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## (Bio-/Cyber-/Robo-)technologically Enhanced and Designed “People” in the Most Recent Croatian Dystopian Prose

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The following paper focuses on typification and cataloguing of the various manifestations of body decorating and enhancing in selected novels and stories, and also tries to examine their meanings, what changes they bring, what attitude of the authors towards technological progress they reveal and what social/cultural phenomena and processes they reflect. The paper also questions the upgrades of the human mind and the transformations of humans into some other forms of existence. Nine contemporary dystopian novels and five short stories have been studied for the purposes of this research. The methodological framework consists of texts that question the enhancement of the human body conducted in various ways, especially through biotechnology, bioengineering, cybernetics, robotics, etc.

**KEYWORDS:** dystopian novels and short stories; biotechnology and bioengineering; cybernetics; robotics; transhumanism

## 1. Introduction

The concepts of the human body and mind have been the subject of interest to various branches of science and art since the beginning of civilization. In the context of increasingly accessible interventions in physicality in modern times, the paper seeks to contribute to the academic debate on the way in which writers of the most recent dystopias cope with the challenges of the body and corporeality. Since the corporeality outside the usual normative patterns has not been systematically researched in works of contemporary Croatian literature, the article focuses on typification and cataloguing of the body enhancements, also tries to decipher their meanings, what changes they bring, what attitudes of the authors towards technological progress they reveal and what social/cultural phenomena and processes they reflect. The author focuses on dystopian works of Croatian literature from the earliest texts to contemporary ones, and the most recent novels and short stories in which interventions in the human body are the most radical and/or interpretively the most interesting have been selected. The research has been conducted on the basis of nine contemporary dystopian novels: *Bojno polje Istra* (The Battlefield Istria) by Danilo Brozović, *Centimetar od sreće* (Centimeter from the Happiness) by Marinko Koščec, *Planet Friedman* by Josip Mlakić, *Irbis* by Aleksandar Žiljak, *Romeo na kraju povijesti* (Romeo at the End of History) by Aljoša Babić, *Eshaton TV* by Goran Gluščić, *Dedivinacija* (Dedivination) by Jelena Hrvoj, *Samo igranj* (Just Play) by Ivan Lutz and *Rakova djeca* (Crab's Children) by Dalibor Perković, and also five short stories: *2094* by Danilo Brozović, *Onaj pravi* (The Real One) by Ed Barol, *Ta divna sutrašnjica* (That Wonderful Tomorrow) by Ernie Gigante Dešković, *Na kraju radnog vremena* (At the End of Working Hours) by Denis Giljević and *Heroj* (The Hero) by Zoran Krušvar.

## 2. Methodology

The methodological framework of the work consists of texts that question the enhancement of the human body conducted especially through biotechnology, bioengineering, the application of cybernetics,

robotics, etc. When it comes to the coexistence of a biological organism and mechanical machine, the book *Filozofija budućeg* (Philosophy of the Future) by Nenad Vertovšek and Ivana Greguric is relevant. Its authors present a four-part division of cyborgization procedures: the replacement of limbs and organs that a person lacks with partial or complete restoration of their functions (e.g. a bionic leg); normalization, the embedding of artificial implants that normalize or enhance lost functions to a state of normalcy (e.g. electrical stimulation of a diseased brain); the reshaping process—adding artificial organs or functions that are not inherent in humans (e.g. the installation of new nerve pathways by which a person could feel ultrasound waves) and the procedure of enhancement—adding functions that ordinary people do not have (e.g. a memory chip). The first three groups represent material cyborgization, and the last one represents informational cyborgization (Vertovšek, Greguric, 2021, 149). With regard to the objectives, cyborgization is divided into reconstructive (medically and ethically justified) in which replacement and normalization procedures are used, and in improving cyborgization (medically and ethically questionable) in which transformation and improvement procedures are used (Vertovšek, Greguric, 2021, 149–150). Ivana Greguric distinguishes four types of cyborgs: an *animo* cyborg (animal), a *homo* cyborg (bio-medical), a *cyber* cyborg (cyber/digital) and a *robo* cyborg (robotic) (Greguric, 2018, 95), and connects *homo* cyborgs with replacement and normalization procedures, and cyber/digital cyborgs with transformation and improvement procedures (2018, 92).

All the ways of improvement are advocated by transhumanists. Thus, John Harris promotes the positive commitment of each individual to his/her own improvement. He proposes intervening in “the natural lottery of life, to improve things by taking control of evolution and our future development to the point, and indeed beyond the point, where we humans will have changed, perhaps into a new and certainly into a better species altogether” (Harris, 2007, 4–5). This, however, is reserved to the most powerful social groups, the elite, the chosen ones. Julian Savulescu insists on the moral commitment of the individual to improvement, too. He believes “that to be human is to be better. Or, at least, to strive to be better. We should be here for a *good* time, not just a *long* time. En-

hancement, far from being merely permissible, is something we should aspire to achieve" (Savulescu, 2007, 533).

One of the more prominent promoters of transhumanism, Nick Bostrom, claims that transhumanists are committed to the continuous improvement and preservation of human life, not to the attainment of a posthuman.<sup>1</sup> Also, their priority is to prolong life, i.e., to seek and improve ways to slow down aging and replace cells and tissues, which is why they emphasize the need to invest in "[g]ene therapy, stem cell research, therapeutic cloning" (Bostrom, 2003, 9) etc. However, according to the seventh point of the Transhumanist Declaration, one of the fundamental documents of transhumanists, from the moment different forms of life begin to exist, they will have all the rights because transhumanists "advocate the well-being of all sentience, including humans, non-human animals, and any future artificial intellects, modified life forms, or other intelligences to which technological and scientific advance may give rise" (Alves et al., 1998). Bostrom (2003, 4) is preoccupied with the consequences and possible dangers due to inadequate current technological solutions and ethical issues related to the development and application of such technologies. He advocates a democratic transhumanism that clearly distances itself from the eugenics<sup>2</sup> applied in the 20th century, and unlike extropianism,<sup>3</sup> the role of government in it is much greater and the security of new technologies and their availability to all is much better regulated (Bostrom, 2005). But the most radical libertarian transhumanist, a proponent of genetic experimentation, Robert Nozick, believes that choosing the characteristics of a new man should resemble a "genetic supermarket" (Nozick, 1977,

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1 Posthumans are "possible future beings whose basic capacities so radically exceed those of present humans as to be no longer unambiguously human by our current standards" (Bostrom, 2003, 5).

2 Eugenics is the concept of suppressing undesirable human biological characteristics and creating people with superior characteristics. For example, in the early 20th century, it resulted in the sterilization of people with mental illnesses in the United States (Matković, 2000, 309–311).

3 Extropianism is a transhumanist school of thought defined by endless progress, self-transformation, practical optimism, intelligent technology, an open society that protects the free exchange of ideas and experiments, self-direction, and rational thinking.

488), and as the main advantage of such a supermarket cites non-existence of the "centralized decision fixing the future human type(s)" (Nozick, 1977, 487).

Among the opponents of genetic engineering experiments in general, and the human genome in particular, the texts of bioconservatives George Annas and Michael J. Sandel are relevant to the paper. George Annas proposes a European harmonization of opinion and the creation of a convention: he thinks that "the general definition would encompass any experimental intervention aimed at altering a fundamental beneficial characteristic of being human" (Annas, 2000, 779). Characteristics change entails the species determination of the human race and the affiliation of the changed to the human race (Annas, 2000, 779). Annas also argues that our humanity has given us human dignity and rights, so changing our nature would threaten to undermine both (Annas, 2000, 773). He mentions bioterrorism as a possible consequence of genetic engineering: "neo-humans" could subdue "the standard-issue human beings" (Annas, 2000, 773). Sandel argues that if bioengineering were to help bring about the myth of the "self-created man," we would consider our talents as our own accomplishments, not as gifts we owe, and that would radically change three important components of our morals: humility, responsibility, and solidarity (Sandel, 2009, 86).

### 3. Analysis

#### 3.1. Aesthetic surgery

According to Nick Bostrom (2003, 7), plastic surgery is not a way of approaching a transhuman. The researched literary works abound in such interventions—they are the norm in some novels.

In the novel *Romeo na kraju povijesti* by Aljoša Babić, the age limit of experimenting with body modifications has dropped dramatically. At the age of eight, the girl Žana injects silicone in her lips, and at the age of ten she is thinking about breast augmentation. Her attitude towards "repairing" the human body is best shown by her astonishment and criticism of a girl who did not decide to intervene: "Imagine her, the hen, she

is ten years old and still doesn't have any corrective procedure on the body" (Babić, 2015, 56). In the novel in general "[o]nly losers, according to modern understanding, left it to mother nature, genealogy or who knows what to determine their physical appearance" (Babić, 2015, 56). The removal of the ribs and the injection of silicone in buttocks and breasts (Babić, 2015, 42) are also mentioned. Also, men opt for phalloplasty and women for labiaplasty (Babić, 2015, 46).

In the novel *Eshaton TV* by Goran Gluščić, plastic surgery turns mediocre people into beautiful ones (Gluščić, 2018, 48, 239). In *Irbis* by Aleksandar Žiljak, beauty is the privilege of the rich, it is "synthesized"; in addition to gyms, solar beds and unreasonably expensive clothes, shoes, jewelry and all accessories, it includes "[w]omen of indefinite age, designer bodies with signed discreetly written nano-chromatophores on the ass" (Žiljak, 2012, 129) and men with "equally annoying metrosexual nano-faces and implanted hair" (Žiljak, 2012, 130).

Mostly consumerist societies encourage a well-groomed appearance, so the society in *Heroj* by Zoran Krušvar is prone to a beautifully shaped beard and wrinkle-free face as a result of copious use of cosmetics or perhaps plastic surgery (Krušvar, 2013, [7]). On the other hand, a person's gray, uncolored hair, yellow teeth, skin unaffected by laser treatment or Botox are looked at suspiciously (Krušvar, 2013, [3]). Collagen lips and silicone breasts, which aesthetic surgery advertisements are filled with, are attributes of a girl on the rise in the short story 2094 by Danilo Brozović (2004, 15). Medical interventions of various kinds are quite common in *Dedivnacija* by Jelena Hrvoj, so it is surprising for Aurora that the outcast Andromeda does not hide her age (Hrvoj, 2018, 186). Equally, Andreas Bergen, from the novel *Rakova djeca* by Dalibor Perković, wonders why anyone would skip rejuvenation treatments, stay bald or be overweight "in the hedonistic society of the Freelanders, where every aesthetic procedure was as common and accessible as going to the hairdresser and where superficiality was taken to extremes" (Perković, 2019, 21).

A completely opposite view of body weight is promoted in the novel *Samo igraj* by Ivan Lutz. Although various changes in the human body are quite common, no one tries to get rid of obesity—it stands out as an indication of wealth. Olivia has several tens of excessive kilograms, and

how proud she is of her obesity is demonstrated by "[h]er learned movements of lowering her jacket over large buttocks, rolling up her sleeves, looking in mirrored windows and adjusting her collar so her double chin (quite large and wobbly) can be seen" (Lutz, 2018, 20).

### 3.2. Surgery

Radical changes and repairs using surgical procedures are also not uncommon. In *Eshaton TV* bone lengthening and tissue addition are used to make people taller (Glušćić, 2018, 48). In *Romeo na kraju povijesti*, it is an everyday occurrence to see organ replacement operations advertised in newspapers by the poor, while rich customers can check the environment where their future organs come from (Babić, 2015, 122).

Installing alternate body parts on a daily and weekly basis in the story *Na kraju radnog vremena* by Denis Giljević goes beyond our experience and leaves many unanswered questions. The unnamed protagonist's workplace, a lending office of organs called Satanic Organic, has one popular organ on sale every week (Giljević, 2007, 12). Young Konrad drinks and smokes with his peers on weekends, so he often borrows replaceable lungs and liver so as not to damage his own (Giljević, 2007, 13). Male sexual organs and female sexual organs are also in high demand (Giljević, 2007, 15), and the protagonist occasionally thinks of borrowing a brain instead of his own to get some rest (Giljević, 2007, 13). There is a particular case of a woman who borrows bones to save her own from the blows of a jealous husband (Giljević, 2007, 15–16). Replacement is done under anaesthesia, and given that some people often lend organs, the technology seems to have advanced greatly. Returned organs are treated in a special way to restore freshness and are stored in boxes, waiting for a new borrower. The author does not offer a solution for organ rejection, he does not mention blood group compatibility or the Rh factor. Less radical seems the idea of a (temporary or permanent) transplantation of organs that have undergone icing: the protagonist eventually escapes with a woman who has borrowed bones and launches in another universe a "small company for the sale of frozen organs, designed to sustain the lives of passengers on endless interspace flights" (Giljević, 2007, 16).

### 3.3. Biomedical engineering

#### 3.3.1. Implants

Biomedical engineering in the studied texts manifests itself in the form of a significant number of implants and chips implanted in different places in the body, mostly connected to the central nervous system, with a relatively broad spectrum of action.

The identification chip in *Planet Friedman* by Josip Mlakić is a matter of prestige, only the residents of the privileged A zone have it. Elite member Dr. Gerhard Schmidt has it installed on his right shoulder, and thanks to it he gets information from his Rollex watch: as soon as he thinks about time, the chip reminds him of arranged meetings; in an unlit city the chip induces the lighting of lamps all the way along the route Gerhard is following.

Chips connecting to certain systems are also present. In the story *Na kraju radnog vremena*, the protagonist connects to cable telepathy to watch movies: he accesses the telepathomat, pays a monthly subscription, and guarantees payment with a thousand of “the most vital brain units” (Giljević, 2007, 13). Computer hacker Oliver Riemer, the main character in the novel *Bojno polje Istra* by Danilo Brozović, also connects his brain to a parallel world, another reality (Brozović, 2007, 26). Jaguar, the protagonist of *2094*, has a voice-activated telecommunications chip in his mind (Brozović, 2004, 19). The main heroine of *Dedivinacija* has a “scar” from her childhood from a polluted and dangerous raindrop. In fact, it is a subcutaneous chip with a built-in memory with the addition of transmitters installed by the authorities. Taša, one of the protagonists of another novel, *Centimetar od sreće* by Marinko Koščec, goes every day at the cataclysmic end of the novel to get her daily dose of “digital imprint” (Koščec, 2008, 276), which guarantees to keep her body in balance, and is also taking medications that make her dizzy and obedient. In *Romeo na kraju povijesti* the subcutaneous chip can be implanted at the post office, in the bank, in a café and in the branches of the ruling Deltacor corporation (Babić, 2015, 83). The only purpose of the chip that the reader learns about is locational: one mother has a chip implanted in her daughter so that she always knows where her child is (Babić, 2015, 237).

Nano-implants, placed in almost all inhabitants of the fictional world in *Samo igranj*, are a means of control. Nanoprobes are connected

to UnderNet, a network that controls the population: it tells them what to eat, where to go, it manages their senses. Everyone is addicted to it—no one wants to remain in silence. The seventh point of the Transhumanist Declaration (Alves et al., 1998) is not applicable in Lutz's novelistic world—only modified people are accepted. Annas's prediction came true: a change in human nature undermined human dignity and violated human rights (Annas, 2009, 773).

In addition to keeping them under control, the implants in *Samo igraj* guarantee improved communication through thoughts: "We were connected, she could accurately discern my thoughts as in the good old days of the Web" (Lutz, 2018, 241).

In the story *Heraj* consumerism is forced, so the installation of a camera in the eye is a symbol of prestige, even though it can lead to debt slavery for a person with low income (Krušvar, 2013, [2]).

Implants can be also used to increase combat readiness. In *Bojno polje Istra* soldiers have "[s]urgically implanted sight," and are "surgically equipped with an infrared sensor, genetic implants that accelerate reactions" (Brozović, 2007, 9–10). The "neohumans" created in this way really look like a threat to "the standard-issue human beings," that is, like the realization of the "potential bioterrorism" (Annas, 2000, 773).

Cyborgs with implants from the studied texts are considered *cyber* cyborgs (Greguric, 2018, 95), the most vulnerable point of transhumanism due to the technology they contain: although some transhumanists seek to reduce the dangers of inadequate technologies (Bostrom, 2003, 4), the issue of human-embedded chip hacking seems significantly more comprehensive than the data theft security problem.

### 3.3.2. Prosthetics

In *Samo igraj* various upgrades to human corporeality can be found: the index finger of the finest nickel (Lutz, 2018, 14), a metal hand (Lutz, 2018, 192), and an artificial ear (Lutz, 2018, 20). UnderWorld agents have been specially modified, their cyborgization having gone a step further:

He was pale with artificial metal ears and a few noticeable implants on his face. His front teeth were white, and his molars gleamed in the colours of the signals received; half-machines, half-humans, and even

by behaviour they never hinted that they once had parents, lived in a community, ate, or went to the toilet like normal people (Lutz, 2018, 98).

In *Eshaton TV* various “imaginative” modifications and additions are the aesthetic standard: “Models have wings like birds, women have star-shaped breasts, and men penises that spin in a spiral. Natural is no longer modern” (Gluščić, 2017, 46). It is possible to install another pair of hands, which seems very useful to the improved drummer: “‘Godlike,’ Galnar grinned [...] He crossed his biological arms behind his head and continued to spin the drumsticks with his mechanical ones” (Gluščić, 2017, 49).

Like cyborgs with implants, cyborgs with prosthesis are cyber cyborgs (Greguric, 2018, 95). Given the frightening outcomes of some of the improvements in the examined texts, the process of reshaping, the most intriguing process of material cyborgization (Vertovšek, Greguric, 2021, 149), that is, improving cyborgization (Vertovšek, Greguric, 2021, 149–150) becomes questionable: what do we need wings, two pairs of arms and a rotating penis for?! Despite the transhumanists’ insistence on the human moral commitment to improvement (Harris, 2007; Savulescu, 2007), the incorporation of such “improvements” leads to “meaningless denaturation of human life” (Greguric, 2018, 78).

### 3.4. Cognitive science

The final stage of “bridging” the human need are holographic and robotic substitutions. In 2094, cyber holovision projections of half-naked girls in seductive lingerie advertise countless products (Brozović, 2004, 11–12), and the presenter of holographic news can be chosen with the viewer’s will (Brozović, 2004, 34).

Artificially created “friends” are frequent in the world of *Dedivinjacija*, but Aurora refuses to have programmed friends, “soulless illusions” (Hrvoj, 2018, 11). The presence of robots is frequent in *Romeo na kraju povijesti*: they appeared with the arrival of the company Amazon on the market, doing less sought-after jobs, such as cashiers, shelf arrangers in retail chains, fast-food restaurant workers, hotel staff, hand-deliverers of subpoenas. Robots have occupied the sports sphere, too: they sit in stadiums instead of supporters, arguing and cursing the referee.

In *Samo igraj* robots participate even more actively in sports: they play basketball and compete in a robot championship. The best basketball player in the world is Clarus Doo, "a harmonious machine with a flexible joint [...] He had an operator as agile and fast as the positron impulses that propelled him" (Lutz, 2018, 21). Clarus is not a *robo* cyborg, a fusion of the human mind and body-machine, but a stage that precedes it: a kind of a blend, controlling the robot with its mind, without rejecting its own body (Greguric, 2018, 130).

### 3.5. Biotechnology

#### 3.5.1. Biopharmaceuticals

A method of genetic engineering, biosynthesis, is used to produce the growth hormone—it appears in the novel *Rakova djeca* to cope with low growth (Perković, 2019, 21). Since fine appearance is a social imperative, every detail is taken into account. Although not impacted by dwarfism, a character named Baha is slightly lower than the propagated norm. Even though Sandel questions the use of hormones in childhood, asking if we want to live in a society where parents spend a fortune to make a perfectly healthy child a few centimetres taller (Sandel, 2009, 76), its use in adulthood is equally, if not more, wrong.

The value system of the novel *Romeo na kraju povijesti* is completely de-generated: five-year-old John, the protagonist's nephew, takes steroids every day "so that he can equally enter the life race with other peers who were under similar anabolic cures" (Babić, 2015, 52).

An example of the misuse of biochemical agents can be found in *Planet Friedman*: athlete Paula Bolt receives stimulants in order to achieve better results. A Roche employee, Dr. Schmidt, injects into her muscles the company's most successful stimulant, myosinusoid, which relentlessly wears out muscles, so the career of an "athletic material" lasts for several years. The novel takes to extremes the fact that "as the role of enhancement increases, our admiration for the achievement fades—or, rather, our admiration for the achievement shifts from the player to his pharmacist" (Sandel, 2009, 78). In this case, the distribution of roles is disrupted and the contribution of the athlete is completely neglected.

Sandel argues that he doesn't think that "the main problem with enhancement and genetic engineering is that they undermine effort and erode human agency" (Sandel, 2009, 78). It is quite the contrary: "The problem is not the drift to mechanism but the drive to mastery. And what the drive to mastery misses and may even destroy is an appreciation of the gifted character of human powers and achievements" (Sandel, 2009, 78). When myosinoid starts to get out of control and causes severe cramps in Paula's muscles, there seems to be no salvation for her. She may have a year or two left, and be likely to undergo a series of heart attacks that she will probably not survive. Her body has paid the highest price of the "Promethean aspiration to remake nature" (Sandel, 2009, 78). According to Sandel: "The real problem with genetically altered athletes is that they corrupt athletic competition as a human activity that honours the cultivation and display of natural talents" (Sandel, 2009, 79). That is the only practice in the novel, there is no other system of competition, it is decayed and dehumanized in relation to the system as we know it.

### 3.5.2. Genetic engineering

#### 3.5.2.1. Cloning

The process of cloning in *Dedivinacija* serves to multiply identical replicas of the protagonist, Aurora. She belongs to the dominant human race, and is able to withstand the P.E.A.K. virus, a cocktail of four diseases: bird flu (HSN1), Ebola, AIDS and cholera living in her body. The people in power belong to a smaller and more militant race, and that is why they want to get rid of individuals like Aurora. For this reason, they have created a lot of her clones in which the virus already exists (Hrvoj, 2018, 550–551). In *Eshaton TV*, it is not people who are subject to cloning, but a panda called Snowflake—six times, with deadly consequences. (Glušćić, 2018, 95). Countless Islamic female warriors have been cloned in *Irbis*: one of the earlier generations was killed in the presence of the protagonist in Peshawar, Pakistan, and years later, he met the last warrior of the same series in an attack on the Zagreb Tower (Žiljak, 2012, 137). In the short story *Onaj pravi* by Ed Barol, "[c]lones are unstable and socially unacceptable on most planets" (Barol, 2007, 32). As the reality in *Centimetar od sreće* becomes more dystopian, one of

the heroines, Maša, replaces managerial jobs with worse ones, and ultimately works in the web distribution of a bank of cloned cells (Koščec, 2008, 286). Cloning enters the transhumanist point of view as a negative example: defending correction, Harris (2009, 134–135) argues that normal sexual reproduction always varies the genome, but it remains “preserved” only during cloning.

### 3.5.2.2. Genetic modifications

Extending life expectancy is an important topic of transhumanism. In *Samo igranj*, life expectancy is extended by thirty percent (Lutz, 2018, 23), and the rich live thirty to forty years longer than others (Lutz, 2018, 156–157). In *Irbis*, people undergo treatments for longevity (Žiljak, 2012, 129), in the novel *Rakova djeca* the human lifespan lasts a little over two hundred years, while in the short story *Onaj pravi* people can theoretically live forever, but the oldest known inhabitant of the colonies is just over six hundred years old (Barol, 2007, 32).

For transhumanists, the priority is not only a longer life, but a good one (Savulescu, 2007, 533). In the novel *Samo igranj* people are more resilient, advances in treatment and early detection of disease have been brought about by the Web to which everyone is connected (Lutz, 2018, 156). The main heroine of *Dedivinacija*, Aurora Blue is the fifteenth generation of genetically modified people, perfected to the extent of making them more resistant to disease, radiation, and pollution:

We are homo sapiens, at least in part. [...] We were created from a test tube. Our genetic code has been pre-programmed, crossed, and with generations we know how the law of the stronger progresses. Zeus is just another subspecies of the human race. We all more or less possess the same characteristics, mostly physical ones. Zeus was the project of creating the ultimate human being (Hrvoj, 2018, 384).

The races of Athena, Ares and Zeus were created in 2112 during Noah's Ark project, as the “old” eugenics did, the implementation of which “would have required a massive social program carried out over many generations. Such a program could not have been initiated without the consent and cooperation of a major fraction of the population and would

have been continuously subject to social control" (Sinsheimer, 1969, 13). The major difference is that in the creation of new races the chosen rulers did not seek permission from the social majority: they produced new races in order to control the masses and use them as labour, while the race of Zeus is nothing but Nietzsche's *Übermensch*.

Eugenics is explicitly mentioned as a factor in choosing a life partner in *Rakova djeca*:

"In families, great attention is paid to eugenics," Baha explained, overtaking the Doctor [...]. "Marriages are arranged and pre-tested for genetic compatibility" (Perković, 2019, 239).

Perhaps the most representative example of "old" eugenics is the legal regulation of the genome in the story *Na kraju radnog vremena*, although it is framed by a ridiculous tone about the strike in the beauty industry:

A march of cosmetic surgeons took place today [...]. The rulers and the wealthy switched to new methods of touching up their successors in embryonic development, so the ugly and evil poor who did not care too much about their appearance were left with the unadaptable aestheticians (Giljević, 2007, 14).

Modelling one's offspring according to a wishlist is the principle by which the "new" eugenics operates. The real "genetic supermarket" (Nozick, 1977, 488) is the Reproduction Center Ozone in the story *Ta divna sutrašnjica* by Ernie Gigante Dešković: children are offered to everyone who wishes so, and up to a certain date some procedures are available, such as creating facial features on request, home delivery within two days and the regulation of all government obligations (Gigante Dešković, 2007, 60). One of the characters, a nameless mother, belongs to an endangered species created by the "biological fluid pathway," and her son is custom-made, and therefore has a bar code on the back (Gigante Dešković, 2007, 61). The boy chooses his brother according to the characteristics he considers desirable: "a boy of his age, fair skin and dark eyes, average intelligence, good resistance

to disease, life expectancy 5 years (he did not want too much because he could get bored), special affinities—video games" (Gigante Dešković, 2017, 61). The children bought in Ozone do not live long, the boy does not know that his brother will outlive him by four years, and the mother is already planning to buy a girl next time. Custom-made children are part of the reality in *Onaj pravi*. They are less demanding than the real ones and live only twelve years (Barol, 2007, 32). The family to whom Scott, a real boy, is too much of a challenge, decides to replace him with a seven-year-old girl delivered to their home address and Scott is to get custom-made parents who will know how to deal with him (Barol, 2007, 33).

Although Nick Bostrom argues that democratic transhumanism guarantees the availability of new technologies to all (Bostrom, 2005), only the rich have had access to new technological tools throughout history. If the genetic supermarket were the privilege of the rich, the genetically optimized children of rich parents would gain another advantage in the already unjust game between the rich and poor.

One of the methods of designing offspring is the purchase of genetic material. In *Romeo na kraju povijesti*, Brad Pitt is already quite old (the novel is set in 2035), but his genetic material from the end of the last century is a highly sought-after commodity: "My dad even offered to give me a non-purpose loan so that I could be fertilized with Brad Pitt's sperm. It is true that he is already old, but his eggs from the nineties can be obtained on the sperm-bay" (Babić, 2015, 46). Although "[t]he advent of artificial insemination allows prospective parents to shop for gametes with the genetic traits they desire in their offspring," according to Sandel, the application of this method still leaves little possibility of deviation from the desired characteristics of the future offspring because "it offers a good example of a procreative practice in which the old eugenics meets the new consumerism" (Sandel, 2009, 83).

The girl Tara in the novel *Centimetar od sreće* has been "produced." Her misunderstanding of giving birth leads us to think that the author probably did not mean cloning because her mother or surrogate mother would have brought her into the world: "When it is said to give birth, like they say of that grandfather, is it possible that this means that someone is taken out of his body?" (Koščec, 2008, 289).

A special form of eugenic “wizardry” in *Irbis* is the merging of pre-defined consciousness, memory and character with an arbitrarily chosen body; thus, the wife of a mafia boss Kim Kiu carries his memory-character card around and has not yet “superimposed” it in a body created for him: “[y]ou clone someone, or better yet, stack DNA from scratch. More likely the latter” (Žiljak, 2012, 37). The mortally wounded protagonist, a former soldier, was given an animal body:

They took an irbis, a snow leopard, an elusive cat of lush yellowish-grey fur sprinkled with dark rings, [...] And they had me, blown up with a mine and with a signed annex. They scanned my character-memory matrix and superimposed it on a thoroughly reworked cat’s brain. They added cool bioelectronic stuff, so I could have them on hand. [...] It was almost as if they had installed a satellite with 150 channels in me (Žiljak, 2012, 22).

According to Ryuichi Ida, the example of the human essence residing inside a body which is only a “material case” reflects the Western way of thinking (Ida, 2009, 62). What matters is the soul, and the body can be anything. Therefore, from the perspective of Western philosophy, choosing a new “dwelling” for the soul would be justified, and in this sense it is clear how the idea of body improvement could “come from such a philosophical construction” (Ida, 2009, 62). But Ida completely ignores the principle of the unity of the soul and body, one of the fundamental postulates of Christianity, the most influential religion in that same West.

In sum, the outcomes of the “old” and “new” eugenics are similar in these examples: “[w]hether the aim is to improve humanity’s ‘germ plasm’ or to cater to consumer preferences, both practices are eugenic insofar as both make children into products of deliberate design” (Sandel, 2009, 84). But while the “old” eugenics represents the violence and coercion of the state apparatus against the individual, the “new” means the retreat (at least partial) of the state and regulation in front of the arbitrariness of the individual. Custom-made children, e-bay sperm, replacing an undesirable child with a desirable one, or inserting a character-memory card into a body of your choice are by no means rep-

representative examples of the democratic transhumanism propagated by Nick Bostrom (2005).

#### 4. Concluding remarks

The authors of the analyzed literary works do not show significant fear of the future, moreover, some play with various forms of improvement. New incarnations are sometimes funny, but more often disturbing, chaotically complex, even dangerous. The new, revised bodies of their heroes are for the most part just modified human bodies, still with evident human characteristics. Although the objectification of perception, that is, the authenticity of the simulated experience, is demonstrated in many works, the emphasis is still on the real and not on the illusion. None of the authors have dematerialized their protagonist, no one has crossed the line where disembodied minds would be part of the general memory, the database, the universal simulacrum. Moreover, with the exception of a few holograms (2094), all the characters retain the embodied experience, and the authors do not allow the shutting down of human qualities. Even when it comes to forms of artificial intelligence (*Dedivnacija*), and the robotic basketball player (*Samo igraji*) it is not an absolute symbiosis of the human mind and the robotic body. All the authors are somewhere in the middle between blind faith in technology and an absolute rejection of it. In fact, they fear the potential of high technology that could prove to be predatory rather than empowering. They are more in favour of various types of chips and implants than surgery and plastic surgery, especially because the former have a purpose and prove very functional.

The analyzed texts reflect the social phenomenon of consumerism, because most of the enhancements are considered commodities. The authors react to the consumer mentality and the dependence of an individual's happiness on the consumption of goods and services with irony and ridicule (*Romeo na kraju povijesti*). They expose the absurd hyperproduction of completely pointless repairs while verbalizing their uselessness (*Eshaton TV*), express criticism of a society that generates consumerism (*Heroj*) because the repaired body guarantees a better position in

society (2094), and is a commodity which only the rich can afford (*Irbis*). In the novels *Dedivinacija* and *Rakova djeca* the emphasis is not on consumerism but on the aesthetic standard: societies are at a high stage of development, bodily interventions are extremely accessible, commonplace, not a matter of prestige.

No less important social phenomenon in the focus of the researched works is the element of social control—the privileged control the masses through built-in technological add-ons (*Dedivinacija*, *Samo igraj*). At the end of *Samo igraj*, a group of visionaries shut down the control network, which shows the author's fear of such a management system and is an indicator of unequivocal resistance and activism.

The texts discuss a possible new social hierarchy: the installation of accessories that not everyone can afford underlines the existing social stratification, and sometimes sets an insurmountable limit. In the fictional reality of *Samo igraj*, only modified people are accepted. Various accessories also create an unnatural advantage when it comes to athletes (*Planet Friedman*) or warriors (*Bojno polje Istra*). This is even more obvious when it comes to genetic modifications—the privileged rich get additional (psycho-physical) trump cards. By further stratification of society and a widening gap between classes, a new world order is being created. The role that some authors give to clones speaks in favour of this—in a possible armed conflict, the final stage in building a new world stratification, they are consumables on the battlefield (*Irbis*) or weapons in a human form (*Dedivinacija*).

Finally, gene repair, victory over disease (*Samo igraj*) and the prolongation of life (*Samo igraj*, *Irbis*, *Rakova djeca*, *Onaj pravi*) lead to the overpopulation of the Earth. In the novel *Rakova djeca*, human life has been extended to two hundred years, while in the story *Onaj pravi* it is in theory eternal.

Technological development is the cause of the erosion of the boundaries between the human being and the machine, and between the organic and the inorganic. Its consequence is a general anxiety about the instability of the subject, with the body becoming the focus of many of these anxieties. As always, literature has responded promptly to (already achieved) technological possibilities, and the design of a wide variety of posthuman versions can serve as a simulation showing where this could take us.

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