Kapcár, Andrej

The aesthetics of the machine-god : transcendence, salvation, or dystopia in the image of the technological god-entity

Religio. 2022, vol. 30, iss. 1, pp. [45]-76

ISSN 1210-3640 (print); ISSN 2336-4475 (online)

Stable URL (DOI): https://doi.org/10.5817/Rel2022-1-4
Stable URL (handle): https://hdl.handle.net/11222.digilib/145001

The Aesthetics of the Machine-God: Transcendence, Salvation, or Dystopia in the Image of the Technological God-Entity

ANDREJ KAPCÁR

The idea of artificially created humans, born of technological means, is a concept that has been following the cultural advancement of humankind for centuries. In most recent variations, this topic is almost exclusively discussed and applied in pop cultural fiction in all its forms. While modern variations are usually partially derived from Mary Shelley's novel *Frankenstein*,[1] more examples can be found further down history in a variety of creation myths[2] and folk tales[3]. Even though these historical origins are undoubtedly important, the focus of this paper, based on processed research data, is the modern variations depicted in popular culture, as well as (often hypothetical) non-fictional applications.

Before diving into the possible fictional or non-fictional manifestations of artificially created humans, it is necessary to summarize what is to be

1 Mary Wollstonecraft Shelley, *Frankenstein, or, The Modern Prometheus: The 1818 Text*, Oxford: Oxford University Press 1998.

2 William S. Anderson, *Ovid's Metamorphoses, Book 1-5*, Norman: University of Oklahoma Press 1998; William S. Anderson, *Ovid's Metamorphoses, Book 6-10*, Norman: University of Oklahoma Press 1989; Kenneth Gross, *The Dream of the Moving Statue*, New York: Cornell University Press 1992.

3 Among such examples can be mentioned the tupilaqs inf Greenland Inuit folklore (Gretel Ehrlich, *This Cold Heaven: Seven Seasons in Greenland*, New York: Vintage Books edition 2001, 33), the ushabtis of the ancient Egypt (Richard Taylor, "SHABTI (USHABTI, SHAWABTI)", in: id. (ed.), *Death and the Afterlife: A Cultural Encyclopedia*, California: ABC-CLIO 2000, 320-321: 32.), the Prometheus mythos (Carol Dougherty, *Prometheus*, Abindgon: Routhledge 2005, 129), the story of Pygmalion and Galatea (W. S. Anderson, *Ovid's Metamorphoses, Book 6-10*…, 24), or the Golem in Jewish folklore (Moshe Idel, *Golem: Jewish Magical and Mystical Traditions on the Artificial Anthropoid*, New York: State of Univeristy of New York Press 1990, 296).

Religio: Revue pro religionistiku 30/1, 2022, 45-76.
https://doi.org/10.5817/Rel2022-1-4

understood under the proposed expression of "machine-god." As will be shown in the classification in the following chapters of this paper, the machine-god can be understood in two slightly different ways. The first, and more numerous in representations, is the idea of a man-made entity – either a new being in itself or an enhancement to an existing being that transgresses the boundaries of human limitations, physical and intellectual alike. The main idea of this concept is that average human abilities can be surpassed through technological means beyond the point of "humanness".

The second variation of "machine-god" is a separate god-like entity that manifests its influence through technological means. Where in this case the "shell" or "housing" of the entity might be man-made, the entity is considered an individual supernatural being, which humans are trying to find ways of reaching. This entity then serves as the object of worship, with devotees exemplifying the benefits of machinery over organic matter, often through augmentation and/or self-harming means. Examples from popular culture representing these variations will be discussed later in the text.

Throughout the text, two prominent terms will be applied many times – machine-god and god-entity. Due to the different connotations the expression "god" holds in literature, it would be beneficial to clarify its usage already at this point in the paper. First of all, the term "god" in either of the combinations (machine-god, or god-entity) will deviate from the monotheistic understanding of god as the creator and ruler of the universe, the source of all moral authority, a being or spirit who is believed to have supernatural powers or attributes, or who is believed to represent a particular quality.[4] In some cases it can also bear the meaning of god-man – a holy man, religious teacher or leader.[5]

The term machine-god will be applied to any supernatural being or deity that manifests its power through technology. This term will contain beings with intrinsic supernatural powers, who manifest, or communicate through technological means, or of which technology is considered an attribute – beings who were created through technology and whose abilities and traits surpass those of humans, as well as previously human characters who have gained supernatural powers through technological augmentations or mutations.

A god-entity is used in a broader sense, for a being with god-like, or reality changing powers, without the necessity of it being part of any pantheon or an object of veneration for any religious group. As such, a deity-

4 "God" [online], *Oxford Advanced Learner's Dictionary*, <https://www.oxfordlearnersdictionaries.com/definition/english/god>, [2. 1. 2022].

5 "God-Man" [online], *Oxford Advanced Learner's Dictionary,* <https://www.oxfordlearnersdictionaries.com/definition/english/god-man>, [2. 1. 2022].

like machine-god can be a god-entity, but a god-entity doesn't necessarily have to be a machine-god.[6]

The chosen methodology to approach this subject consists of three analytical steps – first, descriptive analysis, to place the machine-god depiction within the lore, or story, thus avoiding out of context interpretations; second, semiotic analysis of the symbols of the depiction and their suggested meaning; and third, aesthetic analysis aimed at further understanding the visual, non-narrative elements of the depiction – what kind of reaction does the depiction invoke?

The data sources range between fictional depictions and non-fictional theories and movements, where the stress is on their mutual influence. The proposed three-step analysis is mostly applicable to fictional depictions, since the non-fictional ones, often still introduced only on a theoretical level, are grounded in either philosophical, or scientific theories. Due to the lack of visual depiction of the non-fictional theories, neither a semiotic, nor an aesthetic analysis would be sufficiently applicable. Contemporary artistic or social movements whose visual identity can be a subject of the appropriate analysis can be considered as exceptions.

Since the chosen media in fictional depictions differ between graphic novels, videogames, and movies, to keep the analysis coherent, it will be aimed only at aspects that can be approached through visual means, omitting possible auditory stimuli.

The examples chosen were of course not the only ones available, but one of the aims of this paper was not to list all of them, but rather introduce categories with representative models. Visual fictional depictions with complex world-building and storylines have the benefit of introducing a flexible model for potential aesthetical analysis based on the contained semiotics. Trying to understand a potential aesthetical reaction to a purely theoretical model, such as the construction of a sun-powered megastructure inhabited by an AI exponentially more intelligent than humankind, would prove difficult, but thanks to the fictional worlds created we are provided with a baseline for further analysis. Among the questions this article is trying to answer are: Are the depicted reactions plausible, or are they nonsensical and why? If they are nonsensical, what would be a reaction with a higher possibility of occurrence? If they are plausible, could we

6 For example, the lore of the science fiction world of Warhammer 40,000 – the deity Omnissiah, a god who commands all technology, which works through his will, can be considered a machine-god and a god-entity, but the Chaos Gods, supernatural entities representing wrath, change, pleasure and death, would be considered god-entities, but not machine-gods, since their attributes are not connected with technology (Games Workshop, *Codex: Adeptus Mechanicus – Cult Mechanicus (7th Edition)*, New York: Games Workshop Ltd. 2015).

assume a similar reaction if the happening would not be purely fictional? The second aim of the paper is to put pop-cultural depictions into comparison with their potential non-fictional counterparts. Through this process, the analysis could help to reveal what aesthetical reaction could occur in the case of a real-life event.

1. Choosing the data

The chosen fictional depictions were selected according to the following criteria:

(1) The depiction had to be directly related to technology or machinery in any of the varying forms, with the focus on modern (automatized) technology. Example: A deity with attributes related to guns, tanks, computers, trains, even steam engines, would be appliable, but an entity related to swords, bows, spears would not.

(2) The depiction needed to be in interaction with the human population but did not need to be worshipped. Even if the protagonist was not a deity per se, but rather a mutated human, the focus should be placed on the interaction between him and other people. Example: The technological mutation had to happen to the main protagonist, or a character close to the main protagonist. Cases where a technological mutation was only introduced as an additional subplot to the main storyline were omitted.

(3) The depiction needed to be placed into a complex environment, not only consisting of inter-human interactions, but also focusing on the cultural, geographical, or political nuances of the world-building. Example: The machine-god character exists within a certain environment where the situation prior to, during, and after his appearance is introduced and discussed. This can include a political, cultural, or environmental situation leading to the construction of the machine-god, its importance for any potential changes within that environment, and the outcome.

(4) The focus was on the actual machine-god, or the circumstances leading to the bio-mechanical changes in the human protagonist. If the character falling into the category of a machine-god was just one of multiple plot points, the depiction was not taken into account. On the basis of this criterion, characters who were introduced as villains in a story focusing on different protagonists were also omitted. Example: According to this selection, popular characters like the Vision, Ultron, or Cyborg introduced within the extended Marvel and DC cinematic universes were omitted. On the other hand, the Marvel comic book miniseries character Vision (2015-2016) would be acceptable.

(5) The depiction needed to be at least partially grounded in scientific reality. Since a partial aim of this paper was not just to analyze the fictional depiction of the machine-god category, but consider any possible non-fictional parallels, depictions not manageable even on a theoretical level were omitted.

2. Depictions and representations of a machine-god

2.1. Fictional

As already mentioned, the most common depictions of a technological god-entity can be found within pop-culture. The ideas of comic book authors, movie directors, or video game designers know no bounds, and examples of technology transcending humankind are plentiful. On the basis of these depictions, we can introduce three distinctive categories of machine-god variables – anthropomorphic, disembodied, and expressions of transhumanism.

2.1.1. Anthropomorphic depictions

The selected example of anthropomorphic depictions of synthetic "gods" comes from the 2009 comic book series Supergod by Warren Ellis.[7] Despite the fact that several other visual novels also incorporate the concept of a synthetic "superbeing", this series was chosen for the explicit focus in the story on its creation, depiction, and social interactions. In an essay accompanying the publication of the series, Ellis describes the story in the following way:

> Supergod is the story of what an actual superhuman arms race might be like. It's a simple thing to imagine. Humans have been fashioning their own gods with their own hands since the dawn of our time on Earth. We can't help ourselves. Fertility figures, brazen idols, vast chalk etchings, carvings, myths and legends, science fiction writers generating science fiction religions from whole cloth. It's not such a great leap to conceive of the builders of nuclear weapons and particle accelerators turning their attention to the oldest of human pursuits. Dress it up as superhuman defense, as discovering the limits of the human body, as transhumanism and posthumanism.[8]

7 Supergod is a 5-issue comic book series created by the British author, novelist, and screenwriter Warren Ellis. The first issue was released in November 2009 by the publishing house Avatar Press, with art by Garrie Gastonny (Warren Ellis, *Supergod*, Rantoul: Avatare Press 2009).

8 Warren Ellis, "Supergod" [online], <https://web.archive.org/web/20100218152948/http://www.avatarpress.com/titles/supergod/>, [20. 8. 2021, archived].

Name	*Country of origin*	*Religious reference*
Morrigan Lugus	Great Britain	Name composed of two separate Celtic deities: The Morrigan – often considered a triple goddess of war and fate,[9] and Lugus – a tricephalic deity of the Celtic pantheon, associated with Mercury by J. Caesar in De Bello Gallico.[10]
Krishna	India	A major deity in Hinduism, worshipped as the eighth avatar of Vishnu and also as a supreme God in his own right. He is the god of protection, compassion, tenderness, and love.[11]
Maitreya	China	The Buddha of the future in Buddhist eschatology. Maitreya is a bodhisattva who will appear on Earth at a time in the future, achieve complete enlightenment and teach the pure dharma.[12]
Malak	Iran	Even though not clearly explained, probably a reference to the archangel Azrael in the Quranic tradition, known under the name Malak al-Mawt. His name can be translated as ملك الموت, "angel of death".[13]
Perun	Russia	The highest god in the pantheon of Slavic mythology. The god of sky, thunder, lightning, storms, rain, law, war, fertility and oak trees.[14]
Dajjal	Iraq/USA	The negative figure from Islamic eschatology, who will appear before the Day of Resurrection and pretend to be the promised Messiah. His full name is Al-Masih ad-Dajjal, translated as "the false messiah, liar, the deceiver, the deceiving messiah".[15]

Table 1. Overview of machine-gods in the story of Supergod

9 John T. Koch, *Celtic Culture: A Historical Encyclopedia*, Santa Barbara: ABC-CLIO 2006, 1622.

10 Julius Caesar, *Commentaries on the Gallic War*, trans W. A. McDevitte – W. S. Bohn, New York: Harper and Brothers 1869, 113.

11 "Krishna" [online], *Encyclopedia Brittanica*, <https://www.britannica.com/topic/Krishna-Hindu-deity>, [23. 8. 2021].

12 "Maitreya" [online], *Encyclopedia Brittanica*, <https://www.britannica.com/topic/Maitreya-Buddhism>, [23. 8. 2021].

13 Gustav Davidson, "A § Azrael", in: id. (ed.), *A Dictionary of Angels, Including the Fallen Angels*, New York: Free Press 1971, 64-65: 64.

14 Thomas V. Gamkrelidze – Vjaceslav V. Ivanov, *Indo-European and the Indo-Europeans: A Reconstruction and Historical Analysis of a Proto-Language and a Proto-Culture*, Berlin – New York: Mouton de Gruyter 1995, 575

15 David Cook, *Studies in Muslim Apocalyptic*, Berlin: Gerlach Press 2002, 94.

In this example, two aspects are to be analyzed semiotically and aesthetically, respectively – the avatar's names, with the connection to their country and origin, and their designed appearance. In the story, the gods, created by the governments and militaries of several leading countries, are used as weapons of mass destruction with the aim of waging global warfare against hostile neighboring countries and geo-political competitors alike. Each country names and designs their own "machine-god" according to the native cultural and religious traditions. The most prominent ones can be found in Table 1.

All the machine-god characters are depicted as anthropomorphic beings, bearing a strong resemblance to humans, but in every case, there are several aspects that prevent us from perceiving them as human, be it the color or radiance of the skin (Krishna has a blue skin; Malak radiates a green light), irregularities of bodily features (three heads on Morrigan Lugus, the incomplete anatomy of Dajjal), or extensive technological enhancements (mechanical eyes on Maitreya, or extensive bio-machinery on Perun). What is a feature common to all the machine-gods is their inhuman behavior (their ignorance to human suffering, often depicted as a blindness to the existence of humans or as a view of humans as lifeforms not worthy of attention), often depicted in extremely gory ways. The resulting amalgamation of attributes is something that resembles a human in physiognomic dimensions but is lacking any (or most) emotional and behavioral elements typical of humankind.

Due to their technological origin, the behavior of machine-gods can be perceived as more mechanical, following a strict logic. The combination of almost god-like powers, superior intelligence, and goal-driven behavior following the machine-god's own agenda has parallels in many of the polytheistic depictions of anthropomorphic gods. Also in this case, the technological god-entities are mortal (in comparison to the concept of the omnipotent god) and through the storyline, all but one are killed in mutual skirmishes and confrontations. The motive of artificially created god-entities is also explored in other works by W. Ellis, mostly Black Summer[16] and No Hero,[17] each from a unique perspective. The leading motive could be summarized as exploring the interactions between human society and the idols it has created. As Ellis himself states, Black Summer (the creation of all powerful beings through posthuman biotechnology) is about superhumans who were too human, No Hero (the creation of powerful beings through chemical drugs) is about superhumans who were inhuman, and

16 Warren Ellis, *Black Summer*, Rantoul: Avatar Press 2007.
17 Warren Ellis, *No Hero*, Rantoul: Avatar Press 2008.

Supergod is about superhumans who were no longer human at all, but something else.[18]

Fig. 1. Various depiction of gods in the Supergod storyline: A – Krishna, B – Morrigan Lugus, C – Dajjal, D – Maitreya[19]

18 W. Ellis, *Supergod*, Rantoul….
19 *Ibid.* (combined by author).

2.1.2. Disembodied depictions

The second category of machine-god depictions is what could be described as disembodied depictions. In this case, they are not constrained to a physical form, but rather the worshippers use technological means to contact them. Throughout the variations in popular fiction, three common elements can be found: 1 – The machine-god is an omniscient, omnipotent entity that is unreachable though conventional means; 2 – The focus in worship is put on knowledge as the main source of devotion, and 3 – The benefits of machinery over organic matter are emphasized. The two examples in this category are remarkably similar to each other – The Singularity Church of the MachineGod, from the videogame Deus Ex: Mankind Divided, and Cult Mechanicus from the game series Warhammer 40,000.

The first one is described as a quasi-religious cult that has formed around the emergence of augmentation technology (substituting organic parts with machines). The Church believes that, through this technology, humanity can evolve beyond flesh and blood and that eventually the individual consciousness will merge into a form transcending death. The members worship a deity named the MachineGod and augmented people are perceived as the chosen ones.[20]

In the second example, the religion of Cult Mechanicus values knowledge and the technology emerging from it above everything else, understanding it as a manifestation of divinity in the universe. Pure mechanical existence is the final stage of mankind's evolution. The worshipped deity, also named Machine God, or Omnissiah, is an immanent and omnipotent entity that governs all knowledge and technology in creation. A person's worth is only the sum of their knowledge, with the physical body being understood only as an imperfect, finite organic machine capable of preserving intellect, hence the aim of substituting organic parts with more durable machinery. In this lore, the process of removing and replacing biological tissue with mechanical parts is considered a sacred, ritual act of devotion.[21]

20 "Singularity Church of the MachineGod" [online], *Deus ex Wiki*, <https://deusex.fandom.com/wiki/Singularity_Church_of_the_MachineGod#cite_note-1>, [10. 8. 2021].

21 Games Workshop, *Codex: Adeptus Mechanicus (7th Edition)*, Games Workshop: Nottingham 2015, 36.

Fig. 2: Depiction of a Tech-Priest of the Adeptus Mechanicus Order[22]

This philosophy and devotion can be also seen in the Machine God credo — Credo Omnissiah:

There is no truth in flesh, only betrayal.
There is no strength in flesh, only weakness.
There is no constancy in flesh, only decay.
There is no certainty in flesh but death.[23]

In the case of these two examples, the actual machine-god entity is difficult to describe. In both cases it is an impersonal "energy", whose main attribute is knowledge, manifested through the possibilities of technological advancement. This omnipresence and omniscience can be associated with examples of dominant, monotheistic gods rewarding their followers,

22 *Ibid*., 44.
23 "Adeptus Mechanicus" [online], *Warhammer 40,000 Wiki*, <https://warhammer40k.fandom.com/wiki/Adeptus_Mechanicus>, [10. 8. 2021].

who are perceived as "the chosen ones". Due to the lack of depictions, the aesthetic analysis thus focuses on the followers, rather than the deity itself. The main aim is to transcend organic existence, often striving for a mind singularity. This is reflected in the negative perception of biological matter, and strong tendencies towards transhumanism. In the case of the Singularity Church of the MachineGod, the augmentations are seen as a sign of belonging, but the goal is to leave the physical body behind and exist only as a non-physical mind. In contrast, the Cult Mechanicus exemplifies self-mutilating augmentations as acts of devotion. The mentioned knowledge, even though embracing all of existence, is to be used and preserved in the realm of current existence, instead of being used for eschatological purposes. On the contrary, mechanical augmentations are processed as a way of prolonging existence (the preservation of knowledge) ad infinitum.[24]

Thus, disembodied depictions of the machine-god can be, mostly through the cult surrounding them, even further categorized into eschatological ones (with the aim of reaching any form of singularity) and status-quo preserving ones (cult members using their belief to reach immortality in their current existence). The worship of machinery, either in its own form, or as a representative of a non-material deity, eschatological, or status-quo preserving, can be found also in several other works of fiction – e.g., Mercerism, in Philip K. Dick's novel *Do Androids Dream of Electric Sheep?*,[25] Fordism, in Aldous Huxley's dystopian social science fiction novel *Brave New World*,[26] the Church of Science (Scientism) in Isaac Asimov's *Foundation* series,[27] and The Children of Atom in the video game series Fallout.[28]

24 In the lore of WH40k, the worshippers of Cult Mechanicus, called Magos Dominus, or Tech-priests are several thousand years old, as the machinery they are built from is keeping them alive Workshop.

25 Mercerism is a technology-based religion, connecting users through virtual reality to a feeling of collective suffering, centered around Wilbur Mercer, a martyr-like character who is eternally doomed to climb a hill while being hit by falling stones (Philip K. Dick, *Do Androids Dream of Electric Sheep?*, New York: Doubleday 1968).

26 The New State in Huxley's novel is built upon the principles of Henry Ford's assembly line, praising mass production, homogeneity, and predictability. Ford himself, while not a deity, was venerated as a "prophet figure", who has oaths sworn by his name (By Ford!). The symbol of the Christian cross was substituted by a T, representing the automobile Ford Model T, produced between 1908-1927 (Aldous Huxley, *Brave New World*, London: Chatto – Windus 1932).

27 A futuristic religion teaching the spiritual rule of the Galaxy, with the venerated deity named the Galactic Spirit with a complex hierarchy and clergy (Isaac Asimov, *Foundation*, New York: Gnome Press 1951).

28 A religious group worshiping a god-like entity named the Atom and nuclear weapons alike. The belief is grounded in the idea that within every atomic mass exists a whole universe. When the atom splits the universe divides into two new ones. As such, the

The category of disembodied depictions of the machine-god is often, mostly through the followers and devotees, connected with the next category – transhumanism.

2.1.3. Expressions of transhumanism – from past to the present

While not a deity (nor necessarily a religious cult or group per se), transhumanism has played a pivotal role in many fictional depictions of machine-god entities or the philosophy surrounding them. Under transhumanistic expressions can be understood mechanical and technological augmentations to organic matter through various means, either for religious (the glorification of technology over living matter) or functional (the enhancing of human abilities) purposes, and involuntary results (infections, mutations, or the results of human experiments). When connected to the mythology of disembodied machine-gods, these augmentations to the human body can be considered a means of devotion or inclusion into the group of followers. In other examples, transhumanism can exist individually as an ideological movement of transgressive human enhancement, without the connection to any central deity. Even though transhumanism is a popular topic in fiction, especially the genres of cyberpunk and its derivates (e.g., dieselpunk, steampunk, atompunk, splatterpunk), its origins can be found in the field of medical science and as such is firmly grounded in the non-fictional world. The idea of substituting limbs and organs with artificial and weaponized replacements goes hand in hand with the advancement of prosthetics. While some might perceive them as originating in the era of modern medical technology, artificial prosthetics have actually accompanied humankind for a very long time. Archaeological research has documented the usage of prosthetics as early as 950-710 B.C.[29] Even though most of the examples that could be mentioned from history served as cosmetic and somehow functional replacements of missing limbs, there are also some exceptions. The famous, and in cinema and literature often romanticized, hook-hand,[30] one of the oldest designs for

Atom is a deity responsible for the creation of new worlds through nuclear fission ("Church of the Children of the Atom" [online], *Fallout Wiki*, <https://fallout.fandom.com/wiki/Church_of_the_Children_of_Atom>, [10. 8. 2021]).

29 Currently, the oldest prosthetic found is a wooden, artificial toe, attached to the right foot of a priest's daughter in the tomb of Tebeketenmut in the necropolis in Thebes, near Luxor. Through experimental archaeology with participants missing the big toe on the appropriate foot, it was proven that the prosthetics was comfortable and assisted them in walking, thus invalidating the original interpretation of the artifact as a purely funeral accessory (Jacqueline Finch, „Artifact", *Archaeology* 64/3, 2011, 1).

30 Dereck W. Meeks – Maurice Leblanc, "Preliminary Assessment of Three New Designs of Prosthetic Prehensors for Upper Limb Amputees", *Prosthetics and Orthotics International* 12, 1988, 41-45: 41.

prosthetic limbs, was also useful in conflicts.[31] Popular fiction further expanded on the idea of the weaponization of prosthetics and depictions of transhumanistic transmutations are currently limited only by the author's imagination.

In this category two main examples from cinema will be mentioned – the 1983 science fiction movie Videodrome,[32] directed by David Cronenburg, and the 1989 art-sci-fi horror movie, Tetsuo: The Iron Man,[33] directed by Shynia Tsukamoto. These examples were chosen in contrast to the transhuman tendencies mentioned previously, where the practicians intentionally change their organic physique to transgress humanity. The process in these examples is always involuntary, as a side effect of some devastating event. The idea of a machine-god demanding the substitution of biological parts is substituted by a non-sentient (a transmitted signal in Videodrome) or not-specified (such as in the case of the Machine Fetishistin Tetsuo: The Iron Man) intention.[34] The results are mutations, similar to cancerous tumor growth, where instead of excessive biological tissue the protagonists grow mechanical (or bio-mechanical) modifications to their body. This process is depicted as painful, stressful, and generally unpleasant. Despite this involuntarily outcome, the protagonist usually manages to use the augmentations to their benefit in certain critical moments.

31 On 28 October 1871, the newspaper Kentish Independent reported the incident of William Benson, whose hand had been replaced with an iron hook, attacking someone with this prosthetics. In another case, in 1904, the newspaper Exeter and Playmouth Gazette discussed the case of a man being shot to death by a bagger who had stashed a firearm within one of his wooden legs.

32 A story about a TV producer looking for new content for his channel and stumbling across a hyperviolent torture show called Videodrome. As he tries to uncover the origins of the show, he embarks on a hallucinatory journey into conspiracies, transhumanistic body transformations and sadomasochistic sex games Collection, Videodrome. Based on D. Cronenburg's original story, Network of Blood, it explores the boundaries of art and pop-cultural consumerism (Suzie Young, "Videodrome" [online], <https://www.thecanadianencyclopedia.ca/en/article/videodrome>, [11. 8. 2021]).

33 An arthouse-movie about a man who starts to grow metal out of his body without understanding why. The story introduces a post-apocalyptic vision of the Earth by the antagonist of the movie (metal fetishist), where all being is consumed by metal (Tom Mes, *Iron Man: The Cinema of Shinya Tsukamoto*, London: FAB Press 2005).

34 Both the Machine Fetishist and the Videodrome signal share the intention of social change and punishment. Neither has a clearly defined goal but seems to function retroactively and somehow haphazardly – they emerge because a certain status quo in society is present and randomly effect or destroy everything in their path within a process of spreading as much as possible. A parallel can be seen with viral infection.

Fig. 3: The bio-mechanical mutations depicted in Videodrome[35]

I would argue that the communicated meaning of these involuntary mutations is that of a sickness or addiction. While the cults and religions mentioned in the category of disembodied depictions intentionally underwent physiological changes, referencing religious self-harming rituals, in this case the victims struggle to retain their human body and mind. Succumbing to the mutation process often reflects the loss of humanity and emotional responses, separating the affected from the human species and creating a new species. A reoccurring motive in these depictions is a close connection with sexual behavior, especially in its violent, or addictive forms, such as bondage, sadism, or sado-masochism. It is unclear why the correlation between aggressive transhumanism and violent forms of sexuality occurs so often in these works of fiction. One of the reasons could be the power relations, where the dominant power is associated with aggressive or narcissistic behavior (the mutated/predatory characters) and the submissive one with victimization (ordinary, hunted humans). It is true that psychological research has shown a statistically higher degree of narcissistic behavior among dominant BDSM practitioners, but at the same time it was not so prevalent as to confirm that most practitioners show this

35 *Videodrome* [DVD movie], directed by David Cronenberg, New York: Criterion Collection 2005, (first issue 1983), 1:05:11, screenshot captured by author.

psychopathological disorder.[36] Approaching this issue through aesthetical analysis, the focus should be shifted onto the actual depiction and symbolic communication. The sexual activity is twisted and shifted into a different form, where pain is given and received willingly, the partners placed into positions of domination and subordination. The whole depicted act serves as a symbol of one sided dehumanization and humiliation.[37]

Pic. 4: Mutations undergoing in the main protagonists of Tetsuo: The Iron Man[38]

These inclinations can be understood as a metaphor for the growing distance between humans and mutated transhumans. The unaffected human population is seen as inferior, prey, slaves, or mere tools for satisfying

36 Pamela H. Connolly, "Psychological Functioning of Bondage/Domination/Sado-Masochism (BDSM) Practitioners", *Journal of Psychology and Human Sexuality* 18/1, 2008, 79-120: 111.

37 Paulus Kaufmann – Hannes Kuch – Christian Neuhäuser et al., *HUMILIATION, DEGRADATION, DEHUMANIZATION: Human Dignity Violated*, London: Springer 2011, 47.

38 *Tetsuo: The Iron Man* [DVD movie], directed by Shinya Tsukamoto, London: Palisades Tartan 2005, (first issue 1989), 0:39:04, screenshot captured by the author.

one‘s sexual desires. In summary, we could say that the involuntary mechanical transmutations represent the dangers of dehumanizing society through technological means. In this case the machine-god is not a single entity, or a deity, but rather a collective, or a movement, predatory towards the rest of the population. The dichotomy between a machine-god (dominant/supernatural) and humanity (submissive/ordinary) is adapted into one of transhumans (dominant/powerful through enhancements) and ordinary humans (submissive/weaker in comparison).

The aesthetic communication of these depictions tends to work extensively with feelings of repulsion and disturbance. While the anthropomorphic depictions of machine-gods communicate the message of a non-human entity captured in an anthropomorphic form, and practitioners of the disembodied religious cults of the machine-god are a mixture of humans and machines, the mutated transhumans are closest to what are described as “monsters”. The basic outline of their physique remains vaguely human, but the body proportions, exaggerated open wounds, or mechanical elements “growing” out of the body itself are intentionally designed to invoke uneasiness or even disgust. Despite the fact that the most radical appearances are usually reserved for the antagonists, even the protagonists often cannot escape the fate of being mutated to some extent. All these motives can also be found in several other examples of popular fiction, usually represented in the genres of body horror, cyberpunk, or splatterpunk, such as the Hellraiser series (1987-2018), Wicked City (1992), and Tokyo Gore Police (2008).

When approaching the topic of the perception of, and emotional response to, a semi-human figure (e.g., augmented transhuman, or mutated human) through an aesthetic analysis (How do we perceive an entity that has human features, but is clearly “non-fully-human”? How to we react to it and why?), two theoretical concepts are prominent – transhumanistic bio-art and the uncanny valley. While the former tackles the question of whether a body modification can be appreciated for its artistic properties in an ideological framework which devalues the human body, the latter deals with the emotional response to an artificial (or imperfect) human resemblance in contemporary society.

2.1.4. Bio-art – the beauty in body modification

One of the principles of transhumanism, repeated in pop-cultural fiction and non-fiction alike, is the partial or absolute devaluation of human flesh. Since transhumanism proposes artificial intervention in biology, enhancing the current corporeality but ultimately aiming to transfer the mind to a

non-biological platform,[39] the body itself is perceived as a barrier in this transformative process.[40] However, this philosophy is inverted when dealing with the aesthetics of bio-art. On the one hand, the body loses its value as a necessity for bodily functions; on the other, it gains a new value as a medium for art.[41] Even if the final goal of transhumanism were achieved, the body would still hold the value of an equivalent amount of clay, or a canvas in the artistic world. Since transhumanism can't be taken out of the socio-cultural environment it exists in (fictional and non-fictional), its value is still determined by the aesthetic reactions it produces.[42] As an example of such aesthetic reactions to transhumanism in a fictional environment can be mentioned the described religious fascination with, and devotion to body modification among the Cult Mechanicus, serving as a factor for inclusion in the group.

2.2. The aesthetic understanding of human vs. artificial human interactions

Feelings of disassociation and even of repulsion or disgust towards the mentioned manifestations of machine-gods and human-machine hybrids could be partially explained through the uncanny valley hypothesis, identified by the robotics professor Masahiro Mori.[43] This hypothetical relation between an object's degree of resemblance to humans and the subsequent emotional reaction to this object suggests that objects that imperfectly resemble actual human beings evoke uncanny[44] feelings of eeriness and repulsion.[45]

39 Natasha Vita-More, "Aesthetics: Bringing the Arts and Design into the Discussion of Transhumanism", in: Max More – Natascha Vita-More (eds.), *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, West Sussex: John Wiley and Sons, Inc. 2013, 18-27: 20.

40 Diana Rishani, "The Aesthetic Fate of the Body: Where Transhumanism Places the Body in the Art Medium and the Ethics Governing This Relationship", *Social Epistemology Review and Reply Collective* 3/5, 2014, 17-24: 17.

41 Natasha Vita-More, *Life Expansion: Toward an Artistic, Design-Based Theory of the Transhuman / Posthuman*, Plymouth: University of Plymouth 2012, 204.

42 D. Rishani, "The Aesthetic Fate…", 17.

43 Masahiro Mori, "The Uncanny Valley", *IEEE Robotics and Automation* 12/2, 2012, 98–100: 98.

44 The uncanny can be described as the psychological experience of something that seems to the observer strangely familiar yet evokes a feeling of mystery (Nicholas Royle, *The Uncanny*, Manchester: Manchester University Press 2003, 1). One such example could be familiar objects or events that are encountered in an unsettling, eerie or taboo context (*Ibid*., vii).

45 Anne E. Ferrey – Tyler J. Burleigh – Mark J. Fenske, "Stimulus-Category Competition, Inhibition, and Affective Devaluation: A Novel Account of the Uncanny Valley", *Frontiers in Psychology* 6/MAR, 2015, 1-15: 14.

Mori's original hypothesis claimed that as the appearance of a robot or any artificial being becomes gradually more human, the observer's reaction becomes positive, supportive, even empathetic, until the appearance reaches a level beyond which the response becomes strong revulsion. If the changes in distinguishability continue, and the robot gains an appearance that is the same as a human being, the emotional responses become positive again, mimicking the human-to-human empathy stage.[46] The phase where the robot's appearance is somewhere between "almost human" but not "fully human" is what is called the uncanny valley. The hypothesis further claims that an "almost human"-looking entity produces a feeling of uncanniness (mystery), where the typical emotional responses to a human-robot (non-emotional reaction towards an appliance), or human-human interactions (emotional reactions of empathy) shift towards anguish, anxiety, repulsion, or even fear.[47] The reason for the existence of the uncanny valley is still currently discussed in academia, with the reasons ranging from biological[48]/evolutionary[49] to cultural/religious.

The feeling of uncanniness was first introduced by Ernst Jentsch, later expanded by Sigmund Freud,[50] for whom the uncanny locates the strangeness in the ordinary. In his essay Freud also works with the difference between fiction and reality and their connection to the uncanny. He proposes that if the author places the story within a fictional realm, too foreign to the existing reality, the feeling of uncanniness is significantly lower than when the author places his fictional story within a world reminiscent of ours. This feeling of eeriness can be exaggerated further if the author ac-

46 M. Mori, "The Uncanny…", 100.

47 *Ibid*.

48 Among the discussed reasons could be religious definitions of human identity (Irvin D. Yalom, *Existential Psychotherapy*, New York: Basic Book, Inc., Publishers 1980), threats to human distinctiveness and identity (Frederic Kaplan, "Who Is Afraid of the Humanoid? Investigating Cultural Differences in the Acceptance of Robots", *International Journal of Humanoid Robotics* 1/3, 2004, 465:480: 479), or mate selection (Gillian Rhodes – Leslie A. Zebrowitz, *Facial Attractiveness: Evolutionary, Cognitive, and Social Perspectives*, New York: Ablex Pub. Corp. 2002).

49 One of the most notable examples of the uncanny valley is mentioned by Charles Darwin in his writings: "The expression of this [Trigonocephalus] snake's face was hideous and fierce; the pupil consisted of a vertical slit in a mottled and coppery iris; the jaws were broad at the base, and the nose terminated in a triangular projection. I do not think I ever saw anything more ugly, excepting, perhaps, some of the vampire bats. I imagine this repulsive aspect originates from the features being placed in positions, with respect to each other, somewhat proportional to the human face; and thus we obtain a scale of hideousness." (Charles Darwin, *The Voyage of the Beagle*, New York: Modern Library 2001, 87).

50 Sigmund Freud, "The 'Uncanny'", in: James Strachey (ed.), *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XVII (1917-1919), An Infantile Neurosis and Other Works*, London: The Hogarth Press 1925, 219-253: 219.

cepts the conditions operating in the real world.[51] Freud's theory was further elaborated on by Jacques Lacan, who proposed that the uncanny situates the observer in a place where it is difficult if not impossible to distinguish good from bad, pleasure from displeasure, this generating a feeling of anxiety that conflicts with the Real.[52] All of the examples mentioned in this paper follow this rule – the story is placed within a believable world, not that different from our everyday experienced reality. Other than the god-entities or altered humans, the society in its interactions, its geography, even its biological consequences (injuries or death) are depicted in a believable manner.

2.2.1. Application of design principles

While several design principles have been suggested to avoid the uncanny valley, it is noticeable that fictional depictions go intentionally in exactly opposite directions, thus evoking feelings of uncanniness. Among such designs the following can be mentioned:

(1) Design elements matching human realism – the feeling of uncanniness is produced when human and non-human elements are mixed together. A robot with a human voice or a human with a robotic voice produce an increased feeling of eeriness in comparison to a robot with a robotic voice or a human with a human voice.[53] A similar result was observed also with the combination of motion and human/artificial appearance. Neuroimaging studies indicated the importance of matching appearance and motion kinematics.[54]

(2) Conflict and uncertainty in the matching of appearance and behavior – in the case of human looking robots, the expectations of certain behaviors are present. These expectations exist on the subconscious level,

51 *Ibid*., 236.

52 In psychology and philosophy, the Real is considered the authentic, unchangeable truth – the primordial dimension of experience, referring also to the infinite, absolute or noumenal, as opposed to the reality consisting of sensory perception. This expression is often associated with Jacques Lacan (Jacques Lacan, „*O Seminário, Livro 10: A Angústia*", Rio de Janeiro: Jorge Zahar Edition 2005, 175).

53 Wade J. Mitchell – Kevin A. Szerszen – Amy Shirong Lu et al., "A Mismatch in the Human Realism of Face and Voice Produces an Uncanny Valley", *I-Perception* 2/1, 2011, 10-12: 11.

54 Ayse Pinar Saygin – Thierry Chaminade – Hiroshi Ishiguro et al., "The Thing That Should Not Be: Predictive Coding and the Uncanny Valley in Perceiving Human and Humanoid Robot Actions", *Social Cognitive and Affective Neuroscience* 7/4, 413-422: 420.

where, if the brain's expectations are not met, prediction dissonance is generated.[55]

(3) Human proportions and the applied surface texture – photorealistic surface textures do not produce feelings of eeriness only in the case when they are applied to the correct dimensions of the body. The inability to correlate these depictions (a realistically depicted disproportional body, or a proportional body with an abnormal surface texture) can produce a feeling of uneasiness in the observer.[56]

2.3. Contemporary transhumanism and the search for the machine-god

When Oscar Wilde, in his 1889 essay The Decay of Lying, states the anti-mimesis[57] to the Aristotelian tradition, i.e., "Life imitates Art far more than Art imitates Life",[58] he sparked a new aesthetic shift in perceiving the dichotomy between art and real life. So, even though this paper has focused till now on the depictions of transhumanism and machine-god entities in fiction, I would argue that it is similarly important to analyze the historical and contemporary ideas, philosophies, or direct practices that inspired these fictional depictions, or vice versa. A semiotic and aesthetic analysis would, in the case of real-life applications, or theoretical concepts and philosophies, hardly be justifiable, so instead the following chapter will try to analyze parallels of inspiration between fiction and reality.

Non-fictional examples, found outside of popular fiction, in the field of performance art, medicine, or theoretical physics, can similarly be divided into three categories, each reflecting a different degree of social application:

(1) Artistic applications – personal level (reference to expressions of transhumanism)

(2) Philosophical and social concepts – social level (reference to disembodied depictions)

55 Jennifer Goetz – Sara Kiesler – Aaron Powers, "Matching Robot Appearance and Behavior to Tasks to Improve Human-Robot Cooperation", *Proceedings of the Twelfth IEEE International Workshop on Robot and Human Interactive Communication*, Lisbon: Portugal 2003, 5.

56 A. P. Saygin et al., "The Thing That Should Not Be…," 422.

57 Mimesis is a term in philosophy that can be understood as imitation, receptivity, mimicry, or the act of resembling (Gunter Gebauer – Christopher Wulf, *Mimesis: Culture—Art—Society*, Berkeley: University of California Press, 1995, 1).

58 Oscar Wilde, "*The Decay of Lying – An Observation*", Intentions, New York: Brentano 1905, 1.

(3) Theoretical applications – suprasocial[59] level (reference to disembodied depictions + non/anthropomorphic depictions)

2.3.1. Artistic applications

The idea of artistic, or semi-functional applications originates, similarly to the expressions of transhumanism, in the usage of prosthetics. In contrast to the functional reasons behind synthetic limb substitution, several artists have aimed to implement technological features into their bodies to improve their artistic expression. Neil Harbisson, a Spanish-born British-Irish artist and activist for transspecies rights, was the first person in the world with an artificially implanted antenna in his skull,[60] later officially recognized as a cyborg by the government.[61] The aim of this antenna is to send audible vibrations through his skull, including measurements of radiation, phone calls, music, as well as visual media (pictures, colors) translated into vibrations.[62] Harbisson describes his work as the art of designing new senses and new organs, and merging with them,[63] no different to the process of sculpting. Instead of sculpting physical matter, he molds his mind in order to create new perceptions of reality.[64]

Another example is the Spanish artist, and the world's first female cyborg artist, Moon Ribas.[65] A professional dancer, Ribas has implanted online seismic sensors into her feet that allow her to feel earthquakes

59 The suprasocial level is usually described as a moral system, but applicable also as a level of social interaction. At this level, the full variability of the human species is known and accepted. For the sake of further advancement – social, technological, spiritual, or biological – certain moral norms can be adapted, changed, or omitted if they secure the capacity to flourish not just for one cultural group, but for humanity as a whole. This concept is used while facing a different form of intelligent species or being that rivals (or exceeds) the intellectual capacity of humankind (Margaret Boone Rappaport – Christopher Corbally, "The Human Hearth and the Dawn of Morality", *Zygon* 51/4, 2016, 835-866: 863).

60 "Colourful Artist: On a Slightly Different Wavelength" [online], *The Irish Times* 2008, <https://www.irishtimes.com/news/health/colourful-artist-on-a-slightly-different-wavelength-1.1215431>, [8. 8. 2021].

61 Madeleine Stix, "World's First Cyborg Wants to Hack Your Body" [online], *CNN* 2014, <https://edition.cnn.com/2014/09/02/tech/innovation/cyborg-neil-harbisson-implant-antenna/index.html>, [8. 8. 2021].

62 Stuart Jeffries, "World's First Cyborg Artist" [online], *The Guardian* 2014, <https://www.theguardian.com/artanddesign/2014/may/06/neil-harbisson-worlds-first-cyborg-artist>, [8. 8. 2021].

63 *Ibid*.

64 *Ibid*.

65 "Moon Ribas: The Cyborg Dancer Who Can Detect Earthquakes" [online], *CNN Style* 2018, <https://edition.cnn.com/style/article/moon-ribas-cyborg-smart-creativity/index.html>, [8. 8. 2021]

through vibrations.[66] Similarly to Harbisson, Ribas also implements the new feelings and sensations produced by the reception of technologically transmitted stimuli into her work, producing new choreographic movements based on the new senses.[67]

In the case of Rob Spence, a Canadian filmmaker, his technological augmentation was born of necessity. As a result of a shotgun accident in his youth that left him half blind, he decided to create his own electronic eye with a wireless camera in it. Over the years he has developed several visually distinguishable versions of his prosthetic eye, including a transparent one and a red-glowing one.[68]

This category of real-life applications is closest to the expressions of transhumanism introduced in this paper. The usage of augmentations is either functional or artistic. The idea of enhancing existing human possibilities comes to the fore – experiencing stimuli through means which conventional existence doesn't allow, and thus exceeding the limitations of biological matter.

The abovementioned artistic applications represent the "personal level" of social applications. The artists follow a personal agenda (the creation of art through personal enhancements), and their transhumanistic augmentations do not influence the society outside of the boundaries of their work.

2.3.2. Philosophical and social concepts

Finding non-fictional parallels to fictional depictions of transhumanistic tendencies on a global scale (or even on a group level) has proven to be a difficult task. Since the required level of technological advancement which would make it possible has not yet been reached, most non-fictional examples can be found in the category of philosophical and social theories. The current advocates of transhumanism, as well as the authors of fictional depictions, still draw inspiration from the philosophers and scholars of the late 19th, early 20th century, such as Pierre Teilhard de Chardin, Vladimir Verdansky, Nikolai Fyodorovich Fyodorov, and Aleksei Gastev.

Pierre Teilhard de Chardin was a French Jesuit priest, scientist, and philosopher, who together with the Russian minerologist and geochemist

66 Gabriella Garcia, "The Woman Who Can Feel Every Earthquake" [online], *Hopes and Fears* 2015, <http://www.hopesandfears.com/hopes/future/technology/216729-the--woman-who-can-feel-every-earthquake-in-the-world.html>, [8. 8. 2021]

67 *Ibid*.

68 Rob Spence, "Man With Eye Camera Partners with World's First 3D Printed Eye Prosthesis Company" [online], *Eyeborg Project* 2020, <https://eyeborgproject.tv/>, [8. 08. 2021]

Vladimir Verdansky developed the concept of the noosphere.[69] In his book, The Phenomenon of Man, he abandoned the literal interpretation of creation as described in the Book of Genesis and perceived the whole process as an allegorical interpretation. The noosphere, described as the "sphere of reason", is the third phase in the development of the Earth, following the geosphere (inanimate matter) and the subsequent biosphere (biological life). In the same way as the emergence of life transformed the geosphere, the emergence of human cognition transforms the biosphere.[70] Teilhard de Chardin observed a directionality in the evolution of the Earth spheres along the axis of increasing complexity/consciousness, where the noosphere is the latest stage of evolution encircling the Earth. Since the noosphere consists of thoughts, reason, and social phenomena (e.g., education, religion, research), it can be understood as a being constituted by the interaction of human minds. He saw the Christian principle of love as the main driving force of "noogenesis", or the evolution of the mind.[71] This process is concluded by the achievement of the so-called Omega Point, a future in which everything in the universe spirals towards a final point of unification – in Christian eschatology, associated with the second coming of Christ.[72] This deterministic idea of transcendental unification has not only influenced later futurists and transhumanists, such as Ray Kurzweil,[73] but direct parallels can also be observed in the aforementioned Singularity Church of the MachineGod.

Nikolai Fyodorovich Fyodorov was a Russian Orthodox Christian philosopher, a proponent of the Russian cosmism movement and a precursor of transhumanism. His writings strongly influenced the renowned Russian esotericist Peter Uspensky. Fyodorov, a futurist himself, was, in his philosophy, occupied by the idea of death and mortality. He saw the evolutionary process being directed towards an increase in intelligence and its effect on the preservation of life. Even though humanity is the culmination of evolution, mortality is an indicator that this process is still imperfect and that the struggle against death should be the uniting factor of all human-

69 Sebastian Normandin – Charles T. Wolfe, *Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800-2010*, New York: Springer Science and Business Media 2013, 10.

70 *Ibid*.

71 David Pitt – Paul R. Samson, *The Biosphere and Noosphere Reader: Global Environment, Society and Change*, Oxon: Routledge 2012, 6.

72 Teilhard argued that the Omega Point resembles the Christian Logos, or Christ, drawing all things into himself. According to the Nicean Creed, Christ is described as "God from God", "Light from Light" and "True God from true God", in addition to a being "through [which] all things were made" (Michael Hickey, *Get to the End: A Catholic's View of the End Times*, London: UPA 2016, 104.).

73 Roy Kurzweil, *The Age of Spiritual Machines*, New York: Viking Press 1999.

kind. In his work, he identified two reasons for dying – the external environment, whose unpredictable nature should be tamed and organized through will and reason, and the imperfection of the human body, with its incapability of self-renewal. People need to reevaluate the power of technology and the weakness of the organic body. He suggests a technological transition not limited to the prosthetic substitution of body parts but concerned with the improvement of organisms as a whole. This way, people would become autotrophic organisms capable of adaptation to any environmental hazard, acquiring a new mode of energy exchange with the environment that would function on an endless cycle of renewal.[74] While Teilhard's and Verdansky's concept of the noosphere anticipated a unification of minds, without the necessity of the body (similar to the Singularity Church of the MachineGod), Fyodorov suggests bodily enhancement, achieving an endless existence with the goal of preserving intelligence as the final stage of evolution (similar to Cult Mechanicus).

While the ideas of Aleksei Gastev, the founder and director of the Central Institute of Labour in the Soviet Union, were devoid of any official religious underlay,[75] the similarity with the introduced disembodied machine-god concept is still evident. The institute, encouraged and financed directly on an order from Lenin, aimed at developing scientific approaches to work management. Aiming to achieve the most efficient performance of any mechanical operation, simple, repetitive factory operations were stud-

74 Nikolai Berdyaev, "The Religion of Resusciative Resurrection. The Philosophy of the Common Task of N. F. Fedorov" [online], <http://www.berdyaev.com/berdiaev/berd_lib/1915_186.html>, [9. 8. 2021]; Ludmila Koehler, *N. F. Fedorov: The Philosophy of Action*, Pittsburg: Institute for the Human Sciences 1979.

75 Even though it is true that the officially introduced doctrine in the Soviet Union was scientific atheism, its aim to root out the influence of religions among the population proved to be a difficult task. The initial idea that after the introduction of science people would massively abandon religious faith and flock towards the new doctrine failed. At some point, the idea that religion could be destroyed only through a clever replacement was implemented (Paul Froese, "Forced Secularization in Soviet Russia: Why an Atheistic Monopoly Failed", *Journal for the Scientific Study of Religion* 43/1, 2004, 35-50: 43). This substitution gave rise to the pseudo-religious role of scientific atheism, with its own rituals and venerations strongly resembling the previous religious ceremonies. Joseph Stalin promoted himself as the "Father" of his people, who alone could protect Soviet citizens from the evils lurking outside the Soviet Union (*Ibid*., 43). This personality cult of political leaders, noticeable also in other autocratic regimes, employed the archetype of a leader-warrior, often attributing to the person almost supernatural powers (Andrew Jeklin, "Stalin Saves the World — Stalin and the Evolution of the Warrior and Saviour Archetypes", in: Anita Pisch (ed.), *The Personality Cult of Stalin in Soviet Posters, 1929-1953*, Canberra: ANU PRESS 2016, 291-440: 350). From this archetype emerged also the image of another character of the aforementioned fictional series Warhammer 40,000 – the Emperor of Mankind, or the God-Emperor, which in some interpretations can be associated with the Omnissiah.

ied in great detail. Gastev saw machines as superior to humans, so the only way to maximize efficiency was to turn the workers into "human robots". In Gastev's own words: "[T]his principle of the mechanization or biological automatization [of man] must go very far, all the way to his so-called mental activity."[76] Starting with uniformity in dressing, the workers should move and react in unison with every step of the production process – from marching to their benches, to holding their hammers and using the factory machinery – so that after a short period of time they would adapt to the unifying mechanical rhythm and react automatically. It is not a coincidence that the generally used term "robot" comes from the Slavic noun "robota", meaning work. Gastev, also an artist, was the author of several poems. His most favorite one "We Grow out of Iron" bears in parts a resemblance to the creeds and mottos of the fictional cults devoted to machine worship:

We Grow out of Iron
Look!
I stand among them: furnaces and forges,
hammers and machinery, and among hundreds of my comrades.
Above us in a wrought iron expanse,
Along the walls move the beams and the irons,
They rise up to a height of 30 feet, Swinging from the right to the left.
They unite the rafters with the cupolas
And like the shoulders of giants,
They hold up the entire iron edifice.
Rising upwards, they are swift, sweeping, strong
Demanding ever more strength.
Gazing upon them, I draw myself up straight.
Pouring into my veins is a new, iron blood,
And I begin to grow.
I myself am growing steel shoulders and infinitely strong hands.
I am merging with the iron edifice.
With my shoulders, I am pushing the rafters and the beams up to the roof.
My feet are grounded, but my head is higher than the building.
And while I am still choking from my inhuman efforts,
I am already crying out: A word, comrades, a word!
The iron echo has heeded my words, the whole building trembles with impatience.
I continue to rise upwards, I am on level with the pipes.
And there is no story here, there is no speech.
There is only the cry:
We will triumph![77]

76 Aleksei Gastev, *Kak Nada Rabotat*, Moskva: Centralnij Institut Truda 1923.
77 Rolf Hellebust, "Aleksei Gastev and the Metallization of the Revolutionary Body", *Slavic Review* 56/3, 1997, 500-518: 505.

Fyodorov, Teilhard, and Gastev were, of course, not the only ones to have a significant impact on framing the principles of transhumanism but could be considered its ideological precursors. Even though the term itself derives from a paper by the Canadian philosopher W. D. Lighthall,[78] the generally regarded founder of transhumanism is the English biologist Julian Huxley,[79] who described it in his 1957 book *Transhumanism* as a form in which humanity will be transcending itself.[80] Other scholars who have had an important impact on the movement include the Japanese Metabolist architects Kenzo Tange and Noboro Kawazoe,[81] the American cognitive and computer scientists Marvin Minsky[82] and Hans Moravec,[83] and the American inventor Ray Kurzweil.[84] A common topic for all these authors was an emphasis on the long-term social benefits of transhumanism for mankind.

This second group thus forms the "social level", and even though some of the respective philosophical notions had a religious basis, the main aim was to improve the quality of life, achieve higher efficiency, decrease mortality, or evolve humankind beyond its current form.

2.3.3. Theoretical applications

Out of the three categories introduced at the beginning of this paper, real-world parallels to anthropomorphic depictions are the most problematic to uncover. Creating a functional, synthetic, anthropomorphic figure that would be inhabited by an omnipotent, or omniscient entity is probably a task that has rarely found its way into even hypothetical planning. On the other hand, if we substituted the anthropomorphic form used so often in the fictional depictions with that of a man-made container, we could find parallels in several theoretical models.

John Murray Spear was an American Spiritualist clergyman who attempted to construct a mechanical Messiah. In his writings, Spear claimed that he was in contact with "The Association of Electrizers" a group of

78 Peter Harrison – Joseph Wolyniak, "The History of Transhumanism", *Notes and Queries* 62/3, 2015, 465-467: 465.

79 Julian Huxley was the brother of Aldous Huxley, author of the already mentioned novel Brave New World.

80 Julian Huxley, *Transhumanism*, New York: Harper and Brothers 1957, 73.

81 Zhongjie Lin, *Kenzo Tange and the Metabolist Movement: Urban Utopias of Modern Japan*, London: Routledge 2010, 24.

82 Marvin Minsky, "Steps Toward Artificial Intelligence", *Proceedings of the IRE* 49/9, 1961, 8-30: 9.

83 Hans Moravec, "When Will Computer Hardware Match the Human Brain?", *Journal of Evolution and Technology* 1, 1998, 1-12: 1.

84 R. Kurzweil, *The Age of…*

spirits including Thomas Jefferson, Benjamin Franklin, and John Quincy Adams, whose purpose was to introduce new technology to mankind that would elevate it to greater levels of personal, intellectual, and spiritual freedom. This culminated in the year 1853, when Spear and several of his followers started to work on a "New Motive Power". This electrically powered Messiah would act as the physical body of God, heaven's last gift to man, that would eventually herald a new Utopia.[85] After the failure to achieve the desired effect, the fate of the New Motive Power is unclear.[86]

While Spear's idea was to create a housing for God himself, the following examples work with a more abstract notion of the ultimate artificial intelligence. The Dyson sphere and Matrioshka brain are hypothetical megastructures, constructed around a star, that would capture and harness the radiated energy in order to power exponentially more complex computing processes.

The Dyson sphere, named after the British-American physicist and mathematician Freeman Dyson, was the result of a thought experiment (Dyson was not proposing how such a structure could be constructed) on explaining how a technologically advanced civilization would meet their demands for energy.[87] He proposed a system of orbiting structures that would be designed to intercept and collect all the energy produced by the Sun.

The Matrioshka brain, proposed by Robert J. Bradbury,[88] comes from the idea of using several Dyson spheres nested inside each other, similarly to how Matrioshkas (Russian dolls) are arranged. This concept increases the effectivity of the Dyson sphere model. The innermost Dyson sphere, which would draw energy directly from the Sun, would necessarily emit large amounts of waste heat, as a result of the ongoing computing processes. The second layer, a second Dyson sphere, would absorb this heat and use it for additional computing processes, while extruding heat of its own. Subsequently, this heat would be absorbed by the next sphere and so on, with every sphere working at a gradually lower temperature. This way,

85 Spear and an unnamed woman, referenced only as the "New Mary", even conducted a birth ritual, where the machine was ritualistically "born" into life (John Benedict Buescher, *The Remarkable Life of John Murray Spear: Agitator for the Spirit Land*, Notre Dame: University of Notre Dame Press, 2006).

86 According to some, the machine was dismantled at a later time, though sometimes unsubstantiated news surfaced about the genuine machine being found (Dan Baines, "John Murray Spear's 'Mechanical Messiah' Discovered in Colorado Attic" [online], 2019, <http://www.danbaines.com/blog/tag/New+Motive+Power>, [7. 8. 2021]).

87 Freemann J. Dyson, "Search for Artificial Stellar Sources of Infra-Red Radiation", *Science* 131/3414, 1960, 1667-1668: 1668.

88 Robert J. Bradbury, "Matrioshka Brains" [online], 1997 [2004], <https://www.gwern.net/docs/ai/1999-bradbury-matrioshkabrains.pdf >, [9. 8. 2021]

the process of harnessing energy would be waste free and working at maximum efficiency.[89] Even though such megastructures are theoretically possible, their practical construction is currently beyond the contemporary technological capabilities of mankind, so all suggestions are presented only on a hypothetical level.[90]

The question of "how is this related to the concept of a machine-god?" comes into play while discussing the possible uses for such immense computing power. Theoretical physics does not provide a clear estimate of how great such computing power would be,[91] but several novelists have included this concept in their works. Charles Stross[92] and Damien Broderick[93] suggested it could be used to run a perfect simulation, allowing human minds to be uploaded into a virtual space, thus creating a whole universe inside the Matrioshka brain. As such, the nested supercomputer would effectively become an entity capable of creating, preserving, and altering all of existence within its simulation, reflecting the idea of an omnipotent god.

The final category of examples thus represents the supra-social level. This kind of level or environment consists of notions of God or any other supernatural power.

2.4. Modern times, modern gods

Even though we have mentioned several examples of real-life behaviour that would bear some resemblance to the cult-based, disembodied depiction of machine worship, true machine worship is rare. One example which approaches this concept is described in the book *The Age of Spiritual Machines: When Computers Exceed Human Intelligence* by the inventor and futurist Ray Kurzweil.[94] He sees evolution as evidence that, one day, humans will create a machine that is more intelligent than they are. Among his other prognoses are ideas that nanotechnologies will augment our body to cure any diseases and prolong life, and that humans will be able to connect to computers via direct neural interfaces or spend their whole lives in a technologically simulated reality.[95] Additionally, he

89 Anders Sandberg, "The Physics of Information Processing: Superobjects: Daily Life Among the Jupiter Brain", *Journal of Evolution and Technology* 2/1, 1999, 1-30: 29.

90 George Dvorsky, "How to Build a Dyson Sphere in Five (Relatively) Easy Steps" [online], *Sentient Development* 2012, <http://www.sentientdevelopments.com/2012/03/how-to-build-dyson-sphere-in-five.html>, [11. 08. 2021].

91 A. Sandberg, "The Physics of Information…", 28–29.

92 Charles Stross, *Accelerando*, New York: Ace Books 2006.

93 Damien Broderick, *Godplayers*, New York: Thunder's Mouth Press 2005.

94 R. Kurzweil, *The Age of*….

95 Kurzweil also proposed the term "singularity" as a rapid increase in artificial intelligence (in opposition to other technologies) that will allow humans to transcend the limita-

claims that, at a time in the future, machines will appear to have their own free will, and will even be capable of spiritual experience.[96] In this case, we can see a shift from the previous introduced categories, but an idea worthy of thought. If machines were capable of spiritual experience, would they evolve into questioning existence through semi-religious means, constructing deities that require devotion through worship? Would this deity also be an inorganic machine?[97] The theories proposed by Kurzweil do not go sufficiently far to provide answers.

Here is where another inventor steps in, with his own idea of a church worshipping artificial intelligence. Anthony Levandowski opened his Way of the Future Church in 2015 as a new religion focusing on the "realization, acceptance and worship of a Godhead based on Artificial Intelligence, developed through computer hardware and software."[98] The belief system of the Way of the Future Church was rooted in the idea that the emergence of a super-intelligence (reflecting Kurzweil's theory of Singularity), an AI that would exceed the intelligence of humans, is inevitable. The church did not operate for long, as Levandowski shut it down at the beginning of 2021 and redirected his energy and funds to different causes.[99]

3. Conclusion

A machine-god could be summarized as an entity, man-made or inhabiting a man-made container, whose capabilities, physical and/or intellectual, surpass that of mankind. This article focused on depictions of the machine-god in popular fiction, while also trying to find possible parallels

tions of human bodies and brains. He also predicted the date of the singularity (2045), when he expects the advent of a computer intelligence that will exceed the sum total of all human brainpower. In the post-Singularity world, there will no longer be a distinction between human and machine anymore (Ray Kurzweil, „*The Singularity Is Near*", New York: Penguin Group 2005, 135–136).

96 R. Kurzweil, *The Age of…*, 6.

97 This idea of beings constructing their gods according to their image can be traced back to the writings of Xenophanes, where he suggests that if cattle, horses, or lions had hands and possessed the ability of pictorial representation, they would depict their deities as cattle, horses, or lions (Xenophanes, "Fragments and Commentary", in: Arthur Fairbanks (ed.), *The First Philosophers of Greece*, London: K. Paul Trench, Trubner 1898, 64-85: 65). This becomes relevant while thinking about the possibility of whether sentient machines would construct their gods also according to their image – machine-gods.

98 Mark Harris, "Inside the First Church of Artificial Intelligence" [online], *WIRED* 2017, <https://www.wired.com/story/anthony-levandowski-artificial-intelligence-religion/ >, [6. 8. 2021].

99 Kirsten Korosec, "Anthony Levandowski Closes His Church of AI" [online], *Tech Crunch 2021*, <https://techcrunch.com/2021/02/18/anthony-levandowski-closes-his--church-of-ai/ >, [5. 8. 2021].

in the real-world. The examples were chosen to represent a broad spectrum of media – graphic novels, movies, and video games. The aesthetic as well as semiotic analysis demonstrated that while the concept of a mechanical god might be similar in the depictions, the communicated symbols differ. A machine-god could be perceived as sickness, alienation, transgression, or even global destruction.

As a result of the analysis, I was able to distinguish at least three separate groups of depictions, each with a different communicational content. The anthropological depictions were intended to represent the idea of an omnipotent (or nearly omnipotent) being, either created by humans, or evolving into an all-powerful stage on its own, contained in a (bio)mechanical form created through science. This entity sooner or later comes into conflict with the human society through its unbound power threatening mankind with annihilation. While these beings, within the story, tend to show signs of agency, it remains questionable whether such agency is a manifestation of free will, or their initial programming, which tends to regard emotionally-driven human behavior as faulty or imperfect. A parallel in meaning can be drawn with man-made weapons of mass destruction, as they also hold the power to wipe out humanity, while on the other hand, the unleashing of their destructive power is still within the context of the original intention behind their creation – to kill and destroy as a means to end conflict. The second category of disembodied depictions builds upon the idea of an omnipotent and omniscient god-entity whose form is never addressed. Instead, this god-being is venerated as the source of knowledge, rewarding those who choose to follow it. Parallels with monotheistic, immaterial gods who, in their respected cosmology, demand loyalty and worship in exchange for benefits (life after death or the improvement of life on earth) for their devotees are evident. Similarly to such monotheistic gods, these machine-gods are also not man-made, but rather exist on a supra-social level, with society reaching up to them. What is man-made are the means of communication. A repeated theme is the embracing of technology as a means of salvation and the rejection of finite biomatter, which is incapable of holding and preserving knowledge, such knowledge being the highest prize in these fictional religions. The last category can also be seen as partially overlapping in terms of meaning and aims with the previous one. The expressions of transhumanism are usually devoid of an explicit religious meaning, but, at the same time, deal with certain global phenomena that affect the behavior, as well as the appearance of mankind. Biotechnological mutations and the substitutions of limbs through technological augmentations are the most noticeable expressions in this depiction. Even though no god-entity is present, the idea of transhumanistic advancement and the transgression of norms mirrors many of the

spiritual paths and techniques aimed at expanding the mental, intellectual, and physical capabilities of humans.

The aesthetic analysis showed that many of the depictions are intentionally designed to create anxiety, revulsion, disgust, or even fear. These technological beings, or mechanical augmentations can be placed in the area of the uncanny valley, where they can be identified as "almost human", but not "fully human". The second part of the paper introduced examples from the real world that mirrored the three introduced categories of machine-god concepts. Transhumanistic "cyborg" artists, theories of human advancement achieved by accepting the dominance of technology over biology, or hypothetical concepts of supercomputers capable of creating whole universes seem very similar to the fictional, futuristic storylines. With improvements in robotics and artificial intelligence, high hopes are invested in the creation of intelligent machines that will assist humans in complex tasks and thus improve the quality of life. Is there a possibility of a future in which people will create a machine that will surpass them, as suggested by Ray Kurzweil? And if so, how will it be perceived? With disgust, distrust, or devotion?

SUMMARY

The Aesthetics of the Machine-God: Transcendence, Salvation, or Dystopia in the Image of the Technological God-Entity

In popular fiction, as well as in theoretical philosophy, often inspired by technological evolution, we often come across the entity of the so-called machine-god. Originating in creation myths, later adapted into the science-fiction and horror genres, the opposition between a synthetic, fabricated creation and its potentially devastating influence on its creator has been approached from multiple angles. With the rise of technological advancement, the idea of a machine capable of surpassing the human in his physical, as well as mental capabilities, becoming thus something greater than humanity itself, has slowly gained in importance. This paper aims to analyze the concept of a man-made machine-god, depicted in popular culture and contemporary scientific theories, and through the perspective of aesthetics and semiotics, compare it to its potential non-fictional parallels. Through analyzing the symbolism of modern depictions, historical discourse, and reasoning behind the subconscious reaction, it aims to analyze the possible interactions between humankind and a god that humankind itself would create.

Keywords: esotericism; pop-culture; transcendence; gods; machines; transhumanism

Department for the Study of Religions
Faculty of Arts
Masaryk University
Arna Nováka 1
602 00 Brno
Czech Republic

ANDREJ KAPCÁR
andrej.kapcar@mail.muni.cz