WHERE, WHY, AND HOW?
TOPOPHONES IN RAY BRADBURY'S SCIENCE FICTION

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Abstract: The article highlights the category of literary space, connecting different topophones with the author's worldview. Topophones in the works by Ray Bradbury are used not only for identifying the place where the events unfold but they equally serve as the background to the expression of the author's evaluative characteristics of the modern world, his attitude to science, the latest technologies, and the human beings who are responsible for all the events, which take place not only on the Earth, but also far away from it.

Key words: chronotope, chronotype, topophone, author's worldview, microtoponym, Biblical allusions.

Almost no one can imagine a time or place without the fiction of Ray Bradbury ("Washington Post")

1. Introduction

The literary critic Butyakov (2000) once called Ray Bradbury one of the most prominent writers of the 20th century, "A Martian from Los Angeles". This metaphor containing two topophones shows how important literary space was for the author who represented the genre of science fiction. Bradbury violates the laws of nature and sends his readers to the distant future to conquer other planets or readily makes them travel to the past. Literary
time and space in works by Ray Bradbury form the author's unique worldview, which can be described in the terms introduced by Bakhtin (1986: 121-122) as "chronotope" and "topophone".

In Bradbury's works, we can name unreal worlds represented by such topophones, as Venus, Mars, nameless planets, cosmic space and a rocket in it, or real worlds with easily identifiable places on the Earth. The latter are specific countries: the USA, Mexico, China, Ireland, with corresponding cities and towns, or places, which we will call microtoponyms, like a (farm) house, its parts, and surroundings: the house itself in general, rooms, garret, porch, and field; other important topophones: Ferris wheel; children's playground; cave; square, maternity home, and some others. Places connected with the Bible deserve special attention. My aim is not only to describe all the above-mentioned topophones, but also to explain why the author puts his characters into this very place and how he connects them with his personal worldview. To realize this aim I have processed 200 short stories with a total volume of 1802 pages using the method of complete selection, I have chosen only those texts, which contain specific topophones. In the article, I mention around 50 short stories, 36 of which have been thoroughly analyzed. I have also applied semantic and stylistic, contextual-interpretative, and linguo-cultural analyses.

To explain specific topophones and their connection with literary time we must take into account Bradbury's worldview, his attitude to modernization and the latest technologies, family values, and his great love towards humanity in general.

2. Ray Bradbury and his worlds
We have described in details specific features of his style in previous publications (Панасенко 2013; Панасенко & Гудименко 2004; Davydyuk & Panasenko 2016; Panasenko & Šestáková 2013). When a reader takes Bradbury's novels or collections of
short stories, (s)he is always surprised by the author's non-standard manner of writing: a reader can fly in a time machine to the distant future or step into another world, conquer the forces of evil or fight against enemies. Over his lifetime, Bradbury published more than eight hundred different works: novels, stories, essays, short stories, poems, and plays (Биография и творческая деятельность, s.a.).

Bradbury easily changes the style and genre of his works. In the stories written in the same year one can find science fiction, melodrama, detective and fantasy, historical sketches, poems, etc. In Bradbury's works protagonists burn books ("Fahrenheit 451"), travel through time ("The fox and the forest"), irrepressibly fall in love ("A medicine for melancholy" and "The great fire"), meet mermaids ("The shoreline at sunset") or prehistoric animals ("The fog horn"), and line up in a queue to spit upon Leonardo's Mona Lisa ("The Smile") (Davydyuk & Panasenko 2016: 15). As regards this article, all the examples are borrowed from works by R. Bradbury, therefore the author's name will not be mentioned.

Bradbury tests a "reasonable person" by unexpected and paradoxical exams, prompting this person to choose: dark – light, war – peace, or love – hate. The heroes of Bradbury's stories are minded, controversial, and extremely active people: a fantastic frame is usually only a background for the development of purely human dramas (Безниско 2003). Notwithstanding where they are – on Venus or on the Earth – his characters demonstrate their best qualities: friendship, devotion, love, and respect, though sometimes the evil or dark sides of the characters can be seen: greediness, weakness, envy, egoism, hatred, etc.

While analyzing Bradbury's creative works we must always bear in mind that he had never owned a car, had never travelled by plane, and had never used a computer. He was against globalization and the total power of machines; he describes "a conflict between human
and technology and a conflict between human and nature" (Davydyuk & Panasenko 2016: 16) and shows the consequences of these conflicts.

As Sibirtseva (Сибирцева 2014) writes, Bradbury expressed deep concern that the development of technological advances would make people lonely and make life useless because machines would replace the functions of people not only in manufacturing but also in the family. He was confident that human emotions and feelings could not be explained or substituted by a computer's actions.

Now I want to highlight the theoretical background of my research.

3. Chronotope, chronotype, and topophone
The author, as the creator of a literary text composes complex, multilayered individual space, which is very often entwined with literary time; the latter consists of characters' and narrator's chronotopes (Панасенко & Гудименко 2004). At the same time, chronotope is an inseparable part of the author's worldview (Новикова 1991), since it greatly influences the system of images that function in the literary text, its structure, composition, semantic space and many other important items. Ogneva (Огнева 2016: 4) considers the text as a cognitive-plot matrix, accumulating the underlying ethno-meanings in the writer's worldview projections; as the unity of different-formative models represented by the symbols of the Past, Present, and Future of people.

The Russian scholar Bakhtin (1986) has not only made a detailed analysis of literary time in texts belonging to different genres, but has also introduced the term "chronotope", which he understands as a formal-substantial category of literature. In literary chronotopes spatial and temporal features merge into the intelligent and definite whole. The chronotope constitutes a matrix where the principal temporal and spatial sequences of a work of art meet, where dialogues, encounters, and events occur. It expresses the inseparability of
space and time (time as the fourth dimension of space). It refers to the manner, in which
time thickens, becomes artistically visible while space becomes charged and responsive
to the movements of time, plot, and history. It is literally translated as "time-space".

Chronotopes are often genre specific, forming chronotope fields, which make the former
not only a feature of language but a cognitive concept as well. Within the chronotope, the
time is allowed to either compress or extend, whereas real space responds to the flow of
time and plot. Each chronotope can include within itself an unlimited number of minor
chronotopes. Each comprising element of a major chronotope can actually have a
chronotope of its own. Elements of chronotopes are seen as four-dimensional mental
images, combining the three spatial dimensions with the time structure of temporal action
(Bemong, Borghart et al. 2010).

Such important aspects of text analysis as the image of the author, the first person
narrative, the entrusted narration, the type of narrator and many others are closely
connected with the spatial-temporal text structure. Ogneva (Огнева 2013) connects the
literary concept of TIME with the category of temporality. I would like to consider the
position of the narrator on the time axis. Usually the speaker perceives the world as a
spatial-temporal continuum, on the axis, of which one's position in definite time is fixed:
"I – here – now". At the same time a man describing what is behind him speaks about
what had already taken place – about the past. I offer my own term for time description –
"chronotype" (and "chronomatrix" as its variety), because in some texts the localization
of heroes is not real. The main types of chronotype are connected with the position of the
narrator on the time axis as well as the number of these axes and literary time features.
Moreover, specifying different time models helps us better understand and explain Ray
Bradbury's topophones.
I offer the following six models: one time axis (← left-side and → right-side arrows); absence of time dynamics ("chronomatrix"); time condensate; two-time axes combination; several time axes combination; spiral (Панасенко 2002a; Панасенко 2002b; Панасенко & Гудименко 2004; Panasenko 2009), which are connected with the position of the narrator on the time axis, the number of these axes, and the literary time features. Let us discuss them in short.

**Model 1: One time axis.** The author talks about events that had taken place in the past (← left-side arrow) – historic novels, sagas, chronicles, etc. Variety – the author ("I – here – now") entrusts the narrator (character) to talk about something, which had occurred earlier; it will make the exposition of events more trustworthy.

Another variant is, when with the help of a topophone, which can be treated as a "magic tool", a man returns to his childhood or youth. This "magic tool", which permits travel in time, is often called a time machine. A book about time machines by Nahin (1999) has been recently republished several times, which testifies to the fact that this topic has been pressing since Herbert Wells until now. R. Bradbury names the attic "Time Machine", in which old people can depart for 40 years back ("A scent of sarsaparilla"); that is what Finch does at the end of the story. One can do left-side movement on the time axis with the help of the "magic tool". To this model belong such stories by R. Bradbury, as "Patterned man", "Henry the ninth", and "The murderer".

The time arrow can also be directed at the future (→), as in Bradbury's stories "February 1999: Ylla", "Tomorrow's the end of the world", "The end of the beginning", "The rocket man", "The garbage collector", and others. Many of his works had been published in the 20th century and Bradbury believed that by the beginning of the 21st century people would have conquered Mars and other planets, and will start living there happy and satisfied.
**Model 2. Absence of time dynamics.** I name such a type "chronomatrix". Time may stop ("freeze") either for one character or for all. E.g., in the story by R. Bradbury "Hail and farewell" a man of 43 looks like a boy of 12.

**Model 3. Time condensate.** Time is condensed and what seems several days for somebody is in reality several minutes. A classical example of this model is "An occurrence at Owl Creek Bridge" by Ambrose Bierce. This chronotype is not typical of Bradbury's science fiction.

**Model 4. Two-time axes combination.** One of the axes is real time, on the other the narrator constantly travels from the past into the future and vice versa. Another variety: blending of past times in the present, which is indicated by chronological landmarks, e.g., the stories by R. Bradbury "The exiles", "All summer in one day", "The visitor" or by personal names corresponding to different epochs – in "Icarus Mongolfier Wright".

**Model 5. Several time axes.** There are several times in the text; heroes exist in their own worlds and may not know about the existence of one another. This type is more typical of works of a large volume.

**Model 6. Spiral.** Time as well as the type of plot development can be presented in the form of a flexible spiral. One may make any shape of it (a circle, an oval), stretch or compress it. It is like the Deoxyribonucleic acid (DNA) formula, which means life. Most vividly this model is displayed in R. Bradbury's story "The visitor".

I mention this classification because in some of Bradbury's works topophones cannot be analyzed without chronotypes; the author shifts the events on the time axes here and there. My hypothesis is that there is some interdependence between topophones and chronotypes in Bradbury's short stories. If it is an unusual place like a far planet, then it will be Model
1: one time axis with the right-side arrow. The year is very often mentioned: now it looks like the past – 1999, or it may be still the future – 2052. There are also real topophones in his works, like specific countries (China, Mexico, etc.) – these are short stories with the left-side arrow. In some texts, the heroes easily move from one epoch to another with the help of the magic tool ("The sound of thunder" and "The fox and the forest").

Topophones connected with the Bible deserve special mention. On the one hand, we easily recognize familiar places from the Bible, like Sodom and Gomorrah, the Promised Land or Bethlehem; on the other hand, events unfold in cosmic space, in a rocket, on Mars, etc. (Panasenko & Šestáková 2013).

In this article, I would like to offer another principle of classifying topophones. There are a number of topophones, which are connected with certain situations, tradition, and belong to ordinary life (the museum, the porch, the attic, the cemetery, the bridge, the field, the playground, school and so forth) or are employed by science fiction writers for the creation of certain images (rocket airfield, the spaceship, planets of solar system, distant galaxies and so forth). Some of them have already been analyzed by scholars. I will give more examples below. Pravdikova (2009; 2010) names all the places mentioned above "microtoponyms" and claims that they have text forming and stylistic functions, actively participating in the expression of the author's idea.

It is also possible to allocate certain cities: Paris – the trendsetter of fashion and luxury; London – a symbol of business life, Athens – a cradle of a world civilization and many others. We may speak about specific countries: China – a symbol of time overcoming, the USA – a symbol of efficiency, activity, and relaxed personality, Germany – on the one hand, a symbol of the technical and philosophical genius, on the other hand – a symbol of militarism, fascism, death, etc. (Панасенко 2013).
Thus, from global toponophones (cosmic objects) we come to the Earth with specific countries and their cultures, then – to well-known places of interest, and then – to ordinary objects, like a bridge, a house, a museum, a field, a maternity house and many others. What makes all these places so specific? Why does Bradbury use them so often? I hope that the answers to these questions can be found in my paper below. Let us discuss Bradbury's most typical toponophones.

4. Bradbury's topophones. Where?

4.1 Unreal toponophones

Here belong some definite and unknown planets, the transport means of reaching them, and the route to them.

4.1.1 Mars ("The Martian chronicles")

The first book that brought him fame was "The Martian chronicles", which, in fact, was a collection of short stories, united by a common theme – the history of Mars exploration by people, the fate of the former inhabitants of the planet, and most importantly – the fate of ordinary people caught up in difficult situations. The "Martian" theme will always be important for the writer – the "Martian" cycle includes many short stories, such as: "The concrete mixer", "Dark they were, and golden eyed (the naming of names)", "The strawberry window", "The blue bottle", etc. (Davydyuk & Panasenko 2016).

When R. Bradbury wrote his book "The Martian chronicles", the dates when event in the texts unfolded were too remote (January 1999, March 2000, October 2002, October 2026, etc.). Now some of the stories describe events, which have proved to be in the past, the rest still preserve nature of the future features of literary time are vividly displayed in this phenomenon (Panasenko 2009: 78). In his interview with the "Chicago Tribune Magazine", the writer expressed his hope that in 200 years "The Martian chronicles" would be read on Mars. Some events in Bradbury's works take place in the future, but the author plays with
time to attract the readers' attention to the problems of today.

When we discuss all the unreal topophones, we must take into account that they fit Type 1 chronotype model with the right-side arrow. Some of the dates mentioned by R. Bradbury in his science fiction now belong to the past (1999; 2002); others have kept the character of the future; we have right-side (→) and left-side (←) arrows. Though the dates look like old ones, the events described in these short stories are still connected with the future, like "February 1999: Ylla".

There are many interesting stories united by the Martian cycle. They have one common motif: people come to Mars because horrible events take place on the Earth. They leave their native planet to escape nuclear war and its consequences. In some stories, they contemplate the explosion of the Earth from Mars. People celebrate their arrival and burn all the documents and papers connected with their previous life: "He laid the papers in a clutter in an old courtyard and set them afire... He dropped a leaf in the fire. I'm burning a way of life, just like that way of life is being burned clean of Earth right now... Wars got bigger and bigger and finally killed Earth'" ("Million-year picnic").

In "The exiles", at the beginning of the story women (the three witches) made a fire and performed a ritual dance to stop the arrival of people from the Earth onto Mars ("Their eyes were fire and the breath flamed out..."). At the end of the story the men, who had arrived on Mars, made fire to burn the books (Davydyuk & Panasenko 2016: 33-34). I present the analysis of this text below because most of the events described in the text take place in rockets.

Another idea, which is distinctly traced in the stories having unreal topophones, is the conquering of other peoples and races by the white man or by the team haunted by the desire to be the rulers of the universe. We know that many civilizations have been
conquered and totally destroyed. On the Internet, you may find a list of civilizations conquered by Rome, Egypt, Mongols, etc. 40,000 Incas governed a territory with 10 million subjects speaking over 30 different languages (Inca civilization, s.a.) but now only old ruined monuments remain.

In some texts, the situation is the same: a team with a captain comes from the Earth and starts dictating to Martians what they should do. The Martians resist in a specific way. People see their relatives who had passed away a long time ago, have a party with them, taste traditional meals, but the next day "The mayor made a little sad speech, his face sometimes looking like the mayor, sometimes looking like something else. ...Mother and Father Black were there, with Brother Edward, and they cried, their faces melting now from a familiar face into something else. ...The coffins were lowered. Someone murmured about 'the unexpected and sudden deaths of sixteen fine men during the night –'" ("Mars is heaven", vol. 1: 102).

A couple has come to Mars to sell hot dogs and has installed the sign "SAM'S HOT DOGS". How does Sam treat Martians who use telepathy and look like blue masks? Sam threatens them: "'Look here,' said Sam. 'I'm from New York City. Where I come from there's ten million others just like me. You Martians are a couple dozen left, got no cities, you wander around in the hills, no leaders, no laws, and now you come tell me about this land. Well, the old got to give way to the new. That's the law of give and take. I got a gun here. After you left this morning I got it out and loaded it.'" ("The off season", vol 1, 125-126). He had used his gun twice and killed two Martians. He didn't want to listen to them. Finally, they announced that they would leave the planet to him. When Sam is surrounded by Martians and he sees that they outnumber him, he explains "'I didn't do anything!'" (ibid., 129). Finally, Sam owns half of Mars, the Martians fly away in ships. Sam is calculating profits when the Earth explodes. Nobody will come to taste his hot dogs,
perhaps there will be "a batch of customers along in about a million years" (ibid., 133). Sam and his wife are and will definitely be "off season".

Some people who come to Mars gradually accept the Martian language and in five years they look like Martians: "'Your books,' she said. 'Your fine clothes.' 'Your illes and your fine ior uele rre,' she said. ...The daughter wove tapestries and the sons played songs on ancient flutes and pipes, their laughter echoing in the marble villa." ("Dark they were, and golden eyed", vol. 1: 520). Some people bring their old furniture with the purpose of making themselves at home on Mars ("The strawberry window").

Though people are shifted by the author into the future, their natures and habits are the same. Some men do not want to court a woman and marry her but prefer to stay alone in a silent city ("The silent towns"). Another situation is grotesque: people have travelled 60 million miles but nobody wants to listen to them; they are sent from Mr Ttt to Mr Aaa, then to Mr Iii. Nobody believes them; at first, they are put into an asylum and finally are killed ("The Earth men").

In the short story "The wilderness", a definite date is mentioned – 2003. Using the dating service Leonora and Janice have found their grooms on Mars. They have doubts if they will be happy there, covering the distance of 60 million miles. They try to speak to their men, but because of this distance, they hear only one word and this word is '…love…' (vol. 1: 250).

We may see that the traditional quest for a magic tool takes place on Mars. The events follow clichés typical of this genre: bad people possess this miracle first, and then they kill each other or die because they misuse this tool and magic kills them. Finally, Craig finds the Blue Bottle. Everyone sees in it one's long cherished dream. But Craig takes it
only as a bottle of bourbon: "All that trouble for a little bourbon" ("The Blue Bottle", vol. 1: 875). He smiles and drinks it happily, whereas other people are lying somewhere dead.

A woman may face family problems, feel ill-treated, unhappy, abused and the like even when her name is Ylla and she lives on Mars ("February 1999: Ylla").

We tried to discover what Bradbury's confession of faith was and found out the following (Panasenko & Šestáková 2013: 192). An obit recorded two quotes of his views on God and love. According to the obit, he told a Times reporter in 2010: "My religion encompasses all religions. I believe in God, I believe in the universe. I believe you are god, I believe I am god; I believe the earth is god and the universe is god. We're all god." (Ford 2012). In the short stories "The Messiah" events also unfold on Mars where Bishop Kelly, Rabbi Nittler, Father Lipscomb, and Reverend Smith over coffee and a drink discuss St. Thomas Aquinas dreaming of having a Baptist Church, a St. Mary's Chapel, and a Mount Sinai Synagogue "here, here on Mars" ("The Messiah", vol. 2: 264).

Reverend Smith confesses that he "came to Mars not only to work with Christians, but hoping to invite one Martian to Sunday supper, to learn of his theologies, his needs.' "Father Lipscomb explains: "'We are still too new to them... In another year or so I think they will understand we're not buffalo hunters in search of pelts. Still, it is hard to keep one's curiosity in hand." (ibid., 265). They also speak about the possibility of seeing the Messiah on Mars and He does come to one of them.

Other short stories connected with Mars include "Night call, collect", "The lost city of Mars", "The visitor". This topophone is very specific and serves as "a scenery to wonderful tragedies of the great master" (Циклы рассказов Брэдбери, s.a.).
4.1.2 Venus (Venusian cycle)

The Venus cycle, called the "Venusian chronicles" includes only two short stories but they belong to Bradbury's best works. The author describes the planet Venus where it is constantly raining.

The first story, "All summer in a day" is about children who live on Venus. They do not know what the sun looks like because it had been raining for seven years. The only exception is Margot who came from the Earth later. She tries to describe the sun: "It's like a penny," she said once, eyes closed. "No it's not!" the children cried. "It's like a fire," she said, "in the stove." "You're lying, you don't remember!" cried the children." Taking advantage of their teacher being away they "caught her up and bore her, protesting, and then pleading, and then crying, back into a tunnel, a room, a closet, where they slammed and locked the door." Then their teacher came back and "The sun came out. It was the color of flaming bronze and it was very large. ...the children, released from their spell, rushed out, yelling into the springtime." They had only two hours to enjoy. Then the heavy rain came back. Their next meeting with the sun will be only in seven years. "They unlocked the door, even more slowly, and let Margot out."

We have already described the second short story, "The long rain", in a previous publication (Davydyuk & Panasenko 2016: 50). According to the plot of this story, men seek Sunny Dome on Venus, to hide there from the rain, as the rain was constant on this planet: "It never stops raining on Venus. It just goes on and on. I've lived here for ten years and I never saw a minute, or even a second, when it wasn't pouring", (vol. 1: 226).

On Venus, the heroes are constantly exposed to various tests but they show the best features of human character: support, friendship, care, sacrifice, and many others. The first Sunny Dome is cold and broken, but the next one welcomes overtired people who were soaked to the skin with warmth and safety.
I would say that these two short stories from the Venusian cycle show the worst and the best features of human nature: bullying at school and mutual aid.

4.1.3 *Rocket, cosmic space, and nameless planets*

These are very specific topophones. People in a rocket are limited in space, and they have a specific destination and aim. If it is a long journey, they know that they will never come back home but realize and sacrifice their own lives for some noble aims: medical experiment, research of unknown planets, preparing new cities for the generations to come, etc. If the author gives no name to the cosmic object, I understand it that it makes no difference where the events unfold. What happens there is more important than where it happens.

As far as the literary space of the short story "Fly away home", the rocket with a final destination of Mars, makes obvious reference to the Bible, I will analyze it later. A rocket is also the topophone of the story "The golden apples of the Sun": "*Their rocket was the Copa de Oro, also named the Prometheus and the Icarus and their destination in all reality was the blazing noonday sun*" (vol. 1: 312). Their aim was to take a sample of the Sun's mass for the research. Notwithstanding some technical difficulties and the death of their colleague, Bretton, they reach the Sun and take a part of it with them: "*It took all of four seconds for the huge hand to push the empty Cup to the fire. So here we are again, today, on another trail, he thought, reaching for a cup of precious gas and vacuum, a handful of different fire with which to run back up cold space, lighting out way, and take to Earth a gift of fire that might burn forever.*" (vol. 1: 315).

The short story "The exiles" has a very unusual plot. The title can be applied to a team, which is heading for Mars, and equally to the writers, whose works were forbidden on Earth and whose books were burnt. Now these authors, Edgar Allan Poe, Algernon Blackwood, Ambrose Bierce, and some others send different plagues on the people in the
rocket who die one by one because of nightmarish visions and dreams: "Smith, did you see any bats, or have other nightmares?" "Yes, sir. The month before our rocket took off from New York, sir. White rats biting my neck, drinking my blood. I didn't tell. I was afraid you wouldn't let me come on this trip." (vol. 2: 315). The captain supposes that Martians do these things: "They began frightening us off eight weeks ago, before we started. They've killed Perse and Reynolds now. Yesterday they made Grenville go blind. How? I don't know. Bats, needles, dreams, men dying for no reason. I'd call it witchcraft in another day. But this is the year 2120, Smith. We're rational men…” Not Martians did all these things. Those were the three witches from Shakespeare's "Macbeth". When the surviving members of the team arrive on Mars, the captain burns the books, which he has brought with him. The Emerald town in the valley is cracking; they hear moans and cries, and then silence.

The topophone in the short story "The Man" is not specified. The author wants to tell us that events of such kind may take place on any planet. I will analyze this text below because it makes reference to the Bible.

4.2 Real topophones
4.2.1 The Earth. Topophones connected with the Earth are specific and should be considered together with literary time.

Real countries. In Bradbury's short stories, we encounter many countries. First of all, it is the USA where he lived and worked. Then his favourite places like Paris ("We'll always have Paris") or Dublin (the Dublin cycle) and many others. However, I would like to present here only two countries, found in the short stories – China and Mexico – because of the unusual combination of literary time and place contained in them.
China. "The Golden Kite, the Silver Wind" reminds us of a fairy tale for adults. The author transfers us to China, however neither the time, nor a concrete place are mentioned though the story abounds in culturological realities of the past time (Mandarin, town of Kwan-Si, caravans, magnificent Emperor of ideas). Here the time of writing of the story – 1953 – the period of the Cold War, a condition of the long conflict between the capitalist world and the socialist camp, the period of a race of arms, is important. Using such a stylistic device as allegory, Bradbury shows what negative consequences rivalry can bring between two leaders of great states (Mandarines in the story) when huge amounts of money are spent not on the development of the economy in the country and an increase in the welfare of the people, but on senseless numerous reorganizations of a city wall, giving her various forms (a pig, a bludgeon, a fire, water, etc.): "They have built their city's walls like a great bonfire to burn our stick! "Tell my stone-masons, ... to build our walls in the shape of a shining lake." "And with this lake of water," said the whisper and the old man, "we will quench the fire and put it out forever!"). This continued endlessly; city walls were built as lightning to act as a shield (they have worked all night and shaped their walls like lightning) and then like the sun as opposed to their rival's city wall in the form of the moon (Davydyuk & Panasenko 2016: 47-48). All this reminds us of the situation in the world during this period of time when new types of weapons were created, and there was a rivalry in development (vol. 1: 287-290).

In the story "The flying machine", the author transfers us to China, drawing a parallel again between the modern world where cybernetics and genetics were called bourgeois sciences and ancient China where the emperor executed the person who had invented the flying device, had risen in the air and had seen the wonderful world. The emperor wanted his people to admire only the fine model of his country, in which artificial birds sang on trees, figures of people worked in fields – a model, which he had created himself.
In these two stories, Bradbury expresses his opinion about the political situation in the world by means of allegory, sending the reader to ancient China though similar events are taking place in our time. Here both literary space and time are very skillfully combined, forming a surprising chronotope.

**Mexico.** In the short story "The fox and the forest" the real country and real time are mentioned – 1938. The only problem is that William Trevis and his wife have come to this year from 2155: "My name is Ann Kristen; my husband's name is Roger. We were born in the year 2155 A.D. And we lived in a world that was evil. A world that was like a great black ship pulling away from the shore of sanity and civilization, roaring its black horn in the night, taking two billion people with it, whether they wanted to go or not, to death, to fall over the edge of the earth and the sea into radioactive flame and madness." (vol. 1: 144). They use Travel in Time, Inc. to escape all these things. But "the functionaries of Travel in Time, Inc., were not foolish. In your brain, before you left on your trip, they placed a psychological bloc. You could tell no one your true time or birthplace, nor could you reveal any of the Future to those in the Past" (vol. 1: 148). They are hunting this couple like a hunter is looking for a fox and to try to persuade them to come back to their time because they need people "'To fight your wars,' said William at last" (vol. 1: 149). Pretending to be an American motion-picture company, they kidnap them and take them back to the time they belong to. It is interesting to mention that in the translations of this story into Russian the titles are different: "Cat-and-mouse" and "Back to future".

4.3 Microtoponyms

Microtoponyms usually denote small geographic objects known to the limited number of people living in this locality, though some microtoponyms constitute symbols of the culture they belong to, such as the White House, Champs Elysees, Red square, etc. (Правдикова 2009). If we understand the meaning of microtoponyms, we will be able to
decode the author's intentions and better understand the system of values typical of this or that society.

Concerning microtoponyms in Bradbury's short stories, we will see that he mainly uses common places, typical of any culture, like a house, a field, a maternity home, and the like. But common places play an important role in the plot development, have something unusual in them, and thus express the author's individual worldview. Let us consider several short stories and analyze the microtoponyms found in them.

A (farm) house, its parts and surroundings
Though in Bradbury's texts we see familiar places, e.g., a cottage, the events, which take place in it, are in the future ("August 2026: there will be soft rains" or "Veldt").

A house. I would like to start with the short story "August 2026: there will come soft rains". Here we have Chronotype model 1 with the right-side arrow, because the events described in this story take place in 2026. We have described this futuristic story in our previous publication (Davydyuk & Panasenko 2016: 46-47): there in an abandoned house; people do not live in it, because there are no humans on the Earth any more. All housework is done by robots – mechanical mice clean the house, a cooker prepares food and a bath waters itself: "At eight-thirty the eggs were shriveled and the toast was like stone. An aluminium wedge scraped them into the sink, where hot water whirled them down a metal throat, which digested and flushed them away to the distant sea. ...Five o'clock. The bath filled with clear hot water.". Suddenly a fire starts in the house; the house tries to survive: mechanical mice spray water, trying to put out the fire, but even the quenching rain cannot overcome the fire. Notwithstanding all these supermodern appliances, the house is being destroyed.
A farmhouse with a field. I would say that the short story "The scythe" occupies a special place in the creative works by Ray Bradbury. It starts with the description of hungry children in the family car, of white lips of Molly, the driver's wife, of Drew, the main character of the story who are running away from famine and other misfortunes. Then there is the sudden end of the road and a house ahead where they hope to find someone who "would spare them something to eat" (vol. 1: 60). Instead of the house being full of people, they find an old man lying on a clean bed in grave clothes: "There was nothing inside but silence... He knew it before he went in. He knew there was death in the house." (ibid., 61). They find there the scythe and the will that the owner has left the house and everything in it to anyone who comes next. The engraving on the scythe, "He who wields me wields the world" reinforces the idea that the scythe represents a kind of ultimate power.

From now on, the family is quite content in the new arrangements. There is enough food to feed them for years ahead and the wheat grows well enough though in clumps. Drew was a farmer. He wanted to work, to work hard and with pleasure in order to make his family prosperous and happy. He goes to the wheat field, which was too big for one man to tend, and starts cutting the wheat. Drew notices that the wheat is very strange: it rots in a few hours and the next day in place of the cut wheat there is new wheat. Then he understands that a name is written on each ear. And finally he comes to the terrifying realization that he is killing people ("Every time you use the scythe on the wheat a thousand people die", ibid., 65), and that he has even killed his own mother.

He wants to take his family away from the house, from the farm, from the scythe, but his wife Molly is strictly against going away. She does not want to return to poverty and see the hungry eyes of her children: "I'm not starvin' my children down again, ever!" (ibid., 66).
Molly reads Drew from the Bible every evening to keep him calm, though it does not help. Once he sees that it is time to cut the wheat with the names of his family; he omits this spot and runs back home. Drew sees the house all on fire with his family inside: "The fire settled contentedly down to feed. ...Molly was still alive. She slept among fallen timbers ... She slept as if nothing had happened. ... She didn't move or hear him, and she didn't speak. She wasn't dead. She wasn't alive. ...He touched her cheek, and it was cold, cold in the middle of hell." (ibid., 69).

When his family died in the fire, at first he refused to cut down the wheat. Then he fully understood his role in the field and the role of the scythe. His destiny was to work on the field until perhaps someone would substitute him. With the scythe, he became the tool of death himself. He was the one now who still cut the field, he was the one now who killed people because somebody had to end their life someday, nobody can live forever, and that is the reason why there always had to be somebody to scythe the field: "It wanted cutting. Certain parts needed cutting now. ....Among these grains there were many who were old, weary, wanting so very much to sleep." (ibid., 68). In such a way, the author metaphorically describes death (Uberman 2016).

This text hides many specific topic, which will be analyzed below in the discussion.

**Rooms.** I have chosen "Veldt" because it is an excellent example of using common microtoponyms in science fiction, especially when it concerns the topics of technical progress, artificial intelligence, and the coexistence of people and machines (Сибирцева 2014). George and Lydia Hadley live in a super modern house: "They walked down the hall of their soundproofed Happylife Home, which had cost them thirty thousand dollars installed, this house which clothed and fed and rocked them to sleep and played and sang and was good to them. Their approach sensitized a switch somewhere and the nursery light flicked on when they came within ten feet of it. Similarly, behind them, in the halls,
lights went on and off as they left them behind, with a soft automaticity." (vol. 1: 214). For their children they have bought a nursery room, the interior of which was changing according to the wishes of its visitor: "And again George Hadley was filled with admiration for the mechanical genius who had conceived this room. A miracle of efficiency selling for an absurdly low price. Every home should have one." (ibid., 215).

This mechanized room is, on the one hand, a brilliant work of art, on the other – a terrible illusion that becomes a reality (Макарова & Бочкарёва 2008). The contact between parents and their children is lost. Though, alas, it still happens in some families, here the children's protest ends in tragedy: lions from the veldt become real and kill the parent who understood what the lions were eating and what the cry they heard meant but it was too late: "The lions on three sides of them, in the yellow veldt grass, padding through the dry straw, rumbling and roaring in their throats. The lions. Mr. Hadley looked at his wife and they turned and looked back at the beasts edging slowly forward crouching, tails stiff. Mr. and Mrs. Hadley screamed. And suddenly they realized why those other screams had sounded familiar." (ibid., 225).

Attic. Very often, fantasists send their heroes to the future or to the past using a specific tool called a "Time Machine". Old Finch goes to the attic where the smell of sarsaparilla evokes a very strange feeling: "For three days in late November, he stood alone, feeling the soft white flakes of Time falling out of the infinite cold steel sky, silently, softly, feathering the roof and powdering the eaves. He stood, eyes shut. The attic, wallowed in seas of wind in the long sunless days, creaked every bone and shook down ancient dusts from its beams and warped timbers and lathings. It was a mass of sighs and torments that ached all about him where he stood sniffing its elegant dry perfumes and feeling of its ancient heritages." ("A Scent of sarsaparilla", vol. 1: 530). The plant Smilax ornata (Len.) is used as the basis for a soft drink frequently called sarsaparilla. The root of another variety of this class of lianas, Smilax officinalis (Kunth.) is said to be the magic plant of the Aztecs (Сарсапарилла, s.a.).
William Finch calls the attic "Time Machine": "Cora," he said, eating his lunch, relaxing, beginning to enthuse again, "you know what attics are? They're Time Machines, in which old, dim-witted men like me can travel back forty years to a time when it was summer all year round and children raided ice-wagons" (ibid., 531). He explains it by the fact that in the attic there are many things belonging to different periods of time: "He closed the trap door down. The flashlight, snapped on, was company enough. Yes, here was all of Time compressed in a Japanese paper flower. At the touch of memory, everything would unfold into the clear water of the mind, in beautiful blooms, in spring breezes, larger than life... Yes, Time was here. You could feel it breathing, an atmospheric instead of a mechanical clock." (ibid., 533). Finch starts travelling in time and once he came back in a "a red candy-striped coat, a high white, choking collar, and ice-cream pants" (ibid., 532), surprising his wife. He invites her to join him and to go to 1909, or 1900, or 1905, or 1898. When she refuses, he warns her that he has taken some money from their account and disappears in the past. Cora, searching for her husband, goes to the attic and sees in one window blossoming apple-trees and a ladder, and in another – November snow: "Outside the opened frame the apple trees were lush green, it was twilight of a summer day in July. Faintly, she heard explosions, firecrackers going off. She heard laughter and distant voices. Rockets burst in the warm air, softly, red, white, and blue, fading. ...Wintry November light glowed up through the trap in the attic floor behind her. Bent to it, she saw the snow whispering against the cold clear panes down in that November world where she would spend the next thirty years." (ibid., 535).

Porch. It is a typical part of a private house especially in the country. But this topophone conceals a certain implication. Ray Bradbury starts the short story "Embroidery" with a description of the porch: "The dark porch air in the late afternoon was full of needle flashes, like a movement of gathered silver insects in the light..." (vol. 1: 308). Three women, whose names are not mentioned (allusion to three Fates or Moirae?), are sitting on the evening porch busy with embroidery. This place is not chosen by Bradbury
accidentally. Bakhtin claims that such a place, as the porch is characterized with emotional-evaluative intensity. The porch embodies crisis and a turning point in one's life, life-changing decisions or, on the contrary, indecision, and fear to step over the threshold (Бахтин 1986: 280-281).

The text describes a trivial situation: the women complain that they have to do a lot of housework whereas their men are constantly away. They are waiting for something bad to happen, though we do not know what precisely will happen: bombing, a dangerous experiment, or a nuclear weapons test: "What time is it?" asked someone. "Five minutes to five." "Is it supposed to happen at five o'clock?" "Yes." "And they're not sure what it'll do to anything, really, when it happens?" "No, not sure." "Why didn't we stop them before it got this far and this big?" (vol. 1: 309).

What the women depict on the canvas is also a piece of the world, but this piece is limited with a tambour: "The second woman was working on the finest, most delicate piece of embroidery of them all... A flower, a man, a road, a sun, a house". (ibid., 308) This is the world surrounding them, the world they long for, but the strict frames of domestic life, like a tambour, limit their freedom.

The women sitting on the porch are carried away by their hobby to such a degree that they simply do not want to know what is happening in the world: "...they didn't glance about to see what was happening to the country, the town, this house, or even this porch." (ibid., 310).

On one hand, the stylistic device of anticlimax points to the word arrangement in decreasing order, from semantically more essential to less essential ones: from the world to the porch. On the other hand, the author's use of demonstrative pronouns ("this house", "this porch") may be treated as anticlimax as well. In this case, this very porch is
incredibly important; it becomes the centre of the universe. As one of the women states, "…our souls are in our hands. For we do everything to the world with our hands" (ibid., 308); we may interpret it in a different way, but everyone will agree that it is a woman, a guardian of the family hearth, who may keep the balance of the whole world.

Thus, the porch with three women sitting on it becomes the centre of the universe (see Fig. 1)

![Figure 1. Topophone of the short story "Embroidery" (Panasenko 2009)](image)

Bradbury ends this story in an unusual way using sustained metaphor and aposiopesis. The author gives the reader the opportunity to interpret the end of this real or invented story. The women heard no explosion, there was no natural disaster; nevertheless Bradbury reminds us about all these things, which take place in the world, setting the embroidery and the woman who was making it on fire: "Then the fire caught upon the moving point of the needle while still it flashed; she watched the fire come along her fingers and arms and body, untwisting the yarn of her being so painstakingly that she could see it in all its devilish beauty, yanking out the pattern from the material at hand. What it was doing to the other women or the furniture or the elm tree in the yard, she never knew. For now, yes, now! it was plucking at the white embroidery of her flesh, the pink thread of her cheeks, and at last it found her heart, a soft red rose sewn with fire, and it burned the fresh, embroidered petals away, one by delicate one... (ibid., 311).
Other important toponyms

Ferris wheel. To this group belongs such a chronotype, in which, thanks to the "magic tool", time for some characters flows backwards, whereas other people stay in real time ("The black Ferris"). Two little boys, Peter and Hank, discovered that Mr. Cooger, the carnival man, became a boy of ten when the Ferris turned anticlockwise. They followed him and recognized Joseph Pikes, "a li'l orphan boy who moved in Mrs. Foley's" (vol. 1: 921). Her son died some time ago and she gave all her love to this little boy. Peter and Hank were clever enough to understand Mr. Cooger's plan: to worm himself into her confidence, to find out where she keeps money, and to rob her. The little boy disappears, and Mr. Cooger is not suspected. They tried to explain all these things to Mrs. Foley but she didn't believe it and asked them never to come back.

Then they decided to spy on Joseph Pikes at night. They saw the boy with a bundle of money enter the black Ferris. At first, a 35-year-old man appeared in the cabin but then something went wrong: "The Ferris wheel went around and around and around" (ibid., 925). Mr. Crooger, "a man, a different man and voice this time" (ibid., 925), prays to stop the wheel: "Now the carnival was ablaze with sudden light. Men sprang out of tents, came running" (ibid., 925). When the Ferris stopped at last, they saw a skeleton on the wooden seat, "a paper bag of money in his hands, a brown derby hat on its head" (ibid., 926). Here the literary place is closely connected with literary time; we have a chronotype model with the left-side and right-side arrows.

Children's playground. Playgrounds can be found in any place. Why does the author make a proper name of it using the definite article and capital letter? Bradbury deliberately exaggerates common things, which usually take place in it: "Now he saw the children! They were dashing across the Playground meadow, fighting, pummeling, scratching, falling, every wound bleeding or about to bleed or freshly caked over. A dozen cats thrown among sleeping dogs could not have shrieked as loud." ("The Playground", vol. 1: 342).
These words belong to Charles Underhill, a widower and a father of a three-year-old son. Charles calls the Playground "the pen of misery". It is for him "an immense iron industry whose sole products were pain, sadism, and sorrow" (ibid., 343). He signs an agreement with the owner of this Playground for 12 years, transforms into a child and occupies the place of his son. Here we have a shift on the time axis to the left.

**Maternity home.** What does it have to do with science fiction? The events take place in the future when every family owns a helicopter as an everyday means of transportation; rockets are seen in the sky and people enjoy different appliances, which greatly facilitate their life. When it is time for Polly to bear a child, her husband Peter Horn takes her to the maternity home in the helicopter and Dr. Wolcott persuades her to use a new birth-mechanism. But something goes wrong and they see a blue pyramid because the child was born into another dimension. It is very interesting to observe how the baby perceives the world, the sounds produced by his Mom and Dad, and many other things: "Baby looked upward through clearing mists. Baby saw the shapes moving over him and knew them to be friendly. Baby was newborn... There were moving objects above and around Baby. Six cubes of a gray-white color, bending down. Six cubes with hexagonal appendages and three eyes to each cube... One of the cubes was white. It had three eyes, too. There was something about this White Cube that Baby liked... There was an odor to the White Cube that reminded Baby of itself." ("Tomorrow's child", vol. 1: 757).

As the boy looked like a blue pyramid, Polly called him Py. He was growing, started walking and he was able to say Father, which sounded like Wheelly. Life went on: "The New Year, the year 1989, arrived. Rocket ships flashed on the sky, and helicopters whirred and flourished the warm California winds." (ibid., 761). As the scholars failed to bring Py back to this world, Dr. Wolcott offered the parents to put them in the fourth dimension and join their baby there. This time the clever machines worked well and Polly found their son on the floor: "A living, pink-faced, blue-eyed boy lying in her arms, gasping and
blinking and crying. The pyramidal shape was gone. Polly was crying with happiness... Dr. Wolcott... only watched the White Oblong and the slim White rectangle holding the Blue Pyramid..." (ibid., 766) leaving the maternity home.

**Square.** The short story "The Smile" is based on defeated expectancy (see more in Davydyuk 2013; 2013a; Kupchyschyna & Davydyuk 2017). At first, a queue in the square is described: "In the town square the queue had formed at five in the morning, while cocks were crowing far out in the rimed country and there were no fires... Down the road, in twos and threes, more people were gathering in for the day of marketing, the day of festival." (vol. 2: 661). The small boy got up very early "to get his place in line". The two men standing behind him call the boy "an appreciator of arts". Taking into account that there was "the long line of men and women ahead" (ibid., 661) we can easily imagine that this is the queue for an exhibition in the museum situated in this square. Whenever a masterpiece is taken somewhere, there is always a tremendous crowd of people patiently waiting for their turn to touch the world of beauty. All over the world, people in this crowd are special, very patient, and the topics of their talks are also special.

What are the intentions of the people in the queue in the square? They are waiting for an old picture, very old, painted in 2061 or 3000 or 5000 and which has a smile, in order "to spit on it clean and true" (ibid., 661-662). Their only entertainment now is festivals. During one festival "they tore up all the books in the square and burned them and everyone was drunk and laughing. And the festival of science a month ago when they dragged in the last motor-car and picked lots and each lucky man who won was allowed one smash of a sledge-hammer at the car." The only feeling they have towards the years before 5000 is hatred to their past. The man explains to Tom, the small boy, that they can only hate their country with "roads like jigsaws from bombs and half the cornfields glowing with radio-activity at night" (ibid., 662).
When his turn comes to spit on the picture of Mona Lisa, Tom cannot do it, his mouth is dry, and he is overwhelmed by her beauty. A policeman on horseback announces that, as it is a festival day, people "'may participate in the destruction of—' Tom hadn't even time to scream before the crowd bore him, shouting and pummelling about, stampeding toward the portrait. There was a sharp ripping sound. The police ran to escape. The crowd was in full cry, their hands like so many hungry birds pecking away at the portrait. Tom felt himself thrust almost through the broken thing. Reaching out in blind imitation of the others, he snatched a scrap of oily canvas, yanked, felt the canvas give, then fell, was kicked, sent rolling to the outer rim of the mob." (ibid., 664).

It took much time for Tom to get home "down the bomb-pitted road" to "the ruined farm dwelling" (ibid., 664). Though it was only 9 o'clock, his family were sleeping already. Perhaps they had no electricity. At last Tom opened his hand and "uncrumpled the fragment of painted canvas. All the world was asleep in the moonlight. And there on his hand was the Smile... And he thought, over to himself, quietly, the Smile, the lovely Smile." (ibid., 665). With his eyes closed, he still saw in his inner mind the Smile, and then, tired after a day of walking, he fell asleep. Here Bradbury again uses personification taking the Smile as a living creature and shows what will happen to a nation if it starts hating its past.

5. Allusions to the Bible

Ray Bradbury, as a representative of classical American culture, which is based on the Christian worldview, was not a Christian in the strict sense of this word; perhaps he was an ecumenist in the broad sense. As a great writer, he touched upon eternal problems in his works and did it skillfully, in an encoded way, with the help of Biblical allusions (Panasenko & Šestáková 2013: 192).

We have already found the connection between the Bible (we mainly used Holy Bible 1990) and the topophones in Bradbury's short stories. If we analyze the geographic places
mentioned in the Bible, we will see that some of them are definite (Egypt, Assyria and Babylon, etc.), others are of general character, like Northern and Southern kingdoms, but they are important and belong to principal Bible motifs, like the Promised Land, for "the journey with Moses to the Promised Land defines Israel's religion, laws, and customs" (Themes, motifs & symbols, s.a.). It can be illustrated in the following way (see Table 1).

Table 1. Places in the Bible, reflected in Bradbury's short stories
(after Panasenko & Šestáková 2013)

<table>
<thead>
<tr>
<th>Biblical place</th>
<th>Reference to the Bible</th>
<th>The short story title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodom and Gomorrah</td>
<td>(Genesis 19:21-28)</td>
<td>&quot;The fire balloons&quot;</td>
</tr>
<tr>
<td>Nineveh</td>
<td>(Book of Jonah)</td>
<td>&quot;The fire balloons&quot;</td>
</tr>
<tr>
<td>The Promised Land</td>
<td>(Exodus 12:1 – 18, 27)</td>
<td>&quot;Fly away home&quot;</td>
</tr>
<tr>
<td></td>
<td>(Exodus 16:2-3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Joshua 1)</td>
<td></td>
</tr>
<tr>
<td>Bethlehem</td>
<td>(Matthew 2:1-12)</td>
<td>&quot;Fly away home&quot;</td>
</tr>
<tr>
<td>Nazareth</td>
<td>(John 19:22)</td>
<td>&quot;The flying machine&quot;</td>
</tr>
<tr>
<td></td>
<td>(Luke 4:29-30)</td>
<td></td>
</tr>
<tr>
<td>Jerusalem</td>
<td>(Luke 2:41-52)</td>
<td>&quot;Bless me, Father, for I have sinned&quot;</td>
</tr>
<tr>
<td>Jericho</td>
<td>(Joshua 6)</td>
<td>&quot;The miracles of Jamie&quot;</td>
</tr>
</tbody>
</table>

Though Bradbury places his characters in rockets, their final aim is the same – to find the place, which will surpass their expectations ("Fly away home"). Captain and 30 men from the rocket can be compared to the Biblical prophet Moses and the Israelites. These men flew to Mars, to the waste land. They did not know what would be there. When they reached Mars where the most part of it was desert, the men became angry and wanted to go home, back to the Earth. In the Bible, Moses led the Exodus of the Israelites out of Egypt through the desert into the Promised Land (Exodus 12:1-18, 27). When Moses took the Israelites into the desert, the people grumbled against Moses and against God. They did not believe that they would survive and they also wanted to come back to Egypt, where they had everything they wanted (Exodus 16:2-3). The Relief Rocket can be compared to the Promised Land. The men in the short story found there everything they needed or they longed for. There were familiar buildings or shops to remind the men of their home. In
the Bible, it is said that it should be a land, which is flowing with milk and honey. When the Israelites came to the Promised Land, they were happy, and so were the men in the short story, when they stepped into the Relief Rocket (Joshua 1) (Panasenko & Šestáková 2013).

In the short story "The visitor", the events take place on Mars where it is always silent. The main characters suffering from tuberculosis have been transported by rockets to Mars to die there. They dream of New York, noisy, crowded, and dirty. New York becomes for them the embodiment of the Earth, to which they aspire in their thoughts and are ready to give everything to come back to the multimillion megalopolis. Here we have two opposed topophones: New York (the Earth) and Mars, i.e. noise versus silence.

It is a paradox: the civilization, which is able to send regular rockets to Mars, can not find proper treatment of TB on the Earth. It makes a strong parallel with the Bible: people who have the plague of leprosy are sent to desert places outside of the camp (Leviticus 13:45-46).

We have described in details all the characters of this story (Saul, Mark, Peter, and others) in our paper (Panasenko & Šestáková 2013). Now I would like to specify one more important place. It is the cave. Saul is the main character in the story "The visitor"; in historical books, Saul is the first king of Israel who disobeyed God. The two protagonists of this story, Saul and Mark, were hiding in a cave. Using hypnosis, Mark could create different worlds. At first, he brought them back to New York. Then, when they were in the cave "New York soared up around them, out of rock and cave and sky. Sun glinted on high towers. The elevated thundered; tugs blew in the harbor. The green lady stared across the bay, a torch in her hand. 'Look, you fools!' said Mark. Central Park broke out constellations of spring blossoms. The wind blew fresh-cut lawn smells over them in a wave." (vol. 2: 245).
In the Bible, Saul was chasing David; David was hiding in a cave. Saul went to the cave to relieve himself. David had a chance to kill Saul but he did not do it (Samuel 1 24:1-16). Saul is the symbol of treachery and dishonesty and, in this story, the protagonist acts according to his name, which may be considered as metaphoric antonomasia. Saul wanted Mark and all his miracles only for himself and "in the center of New York, bewildered, the men stumbled. Johnson fired his gun three times more. ...There was a terrible silence. The men stood watching. New York sank down into the sea. With a hissing, bubbling, sighing; with a cry of ruined metal and old time, the great structures leaned, warped, flowed, collapsed. Mark stood among the buildings. Then, like a building, a neat red hole drilled into his chest, wordless, he fell." (ibid., 245). All these unreal topophones have been destroyed forever because of human meanness, jealousy, and envy. In the cave, one of the men kills Mark. They have killed the miracles he was able to create; they have killed New York; they have killed their hope to return to the Earth.

The short story "The scythe", which I have described in detail above, is based on the biblical allegory of the Grim Reaper, whose name is Death. In the allegory as well as in Bradbury's story, this reaper has absolute control over life and death. The Grim Reaper in this text is bound to the field of wheat, which he cuts killing many people.

The list of examples is long enough. I would like to complete this paragraph with the short story "The Man", a brilliant analysis of which has been done by Thornton (2011). The events unfold on a nameless planet where one day a rocket arrives. Its captain is waiting for "the welcoming committee with a brass band to shake hand" (vol. 2: 247) but nobody comes, and he feels neglected and abused. His behaviour does not differ much from those invaders who had destroyed many civilizations; only the tophophone is not savannahs or prairies on the Earth but a planet with a humanoid population: "We build rockets, we go to all the trouble of crossing space, searching for them, and this is what we get. Neglect. Look at those idiots wander about in there. Don't they realize how big this is? The first
space flight to touch their provincial land." (ibid., 248). He sends a member of his team, Martin, to find out what has happened. When Martin comes back, he explains that the town inhabitants are not interested in the rocket because one day ago the Man came, who had no definite name, because it would be different on every planet. He "healed the sick and comforted the poor. He fought hypocrisy and dirty politics and sat among the people, talking, through the day." (ibid., 249). The captain doesn't believe him and goes downtown to find witnesses. Captain Hart supposes that it was Burton who stole his victory but Burton died several days ago. Then the captain decides to go to other planets and to find that Man there because in this place he could not be found. Most members of the crew together with Martin decide to stay on this planet. Hart names them "fools" and leaves. Seven men go to the mayor who asks them to hurry up because "'We mustn't keep him waiting.'" (ibid., 257).

6. Discussion and conclusion: Why? and How?
Ray Bradbury, a classic of modern American literature has created his own literary world, in which he highlights human relations, eternal moral values, problems of globalization and many others in the light of science fiction and of city fantasy. He persistently and consistently enters Space not to create fascinating phantasmagorias of interplanetary contacts, but to embody the human thirst for knowledge of boundless worlds and self-knowledge. In this sense, his Space is a metaphor of the soul, which has been directed to the active transformation of the Universe (Маркина 2006). Bradbury's heroes, thanks to the opportunities of literary time and space categories, have no restrictions on their actions either in time or in space. In one of his works a hero lives in 2056, in another he goes back 60 million years. In another short story we can fly to Mars and Venus or to see our planet hundreds of years in the future. Bradbury's real and hypothetical text worlds can exist concurrently or be united into certain moments of time.
Short stories with unreal toponyms. Though Bradbury sends his heroes to Mars and Venus, he wants to attract our attention to problems which are still pressing on the Earth: bureaucracy ("The Earth men"), bullying at school ("All summer in one day"), loneliness and misunderstanding in the family ("February 1999: Ylla"), the desire to find a reliable partner and friend ("The wilderness"). Some of his short stories reconstruct the behaviour of people who lived centuries ago and who contributed greatly to the destruction of ancient civilizations: members of the rocket team are people from the Earth. They try to conquer Martians or other humanoids showing their superiority and exclusiveness ("The off season", "The Man").

People have to leave the Earth because it is impossible stay there anymore: nuclear pollution, wars and military conflicts, dangerous diseases ("Million year picnic"). Some people who come to Mars try to accept the ancient culture and keep their own ("Dark they were, and golden eyed (the naming of names)").

Bradbury puts his heroes into dangerous situations that reveal the worst and the best features of the human character ("The long rain", "The golden apples of the Sun"). Some of Bradbury's short stories reveal his great sense of humour. Writers who have created many horrors and thrillers live on Mars and send misfortunes onto the members of the rocket team ("The exiles"). Interrelations between unreal toponyms and chronotypes are displayed in Table 2.

Table 2. Interrelations between unreal toponyms, chronotypes, and means of their verbalization

<table>
<thead>
<tr>
<th>Location (where?)</th>
<th>Implication (why?)</th>
<th>Stylistic and other devices and means (how?)</th>
<th>Short story title</th>
<th>Chronotype model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Earth – Mars</strong></td>
<td>Female natural desire to find a partner for life</td>
<td>Emotively charged words</td>
<td>&quot;The wilderness&quot;</td>
<td>Model 1. →</td>
</tr>
<tr>
<td>---------------------</td>
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<td>------------------------</td>
<td>-----------------</td>
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</tr>
<tr>
<td><strong>Venus</strong></td>
<td>Bullying at school and childish nostalgia</td>
<td>Simile</td>
<td>&quot;All summer in one day&quot;</td>
<td>Model 4.</td>
</tr>
<tr>
<td><strong>Unknown planet</strong></td>
<td>Quest</td>
<td>Mild humour</td>
<td>&quot;The Blue Bottle&quot;</td>
<td>Model 4.</td>
</tr>
<tr>
<td></td>
<td>Allusion to the Bible</td>
<td>Allegory</td>
<td>&quot;The Man&quot;</td>
<td>Model 1. →</td>
</tr>
<tr>
<td><strong>Rocket</strong></td>
<td>Allusion to the Bible</td>
<td>Grotesque, irony, and sarcasm</td>
<td>&quot;The exiles&quot;</td>
<td>Model 4.</td>
</tr>
<tr>
<td></td>
<td>Boundless devotion to work, self-sacrifice</td>
<td>Sustained metaphor</td>
<td>&quot;The golden apples of the Sun&quot;</td>
<td>Model 1. →</td>
</tr>
</tbody>
</table>

As it is next to impossible to describe all the stylistic devices and expressive means employed by the author in accentuating the role of literary time and place (it looks like a special research), I will make comments only in some specific cases. In Table 2 I mention the temporal structure of the text. It is really very peculiar (Panasenko 2009). Very often
Bradbury does not give us information directly. In this text, it is encoded by the total absence of future tenses. It means that this family is doomed and has no future, notwithstanding where it is: on the Earth or on Mars.

In texts with unreal topophones, Chronotype model 1 prevails with the right-side arrow pointing at the far future.

**Short stories with real topophones.** The examples of them are not numerous and are presented in Table 3. To accentuate the problems of the Cold War period, Bradbury sends us to old China and, using the style of a fairy tale narrative, shows what an arms race leads to ("The Golden Kite, the Silver Wind").

<table>
<thead>
<tr>
<th>Location (where?)</th>
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<th>Chronotype model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Earth</strong></td>
<td>Great responsibility of all of us for every deed</td>
<td>Time travel, grotesque</td>
<td>&quot;A sound of thunder&quot;</td>
<td>Model 1. ← and →</td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td>Decent people refuse to produce lethal weapons</td>
<td>Travel in time</td>
<td>&quot;The fox and the forest&quot;</td>
<td>Model 1. ← and →</td>
</tr>
<tr>
<td><strong>China</strong></td>
<td>Warning about Cold War consequences</td>
<td>Fairy tale mode of the narrative, antonomasia</td>
<td>&quot;The Golden Kite, the Silver Wind&quot;</td>
<td>Model 1. ←</td>
</tr>
<tr>
<td></td>
<td>Disapproval of the rulers who ignore innovations</td>
<td>Fairy tale mode of the narrative</td>
<td>&quot;The flying machine&quot;</td>
<td>Model 1. ←</td>
</tr>
</tbody>
</table>

The first two stories are connected with time travel and, at the same time, considerable distances are covered on the time axes (here we have the Chronotype 1 with the right and left-side arrows). The short stories, in which the events take place in old China, have correspondingly the left-side arrow but the questions they highlight are still pressing. As
I have already mentioned Bradbury has encoded his warnings about the consequences of an arms race using the fairy tale genre.

Microtoponyms. Within the literary text, microtoponyms directly participate in forming a literary image of the world, national mentality and express the individual author's worldview. Microtoponyms, which are one of the means of national, cultural, and historical information storage and transfer, play an essential role in the realization of that model of reality, which is put in the literary text. Moreover, under certain conditions, the microtoponymic designations are capable of becoming peculiar ideologems of the public consciousness of an era and of rendering ideas of the material and cultural wealth of the nation at separate stages of its development (Колокольникова 2015).

A "clever house" is on fire and there is no one in it, in the city, on the Earth to save it because of nuclear war ("August 2026: there will be soft rains") (see Table 4).

In "The scythe" we have several very important microtoponyms. Wars on our planet go on and many people perish. Metaphorically, Bradbury presents us the Grim Reaper who was a common farmer, Drew, who first found a scythe and later became a murderer. The house represents hope, luck, happiness, and comfort for the family at the beginning of this story, then it figuratively turns into a cemetery, where the mother and her children lie as if in deep sleep not touched by the fire. Thus, this house is a big "curse".

Another important microtoonym is a huge wheat field that is supposed to be full of life and sun but as we see, it is full of death and sorrow. This wheat field at first represents something good (enough food, prosperity, and long life) and then it also represents all the senseless deaths of innocent people, children, as well as soldiers who obeyed commands in WWII (this story was written in 1943). The farm with the field becomes a big slaughterhouse. The author gives us a serious warning and completes the story describing
horrible events: "Bombs shattered London, Moscow, Tokyo. ...The blade swung insanely. And the kilns of Belsen and Buchenwald took fire. The blade sang, crimson wet. And mushrooms vomited out blind suns at White Sands, Hiroshima, Bikini, and up, through, and in continental Siberian skies. The grain wept in a green rain, falling. Korea, Indo-China, Egypt, India trembled; Asia stirred, Africa woke in the night. ...The farmer in the field is too busy, even after all these years; too busy slashing and chopping the green wheat instead of the ripe." (vol. 1: 71).

The super modern and very expensive nursery room, which changes according to the wishes of its owner, does not help parents who have lost contact with their children. Rich presents can not substitute a cordial family atmosphere and mutual understanding ("Veldt").

When one reads the story "Tomorrow's child" (its basic microtoponym is a maternity home), one may think that it is a story about the world of technology, machines, and engineering devices. But I think that it is a story about love. The love of Polly and Peter – for each other and for the child – saves them; Polly was losing her mind; Peter was losing his family. Although they fail to accept the unusual appearance of their child, they sacrifice themselves and become different because of love. Having a baby looking like a pyramid is a challenge and a warning against progressive technology development and the dangers that this development brings to humanity. Who is the winner in this story: people or technology? A clever birth mechanism has made a mistake but it was a human being who had invented it. Real love conquers all the hindrances and brings peace, comfort, and happiness to this family.

Ray Bradbury was brought up in a very good family. He had four daughters. Many short stories reflect his attitude to women who have their souls in their hands: "For we do everything to the world with our hands." ("Embroidery", vol. 1: 308). The evening porch
becomes the centre of the universe because the three women are sitting there with their embroideries, making the world beautiful and colourful, embellishing it with their everyday routine work.

Though we live in the 21st century, still there are some countries where certain authors are forbidden and their books are destroyed. I concentrate my attention on short stories but I can not fail to mention his futuristic novel "451 Fahrenheit". A square in the far future becomes a place where the Mona Lisa is first spat at and then destroyed. *Ars longa, vita brevis est*, says Latin proverb. Masterpieces of such a kind will live forever notwithstanding people's craziness. The boy keeps the Smile from the portrait as a real treasure, and I hope he will pass it on to his children in future as a great treasure.

Ray Bradbury is a brilliant and sometimes an ingenious narrator. He skillfully uses biblical allusions in many of his texts. As I have mentioned above, the Relief Rocket can be compared to the Promised Land ("Fly away home"). Such characters' names as Saul, Mark, and Peter direct us to some books of the Bible.

The Messiah comes to an unknown planet. What he does and how he is welcomed is extensively described in the Gospel. Even if the names are not mentioned, the reader easily understands that different events from the Bible and their locations are implicitly described by Bradbury: Exodus from Egypt ("Fly away home"), David versus Goliath ("The miracles of Jamie"), Original sin ("Adam and Eve"), ("The fire balloons") and many others.

Microtoponyms are presented in Table 4.
Table 4. Interrelations between unreal topophones, chronotypes, and means of their verbalization

<table>
<thead>
<tr>
<th>Location (where?)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Attic</td>
<td>Nostalgia for the past better times</td>
<td>Time travel, metaphor, personification</td>
<td>&quot;A scent of sarsaparilla&quot;</td>
<td>Model 1. ←</td>
</tr>
<tr>
<td>House</td>
<td>Clever mechanisms are useless because the planet is uninhabited as a result of the nuclear war</td>
<td>Means of stylistic semasiology and phonetics</td>
<td>&quot;August 2026: there will come soft rains&quot;</td>
<td>Model 1. →</td>
</tr>
<tr>
<td>A farm-house with a field</td>
<td><em>Timeo Danaos et donna ferentes</em></td>
<td>Grotesque, allusion</td>
<td>&quot;The scythe&quot;</td>
<td>Model 1. ← and →</td>
</tr>
<tr>
<td>Room</td>
<td>Generation conflict</td>
<td>Grotesque</td>
<td>&quot;Veldt&quot;</td>
<td>Model 1. →</td>
</tr>
<tr>
<td>Porch</td>
<td>Great respect to women</td>
<td>Sustained metaphor, simile, epithet; gradation; aposiopesis, patterned repetitions</td>
<td>&quot;Embroidery&quot;</td>
<td>It can take place at any time</td>
</tr>
<tr>
<td>Ferris wheel</td>
<td>Moral lesson: Commandment 8 <em>Thou shalt not steal</em></td>
<td>Grotesque</td>
<td>&quot;The black Ferris&quot;</td>
<td>Model 1. ← and →</td>
</tr>
<tr>
<td>Children's playground</td>
<td>Parents can give everything but common sense (Yiddish proverb)</td>
<td>Hyperbole, personification, grotesque</td>
<td>&quot;The Playground&quot;</td>
<td>It can take place at any time</td>
</tr>
<tr>
<td>Maternity home</td>
<td>Warning about the conflict between human and technology</td>
<td>Defeated expectancy, personification</td>
<td>&quot;Tomorrow's child&quot;</td>
<td>Model 1. →</td>
</tr>
<tr>
<td>Square</td>
<td>Ars longa, vita brevis est</td>
<td>Defeated expectancy, personification, grotesque</td>
<td>&quot;The Smile&quot;</td>
<td>Model 1. →</td>
</tr>
</tbody>
</table>

The short stories with microtoponyms are based on the Chronotype 1 model or the events are not connected with a definite period of time. These places are familiar to everyone: attic, square, maternity home, etc. But there is something in these texts, which gives us grounds to call them masterpieces of science fiction.
Nowadays we have "a clever house" managed even by mobile phone. Bradbury foresaw this, though if the Earth is empty, all these mechanisms are useless ("August 2026: there will be soft rains"). Children's love can not be bought even by very expensive presents, like a nursery room in "Veldt". Every short story in this group has something, which triggers on the plot development and enhances the importance of the topophone.

In "Embroidery", there is such a lexico-stylistic means as anticlimax: "they didn't glance about to see what was happening to the country, the town, this house, or even this porch" (vol. 1: 310). Thus, the porch becomes the centre of the universe only because the three women who even have no names are sitting, waiting for their husbands and bringing beauty to the world. The second important stylistic device here is sustained metaphor: the second woman "saw the world brighten and catch fire" (ibid., 310) and this fire catches her embroidery, her world limited by the tambour, and then gradually catches her heart, "a soft red rose sewn with fire" (ibid., 310). The texts ends with aposiopesis and gives the possibility to the reader to complete it in one's own way.

In "The Playground" and "The Smile" we see personification. The Playground lives its (her/his?) specific life and acts like a living monster. Though the portrait of Mona Lisa in the distant future is torn to pieces, the Smile is alive. It lightens the gloomy life of a young boy ("The Smile").

The title "Tomorrow's child" is also based on transposition. Here 'tomorrow' is used in the possessive case, which is traditionally used with animate nouns. It looks like tomorrow has delivered the child and it was born into the fourth dimension.

As we have done a special research on Biblical allusions in Bradbury's literary works (Panasenko & Šestáková 2013), we will not comment here on how chronotoposes are verbalized.
Bradbury has created his own unique image of the world reflecting his individual world perception and attitude to modern techniques and appliances. In his works, he touches upon eternal problems: love, women, generation conflict, bullying, bureaucracy, arms race, friendship, nostalgia, and many others.

I have discovered that when the author wants to attract our attention to some pressing problems, he locates his protagonists far away from our planet. Though the topophones are unreal, the problems are earthy. When we have real topophones, there is a time shift on the time axis to the future or to the past. Microtoponyms reflect a typical situation, that is why proverbs, which have the same function, can be easily applied to them while explaining their idea. Though some of these microtoponyms are trivial, like the porch or the attic or the black Ferris, they contain a deep meaning and bear a moral lesson.

The worlds of Ray Bradbury are fascinating and unique. They still do need further exploration. Though it is a very inviting prospect to consider Bradbury's real and unreal spaces using the mental spaces introduced by Fauconnier (1994), I hope it will be the topic of my following study.

Notes
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Résumé

Literary time and place are very important text categories. For some writers who belong to the genres of science fiction, fantasy, or detective stories, chronotopes help express the authors' worldview and sometimes are the triggers, which direct plot development in a specific way. In Bradbury's science fiction, we can find specific topophones: unreal and real. Mars and Venus, rocket, etc. belong to the first category. Real topophones are represented by specific countries (China, Mexico, the USA, etc.). This group also includes so called microtoponyms: small geographical objects or places well known in a specific locality, like a (farm) house, its parts and surroundings, a field, rooms in a house, an attic, a porch, a Ferris wheel, a children's playground, a maternity home, a square, etc. Toponyms connected with the Bible deserve special mention: some toponyms are of definite (Egypt. Babylon, Sodom and Gomorrah) and general character (Northern and Southern kingdoms). Without literary time all these topophones and microtoponyms would have belonged to fictional texts or to autobiographical or historical novels. Ray Bradbury skillfully unites time and place in a chronotope and shifts his heroes on the time
axis to the far future or to the past; especially it concerns microtoponyms, e.g.: maternity home – people use helicopters to go to the concert or to the hospital; children's playground – time stops for the father who wanted to protect his son and occupied son's place on the playground for several years, etc. All these real and unreal topophones I have managed to specify are closely connected with chronotype models. I have put three research questions for myself: Where? Why? and How? and answered them in the following way. Ray Bradbury puts his heroes into specific conditions and specific places (Venus, rocket, etc.) and tries to give us a moral lesson. People may be friendly to Martians or kill them without warning; children may abuse a little girl and grown-ups may show their best qualities under certain circumstances. The last question is how the author makes the reader believe in what (s)he is reading. It is masterfully done with a set of specific tools (Time Machine) and numerous linguistic means.

**Key words:** chronotope, chronotype, topophone, author's worldview, microtoponym, Biblical allusions.

Article was received by the editorial board 23.03.18; Reviewed 14.04.18. and 14.05.18.
Similarity Index 16%