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**FACT AND FICTION IN
 RAY BRADBURY'S *FAHRENHEIT 451*
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G.H. Muradian. Fact and fiction in Ray Bradbury's *Fahrenheit 451*. Science fiction is a literary genre based on imaginative fiction and postulated scientific discoveries, the intersection of the world of science fiction and the world of reality. It makes people think about the future of the world and plays an important role in the predictions of a highly technologized world, society and their problems. A number of authors have been involved in technological predictions, a famous American writer Ray Bradbury among them, with his science fiction novel *Fahrenheit 451* (1953). In this article my purpose will be to focus on the ontological juxtaposition of factitiousness and fictitiousness in science fiction literature in general and in the abovementioned novel in particular, concerning myself with bringing out the linguistic and stylistic properties of Bradbury's novel in terms of literal and figurative language through the linguostylistic method of analysis. Moreover, I will also concentrate on certain cognitive notions and strategies that condition the factual aspect of the novel and contribute to the creation of an environment of *cognitive estrangement* and finally disclose the cognitive frameworks, resources, meanings, as well as the figurative language of the novel.

Key words: Cognition, estrangement, factitious linguistic units, *Fahrenheit 451*, fictitious linguistic units, science fiction.

Г.А. Мурадян. Факт и фикция в романе Р. Брэдбери “451 градус по Фаренгейту”. Научная фантастика – литературный жанр, основанный на воображении и постулированных научных открытиях, в котором пересекаются мир научной фантастики и мира реальности. Он заставляет людей задуматься о будущем и играет важную роль в предсказаниях высокотехнологического мира, общества и их проблем. Ряд авторов были вовлечены в технологические предсказания, и среди них известный американский писатель Рэй Брэдбери, автор научно-фантастического романа *451 градус по Фаренгейту* (1953). Мое исследование сосредоточено на онтологическом сопоставлении фактивности и фиктивности в научно-фантастической литературе в целом и в упомянутом романе, в частности. В нем с помощью лингвостилистического метода анализа выявлены лингвостилистические особенности романа Брэдбери, настоящие и выдуманные терминологические и образные лингвистические элементы. Я также обращаюсь к определению ряда когнитивных понятий и стратегий, обуславливающих фактивный аспект романа и способствующих созданию среды *когнитивной отчужденности*, тем самым раскрывая когнитивные схемы, вербальные средства и способы, фигуральный язык данного романа.

Ключевые слова: научная фантастика, отчужденность, познание, фактивные языковые единицы, фиктивные языковые единицы, 451 градус по Фаренгейту.

Г.А. Мурадян. Факт і фікція в романі Р. Бредбері “451 градус за Фаренгейтом”. Наукова фантастика – літературний жанр, заснований на уяві і постульованих наукових відкриттях, в якому перетинаються світ наукової фантастики і світ реальності. Він змушує людей замислитися про майбутнє і відіграє важливу роль у прогнозах високотехнологічного світу, суспільства та їх проблем. Ряд авторів були залучені в технологічні передбачення, і серед них відомий американський письменник Рей Бредбері, автор науково-фантастичного роману *451 градус за Фаренгейтом* (1953). Мое дослідження зосереджено на онтологічному зіставленні фактивності і фіктивності в науково-фантастичній літературі в цілому і в згаданому романі, зокрема. У ньому за допомогою мовностилістичного методу аналізу виявлено мовностилістичні особливості роману Бредбері, справжні й вигадані термінологічні та образні лінгвістичні елементи. Я також звертаюся

до визначення ряду когнітивних понять і стратегій, що обумовлюють фактивний аспект роману і сприяють створенню середовища когнітивної відчуженості, тим самим розкриваючи когнітивні схеми, вербальні засоби і способи, фігуральну мову цього роману.

Ключові слова: відчуженість, *451 градус за Фаренгейтом*, наукова фантастика, пізнання, фактивні мовні одиниці, фіктивні мовні одиниці.

Anything you dream is fiction, and anything you accomplish is science, the whole history of mankind is nothing but science fiction.

(Talk: Ray Bradbury 2014)

Introduction

In the 21st century we live in a world full of technological advancement and an abundance of cyberspace; we are astounded at different innovations proving right the predictions of the previous centuries about mankind going to be technologized. Science fiction – imaginative fiction based on scientific discoveries and the ideology of change, the form of literature that talks about facts wrapped in fiction, the intersection of the world of science fiction and the world of reality¹ – plays a topical and important role in this type of predictions. It also makes people speculate about the future of mankind and the world. Science fiction futures express our utopian dreams and dystopian nightmares, showing in creative visions what we see as best and worst for our present world. A number of authors have been involved in future technological predictions, and, concerned with producing science fiction literature, some of them adhere to hard science fiction – referring to natural sciences and pure technological advancement, and others – to soft science fiction – discussing socio-political futuristic issues. Among the latter is the famous American writer Ray Bradbury with his science fiction novel *Fahrenheit 451* (1953). Thus, the **object** of the present study is the linguostylistics of *Fahrenheit 451*. Although the novel is a good example of future prediction, the author himself once mentioned: “I didn't write *Fahrenheit 451* to predict the future, I wrote it to prevent the future” [in Prochnow 2013]. Preventing a disastrous future is actually one of the most important humanistic objectives of the literary genre of science fiction. The linguistic **aim and objective** of this study is to disclose the cognitive frameworks, resources, meanings, as well as the figurative language of the novel, hidden-between-the-lines messages of the author.

The science fiction writer sets the focus on the technological aspect and its relation to imagination, creating the genre initially called *scientifiction* by editor, journalist and publisher Hugo Gernsback [1926], and then – *science fiction*. The Golden Age (or Classic Age) of science fiction which lasted from the late 1930s through the early 1960s was marked by great attention to accurate detail in natural sciences, especially physics, astrophysics, and chemistry, and precise depiction of worlds that more advanced technology might make possible to create.² The New Wave movement (1960-1980)³ dealing with issues like gender, human relationships, and, community which sought to apply mainstream literary qualities to science fiction, preceded the current phase of Cyberpunk/Post-Cyberpunk science fiction (1980 onwards). Previous to and at the beginning of the New Wave period Ray Bradbury had already gained respect in the field.

The **task** of the present case study is to reveal certain aspects of the ontological juxtaposition of factitiousness and fictitiousness in science fiction literature in general and in *Fahrenheit 451* in particular. Firstly, of particular concern are the linguostylistic peculiarities of the mentioned novel in terms of literal and figurative language, denotative vocabulary and expressive means of language. In other words, the analyses carried out on the semantic, metasemiotic and meta-metasemiotic levels of investigation through the linguostylistic and linguopeotic methods of analysis [Gasparyan 2008] enable us to disclose certain stylistic peculiarities of Bradbury's novel. Secondly, concentration on specific cognitive notions and strategies that condition the factitious aspect of science fiction and contribute to the creation of an environment of *cognitive estrangement* [Suvin

1979: 17] make it possible to present not only a literary or solely linguistic analysis but also to view them in light of certain style-forming cognitive linguistic peculiarities.

Intersection of Cognition and Estrangement in *Fahrenheit 451*

Science fiction relies on science even when it is contradicting, ignoring or negating some specific laws of science or technological advancement. It is the form of literature that examines the ways in which science penetrates, alters, and transforms the themes and worldview of fiction, involving in part true, in part fictitious laws or theories of science in which the cognitive content is never questioned.

Cognition, with its rational, logical, objective, real implications, refers to that aspect of science fiction that makes us understand the alien pictures of a given science fiction creation. *Estrangement* is the author's and the reader's unreal, subjective, imaginative, desirable view for a better, different personal and socio-political future that appears on a scale that is sometimes commonplace and sometimes magnificent. The intersection and cooperation of cognition and estrangement or cognitive estrangement results in what D. Suvin [1979: 38] argues to be the *novum*, the "totalizing phenomenon or relationship deviating from the author's and addressee's norm of reality." Suvin [1988: 76] makes the following case: "Born in history and judged in history, the *novum* has an ineluctably historical character. So has the correlative fictional reality or possible world which, for all its displacements and disguises, always corresponds to the wish-dreams and nightmares of a specific sociocultural class or implied addressees." The future in these terms expresses its conditions of possibility – conditions found in the human history of the present and hence – in no way devoid of scientifically possible cognitive solutions.

Cognition is a way of thinking about reality that takes its objectivity for granted. Estrangement is a way of describing reality that assumes the subjectivity of the mind and experience. At first sight the two notions seem to contradict each other. But science fiction is a form of literature in which the one complements the other. Science fiction pretends to take the objectivity of the world it describes for granted, yet clearly does not describe the objective world as we know it to be. It is scientific, but clearly unrealistic and fictitious.⁴

Estrangement differentiates science fiction from not only the realistic literary mainstream fiction but also from myth, folk (fairy) tale and fantasy. The mentioned discourses also doubt the laws of the author's empirical world, but they escape out of their horizons into a closed world indifferent to cognitive possibilities. Anything is possible in a myth, folk tale and fantasy, because they are manifestly impossible, whereas in science fiction the basic fact and the possibly predictable future is taken as a cornerstone. Estrangement, thus, is the process of separating or distancing ourselves from the real world and allowing our minds to imagine or create something that does not exist in our world but might exist in the future. It bases itself on notions that are cognitively logical, and then makes these notions imaginative.

Thus, cognitive estrangement is the ontological juxtaposition of cognitive concepts and imaginative patterns that create an unreal, nevertheless a logical science fictional world. In other words, cognitive estrangement is the factual reporting of fiction. It has the significant effect of estranging, alienating us from our usual assumptions about reality. Through cognitive estrangement science fiction describes unfamiliar things as if they were familiar [Suvin 1988]. Both the presence and interaction of cognition and estrangement, reflection of the factitious and the fictitious, the real and the unreal, the objective and the subjective, the literal and the figurative, the semantic and the metasemiotic, the conceptual and the metaphorical is a must for science fiction [Muradian 2013: 104].

The Linguostylistic Expression of Cognition/Fact and Estrangement / Fiction in *Fahrenheit 451*

Bradbury described his method of composition as “word association, often triggered by a favorite line of poetry” [Encyclopedia of Science Fiction and Fantasy 2005: 59-60]. Literary critic and writer J.B. Priestley [in CliffsNotes 2015] noted that behind Bradbury’s tales are “deep feelings of anxiety, fear, and guilt.” Both characterizations are typical of the style of *Fahrenheit 451*. The novel takes its title from the supposed temperature at which books burn – and is set in a repressive dystopian future where reading is banned and books should be destroyed.

As already mentioned, the role of cognition regarded as the factitious aspect of science fiction and opposing the fictitious one termed as estrangement, is great in *Fahrenheit 451*. In order to understand the discourse of the novel we should try to comprehend its cognitive framework, resources, semantic meanings conditioned by certain socio-technological changes and sociological ideology. Of no less importance is the comprehension of its estrangement models (conditioned by tropes, figures of speech, inherent and adherent connotations) requiring interpretation on the metasemiotic and meta-metasemiotic levels. The multiple cognitive connections or different arrays of information turn into creative mappings, transfers, and fictitious elaborations worked out by the author whose language is not purely semantic; it prompts for construction of meaning in an imaginative context with particular creative, estrangement resources.

From the very first passage of the story we cognize the sociological fact; if there is no knowledge (books), there is no development of consciousness and individual morality in society; if there is no ethical framework, there is no proper community. The cognitive framework helps to understand that along with books any form of personal intelligence, independent thought, and freedom of expression is destroyed, repressed, imprisoned. The estrangement functions within this major framework – in the dystopian world of fire. The fireman Guy Montag (the protagonist) is the killer of the future contrary to his original mission.

It was a special pleasure to see things eaten, to see things blackened and changed. With the brass nozzle in his fists, with this great python spitting its venomous kerosene upon the world, the blood pounded in his head, and his hands were the hands of some amazing conductor playing all the symphonies of blazing and burning to bring down the tatters and charcoal ruins of history. <...> He strode in a swarm of fireflies. He wanted above all, like the old joke, to shove a marshmallow on a stick in the furnace, while the flapping pigeon-winged books died on the porch and lawn of the house. [Fahrenheit 451, p. 1]

At first sight neutral, the words *eaten*, *blackened*, *changed* increase their stylistic charge when we cognize them in association with the fire. Metaphorically, the fire is presented as a *great python spitting its venomous kerosene upon the world*, and the hands of Guy Montag (burning the books) – as *the hands of some amazing conductor*. Burning gives Montag a sense of power, as if he had control over *symphonies of blazing and burning* (an epithet). Like the way a conductor influences music produced by an orchestra, Montag feels that he controls the world he burns. The metaphorical expression *to bring down the tatters and charcoal ruins of history* emphasizes the cultural and historical value of the things burnt. Books are a vital part of the cultural heritage, yet Montag feels nothing but pleasure when burning them. The act of burning is associated with destructive, irresponsible pleasure. We know this because symphonies are refined, sophisticated, enjoyable musical pieces and comparing the act of burning to that of a symphony tells us that Montag sees the burning as a feast for his senses. Fireflies are a beautiful scene when they fly in a swarm. The metaphor *He strode in a swarm of fireflies* describes the sparks and burning embers flying around Montag as he walks through the wreckage. The metaphorical utterance *the flapping pigeon-winged books died on the porch and lawn of the house* contains an epithet (*pigeon-winged books*) and a personification (*books died on the porch and lawn of the house*). Burning books, like

burning pigeons soaring in the sky, like burning human imagination, happiness, hopes, desires and thus plunging people into intellectual darkness (meta-metasemiotic level) enhances the impact of the brutality of what is happening around.

The example below reads:

He held his pants out into an abyss and let them fall into darkness. His hands had been infected, and soon it would be his arms. He could feel the poison working up his wrists and into his elbows and his shoulders, and then the jump-over from shoulder-blade to shoulder-blade like a spark leaping a gap. His hands were ravenous. [Fahrenheit 451, p. 19]

In the genuine metaphor *held his pants out into an abyss and let them fall into darkness*, the inherently connotative noun *abyss* (a space so great that cannot be measured), combined with *darkness*, is indicative of a certain change in the psychology of the protagonist. He is trying to hold his breath when stealing books (to be burnt) as he no longer enjoys the process. This action is just an involuntary bodily reflex. He regards his hands as infected and describes the process through the simile *the poison working up his wrists [...] like a spark leaping a gap*. The *poison* refers to his sense of guilt at wrongdoing. Later this same sense is more vividly expressed when describing how Montag washes his hands at the fire station in an attempt to cleanse them from the guilt (an obvious allusion to Shakespeare's *Lady Macbeth*). A personified metaphorical expression we come across in the passage is *his hands were ravenous*. The larger context enables us to understand and interpret the meta-content of *ravenous* as his desire to satisfy his unconscious, instinctive eagerness (hunger) for destroying books.

At first sight completely contradicting, estrangement and cognition are interconnected. Estrangement is considered a basic human cognitive ability, central to meaning-making and rationality. As argued by many authors [Johnson 1987; Fauconnier and Sweetser 1996; Lakoff and Johnson 1999], the way we reason and what we can experience as meaningful is based on structures of imagination. Thus, Bradbury's creative language is the result of cognition that centers on estrangement constructions of meaning as the discourse unfolds in the context.

They had two machines, really. One of them slid down into your stomach like a black cobra down an echoing well looking for all the old water and the old time gathered there. It drank up the green matter that flowed to the top in a slow boil. Did it drink of the darkness? Did it suck out all the poisons accumulated with the years? It fed in silence with an occasional sound of inner suffocation and blind searching. It had an Eye. The impersonal operator of the machine could, by wearing a special optical helmet, gaze into the soul of the person whom he was pumping out. [Fahrenheit 451, p. 6]

The extended metaphor elaborated within the general cognitive frame covers the whole passage. The concept of advanced technology (*two machines; impersonal operator of the machine; wearing a special optical helmet*) comes to the fore. This technology, called to save human lives (and it does in this case), is compared to an evil snake sucking the poison out of the body (*slid down into your stomach like a black cobra*). It peeps into the depths of the human soul, drains people of their freedom and knowledge (*It had an eye; gaze into the soul of the person whom he was pumping out*). The inherently connotative nouns *darkness*, *poisons*, *suffocation* are indicative of Mildred's despair and unhappiness. In the century of technological advancement where the human factor is not very important, *the machines* save us but they also control our lives and add to our loneliness.

The negative cognitive view of technology is enhanced through the highly expressive means used in the next example:

It was not the hysterical light of electricity but-what? But the strangely comfortable and rare and gently flattering light of the candle. One time, when he was a child, in a power-failure, his mother had found and lit a last candle and there had been a brief hour of rediscovery, of such illumination that space lost its vast dimensions and drew comfortably around them, and they, mother and son, alone, transformed, hoping that the power might not come on again too soon. [Fahrenheit 451, p. 3]

The two epithets – *the hysterical light of electricity* and *the strangely comfortable and rare and gently flattering light of the candle* – represent two eras: the life before and after technology. The two contradicting notions, the negatively charged *hysterical* and the positively charged *comfortable* indicate that the author's sympathies are with the *rare* first, the good old days with *gently flattering light of the candle*. The next, sixty-one word sentence, and especially the linguistic units *a brief hour of rediscovery; illumination; space lost its vast dimensions and drew comfortably around them; hoping that the power might not come on again too soon* complement this view. Semantically, the word *hysterical* refers to a state where things are out of control. When applied to the *light of electricity*, it shows (on the metasemiotic level) that the light is strong and unsettling to the senses. Interestingly, the larger cognitive frame (technological advancement) helps us to disclose meta-metasemiotic reflections: *the hysterical light of electricity* (technology) reinforces a sense of loneliness and inferiority; in contrast, it is in the candlelight that, basking in warmth, we feel the beauty and happiness of life. The candlelight is *illumination*; the electric light is confusion and depression.

The following passage is a good example of Bradbury's cognitive prediction of the destructive force of technology at a time when the electronic disaster had not arrived yet.

Without turning on the light he imagined how this room would look. His wife stretched on the bed, uncovered and cold, like a body displayed on the lid of a tomb, her eyes fixed to the ceiling by invisible threads of steel, immovable. And in her ears the little Seashells, the thimble radios tamped tight, and an electronic ocean of sound, of music and talk and music and talk coming in, coming in on the shore of her unsleeping mind. [Fahrenheit 451, p. 5]

The seashell symbolizes nature. When we press a seashell against our ear, it seems we hear the sound of the sea. Indirectly compared *thimble radios* and *the little Seashells* are in fact incompatible. The aim of the comparison is to focus on the separation of man from nature, from the real life, materialized in the *thimble radios* (today's iPods – small digital audio players that can store thousands of tracks from the Internet). The separation is expressed through the following expressive means: *His wife stretched on the bed, uncovered and cold, like a body displayed on the lid of a tomb* (simile); *invisible threads of steel* (epithet); *immovable* (connotative adjective), *electronic ocean of sound* (epithet); *unsleeping mind* (epithet). The result of the separation is still more depressing: people live beside one another but listen to their headphones rather than engaging in conversation. The constant, hypnotizing, manipulating sound can only give an illusion of happiness. The meta-metasemiotic reflections indicative of a society plagued by hedonism⁵ – show the isolation of man obsessively dwelling upon mass entertainment instead of the real world. The latter is expressed in Beatty's advice to Montag:

Don't give them any slippery stuff like philosophy or sociology to tie things up with. That way lies melancholy. [Fahrenheit 451, p. 77]

Cognitively, philosophy and sociology are disciplines that examine the nature of life and human existence. Estrangement, however, realized through the word *melancholy*, refers to the notion that *philosophy or sociology* embroil the mind in difficult issues and may lead to depressing truths

(according to Beatty). Thus, Montag (and the society) must reject the disciplines, opting instead to focus on amusement.

However, the novel does not end on such a despondent note. *The tree of life* (p. 77) symbolizing fertility and growth, promises much hope and gives a sense of optimism. The society depicted in the novel is the metaphorization of our past, present and future, and we are glad to find that there is hope for regeneration, a change for the better for mankind on this small planet of Earth.

Conclusion

Science fiction has its unique place in the world of literature. Its uniqueness is conditioned by the all-important juxtaposition of fact and fiction, cognition and estrangement, intellect and imagination, literal and figurative discourses. This juxtaposition, reflected in the cognitive frame of an estranged creative language, works perfectly in Ray Bradbury's *Fahrenheit 451*. The findings presented in this paper support the claim that both cognition and estrangement, and their linguostylistic expressions should be present and interactive in science fiction. Bradbury's estrangement, at first sight an escape from cognition, creates a society that does not exist in reality, and might exist in the future (or already exists). The cognitive framework, resources, meanings, however, is a constant existence in the novel conditioned by certain socio-technological changes and sociological ideology expressed through certain linguistic units realizing their literal meanings. Bradbury's *Fahrenheit 451* proved to be a very useful source for our research thanks to the presence of cognitive notions and richness of figurative language, combined with the hidden-between-the-lines authorial messages.

NOTES

1. Science fiction is a genre of literature that resists easy definition. This has become clear due to a number of works and discussions put forward during the course of its development. All of the many definitions offered by critics have been contradicted or modified by other critics.
2. This was the period in science fiction history that focused on the ability of the given narrative to function within the boundaries of the predictable future and perceive it as something *nostalgic*. This period takes as a premise the idea that science fiction is not interested in what *may happen* but in the way things *have been* [Encyclopedia of Science Fiction and Fantasy 2005].
3. The New Wave, initially centered in England and soon moved to the United States, changed the focus of science fiction from the hard (based on natural sciences) to the soft (based on the humanities).
4. Robert Scholes, in his book *Structural Fabulation* [1975: 2], has stressed the fictitious strain of science fiction. He defines *fabulation* as "fiction that offers us a world clearly and radically discontinuous from the one we know, yet returns to confront that known world in some cognitive way."
5. Hedonism is the doctrine that assumes pleasure or happiness is the highest, the primary or the most intrinsic good for mankind. A hedonist maximizes net pleasure (pleasure without pain) and lacks respect for intellectual activity.

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