

Analytical Framework of Extrapolation and Metaphor in William Gibson's *Neuromancer*

Ekstrapoliacijos ir
metaforos analitinis tyrimas
Williamo Gibsono romane
„*Neuromancer*“

SOCIOLINGUISTICS / SOCIOLINGVISTIKA

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The theoretical background of cyberpunk literature would be void without the actual analysis of extrapolation and metaphor in William Gibson's (the forerunner of cyberpunk subgenre) *Neuromancer* (1984). Despite being examined as a product of both imaginative and cognitive worlds, the metaphor cannot thoroughly express the actual reality. The latter aim is realized through *extrapolation* which can be described as a scientifically oriented cognitive estrangement, rational imagination capable of making predictions which have a reasonable chance to become reality. Thus, extrapolation deals with how to construct metaphor on truth and helps to draw the borderline between the scientifically oriented truth and the imaginary truth. The delimitation of the given borderline contributes to knowing and recognizing the original language and style, the cognitive and imaginative maps of cyberpunk literature. It is the *cyberspace* and its characterizations of *matrix*, *simstim*, *memory*, *Microsoft(s)*, *DNA* that represent the main components and sources of extrapolation for the imaginary urban space examined quite closely in *Neuromancer*. The infiniteness of *Cyberspace* reflects the probability of those futuristic and trajectory settings which are the main "inhabitants" of Gibson's cyberpunk. The settings are extrapolated and transmitted to the realm of metaphoric chains in which extrapolation functions as a unique type of cyberpunk metaphor.

KEYWORDS: extrapolative analysis, cyberpunk concepts as components of extrapolation, figure of extrapolation, extrapolated metaphor.

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Abstract



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Introduction

The overall effect of William Gibson's cyberpunk novel *Neuromancer* (1984) is its search for knowledge, meaning and new emotions, its creation of a balanced textual construct, something that could be realized as an actual existence or as a metaphor.

Gibson's cyberpunk presents visions of the future based on the extensive application of the idea of *cyberspace*, a term coined by William Gibson and first used in *Neuromancer*. The *cyber* component alludes to the fact that the point of reference of this genre of science fiction is cybernetics rather than spaceships and robots. The *punk* element hints at a defiant attitude based on the urban street culture. Cyberpunk's characters are people on the fringe of society: outsiders, misfits and psychopaths, struggling for survival on a garbage-strewn planet which is always on the verge of dissolving into a quagmire of muddy dreams. Thus, the setting of cyberpunk novel as "high tech and low life" sounds appropriate (Cavallaro 2000, p. 14; Baghira 2015, p. 2). As opposed to other genres of science fiction the cyberpunk revolves its subject in near future.

For the accurate representation of the main principles of the cognitive model boundaries we would adhere to the extrapolation of some real or invented scientific concepts which both flourish and complicate the nature of cyberpunk metaphor. The basic understanding of the cognitive force of cyberpunk metaphor is achieved through investigation of extrapolation related to science fictional technological, computer-based concepts. The main track of our analysis deals with the study of metaphor with ***cyberspace, matrix, simstim, memory, Microsoft(s), DNA*** extrapolated concepts or components of extrapolation. The paper aims at disclosing the *cyberspace* characterizations of *matrix, simstim, memory, Microsoft(s)* and *DNA* as the main components of extrapolation for the imaginary urban space in Gibson's cyberpunk. The mentioned concepts are extrapolated to metaphoric chains and function as a unique type of cyberpunk metaphor. The application of the method of extrapolative analysis once again reveals the cognitive nature of metaphor which, in its turn, helps to get insight into different creative scientific phenomena typical of science fiction. Despite the abundance of metaphor analyses and metaphor interpretations in different registers, the presentation of metaphor from the perspective of extrapolation in science fiction in general and cyberpunk in particular, leaves much to be desired, hence the novelty of the present research.

Cyberpunk Components of Extrapolation in *Neuromancer*

Cyberspace is one of the most important components of extrapolation and metaphor used in cyberpunk literature. The framework of *cyberspace* is closely tied to the notion of *cybercity* where *cyberspace* is expressed through virtual reality. Gibson describes the world in *Neuromancer* as a means of shifting from the real to the *cyberlog* unreality. In this unreal world changes and transformations taking place in human memory are central themes. The *cybercity* is comprehended in terms of the computer's most basic operations: its binary on/off options, and the gates through which various data are arranged. These operations can be seen as metaphors for organization of space based on principles of "presence and absence", "order and disorder" (Cavallaro, 2000, p. 22).

We would start our extrapolative analysis with the very first sentence of the *Neuromancer* which not only represents a conceptual metaphor and guarantees the transfer from the known domain to the unknown but is also a means of implementation of the scientific figure of extrapolation which broadly defined is the estimation of a value based on extending a known sequence of values or facts beyond the known area.

- (1) *The sky above the port was the color of television, tuned to a dead channel.*
(Gibson, 1984, p. 1)

The basic grammatical structure of the metaphor in the given example is of the domain construction type which is generally expressed by the source and the target (Lakoff and Johnson

1980, p. 4; Sullivan 2007, p. 6). The multifold comparison is expressed through *the sky*, *the color of television* and *the dead channel*. The source domain is expressed by *the color of television* which is qualified as the color of *a dead channel* which, in its turn, characterizes the target domain – *the sky above the port*. In other words, the color of the sky is compared with the color of *television* which could be either colored or colorless/black and white. The attribute *dead* contributes to distinguishing the required color as grey.

The above extrapolated metaphor (1) can be considered through the mathematical figure of linear extrapolation $y=cx+a$ where x and y are variables, c and a are constants (Brezinski and Zaglia 1991). Linear extrapolation is able to function at best within sentence structure as a linguistic and conceptual device. According to McGlone (1996) and Sullivan (2007) metaphors are the interpretations of implicit comparison statements rather than categorical assertions. Thus they could quite freely express the relationships of the figure of linear extrapolation, x and y being the poles and extremes of comparison.

The nouns *sky* and *color* are the constants as they represent fixed data whereas the noun *television* and the collocation *dead channel* are variables – instead of the colour of *television* the colour of another object could have been considered and the epithet *dead channel* would change respectively. Considered from the perspective of extrapolation the given example would be presented as follows:

$y = cx + a$

The biblical themes of *hell* and *paradise*, *body* and *soul* are extrapolated in the next example (2). The *bodiless exultation of cyberspace* is compared to a heavenly life, the happiness is *bodiless* as it is Case's mind (or soul) that is enjoying the virtual reality (the paradise). In a preceding sentence Case has already expressed his contempt for the human body (*The body was meat. Case fell into the prison of his own flesh.* p. 3). The capitalized noun *Fall* intensifies his sorrow at being disconnected from the object of his obsession – the *cyberspace*; his flesh is of no value to him if he is ostracized from the hi-tech paradise.

(2) *For Case, who had lived for the bodiless exultation of cyberspace, it was the Fall.*
(Gibson 1984:3)

The cognitive realm of the above metaphor could undergo the following modification: *cyberspace* [was] *bodiless exultation* [and disconnection from it] *was the Fall*. The source domain *Fall* is closely related to the AP *bodiless exultation* (otherwise NP *cyberspace exultation*) of the target domain. Thus, the simplified conceptual metaphor would be: *Without cyberspace life is a Fall*.

The theme of the computer *cyberspace* and *the Sprawl* (a megacity with its own artificial climate, unreal day, night circle shift) is actually carried through the whole of *Neuromancer* and finds its realization in a number of ways.

(3) *A year here and he stilled dreamed of cyberspace, hope fading nightly. All the speed he took, all the turns he had taken and the corners he had cut in Night City, and still he had seen the matrix in his sleep, bright lattices of logic unfolding across that colorless void. The Sprawl was a long strange way home over the pacific now.*
(Gibson 1984:2)

Three important notions underlie the creation of the metaphoric picture in the given example (3) – *matrix*, *cyberspace* and *the Sprawl*. The extrapolation, respectively, refers to these themes. *Cyberspace* constitutes the head of the given metaphoric chain since the basic

actions are either implemented in cybernetic virtual reality, thus enhancing the metaphoric structures with invisible potentials of online dematerialization, or take place offline, thus depicting materialization, i.e. vanish from cyberspace as a tragedy. *The Sprawl*, in its turn, is a visualization of a future where virtually the entire East Coast of the United States has melded into a single mass of urban sprawl (The Sprawl, 2013).

(4) **Cold steel odor** and **ice** caressed his spine. And faces peering in from **a neon forest**, sailors and hustlers and whores, under **a poisoned silver sky**. The air in **the Sprawl** was dead, immobile.

(Gibson, 1984, p. 73).

The use of stylistically charged words and word groups with negative connotations (*Cold steel odor; ice; a neon forest; a poisoned silver sky; dead; immobile*) makes the dystopian picture of *the Sprawl* far more unattractive. The air here is *dead* and *immobile* like the sky described as dead, grey or colorless in the very first sentence of the novel (1). The last sentence of the above suprasentential unity (4) is both an ideal implementation of the figure of extrapolation and a perfect object of extrapolative analysis. The source domain is expressed by detached adjectives (*dead, immobile*) functioning as variables and the target domain – by nouns functioning as constants (*air, the Sprawl*). The extrapolated sentence presents a unique, genuine metaphor – an extrapolated metaphor which is typical of science fiction narrative. The figure of extrapolation of the deconstructed sentence given below depicts the relationship of the two domains:

(4a) *The **dead** **air** was **immobile** in the **Sprawl**.*
 $y = c \quad x \quad + \quad a$

The stem of the figure of extrapolation with the component *matrix* is based on the definition of the latter as a rectangular array of numbers, symbols, or expressions, arranged in rows and columns. The feature typical of matrices is the multiplication and amplification only in case the number of elements in rows and columns equals. A major application of matrices results in linear transformations (Beauregard, 1973, p. 56). In the case discussed the *matrix* is a part of *the Sprawl* virtual reality able to add data into it and change its structure.

Thus, the *matrix* is a component and a perfect means of realization of extrapolation in the actual *cyberpace* reality, i.e. the *matrix* has a far-fetching inner force which makes it stand closer to extrapolation since the latter is basically dealing with the predictable and unpredictable futures being based on scientific polarizations and thus creating the concept of digitalization through digital maps. In science fiction, extrapolation allows writers to focus not on the way things are, as all the other types of fiction, but on the way things can change. It provides science fiction with a quality that D. Suvin has characterized as “cognitive estrangement” (Suvin, 1974), the recognition of what we are reading is not the world as we know it, but a world whose change forces us to reconsider our own with an outsider’s perspective.

After examining the nature of extrapolation underlying the metaphoric chain (3) we can focus on certain linguo-stylistic structures that help to reveal shades of figurative meaning. The second sentence is a far-fetched (extended) metaphor, within the frames of which the conceptual metaphor *the matrix* [...] *bright lattices of logic unfolding across that colorless void* is actualized. The source domain (*bright lattices* [partially ordered set of elements] *of logic unfolding across that colorless void*) represents the *matrix*, its numbers, symbols, rows and columns. The target domain is the *matrix* itself. The epithet *colorless void* symbolizes the cyberspace or the grey sky of *the Sprawl* which now seems too far away (*a long strange way home*). The basic conceptual metaphor underlying the suprasentential unity would be *cyber-space/the matrix/the Sprawl* [is a far away] *lattice of colorless void*.

Other extrapolated concepts and shades of meaning on the nature of *matrix* are revealed in the following examples:

(5) *He had operated on an almost permanent adrenaline high, byproduct of youth and proficiency, jacked into custom **cyberspace deck** that projected his disembodied consciousness into the **consensual hallucination that was the matrix**.*

(Gibson, 1984, p. 2)

(6) ***Cyberspace. A consensual hallucination** experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts.*

(Gibson, 1984, p. 31)

We cannot proceed with the analysis unless we examine the meaning of the term *cyberspace deck* or *deck* for short (5). The latter is used to access the virtual representation of the *matrix*. According to Gibson *the deck* is connected to a device that operates by electrodes to stimulate the user's brain while drowning out other external stimulation. The *disembodiment of consciousness* is achieved through the *cyberspace deck* which creates a passage to the human brain. An obvious metaphoric link is created between *consensual hallucination* and *the matrix/cyberspace*. The target (*matrix*) and the source (*consensual hallucination*) are given in reverse order (*the consensual hallucination that was the matrix*), thus increasing the stylistic effect of the extrapolated metaphor. In (6) the same concept is expressed through a synonymous target (*Cyberspace. [is] A consensual hallucination*). The metaphoric chains respectively are:

(5a) *source domain* → *be* ← *target domain*

(6a) *target domain* → *be* ← *source domain*

As was witnessed in the examples examined above, the copula *be* plays an important role in the transmission of the metaphoric meaning in cyberpunk narrative. It adds elements of reality into the narrative thus increasing probability of the extrapolated notions.

Simstim and **memory** are important components of extrapolation and, as such, important parts of virtual reality and constant habitats of *the Sprawl*.

(7) *The dream, the **memory**, unreeled with the monotony of an unedited **SimStim** tape.*

(Gibson, 1984, p. 31)

(8) *Cowboys didn't get into **simstim**, he thought, because it was basically a meat toy. He knew that the trodes he used and the little plastic tiara dangling from a **simstim** deck were basically the same, and that the cyberspace matrix was basically a drastic simplification of the human sensorium, at least in terms of presentation, but the **simstim** itself struck him as a gratuitous multiplication of flesh input.*

(Gibson, 1984, p. 55)

In example (7) *memory* is not the real human memory but the one in virtual reality. It is *unedited* which means that it has not undergone any outer interference and has preserved all the characteristics of the original memory. In this case (in example 7) the term *simstim* (or *Simstim* – literally *simulated stimulation*) is the logical parallel of virtual reality rather than experiencing virtual reality as in (8) where it represents sensory stimulation of another person through a device placed in the mind in order to view the world through this "another person's" eyes. *Simstim* is designed to record and playback brain impulses to the point that all sensory input, including emotional responses, is recorded and preserved. Through the *SimStim* Case follows Molly, every now and then allowing his thoughts merge with hers but unable to have control over her actions. The device is abandoned only when Case is forced to catch her physically.

(9) *It was disturbing to think of the Flatline as a construct, a hardwired **ROM** cassette replicating a dead man's skills, obsessions, knee-jerk responses.*

(Gibson, 1984, p. 52)

In (9) the metaphoric model is presented as a memory device, a computerized *ROM* (*Read-only memory*) cassette of a dead person's mind. This means that human memory can be recorded on a storage medium (*ROM*) to be used in computers and other electronic devices. The data stored in *ROM* either cannot be modified, or can be modified very slowly at will. Thus, the construct is a *ROM* with a memory that can be subjected to changes. In (9) the *ROM* functions both as a metaphor and a literalism.

(10) *Her destination was one of the dubious software rental complexes that lined **Memory Lane**.*
(Gibson, 1984, p. 73).

Memory Lane is the extension of memory to a lane. This N+N attributive word-group cannot be merely observed as an epithet within a metaphorical structure or an extrapolated metaphor. It also functions as a literalism indicating the memory data accumulated and transferred into a software. The metaphoric expression is realized through a two-fold domain construction; one domain structure is extended from the other (*Her destination was one of the dubious software rental complexes; Her destination was one [...] software rental complex [...] that lined Memory Lane*). The source domain (*complexes*) is realized through the attributes *dubious, software, rental* and the attributive clause *that lined Memory Lane*.

The conceptual mappings of Gibson's *cyberspace* would be impossible to comprehend without investigating **Microsoft(s)** as another component of extrapolation and metaphor. Gibson's *Microsoft* is a chip used in conjunction with a cybernetic wetware implant located behind the ear. *Microsofts* grant the user new abilities as long as they are plugged in.

(11) *The weight of memory came down, an entire body of knowledge driven into his head like a **Microsoft** into a socket. Gone.*

(Gibson, 1984, p. 69).

The basic line of comparison goes between *the weight of memory, an entire body of knowledge* and *a Microsoft*. The ability of the *Microsoft* chip to store the data of human memory and enable people to put the data into efficient use is the underlying source of extrapolation.

One of the grounding concepts of cyberpunk and a source of extrapolation – **DNA** – is expressed in a number of vivid metaphors in *Neuromancer*. Here is one of them:

(12) *There was a kind of ghostly **DNA** at work in the Sprawl, something that carried the coded precepts of various short-lived subcults and replicated them at odd intervals.*

(Gibson, 1984, p. 39)

The given example (12) is a good reflection of the extrapolative aspect of metaphor where the understanding of *DNA* (deoxyribonucleic acid) is principally important. *DNA* is a molecule that encodes the genetic instructions used in the development and functioning of all known living organisms. It is well-suited for biological information storage. The information carried by *DNA* is held in sequence of pieces of *DNA* which are the genes. Transmission of genetic information in genes is achieved via complementary base pairing (DNA, 2015). Extrapolations based on this scientific definition result in different metaphorical usages based on infiniteness. As in the above example (12) *DNA* is represented as the *Cybercity* infiniteness. But why is it viewed as *ghostly*? The matter is that the inhabitants of the future are not only born humans but also created or *replicated* biological constructs carrying *the coded precepts of various short-lived subcults*. So far, the replication has generally been viewed as undesirable, and Gibson adheres to this approach – the replicated ones are the phantoms of the real

humans. The extrapolated truth will become more predictable and realistic if we view the epithet *ghostly DNA* as a shift from the conceptual metaphor *DNA is ghostly*.

All the sources and components of extrapolation or extrapolated metaphors represent the general purport of Gibson's message. But the most creative blend, the biggest extrapolation and the "most extended" metaphor is the title of the novel itself. In the final pages of the novel we uncover the meaning of the imaginative title – *Neuro from the nerves, the silver paths. Romancer. Necromancer. I call up the dead* (p.143).

William Gibson's cyberpunk is one of the many versions of science fiction that finds ways of expressing and materializing the backwards trajectory of a high tech future that is piercing through our present into our past by precisely mapping out the realm of prediction. The *cyberspace* reality actualized in the *Neuromaner* presents a unique style juxtaposition of extrapolation and metaphor. The application of extrapolative analysis has once again demonstrated the cognitive nature of metaphor which, in its turn, helps to get insight into the nature of different creative scientific phenomena typical of science fiction.

The analysis has shown that extrapolation and metaphor or extrapolative metaphor exercised in futuristic settings is the cornerstones of science fiction in general and cyberpunk in particular. The application of the figure of extrapolation ($y=cx+a$) works more productively in linguistic constructions where two pairs of metaphoric expressions are linked with the help of the copula *be*. Heads of the given pairs are basically expressed with the help of nouns and are attached to the second element of the metaphoric pair through an attributive bond.

The basic track of our analysis has led to the study of metaphor as a cognitive device which is built on extrapolation and correlation of source and target domain mappings. The given correlation results in scientifically oriented abstractions to create the illusion of reality. The metaphors used in the elucidated examples are characterized by vividly expressed or transformed linguistic structures. The grammatical structures are visualized due to the link between source and target domains of metaphoric conceptual mappings. The basic types of structure are demonstrated as extended metaphors based on *cyberspace*, *matrix*, *simstim*, *memory*, *Microsoft(s)*, *DNA* extrapolated concepts which enable to draw parallels between the phenomena witnessed in the linguistic structure of the sentence and the extra-linguistic reality.

The term *cyberspace* is of particular significance since it acts as an underlying concept and source of extrapolation of imaginary urban space examined quite closely. The *Cyberspace* infiniteness reflects the probabilities of those futuristic settings which are the main "inhabitants" of Gibson's cyberpunk. The settings are extrapolated and transmitted to the realm of metaphoric chains in which extrapolation functions as a unique type of cyberpunk metaphor – the extrapolated science fictional metaphor.

Conclusion

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1. Baghira, T., 2015. *Cyberculture: Literature, Film and Commercialization.* //International Multidisciplinary Research Journal. Indian Streams Research Journal. vol 5/1. [Online] available at: <http://isrj.org/UploadedData/5948.pdf> [Accessed February 2015]
 2. Beauregard, R.A., Fraleigh, J.B., 1973. *A First Course in Linear Algebra: with Optional Introduction to Groups, Rings, and Fields.* Boston: Houghton Mifflin.
 3. Brezinski, C. and M. Redivo Zaglia, 1991. *Extrapolation Methods. Theory and Practice.* Amsterdam: North-Holland.
 4. Cavallaro, D., 2000. *Cyberpunk and Cyberculture. Science Fiction and the Work of William Gibson.* London and Brunswick: The Athlone Press.
 5. *DNA*, 2015. [Online] available at <http://en.wikipedia.org/wiki/DNA> [Accessed February 2015]

References

6. Lakoff, G. and Johnson, M., 1980. *Metaphors We Live By*. Chicago: University of Chicago.
7. McGlone, M.S., 1996. *Conceptual Metaphors and Figurative Language Interpretation: Food for Thought?* // Journal of Memory and Language 35, Article No. 0029: Lafayette College. <http://dx.doi.org/10.1006/jmla.1996.0029>
8. Sullivan, K. (2007) *The Linguistic Structure of Literary Metaphor*. Berkeley: University of California.
9. Suvin, D., 1974. *Radical Rhapsody and Romantic Recoil in the Age of Anticipation: A Chapter in the History of SF*. // Science Fiction Studies. vol. 1, n. 4, Greencastle IN, DePaw University: SF-TH Inc.
10. *The Sprawl*, 2013. [Online] available at: http://en.wikipedia.org/wiki/The_Sprawl [Accessed June 2014]

Source of Data

1. Gibson, W.F., 1984. *Neuromancer*. London: Harper Collins. See also Gibson, W.F., *Neuromancer*. [Online] available at <http://lib.ru/GIBSON/neuromancer.txt> Retrieved 2006. [Accessed May 2014]

Santrauka

Gaiane Muradian, Liza Mardoyan. Ekstrapoliacijos ir metaforos analitinis tyrimas Williamo Gibsono romane „Neuromancer“

Kibernetinės fantastikos literatūros teorinis pagrindas būtų niekinis be faktinės ekstrapoliacijos ir metaforų analizės Williamo Gibsono (kibernetinės fantastikos subžanro pradininko) romane „Neuromancer“. Nepaisant to, kad metafora yra analizuojama kaip kūrybinio ir kognityvinio pasaulio produktas, ji negali tobulai išreikšti faktinės realybės. Pastarasis tikslas yra realizuojamas per *ekstrapoliaciją*, kurią galima apibūdinti kaip mokslinį kognityvinį nuotolį, racionaliąją vaizduotę, gebančią kurti prognozes, kurios turi šansą tapti realybe. Todėl ekstrapoliacija analizuoja, kaip, remiantis tiesa, sukonstruoti metaforą ir padeda nubrėžti skiriamąją liniją tarp mokslinės ir įsivaizduojamos tiesos. Šios skiriamosios linijos delimitacija prisideda prie pirminės kalbos ir stiliaus žinių ir atpažinimo bei kognityvinių ir įsivaizduojamų kibernetinės literatūros žemėlapių. Būtent kibernetinė fantastika ir tai, kaip ji charakterizuoja *matrix, simstim, memory, Microsoft(s), DNA*, sudaro pagrindinius ekstrapoliacijos, skirtos romane nagrinėjamai įsivaizduojamai urbanistinei erdvei, komponentus ir šaltinius. Romano „Cyberspace“ begalybė atspindi tikimybę tų futuristinių ir trajektorinių situacijų, kurios yra pagrindinės Gibsono romano „gyventojos“. Situacijos yra ekstrapoliuojamos ir perduodamos į metaforos grandinių karalystę, kurioje ekstrapoliacija funkcionuoja kaip unikalus kibernetinės literatūros metaforos tipas.

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