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Cyberpunk, Anime and Creative Foresight

ABSTRACT

The theme of the article is the vision of the future presented in cyberpunk literature and its representation in Japanese animation. Two constituents of this vision are examined: the notion of body modification and cyberspace. Movies and science fiction novels, as a part of popular culture, are influenced by the same factors that affect the whole society. In their novels cyberpunk writers show the social results of computer prevalence which occurred in the 1980s. Similarly, Japanese animators' vision of the future resulted from their country's rapid technological progress. Yet, fictional visions of the future are more advanced than technological progress so they can serve as a research field for future studies and foresight.

KEY WORDS

Foresight, futures studies, extrapolative science fiction, cyberpunk, anime, deconstruction, body modification, cyborg, cyberspace

In my article I focus on the application of science fiction literature in futures studies. This literature, as a kind of present day mythology, may be considered as a field of research which provides an influential vision of the future. My goal is to present how a particular subgenre of science fiction – cyberpunk – envisages the future and how this vision can be analysed in terms of foresight. “Science fiction is consequently considered [...] to be a branch of the futures studies in three ways: in its inherent predilection for prediction; as one of the best forms of historical source material for study changing ideas about

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the future; and simply as a way of involving students in academic speculation about the future”¹. Because of its inherent predilection for prediction, extrapolative science fiction literature is particularly constructive as a research field for future studies. Deconstruction of science fictive texts aims to reveal the constituents of the fictional vision of the future.

“The genre of science fiction [SF] is a product of late nineteenth- and early twentieth-century attempts to understand, shape and control the social environment. Despite its self-cultivated association with the hard sciences [...] its true relatives are social sciences for its most central theme is the impact of scientific advance upon society”². Alvin Toffler in his groundbreaking book *Future Shock* (1970) claims that science fiction literature serves to acclimatise us to the future and calls it “the sociology of future”³. But science fiction’s influence resides not only within the realm of its readers’ imagination, but also in the minds of scientists and politicians. By so doing it helps to create real objects and inventions, as well as imaginary worlds. The most widely known example of such a practice is the communication satellite that was at first described in 1945 by science fiction writer Arthur C. Clarke, and constructed seventeen years later by NASA scientists inspired by Clarke’s text. “Science and SF are useful emblems of the real and the possible. The Reagan administration began the Strategic Defense Initiative primarily because of input from SF writers”⁴. Also the name of the *Star Wars* military project initiated by the Reagan administration was named after the famous SF films created by George Lucas.

CYBERPUNK MOVEMENT

From a wide variety of science fiction subgenres, cyberpunk has been recognised as a particularly future-oriented brand in extrapolative science fiction. In cyberpunk novels, the notion of technology is the crucial element that constitutes its vision of the future. This theme also belongs to the most important branches of existing foresight programs. As a literary movement, cyberpunk also signifies an original attitude towards the future, derived from a post-

¹ F. Mendlesohn, E. James, *Fiction and the Future*, [in:] *The Knowledge Base of Future Studies, Vol. 1. Foundations*, ed. R. Slaughter, Kew 1996, p. 148.

² *Ibidem*.

³ A. Toffler, *Future Shock*, New York 1990.

⁴ G. Benford, *Science Fiction, Rhetoric, and Realities: Words to the Critic*, [in:] *Fiction 2000. Cyberpunk and the Future of Narrative*, eds. T. Shippey, G. Slusser, Athens, London 1992, p. 224.

modern paradigm. This paradigm is represented by the statement that the future has imploded into the present. Such a statement may be described by the words of J.G. Ballard, who in the introduction to his novel *Crash* wrote: “The future is ceasing to exist, devoured by all-voracious present. We have annexed the future into present, as merely one of those manifold alternatives open to us”⁵. By describing the near-future, cyberpunk writers seem to share Ballard’s point of view.

Cyberculture, an environment saturated by electronic technology, and its fictional representation in cyberpunk compels us to reassess drastically ideas of time, reality, materiality, community and space. The gap between the present and the future becomes narrower and narrower, as the futuristic fantasies of classic science fiction turn out to be integral parts of here-and-now⁶.

Another reason for analysing the cyberpunk subgenre in terms of futures studies is that its visions of the future, to some extent, were created with reference to the current state of scientific research. “Cyberpunk, with all its criticism, shows a future we might reasonably expect, and shows people successfully coping, surviving, and manipulating it”⁷. Moreover, cyberpunk emerged in the 1980s, a decade of technological revolution, when hi-tech gadgets ceased to reside within the realm of sterile laboratories or military research centres. The available computing power had been doubling since the middle of the seventies. Due to the miniaturisation of electronic components, computers became smaller and cheaper. Consequently, the idea of a personal computer emerged. The advancement of computers has begun and they have found their way into offices and homes, becoming part of the daily routine.

The cyberpunks are very much a product of the technological explosion of the 1980s with its proliferation of media, computers, and new technology. Their work is heavily influenced by the saturation of culture and everyday life through science, technology and consumer culture and their writing presents an overlapping of the realms of high-tech and popular mass culture⁸.

⁵ J. G. Ballard, *Crash*, London 1995, p. 4.

⁶ D. Cavallaro, *Cyberpunk and Cyberculture. Science Fiction and the Work of William Gibson*, London, New Brunswick NJ 2000, p. xi.

⁷ J. Gordon, *Yin and Yang Duke It Out*, [in:] *Storming the Reality Studio. A Casebook of Cyberpunk and Postmodern Science Fiction*, ed. L. McCaffery, Durham, London 1991, p. 200.

⁸ D. Kellner, *Media Culture: Cultural Studies, Identity and Politics Between the Modern and the Postmodern*, New York 1995, p. 303.

As the cyberpunk spokesperson Bruce Sterling states in a preface to *Mirrorshades* (1986) – the subgenre’s manifesto – “the cyberpunks are perhaps the first SF generation to grow up not only within the literary tradition of science fiction, but in a truly science-fictional world”⁹. The term ‘cyberpunk’ indicates two key elements in cyberpunk fiction. The first element – ‘cyber’ indicates a high-tech control system combining computers and other advanced technologies with strategies of surveillance and control; the second element – ‘punk’ – signifies an anarchic, urban subculture. The fusion of these two worlds resulted in an innovative strand of science fiction literature, which has become not only the ideological background for the whole computer society, but is also considered as an important insert into postmodern literature.

“Cyberpunk was a product of the commercial mass market of ‘hard’ SF; concerned on the whole with near-future extrapolation and more-less conventional on the level of narrative technique, it was nevertheless at times brilliantly innovative in its extrapolations of technology”¹⁰. The invention of cyberpunk literature relies heavily on its original attitude towards technology: for the first time, hi-tech devices were described not in terms of saving the human race but changing the shape of social structures as well as of individual human being.

Those writers who might be described as cyberpunk writers (including [William] Gibson, Bruce Sterling, Pat Cadigan) are mostly doing just the classic SF writers of the 1940s and 1950s frequently did: writing about the near-future and attempting to extrapolate current social, economic and technological trends into the twenty-first century and beyond. Their vision is very different from stainless steel vision of the 1950s¹¹.

The cyberpunk’s motto: “high tech, low life” indicates that advanced technological gadgets are used not only by multinational corporations and government agendas, but also by suburban gangsters, underground artists and outsiders. This motto is also one of the crucial elements of cyberpunk’s application in foresight. The pope of cyberpunk, William Gibson in his interviews frequently says that “the street has it’s own use of technology”. This thesis is crucial in creating the cyberpunk vision of the technology and society of the future.

⁹ *Mirrorshades: The Cyberpunk Anthology*, ed. B. Sterling, New York 1986, p. xi.

¹⁰ V. Hollinger, *Cybernetic Deconstructions: Cyberpunk and Postmodernism*, [in:] *Storming the Reality Studio...*, op. cit., p. 204.

¹¹ F. Mendlesohn, E. James, op. cit., p. 161.

TECHNOLOGY IN FORESIGHTING

The technology is also one of the most important notions in futures studies and foresight. They even have the same mythological rudiments. According to Greek mythology, the first technological skill that humans acquired was the ability to make fire. A brave human – Prometheus sneaked into the gods' abode and stole a burning branch. The name "Prometheus" consists of two Greek words: "pro" + "meth" (manthano), which means "knowing in advance", or "foresight". Prometheus – the fore-thinker – was also the mythological father of human technology and consequently turned technology into one of the most crucial elements of foresight.

The pioneers of modern foresighting are the Japanese, who made technology the foundation of their economy and assumed that if they could designate the right directions for scientific and technological development, they find the key to the development of the whole society. The first forecasts were made in the 1970s and since then every five years a new set of forecasts has been prepared. Although not all forecasts are successful, the Japanese emphasise that designating the precise directions is not as important as the process of reaching a social consensus in setting strategic goals for the whole nation. As a result of this, Japan has become the domain of hi-tech progress. Yet, nowadays technological advancement is the crucial factor in the development and economy of whole countries as well as individuals. "Technology is now, not only in a distant, science fictional future, an extension of our sensory capacities; it shapes our perceptions and cognitive processes, mediates our relationships with objects of the material and physical world, and our relationship with our own bodies. Technology is our historical context, political and personal"¹².

Cyberpunk's contribution to foresight consists in describing the consequences of technology's pervasiveness. The shape of future technologies is far less important than the human use of these technologies. In the 80s Gibson himself was not particularly interested in computers or other hi-tech devices. He wrote *Neuromancer* using an old fashioned typewriter, although he described how people in the near-future would use cyber space decks. "Cyberpunk fiction's visions of the future extrapolate from our current cultural preoccupation with computers to create worlds where the computer metaphor for human existence has triumphed"¹³. Cyberpunk writers presented in their no-

¹² T. de Lauretis, *Signs of Wo/ander*, [in:] *The Technological Imagination: Theories and Fictions*, eds. T. de Lauretis, A. Huyssen, K. Woodward, Madison 1980, p. 167.

¹³ C. Springer, *Electronic Eros. Bodies and Desire in the Postindustrial Age*, Austin 1996, p. 130.

vels a unique vision of the symbiosis between humans and technological devices. Within this field, cyberpunk literature outlined two important phenomena: cyberspace networking and body modification. They both were not completely new ideas, yet cyberpunk writers described them in detail, found them context and made them an important part of popular culture. When cyberpunk novels were written, the notions of a computer network or body implants were in quite an early stage of scientific research. Yet, in those novels they are fully developed phenomena and their authors not only propagated them, but also found their application. Hans Moravec, an acclaimed robotics specialist, in 1988 described the process of extracting human consciousness and downloading it into a machine, called 'transmigration scenario'¹⁴. "An early cyberpunk novel by Rudy Rucker entitled *Software* presents perhaps the closest popular-culture equivalent to Hans Moravec's transmigration scenario. [...] Because Rucker's novel was published six years before Moravec's book, it appears that the idea of extracting human brain patterns originated in science fiction"¹⁵. Asked by an interviewer if he was inspired by the science fiction novel in his own project, Moravec answered that it helped him to take his own eccentric ideas seriously: "Otherwise you tend to think of local possibilities, within society as it exists, rather than thinking of radically different things. It helped to keep getting the mind stretched at an early age"¹⁶.

CYBERSPACE

The first writer who anticipated the Internet was probably Murray Leinster in the sixties. Yet, even than his ideas were not completely fictional because of the Massachusetts Institute of Technology research regarding data transmission, namely the first paper on packet switching theory by Leonard Kleinrock, published in July 1961. Four years later, Lawrence G. Roberts – working with Thomas Merrill – connected computers in Massachusetts and California with a low speed dial-up telephone line creating the first ever computer network¹⁷. In 1969 Advanced Research Projects Agency (ARPA) created ARPANET – a computer network linking four university computers in California, Utah and Massachusetts. During the next couple of years, more universities were added

¹⁴ See H. Moravec, *Dualism through Reductionism*, [online] <http://www.leaderu.com/truth/2truth05.html> [access: 30.07.2014].

¹⁵ C. Springer, op. cit., p. 32.

¹⁶ H. Moravec, *Interview by David Turin*, "Mondo 2000" 1993, nr 11, p. 51.

¹⁷ See B. M. Lanier, V. G. Cerf et al, *A Brief History of the Internet*, [online] <http://www.isoc.org/internet/history/brief.shtml> [access: 05.06.2014].

to ARPANET and in 1983 a military network – Milnet – was created. Between those two networks a connection was made. It was called DARPA Internet, in short – Internet – and it has become the foundation of today’s global network. In the same year 1983, a relatively unknown American writer William Gibson finished his novel entitled *Neuromancer* (1984) which went on to become the most acclaimed and influential cyberpunk work of fiction of all time.

In *Neuromancer*, Gibson developed the notion of cyberspace which he had previously described in his book *Burning Chrome* (1982). The term ‘cyberspace’ was used for the first time by another science fiction writer Vernor Vinge in his short story *True Names* (1980). Gibsonian cyberspace relies on the concept of a global information network containing all kinds of human intellectual and scientific activity. It is a computer generated virtual reality in which all the data – software, military information, governments’ files, as well as personality constructs and artificial intelligences – are stored. This cyberspace is the product of a colossal and infinite flow of information. Although many other writers, such as Bruce Sterling, John Shirley, Pat Cadigan, Lisa Mason or Neal Stephenson, depicted the phenomenon of a global network, the Gibsonian vision of cyberspace has become the most influential.

A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from the bank of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights receding¹⁸.

“Cyberspace, a monochrome nonspace where the only stars are dense concentrations of information, and high above it all burn corporate galaxies and cold spiral arms of military systems”¹⁹. Gibsonian cyberspace is being used by corporations and military agencies as well as ordinary people. This part of the eighties’ cyberspace description corresponds perfectly with the global network from the late nineties to the present. Moreover, Gibson presents a vision of eternal information with its own architecture. The fragments of this architecture and the mechanism behind it can be accessed via a matrix. The roots of this fictional matrix are primitive arcade games and early graphic interfaces. The simulation of a three dimensional perspective with two dimension vector graphics and geometrical shapes represents the structure of all data and provides orientation for the cyberspace users. Those users, called

¹⁸ W. Gibson, *Neuromancer*, New York 1984, p. 51.

¹⁹ Idem, *Burning Chrome*, New York 1982, p. 170.

console cowboys, navigate in cyberspace like players in the early Nintendo platform games. Yet the graphic representation of cyberspace is much more complex.

In Gibson's writings, cyberspace is three dimensional and colourful – its architectonic structure is its crucial characteristic. The structure of the cyberspace is compared to the architecture of the city with its neon lights and manifold buildings. Such a vision of graphic user interface was far too advanced for the eighties, when two dimensional Xerox Star windows locked in the Palo Alto research labs were the most sophisticated version of an interface available. In cyberpunk novels, a console and head-mounted wires were needed to access the cyberspace. The user's mind became part of the computer universe.

In *Neuromancer* the narrator defines cyberspace as a 'consensual illusion' accessed when a user 'jacks into' a computer. Here the writer's imaginations outstrips existing technologies, for Gibson imagines a direct neural link between the brain and the computer through electrodes. Another vision of this link is a socket, implanted behind the ear, that accepts computer chips, allowing direct neural access to computer memory. Network users collaborate in creating the richly textured landscape of cyberspace²⁰.

From a technological point of view, the contemporary Internet is a telematic network, an interface between computer or portable device and telecommunication technologies. In the Internet, user activity resides within a two dimensional graphic interface. There were some attempts to create a three dimensional interactive internet environment, namely Adobe Atmosphere software, but it failed to meet users expectations and therefore was discontinued. Nowadays, no-one even dreams of the interface resembling the one from the cyberpunk novels. The concept of Gibsonian cyberspace is similar to Jaron Lanier's model of Virtual Reality.

Virtual Reality involves a computer-generated space that people wearing goggles fitted with small video monitors perceive as three dimensional. Gloves connected to the computer allow users to interact with the space and feel as though they are performing physical activities such as walking, driving, flying or picking up objects. The most sustained use of virtual reality has been Defense Department in battle simulation and fight training²¹.

²⁰ N. K. Hayles, *How We Become Posthuman. Virtual Bodies in Cybernetics, Literature, and Informatics*, Chicago, London 1999, p. 36.

²¹ C. Springer, op. cit., p. 81.

Yet, although the VR has been functioning as a cultural concept since 1960s, the actual VR incarnations are rather disappointing, largely due to the technical limitations of existing hardware.

BODY MODIFICATION

The notion of the human body is one of the most crucial elements in cyberpunk literature. Within the realm of the body, the worlds of nature and technology permeate each other to create a bio-technological fusion – a cyborg. The term ‘cyborg’ was coined by Manfred E. Clynes and Nathan S. Kline in 1960. “The Cyborg deliberately incorporates exogenous component extending the self-regulatory control function to the organism in order to adapt it to new environments”²². The inventors thought that by altering the functions of an astronaut’s organism they would manage to adapt it to the conditions of outer space. Yet the concept of cyborgisation – permanent technological modification of the human body – has found its application in medicine. Mankind has always used various kinds of extensions to improve its malfunctions or to facilitate daily routines. Walking sticks, spectacles, dentures or peg legs can be considered the earliest stage in the evolution of cyborgisation. However, Clynes and Kline’s definition of a cyborg includes one important factor: it adds previously unexperienced functionality to the human body. In their article, the two scientists proposed, for example, modifying the human respiratory system to eliminate the oxygen that is unavailable in space. As a result, the astronauts would not have to carry oxygen bottles and masks to exist in cosmic space. Therefore, the most important, contemporary aspect of cyborgisation, regarded as the body modification, is to extend the functions of the human body by providing it with new potential. As Douglas Kellner states:

Another Baudrillardian theme in cyberpunk is the implosion between biology and technology – human body parts are easily replaceable with technological prostheses, personalities are programmable, neurochemistry modifies intelligence and personalities, brains and computers interface and implode, and individuals enter strange new technological worlds²³.

Within the works of William Gibson and other cyberpunk writers, two kinds of body modification can be specified, depending on their function. The first group are brain implants and other devices that are used to access the

²² M. E. Clynes, N. S. Kline, *Cyborgs and Space*, [in:] *The Cyborg Handbook*, ed. Ch. H. Gray, New York, London 1995, p. 31.

²³ D. Kellner, *op. cit.*, p. 304.

cyberspace and – more generally – for non-verbal, network mediated communication. Modification of this kind serves to obtain information as well as software and data within the cyberspace. The second kind of body modification are various sorts of weapons implanted under the skin and the enhancement of human senses. These alterations and adjustments serve mainly to boost combat skills and provide the user with unnatural fighting capabilities. By describing these kinds of body modification, Gibson was way ahead of his times.

The most precise examples of these two kinds of body adjustments are two *Neuromancer* protagonists: Case and Molly. Case is a console cowboy: he spends most of his time jacked into cyberspace with the deck on his lap. To access the cyberspace, he places dermatrodes on his forehead and wires them to the console. Behind his closed eyes he sees the architectural structure of data. Molly is a street samurai. Her eyes are covered by mirrorshades implanted into her face and sliding razor blades are hidden under her fingernails. Her neural system is modified to speed up her movements and enhance her reflexes. The two kinds of body modification presented in cyberpunk fiction fulfil the criteria of Clynes and Kline's definition of a cyborg. Molly and Case were modified to provide them with new, technological functions that the human organism originally does not possess. Although Case's modification is of an external kind, it serves to adapt to the new and unnatural environment of cyberspace. Molly operates in an earthly, non-virtual setting, yet her profession of street samurai requires internal body modifications: lethal implants and sharpened neural synapses. In cyberpunk fiction, the body itself has a highly restricted meaning. Molly's body serves to fight or to give pleasure, so it has been described in detail. Case's body is redundant, he does not need it in his true homeland – cyberspace, so he scornfully refers to it as 'meat'. Since his brain was damaged so he could not access cyberspace and so he felt imprisoned in his own meat and life lost any meaning for him. By emphasising the significance of non-material existence in the infinite ocean of data, Gibson inscribes cyberpunk literature into a posthumanist paradigm.

JAPANESE CYBERPUNK

Cyberpunk writers depict the future using Japan as a metaphor. "This is the Japan that represents hypermodernism in all its dimensions, from advanced technology to [...] urbanization run amok. This stylized version took root in the '80s amid the country's economic boom. It was the time when Japanese business models, money, and products seemed like irresistible forces. *Neuro-*

mancer launched cyberpunk onto the streets of a future Japan”.²⁴ Gibson himself explained why has he included many Japanese motives in his novels: “If you believe, as I do, that all cultural change is essentially technology-driven, you pay attention to Japan. [...] The Japanese love ‘futuristic’ things precisely because they’ve been living in the future for such a very long time now. History, that other form of speculative fiction, explains why”.²⁵

The eighties were the peak of Japan’s economic bubble. Japanese technology, cars and other industrial products, which had been considered as deficient, became the embodiment of Japanese economic power. Consequently they started to be recognised as a threat to other mighty world economies, especially the USA. Japan has become the homeland of the world’s most future-oriented nation. “During the 1980s it seemed that Japanese society, with its superb bureaucracy, efficiently functioning government and technological expertise existed as a utopian alternative to [...] the societies of the West”²⁶.

In Japan cyberpunk literature has been enormously popular. “*Neuromancer* was translated more quickly than most Anglo-American novels. And the more influential cyberpunk becomes, the shorter the translation time: thus *Mona Lisa Overdrive*, which Gibson published in October 1988, appeared in Japanese in February 1989”²⁷. Japanese artists, like no predecessor, have embraced cyberpunk ideas and creatively included them into their own works. Although there are some Japanese cyberpunk novels, in pictocentric Japan cyberpunk ideas have found their voice not only through literature, but also through the images of manga – Japanese comics, and anime – animated movies. “[I]n the latter half of the twentieth century, Japan became the locus for all things high tech”²⁸ and the frames of manga and anime have become overcrowded by pictures of androids, complex technological devices and the future cities. Through these pictures, Japanese artists manifested the pervasiveness of technology and presented their profound and complex vision of future societies.

²⁴ Ch. Anderson, *Is Japan Still the Future?*, “Wired”, Issue 9.09, September 2001 [online] <http://www.wired.com/wired/archive/9.09/japan.html> [access: 6.06.2014].

²⁵ W. Gibson, *My Own Private Tokyo*, “Wired”, Issue 9.09, September 2001 [online] <http://archive.wired.com/wired/archive/9.09/gibson.html> [access: 6.06.2014].

²⁶ S. Napier, *Anime from Akira to Princess Mononoke. Experiencing Contemporary Japanese Animation*, New York 2000, p. 28.

²⁷ T. Tatsumi, *The Japanese Reflection of Mirrorshades*, [in:] *Storming the Reality Studio...*, op. cit., p. 36.

²⁸ B. Ruh, *Stray Dog of Anime. The Films of Mamoru Oshii*, New York 2004, p. 127.

It is perhaps no accident that two of anime's most popular genres, the cyberpunk, and so-called mecha genre, are within the science fiction. Cyberpunk, well known from such Western science fiction classics as William Gibson's *Neuromancer* (a major influence on Japanese science fiction in general), is a genre focusing on the dystopian futures, in which human struggle in overpoweringly technological world where the differences between human and machine is increasingly amorphous²⁹.

As the products of popular culture manga and anime represent the content of Japanese consensual unconsciousness, the dreams of a nation undergoing rapid industrial expansion.

CYBERPUNK ANIME: *GHOST IN THE SHELL*

The most important cyberpunk anime films are based on the *Ghost in the Shell* manga by Masamune Shirow which is regarded as a cyberpunk classic. The first manga was released in 1989 – at the end of the 80s when all cyberpunk masterpieces were written. Shirow's manga had all the narrative elements of cyberpunk fiction combined with the visual language of Japanese comics. Its imminent success resulted in a series of manga sequels still being published. Anime producers were eager to make the screen version of Shirow's breakthrough manga, yet they were looking for the right director. They found it in Mamoru Oshii, whose anime *Patlabor* (1989, 1993) proved him to be a filmmaker who understands near-future cyberpunk themes. Oshii's movie *Ghost in the Shell* (1995) launched a string of films based on Shirow's manga: movie sequel *Ghost in the Shell: Innocence* (2004) directed by Mamoru Oshii, two television series *Ghost in the Shell: Stand Alone Complex* (2002, 2004) directed by Kenji Kamiyama and a four-part OVA³⁰ series *Ghost in the Shell: Arise* (2013–14) directed by Kazuchika Kise. All films and series are based on the manga *Ghost in the Shell*, yet Oshii's films are rather inspired by Shirow's comics, while TV and OVA films are more closely related to the manga. Also, the character design is different in each film and series but all the designs share common traits with Shirow's original concept. The first movie *Ghost in the Shell* is one of the best known anime in the West, appreciated both by anime fans and film critics. It is also the most often analysed anime in the history of this medium. Such popularity and the considerable amount of the source material from Shirow's manga has resulted in a TV-series, sequel movie and OVAs. The second movie *Ghost in the Shell: Inno-*

²⁹ S. Napier, op. cit., p. 11.

³⁰ Original Video Animation – films released direct to video or dvd, yet *Ghost in the Shell: Arise* received a limited theatrical release in Japan.

cence shares its predecessor's artistic quality and introduces 3D-animation techniques.

The main themes underlying the plot of *Ghost in the Shell* movies are cyberspace and networked society in the near-future of the year 2029³¹. The protagonists work in the elite Shell Squad, a part of the Security Police Section 9, dealing with network and cybernetic crimes. The plot of all three titles revolves around investigations carried by the Section 9 members of various criminal cases. The heroine of *Ghost in the Shell* (1995) – Major Motoko Kusanagi – is a cyborg: her entirely robotised body, made by the MegaTech corporation, is hi-tech state-of-the art and the only 'original' element are human brain cells and a small part of her spinal cord. The story of her origin is told in *Ghost in the Shell: Arise* (2013), Motoko's mother was pregnant when she died in a tragic accident. A cyborg specialist was on the crash site in the moment of her death and he managed to save the brain of her unborn child and put in into the body of a child-cyborg. Kusanagi possesses incredible physical strength and fighting skills hidden inside the wrapping of an attractive young women's body. Kusanagi also has a brain implant allowing her to contact other people without using her voice and to access the net to search and download information. Although she seems to be rather self-confident, deep in her mind she dwells on whether she is still a human or already a machine, and where lies the border between these two. Motoko Kusanagi is the perfect embodiment of "how people in the late twentieth century contemplate the future of humanity"³². In the course of the investigation Kusanagi meets the Puppet Master, a conscious life form which evolved in the sea of information from the government experiment code-named Project 2501. This encounter is not accidental: the Puppet Master was looking for Kusanagi to merge with her, and by so doing – to create a new form of life: a unique entity that will become part of all things. In *Ghost in the Shell: Innocence* (2004) the protagonist is Kusanagi's partner from the previous movie – Bateau. He investigates the case of murderous android dolls, but apart from his job in Section 9, he lives a quiet life with his basset-hound clone-dog. Just like Motoko Kusanagi, Bateau has also been trying to establish his own identity. She has chosen a life in the vast and infinite information network, whereas Bateau has opted for the daily routine of a simple life.

The *Ghost in the Shell: Stand Alone Complex* TV series, as a medium addressed to a mass audience, presents a philosophical and more intelligible story than the two movies. The series focus on the criminal aspect of the plot and presents an expanded vision of the future. *Stand Alone Complex* relies

³¹ Sequel *Innocence* is set in 2032 and *Ghost in the Shell: Arise* – in 2027.

³² C. Springer, op. cit., p. 15.

heavily on the vision of the near-future metropolis presented in the first movie, but it also adds a social undertone and expanded civic background. If the movies deliver the philosophical and theoretical assumptions of *Ghost in the Shell* system, in *Stand Alone Complex* we can see them operating in practice. Through the criminal cases investigated by the Section 9, the problems afflicting the near-future society and the fairly new social relations are presented. The series' original invention are the Tachikomas – adorable, tank-like, round-shaped robots resembling pets or giant bugs, and containing artificial intelligence brains. They learn and evolve due to information gathered from their collective experience and from the environment. Consequently, they develop their own identity and become troublesome because of their curiosity. Due to its focus on the daily routine of the future society, *Stand Alone Complex* in particular resembles cyberpunk novels. Both the TV series and literature present not only how the future technologies will look, but also how people will mostly be using it. These motives are continued in the *Ghost in the Shell: Arise* series, a prequel to all previous instalments. In the OVA series, the origins of Section 9 are presented, as well as the personal background of Motoko Kusanagi.

All *Ghost in the Shell* films and series can be regarded as cinematic representations of cyberpunk fiction. Although there were two screen adaptations of William Gibson's novels: *Johnny Mnemonic* (1995) directed by Robert Longo and *New Rose Hotel* (1998) directed by Abel Ferrara, they are only poor imitations of the writer's innovative fiction. The poetics of live-action film seem to be too apparent for cyberpunk motives. The medium of animation allows for the creation of more visionary images of the future, although some recent films, such as *Her* (2013, dir. Spike Jonze) and *Transcendence* (2014, dir. Wally Pfister) innovatively presented cyberpunk motives as live-action films. But it is the Japanese anime filmmakers who manifested a profound comprehension of the dystopian near-future vision and succeeded in bringing the true spirit of cyberpunk to the screen. The world of *Ghost in the Shell* is immersed in technology and information. The cyborgs – hybrids of artificial bodies and human cells – have become the next stage of evolution. Even 'original' bodied members of the Section 9: Togusa and Chief – have brain implants to access the information network and communicate with their co-workers. These two characters are the perfect example of cyberpunk's first type of body modification. Motoko Kusanagi, Bateau and other members of Section 9 represent the modification of the second type: their bodies are created technologically. Not only are they completely robotised, but also they have cyber-brains closed in titanium shells with their own human cells. Such brains can be accessed or hacked by others operating in the network.

Through this character [Kusanagi] Oshii shows that as technology becomes a larger part of our everyday lives, it can inscribe us with new circles of control. [...] Oshii problematizes the progression of technology in a very technological fashion, through his use of sophisticated computer animation. He examined the downfalls of technology without succumbing to paranoia or seeming a Luddite³³.

Such an ambivalent approach towards technology is also distinctive for cyberpunk writers.

THE CITY OF INFORMATION

The network itself is presented in the *Ghost in the Shell* movies in a unique and original manner. It is a second, parallel universe, which can be entered by people with brain implants. Motoko Kusanagi can exist and operate in those two worlds simultaneously. Frequently she ‘walks around’ cyberspace looking for an answer to her questions. One episode of the TV series is entirely set in a chat-room, where users talk about the virus that attacked some security officers’ brains. The chat room is presented as a kind of talk-show studio and all the users have humanlike avatars. The data, like video files, have visible material manifestations. The Puppet Master from the first movie represents the idea of bodiless consciousness born in the sea of information which was described in *Neuromancer* as Wintermute - Artificial Intelligence. The notion of AI is very contemporary, for example, the U.S. Department of Defence alone has devoted half a billion dollars a year to AI research every year since 1985. Just like Gibsonian cyberspace, the information network in anime has an architectural structure and frequently merges with the images of city streets and buildings. “[Cyberspace is] the simulation of cityplace where all cities reside as subroutines in the hypercity of data representation, a hyper-reality that has given rise to its own underground of Rastafarian data pirates (Sterling) and deck cowboys (Gibson)”³⁴. The internal city systems are presented as parts of the information network and can be accessed and manipulated. The notion of cyberspace being the tool of observation is common for Japanese filmmakers and cyberpunks. “Issues of privacy and surveillance are closely tied into the progress of technology in Oshii’s films. As technological sophistication increases, concerns that privacy will be eroded arise”³⁵. The city of Newport, where the action takes place, is overflowing with infor-

³³ B. Ruh, *Stray Dog of Anime...*, op. cit., p. 10.

³⁴ D. Porush, *Frothing the Synaptic Bath: What Puts the Punk in Cyberpunk?*, [in:] *Fiction 2000...*, op. cit., p. 256.

³⁵ B. Ruh, *Stray Dog of Anime...*, op. cit., p. 10.

mation. The information itself is embodied by omnipresent water which floods the parts of the city, flows in canals and ocean harbours, and pours with rain. As the movie's art designer Takeuchi Atsushi explains:

Ghost in the Shell does not have a definite chosen set, but in terms of street scenes and general atmosphere, it is obvious that Hong Kong is the model. Such a choice has, of course, something to do with the theme: on the streets there flows an excess or a flood of information, along with everything this excess brings out. The modern city is swamped with billboards, neon lights and symbols... As people live in this information deluge, the streets will have to be depicted accordingly as being flooded...³⁶

The movies show the city in long, contemplative scenes. The images of dilapidated buildings, littered streets, bright advertisements and neon lights pass slowly in front of the viewers' eyes, just like the descriptions of the urban sprawl in Gibson's novels.

The motives of body modification, information network and overcrowded city space in anime are not the only borrowings from cyberpunk fiction. The technological and sociological themes underlying *Ghost in the Shell* and cyberpunk novels are the same. The animators and writers derive their vision of the future from the present. They take notions from today's reality and extrapolate them into the near-future to show their possible consequences. Both cyberpunk novels and anime deal with the results of computerisation and a subsequent accumulation of data. Due to data overproduction the memory systems have begun their own independent existence in the information network – the parallel universe. People have started to alter their brains to get direct access to the world of data and by so doing, they begin to exist in the two worlds simultaneously. Then they have transferred their earthly dealings into cyberspace and new phenomena such as cybernetic crimes, brain-hacking, erasing or falsifying memories have arisen. The information has become the most valuable monetary unit, so many criminal and economical activities have moved into cyberspace, and technology has become the most powerful weapon. But cyberpunk in anime presents not only the future changes in economy, environment and human organism, but also the changes in the human psyche, in the ways of perceiving the outside world, and in relations with this world.

³⁶ W. K. Yuen, *On the Edge of Spaces: Blade Runner, Ghost in the Shell, and Hong Kong's Cityscape*, "Science Fiction Studies 80", Volume 27, Part 1 – March 2000 [online] <http://www.incunabula.org/greylodge/Grey%20Lodge%20Occult%20Review%20Vol%20I%20Issue%20VI.pdf> [access: 6.06.2014]

CONCLUSION

“Regardless of the era, it is a fundamental principle of entertainment to depict cultural change”. This quote can be easily assigned to one of the famous cultural critics, yet it was spoken by Tachikoma – a robot in the *Stand Alone Complex* anime series. “For humans, through interaction with robots, the concept of ‘life’ is changing. The ones who are changing are probably humans, not robots” – continues Tachikoma. The words of the robot may be interpreted as the definition of the futures studies’ content: change. Change is the crucial element of all visions of the future. We can relate to these visions only by comparing them to what we know. One of the ways of conceptualising the future is by thinking how and what will *change*. Art, especially film and literature, provides us with ready images of the future and the changes which those visions propose. Consequently, it also provides us with the outcome of those changes. From fictional images we can find out how artists perceive the future, what they stress as the crucial elements of their visions. Creating fictional visions of the future is a “safe” and convenient method of foresight because there are very few limitations. Those visions are very valuable from a critical and analytic perspective because they provide ready-made scenarios which may serve as a research field.

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