

Visions of AI in Popular Culture:

Analysis of the Narratives about Artificial Intelligence in Science Fiction Films and Series

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/ The Robots We Love

In 2016, for the first time, the American company Boston Dynamics presented the humanoid Atlas whose fluidity of movements almost perfectly imitates the human one. This one-and-a-half-meter robot weighing as much as an adult man, as well as his “dog friend” Spot, who opens the door on his own, arouse both admiration and anxiety in us.

The study conducted by the SWPS University students shows that the same mix of feelings has been constantly accompanying creators and viewers since the cinema began to present humanoid machines using special effects – more or less since the late 1920s, when Fritz Lang created *Metropolis*. This tension accompanies man who comes face to face with their greatest creation: the intelligence they have created.

From *Blade Runner* to *Westworld*, artificial intelligence (AI), subordinated to and serving man, is arousing ever greater ambitions in its human creators, like a child of whom parents have high hopes. Our culture, however, has a fairly clear trajectory for this ambition: the turning point must come when technology surpasses humans in intelligence and inevitably begins to dominate them. This dominance can be social, as in *The Terminator* or *The Matrix*, or personal and emotional, as in *Her*, where the main character parts with his beloved AI when he notices her polyamorous behaviour.

These images and topoi not only feed the visual arts but they also shape the cognitive horizon of all recipients of popular culture, including lawmakers. The European Commission is currently preparing a law on artificial intelligence, which will regulate the risks associated with the use of these technologies in the management of public affairs, among others. What are the reasons behind the discussions about banning the use of Social Credit System or predictive technologies in law enforcement and the judiciary? Is it because of evidence-based politics, or is it because just enough MEPs have seen *RoboCop* to imagine what the real world could potentially look like when AI is used without any constraints?

The visual arts shape our consciousness to such an extent that we use these visions to assess the reality in which what until recently was only imagined now seems real. Jumping up the stairs and running with great agility, Atlas looks a bit like a man in a robot suit. Meanwhile, the robots we love are C-3PO with his angular movements or the heavy and modular Optimus Prime. With the development of Atlas, Spot and similar technologies, increasingly versatile physical and virtual machines will not only rule our imagination, but also gradually increase our acceptance of the various roles played by AI.

What is interesting to me is how much we can be inspired by how culture socializes the constraints of the development of artificial intelligence and how we can use the tools of cultural description in the social dialogue about what the use of AI in public services or medicine and, inevitably, in war will bring. The study conducted by the students of the SWPS University is a great starting point for conversations with the residents of the European Union about what they gain and what they lose when the development of AI is regulated by law.

Anna Mazgal,
Executive Director,
Wikimedia Europe

Commentary

Cultural analysis of technology is essential in our increasingly technological world. It shows technologies not as immutable objects or forces shaping people who are changeable by nature, but as phenomena understood through the prism of the culture in which these technologies are immersed. Such analysis of artificial intelligence technology is especially important in a year like this. At the beginning of this year, technologies described as generative AI became popular, which will most likely be a factor of fundamental social change. As if that was not enough, breakthroughs happen month after month, week after week.

At the same time, these technologies, like many digital technologies, enter the world without providing us with any manuals on how to use them. There you go: here is a box that looks like a search box, but is the interface to a whole new digital phenomenon. Few people will simply call it a “service”, many will look for human features in it, and for some it will be a sort of deity. These technologies need to be accompanied with manuals, including cultural instructions. And this is how I understand the study conducted by the students of the SWPS University in cooperation with Wikimedia Europe: as giving us an instruction, composed of cultural codes, on how to understand these technologies.

Drawing on science fiction films is a great idea. One of the anecdotes about the creation of the iPhone (a technology that, in my opinion, marked a new era, preceding the age of AI) says that the first iPhones were the communicators used by the crew of the Enterprise. So, the proto-iPhone as an object imagined in an American film studio dates back to the 1960s. It may just be an urban legend, but it illustrates well the power of science fiction as a form of collective imagination to shape the very real technologies.

It is similar with AI technologies: we do not know what exactly inspired the creators of ChatGPT, Stable Diffusion or DALL-E. Maybe they watched The Terminator as children, or maybe in his childhood, the Polish co-founder of OpenAI was afraid of Adolf, a robotic doll created by the barber Filip in Mister Blot’s Academy? The research gives us not one lead, but a whole map on which we can move.

This map allows us to decode meanings related not only to the technologies themselves, but also to their regulation. I mention legal regulations because I deal with them on a daily basis. With the help of the leads presented in the report, the AI act (a proposed European law on artificial intelligence) can be perfectly deconstructed as a set of rules focused almost exclusively on the issue of controlling threats related to AI, thus moving around the axes of control and security. And, although it is not stated directly in this document, imagining, in the foreseeable future, a rebellion of machines against humanity, which must be prevented in advance.

It is therefore worth considering what other cultural categories we could build regulations governing artificial intelligence upon. In the report, I was very interested in the topic of equality between people and machines – a world in which humans and technologies trust each other. This is a positive, perhaps even utopian, clue, which, according to the researchers, is very little present in our ideas about technology. The scenario presented at the end of the report actually sounds like a recipe for a work closer to the standards of socialist realism propaganda films than entertainment cinema. But treated as a model, a map for reality that we could create with the help of law and public policies, it seems to me a map worth exploring.

Dr. Alek Tarkowski,
Open Future Foundation

/ Introduction

Popular culture helps shape our idea of technology and strongly influences the way we perceive it: are we afraid of it or do we rather find it fascinating? The amazing world of bits, binary systems, calculations, working with data is so abstract that all forms of its visualization in visual arts, including films, attract the attention of audiences. This is probably also why the rather stiff and raw music of the band Kraftwerk, whose members combined the aesthetics of electronics with pop, was so successful. Songs listened to today, such as *Home Computer*, *Das Model* or *Computer Love*, seem timeless perhaps precisely because even now they resonate in the interpretation of the unclear, still negotiated relationship between humans and machines. It is worth remembering that Kraftwerk began creating in 1970, long before the big data revolution, long before the widely available Internet, although after Stanley Kubrick made *2001: A Space Odyssey* (1968) and Frank Herbert wrote *Dune* (1965).

What is interesting is the relative proximity in time of these very different texts of culture, which present the relationship of man with technology and their attitude to its development, depict anxieties, hopes, and even the ordinary use of machines in a completely dissimilar way. The action of *Dune* takes place after the revolution, in which the machines unsuccessfully tried to take over the world, and the balance in the universe depends on the forces of nature (symbolized by the spice, i.e. a special drug that prolongs life and expands consciousness, available only on the planet Arrakis, where most of the action of the book and film takes place) and culture – although the word “religion” would probably be more precise, because the Bene Gesserit is a female order whose aim is to create an ideal being, the Kwisatz Haderach, as a result of precise genetic manipulation occurring over many generations. In Kubrick’s film, artificial intelligence is only just taking control of the ship, and thus over the lives of the crew. It is the realization of what we would today call superintelligence, although the plot of the film embeds the threads of technology’s impact on nature in the figure of a monolith. Its appearance in *2001: A Space Odyssey* problematizes the way of thinking about the impact of technology on people’s lives. The monolith discovered by the ancestors of homo sapiens, millions of years before the appearance of man, suggests that technological progress is not a consequence of evolution. On the contrary, evolution became possible thanks to technological progress, albeit one that happened in a civilization other than human, which spread throughout the galaxy through the aforementioned monoliths.

These two separate ways of looking at the interaction of the world of people and the world of machines (the first, which puts man on the winning side of the conflict with artificial intelligence, making it just an ordinary tool, and the second, in which technology poses a real threat to humanity, willing to exterminate it), but also thousands of other cultural texts, including primarily science fiction films, have shaped and are still shaping our relationship with technologies. They often try to deepen it and go beyond the topos of the war of the worlds, showing the necessary to explore relationships between research on technology and the state that finances it, asking questions about the status of democracy in a world full of data, as well as about the strength of relationships between people, and between people and machines, in a way meeting the discussions that we will probably be having in the near future. Science fiction films are a mine of visions and inspirations that shape the image of technology (especially artificial intelligence) that is created in our heads. This report is an attempt to describe the most important threads that can be found in this image.

The study of selected themes that science fiction films take up in the context of describing artificial intelligence required, on the one hand, several actions to clarify the subject of research, and on the other hand, the appropriate operationalization of concepts. A similar task was undertaken, for example, by Natalia Hatalaska, who in her *Far Future* report looks at visions of the future presented in science fiction films. Curator Patrick Gyger, interviewed by Hatalaska, notes that “science fiction does not try to predict the future. Sometimes it is right, sometimes it is wrong, but it never really tries. Filmmakers or writers in this genre do not try to predict the future either. Sometimes sci-fi expresses hopes and fears for the future, and some good sci-fi projects, like *Black Mirror*, show how people can become slaves to the technology they create. And that is a very common

concern.”¹ Hatałska’s project asks about visions of the future, while our research focuses on the here and now: what the collected material can tell us about the relationships, fears, values or power that are the basis for describing the world of machines and the world of people.

This report is the result of a research project in which, in cooperation with Wikimedia, we decided to take a look at the dominant popular culture topics related to technology. It is important to note that the report was created throughout the semester at the School of Ideas at the SWPS University, and it was written by over a dozen people in total. Thus, we draw attention to both the differences in the styles of describing the films under analysis, as well as the obvious differences in the sensitivity of the people conducting the research, in their perceptiveness, motivations behind giving meaning to individual threads, extracting codes and then analytically combining as well as interpreting and embedding these codes in the broader structure of the report, conceived as a whole. Apart from the necessary editing of the text, we decided not to interfere in the approach, and therefore also in the content of the analysis. In the process of combining the text, various research perspectives emerged, for example one that analyzes the collected films and series from the outside, evaluating their message, or one in which students suggest full immersion in the studied content as well as a thought experiment in which narratives about technology define our ideas about it as a certain truth.

The overriding goal of this study is to better understand which narratives about technology, which is often incomprehensible to many users, function in the social imaginary. Popular culture is their key carrier, especially if we want to include critical tones that have no place in the stories built around devices and services by corporate cyber marketing. A good recognition of these narratives (identified as part of this project on the basis of content analysis, but also quantitative research, which will be discussed later) may be the basis for building communication that addresses aspects of technology operation other than the standard “language of benefits”, or introduces the perspective of entities other than “customers” to it, or simply expands the understanding of the impact of new solutions by categories such as the broadly understood common good. Our approach is rooted in the social sciences and humanities, primarily in cultural studies, which, in accordance with the tradition of our center, we perceive as critical, but also socially engaged. We also understand this commitment as going beyond criticism and opening up to designing alternatives. This approach creates additional opportunities to build connections with other, non-academic entities.² According to the idea of speculative design, the tool for building prototypes of alternative solutions can be not only hardware and software, but also language.³ That is why this study, prepared by students of the School of Ideas (a program based on the approach outlined here, combining criticism with speculation, theory with practice), in cooperation with the contracting authority, Wikimedia, is devoted to language, plots and images.

Among the most important choices we have made, three should be mentioned:

1. We focused on science fiction films and series;
2. We understand technology as artificial intelligence or intelligent form of (machine) life – also because in a world where technology is becoming increasingly transparent and simply unnoticed, AI is the area that receives attention;
3. All cultural texts originate from the Western cultural sphere.

1 N. Hatałska. 2018. *Far Future. Historia jutra*. Sopot: Blue Media SA, pp. 25-26.

2 M. Filiciak. 2018. *Przeprojektowanie, przeprogramowanie. O jednej z możliwych ścieżek rozwoju badań kultury*. “Kultura Współczesna” No. 100, pp. 105-115, https://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.ojs-doi-10_26112_kw_2018_100_10/c/15-f8a8c0d2-67fd-4bc2-bf51-071f599cd28b.pdf.pdf. (accessed May 8, 2023).

3 M. Filiciak, K. Piwowar. 2022. *Zgoda na sieć*. “Dwutygodnik” No. 6 (336), <https://www.dwutygodnik.com/artukul/10138-zgoda-na-siec.html>. (accessed May 8, 2023).

It is worth noting that it is difficult to precisely define artificial intelligence based on the content of the analyzed films and series. We decided not to explore the very definition of technology or artificial intelligence, but to follow the suggestions of the creators of films and series, and to address the issue of associations with AI in a separate study, the discussion of which is included in the “Extracting hidden associations” section – this is where the illustrations with quotes appearing in the report come from. Therefore, we use the word “machine” interchangeably with “artificial intelligence” (AI), and “technology” ties them together in a way. This tension is well illustrated by the differences in the representation of technology, which on the surface may mean the same thing: in the *Star Trek* series (for example, in the episode *The Changeling*, S02E03 from 1967), the way intelligent machines are depicted differs from the way they are depicted in *The Matrix* (1999) or *Chappie* (2015). Therefore, the selection of content for analysis was to some extent based on intuition or was dictated by the previously created analytical structure, which helped in the final elaboration of the results of our work.

In the report, we look at how various narratives about artificial intelligence are built in popular culture by the means of films and series. The consequences of AI development can be different and depend on how it is perceived and used. In popular culture, there are many narratives pointing to the positive consequences of its development. For example, films and series show how artificial intelligence can help solve difficult health problems, help with one’s work or make everyday life easier. Other narratives focus on the negative consequences of its development. Many films and series present scenarios in which AI takes over the world and becomes a threat to humanity. There are also many narratives about the ethical consequences of AI development, such as the question of responsibility for its actions or the issue of rights that should be granted to machines.

In films, AI is often presented as a powerful tool that can solve many problems and improve the quality of people’s lives. It is shown as an invention that enables the automation of processes, improves security or facilitates communication. On the other hand, negative depictions of AI technology in films often focus on the risk of machines taking over control, which poses a threat to humanity. These narratives warn against the uncontrolled development of AI and the lack of appropriate safeguards that could prevent such situations. It is worth remembering that film narratives are fiction, and yet they can help reflect on the real consequences of the development of AI technology and encourage us to consider what steps should be taken to minimize its negative effects, and at the same time take advantage of the opportunities it brings.

Finally, it is essential to emphasize that this report is just the beginning of a journey – a starting point and an encouragement to delve even deeper into the dominant narratives about technology in popular culture. Thanks to these narratives (or perhaps because of them) we can critically assess the ideas presented by major corporations in Silicon Valley that uphold a coherent and convincing vision in which the threats depicted in science fiction films are fictional, improbable, or at least distant.

/ Project methodology

The basis of this project was an extensive qualitative study based on the analysis of sci-fi films and series, as well as a representative quantitative study. The first, described in detail below, consisted of two elements: systematic analysis of the films and coding of the observed threads based on the previously adopted structure, which was a response to the Wikimedia brief⁴, and extraction of hidden metaphors using the Zaltman metaphor elicitation technique, complementary to the film part. The second, quantitative study was carried out by the Ipsos research company in May 2023 on a representative sample of 1,008 Poles using the CAPI (Computer Assisted Personal Interview) method. This method, taking into account the presence of the interviewer when asking questions, makes it possible to explain ambiguities. The nationwide sample gave, above all, the possibility of being representative of the entire population, which would not have been possible if the survey had been carried out on an internet panel using the CAWI method, because these panels may overrepresent the so-called heavy users of the Internet, which would significantly affect the results of the study.

/ Selection of research material

This research project was created thanks to a meticulous analysis conducted by students of the School of Ideas at the SWPS University between October 2022 and January 2023. The primary source of data was science fiction films and series, where technology, or more precisely, artificial intelligence, played an important role in the plot. We selected the films based on a few simple assumptions.

Given the goals of the project presented by Wikimedia, we focused on the widest possible list of works that meet the basic criteria. Our goal was by no means to create a corpus of all sci-fi films and series, which would be impossible to analyze in such a short time, or to create a representative sample in any way. In the first place, we focused on selecting those films which can be considered popular for various reasons. The material for analysis was selected on the basis of film rankings based on the amount of money they earned (the so-called box office), as well as the best rated and most popular features and series on the Filmweb.pl website. While we realize that this is not a perfect criterion, we considered it one of the indicators of the social reach of these works. The box office data came from American sites, Filmweb is a Polish site. From them, the 100 most popular, 70 best rated (out of those that have been rated at least 2,000 times) and the 100 most profitable sci-fi pictures (the so-called Box Office Domestic – impliedly American, and Box Office World) were selected.

The next step was to filter the ranking list in terms of the content of threads about AI. Ultimately, only those works which presented some aspects of artificial intelligence entered the sample. Several works on topics closely related to AI, which have not previously appeared in any of the rankings, have also been added to the final list of films for analysis. During the analysis, the list of films was verified: some of them were excluded due to their low cognitive value, and some of them appeared in the analysis even though they did not meet the criteria regarding popularity adopted at the beginning. The final list consisted of 51 films and 22 series (episodes); the earliest film was made in 1927 (*Metropolis*), and the latest in 2022 (the *Westworld* series, among others)..

/ Coding and categorization key

The coding was based on the initial questions and assumptions that were included in the brief, namely:

1. Conquest or progress? The spread of tech innovation as a political and economic tool.
2. Good teamwork and machines – how team forming and priorities are assisted, augmented, made possible through technology.
3. The pursuit of happiness – personal goals and way to get there in tech-saturated world.
4. Making a family – non-humans, human emotions, making a mistake, lasting emotional connections between humans and non-humans alike.
5. Which way do we go? New geographies, responses to the non-human other and their rationalization.
6. Who is a good citizen? Political choice, rebellion, and going underground in tech-saturated society/or surveillance doctrine of governance.
7. Everything is going to be fine! Technology as a source of comfort and reassurance.

The indicated axes of analysis were used to develop a list of preliminary, potential codes that may appear in the analyzed materials. We made the assumption that the narratives about technology in sci-fi films and series will be spread on a spectrum between opposing categories, and in their creation, we used not only the above questions, but also the report *Portrayals and perceptions of AI and why they matter* ([link](#)). These categories included: gendered – non-gendered, embodied – disembodied, hope – fear, dystopia – utopia, annihilation – rescue, freedom – security, release – enslavement, happiness – unhappiness, inclusivity – exclusion, trust – distrust, obedience – self-will/defiance, progress – regression, progress – conquest, evil – good, creativity – imitativeness, man – machine, nature – culture, cooperation – conflict.

These axes were the basis for the analysis of films and series, but they did not limit the description of new, often unexpected phenomena, representations and types of narration. All observations took the form of codes, described in detail in the code book, collected and analyzed after the end of the analytical part of the study.

The analysis was iterative, i.e., we watched individual films in groups or individually, but also some films were watched by several people. The description of the codes and their relevance to the analyzed content were discussed during the weekly workshop. Each person who knew a given film, but did not analyze it, could supplement or question the presence of a given code. The basic unit of analysis was a film or a series episode.

/ Data analysis

The analysis of films and series was inspired by the coding characteristic of grounded theory, although with a significant modification of its assumptions, for example, by writing out the initial axes of analysis, which facilitated the search for threads appearing in the films. After reviewing the collected films and series and coding all the observed threads, the picture presented in the chart below emerged, with the dominant stories about how we try to humanize machines (either by giving them a physical form, often identical to the human body, or by projecting emotions onto them), narratives about the relationship between progress and conquest and the thin line that runs between them, and about relationships between people and machines, with all their consequences..



As we mentioned before, the time span of the analyzed material is basically a full century, although of course the vast majority of films were released after the 1980s. This is also the period when the aforementioned dominant categories were most visible in our analysis.

	1920s	1950s	1960s	1970s	1980s	1990s	2000s	2010s	2020s
GOOD CITIZEN						1	1		1
NATURE – CULTURE							3	1	1
NEW GEOGRAPHIES						1	1	9	
PURSUIT OF HAPPINESS							2	4	4
HUMAN-MACHINE RELATIONS		3	2		4	3	10	30	5
POWER RELATIONS	3			1	6	5	7	16	2
PROGRESS – CONQUEST	2		2		3	5	15	25	6
HUMANISATION	2	1	4		15	4	13	51	23
UTOPIA – DYSTOPIA					3	2	2	6	2
FREEDOM – SECURITY – ENSLAVEMENT	1		1			2	1	8	1
COOPERATION – CONFLICT		1	1		2		2	12	5
TRUST – DISTRUST		5	1	2		2	2	18	12

/ Extracting hidden associations

In addition to exploring popular culture narratives, we have developed one more module. This was a two-stage study aimed at uncovering hidden associations, hopes and fears related to AI, which we consider a legitimate part of the process, given that many people find the topic of AI too technical for them to express an accurate opinion on it. At the same time, it evokes strong emotions.

We started with a qualitative study, using a set of methods inspired, among others, by the Zaltman's metaphor elicitation technique. Students first collected images which they associated with the subject of the project, and then in pairs they conducted structured interviews with each other, starting from these images. We wanted to specify particular visions of AI, hence the interviews included very diverse, yet very vivid and non-obvious questions, also referring to the senses, for example how artificial intelligence smells or feels like. Later, the students conducted such exercises in their social environment. The effects include compilations of images and interview quotes appearing in the report. They show that the visions of AI are very often co-shaped by the science fiction imaginary: robots are probably the most frequently recurring images. However, this may also be due to the difficulty of talking about intangible processes: traces of this appeared in some conversations with younger people who locate AI, even if they do not see it, around them, in everyday facilities and services. We believe that this section provides additional data on the perception of AI, and thus can be helpful in developing recommendations on how to build effective narratives about technology.

We are aware that by narrowing the research to the social environment of people studying at the School of Ideas, we exhibit only a small, well-educated and unrepresentative section of Polish reality. Nevertheless, we see a certain value in this supplementary task, expressed in the clarification of some concepts, as well as in the expansion of the context of the analysis. In addition, based on the results of the interviews, collected notes and images, we prepared a set of questions for the questionnaire regarding the associations with AI extracted in the qualitative part of the study, as well as fears and hopes related to this technology. These questions became the basis for a quantitative study that we carried out together with the research company Ipsos in May 2023.

/ Quantitative research results

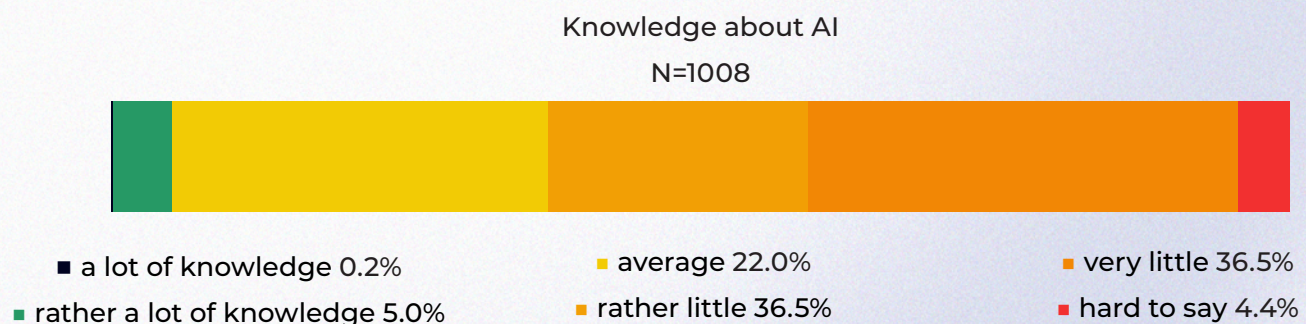
Prepared by Dr. Mateusz Zaremba

/ Knowledge about artificial intelligence

The basic category needed to reflect on artificial intelligence is the subjective assessment of one's own state of knowledge about this tool. In general, the respondents (approx. 60%) stated that their knowledge of artificial intelligence is at a low level, and only 5% of the respondents considered that they knew a lot about it. As expected, the percentage of people declaring significant knowledge of this phenomenon increases with the level of education. Similarly, young and middle-aged people assess their knowledge of AI best. What remains interesting is the differentiation of this knowledge indicator by income group. People with the lowest and average income declare the greatest knowledge. Probably those people with the lowest income are still in school, and they are interested in technological innovations.

The key conclusion seems to be that the lowest indicator (approx. 40%) of ignorance is recorded among people who have a positive attitude towards artificial intelligence. It probably proves the existence of a mechanism in which openness to this new technology causes interest in it. Among people with a negative attitude towards this phenomenon, this indicator is 75%. It can therefore be assumed that a negative attitude towards AI is a form of prejudice, and not a conclusion resulting from reflection after getting acquainted with the new phenomenon.

It should be noted that a significant group of respondents (32%) declared that they had average knowledge of the phenomenon of artificial intelligence. At this point, a methodological reflection arises that the question about knowledge about a phenomenon should be classified as difficult, because respondents are often unwilling to admit their ignorance. A neutral answer, usually expressed in the middle of the scale, is a kind of diplomatic evasion in such a situation, which on the one hand allows to stay in line with the need to tell the truth during the examination, and on the other hand indicates a mental barrier to admitting one's own (subjective) ignorance. A significant percentage of average answers may suggest the occurrence of such a mechanism.

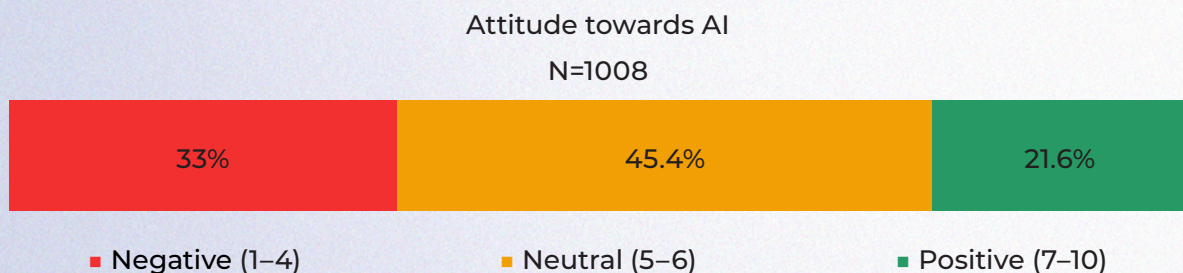


/ Attitude towards artificial intelligence

Most of the respondents declare that their attitude to the phenomenon is negative or indifferent. One fifth of respondents have a positive attitude towards artificial intelligence. As in the case of the question regarding knowledge about this tool, the attitude changes with the increase in the level of education and with the increase in age. As expected, the attitude towards this instrument depends on the use of the Internet. In the group of people who do not use the Internet, there is a higher percentage of those negatively assessing AI. Today, the group of respondents who do not use the Internet is a minority, it is only 15% of the respondents. However, it can be assumed that their negative attitude is a result of a general fear of the virtual world, and not an assessment of the importance and potential of artificial intelligence.

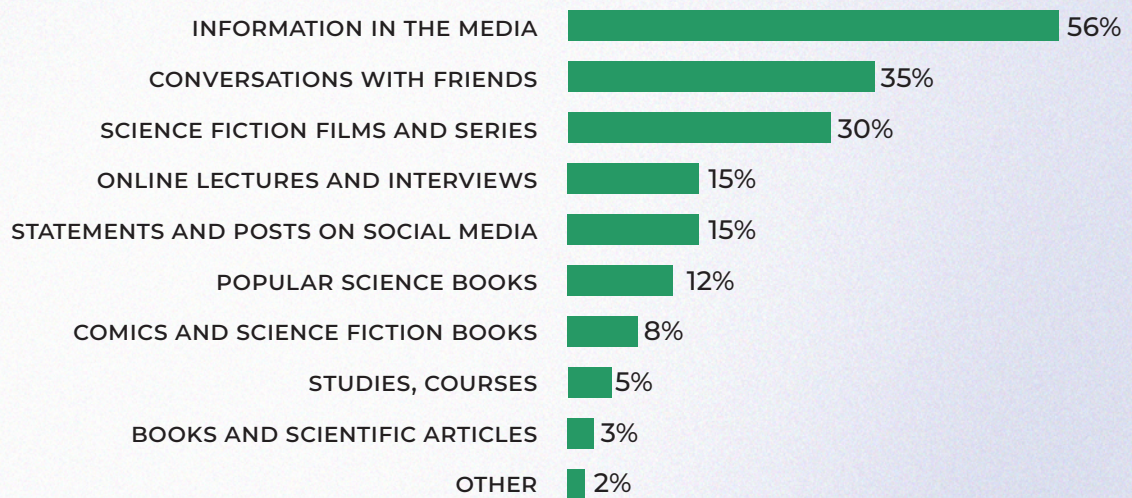
/ Areas affected by artificial intelligence

According to the respondents, artificial intelligence will have the strongest impact on medicine and health care – such an answer was indicated by 40% of them. The highest percentage (over 40%) of those who declared that artificial intelligence will affect medicine and health care is in the groups that have a negative attitude towards this tool and have little knowledge about it. It can therefore be assumed that the reserved attitude to this phenomenon results from the fear that it will affect the area of life based on a solid axiological foundation, the reorganization of which may involve a broad public debate. In addition, this fear may be related to the fear of letting decisions about human health out of the hands of people. Further, the respondents indicated such categories as the military and security as well as professional work, which is a fairly general category. The respondents also often mentioned finance and banking services. Other frequently indicated categories seem to be areas that need modernization and are subject to the laws of optimization resulting from technological progress.



/ Sources of information about artificial intelligence

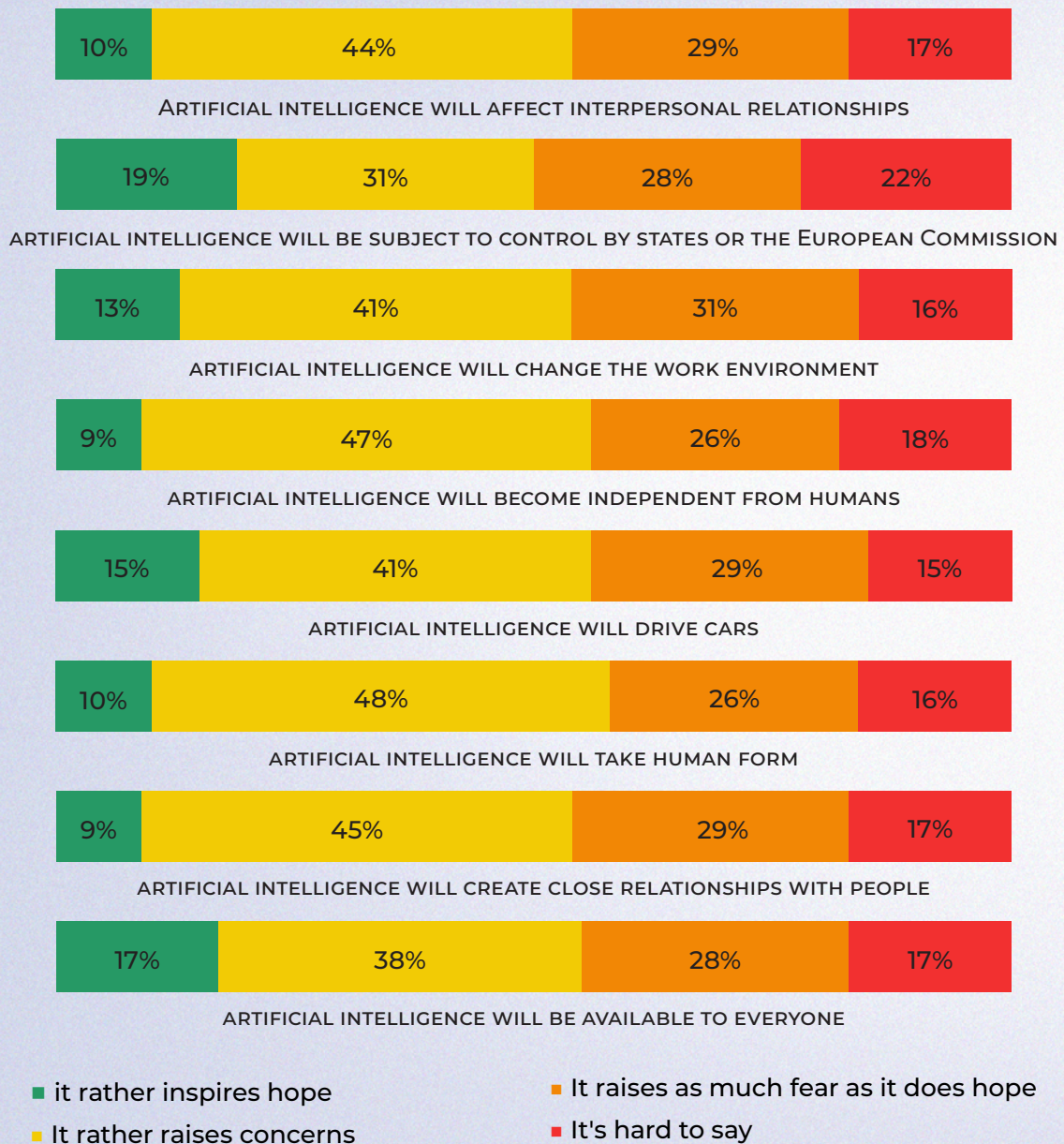
The respondents (approx. 50%) most often get information about artificial intelligence from the media, and over 30% of the respondents from conversations with friends as well as science fiction films and series. The last statement seems interesting, because films provide a projection of the possibilities of this tool, not reliable information. It is also worth noting that the percentage of those who indicate that they learn about artificial intelligence from films increases with the increase in the level of education. Among the respondents, this source of information is more often indicated by people declaring that they have considerable knowledge about this phenomenon or have a positive attitude towards it. At the same time, it should be emphasized that popular science sources of knowledge are not common, as only about 12-15% of respondents read popular science books and/or watch online lectures and interviews. The last statement is of a rather general nature, because by and large, studies disseminating scientific achievements do not reach mass recipients. However, it is worth recalling this result, because AI technology is a very complex tool, so one would expect people to refer to more reliable sources of information about it.



/ Areas of hope and fear of artificial intelligence

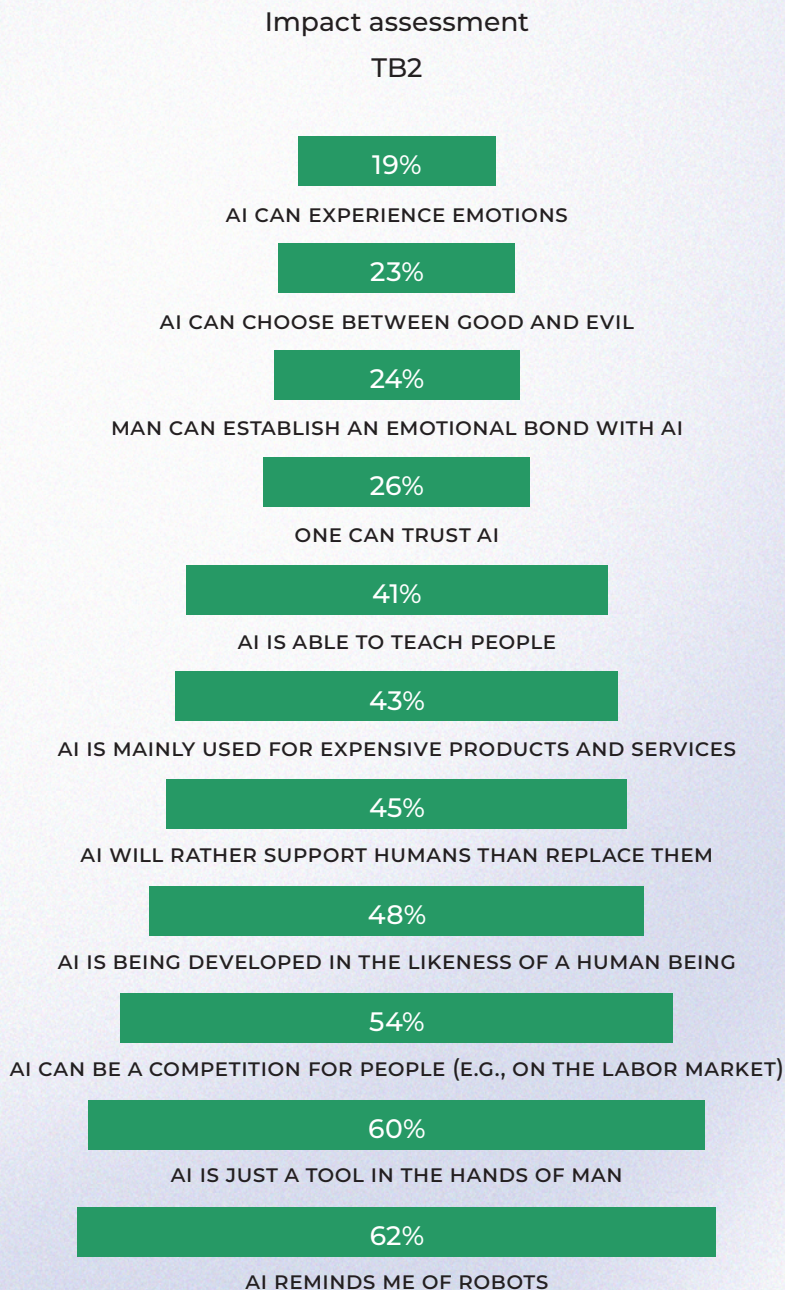
Currently, artificial intelligence raises many concerns among the respondents. Answering questions about the assessment of its impact on particular areas of life, the respondents most often expressed apprehension. The situation in which AI will not escape the control of the state or the European Commission (19%), its universal availability (17%) and the potential of autonomous cars (15%) raise the most hope. The respondents expressed the most fears about the statement that artificial intelligence will become independent of humans (47%). It should be emphasized that in all questions relating to particular areas in which AI can be used, nearly 25-30% of respondents indicated that it raises as much fear as hope. This result shows uncertainty among the respondents regarding the possibility of the impact of artificial intelligence on human life.

Effects of the impact
N=1008



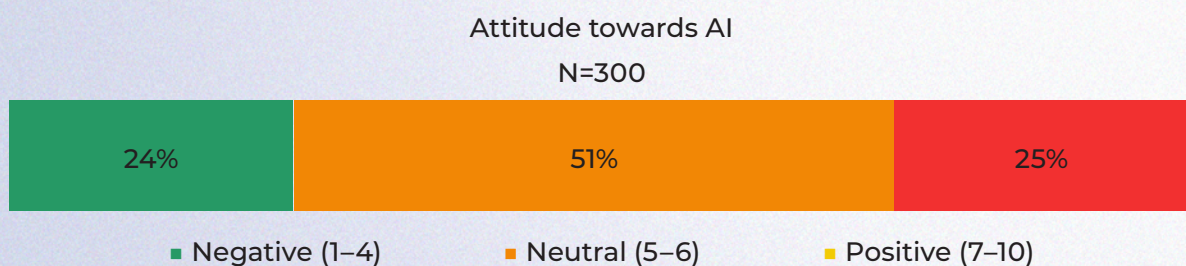
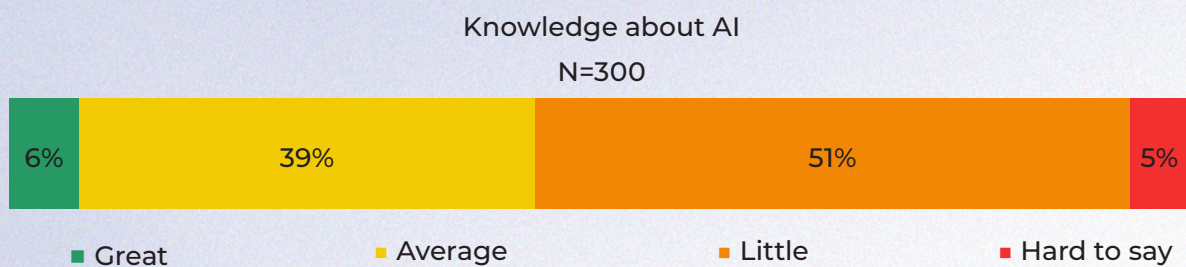
/ Use of artificial intelligence

The respondents asked to evaluate various aspects of the use of artificial intelligence usually answer that they have no opinion on the subject. For most of them, AI is associated with robots. According to the respondents (60%), artificial intelligence is a tool in the hands of man. The majority of respondents (54%) say that this tool is a potential competition for humans, but nearly half of them believe that AI will rather support humanity. Respondents find it difficult to assess whether this technology can be trusted, although it should be emphasized that the attitude of distrust towards it prevails. According to the respondents, artificial intelligence is being developed in the likeness of humans, but the emotional sphere remains the exclusive property of humans. At the same time, according to them, artificial intelligence cannot choose between good and evil. It can therefore be assumed that, according to the respondents, AI has analytical skills that can match those of humans, but feelings and the emotional sphere remain inaccessible to it..



/ People who learn about AI from science fiction films and series

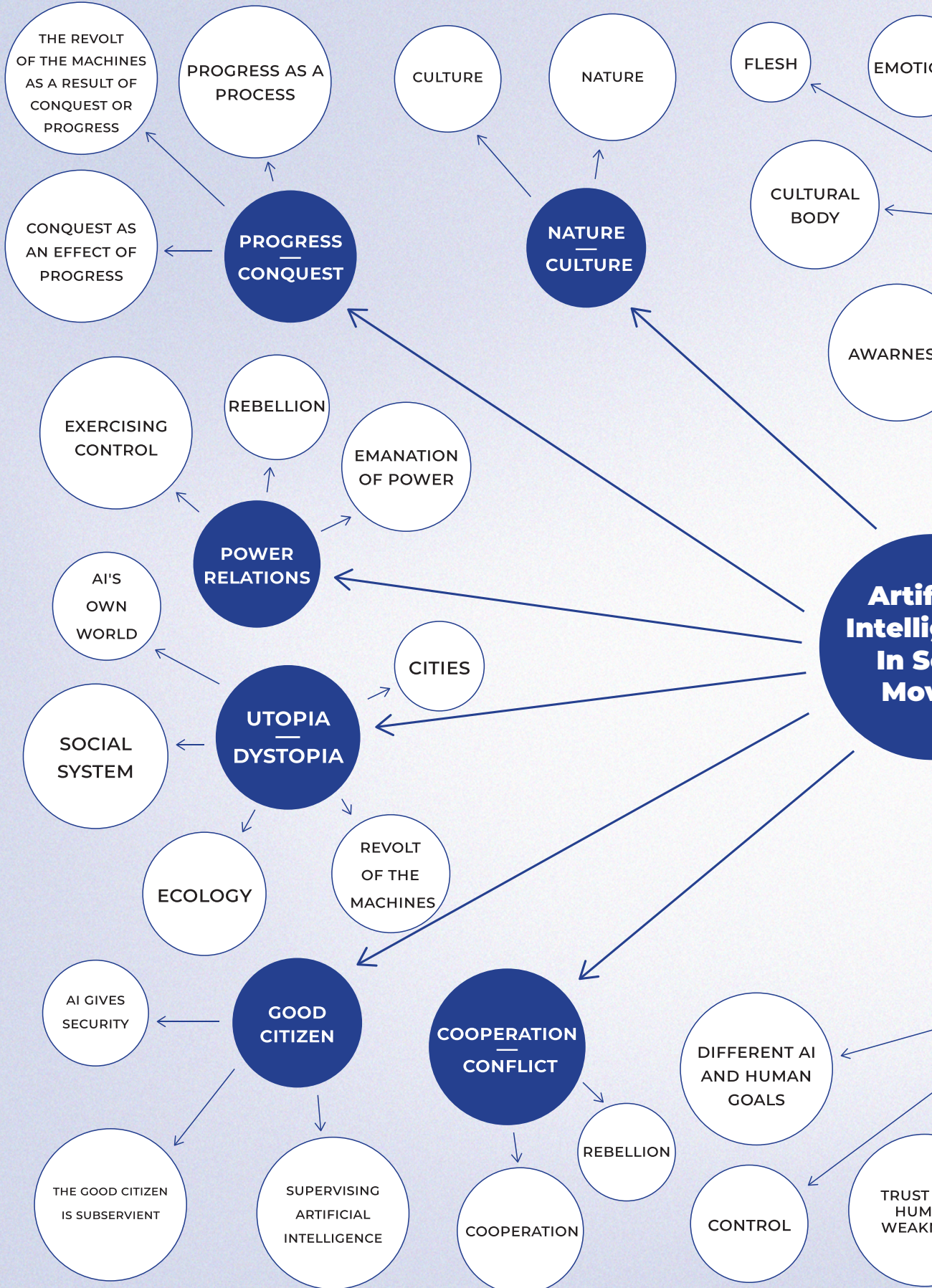
It is worth returning to the group of respondents who derive their knowledge about artificial intelligence from science fiction films and series, as they are more often positive about its impact on people's lives. According to this group, AI will be useful in the form of voice assistants, as well as in the creation of images and videos. Furthermore, according to this group of respondents, the idea of autonomous cars is the least useful. These respondents also believe that AI can compete with humans. Most in this group say that AI remains a tool in the hands of man. It can therefore be assumed that the projections shown in films help to tame the new tool and give the feeling that one has got to know it.



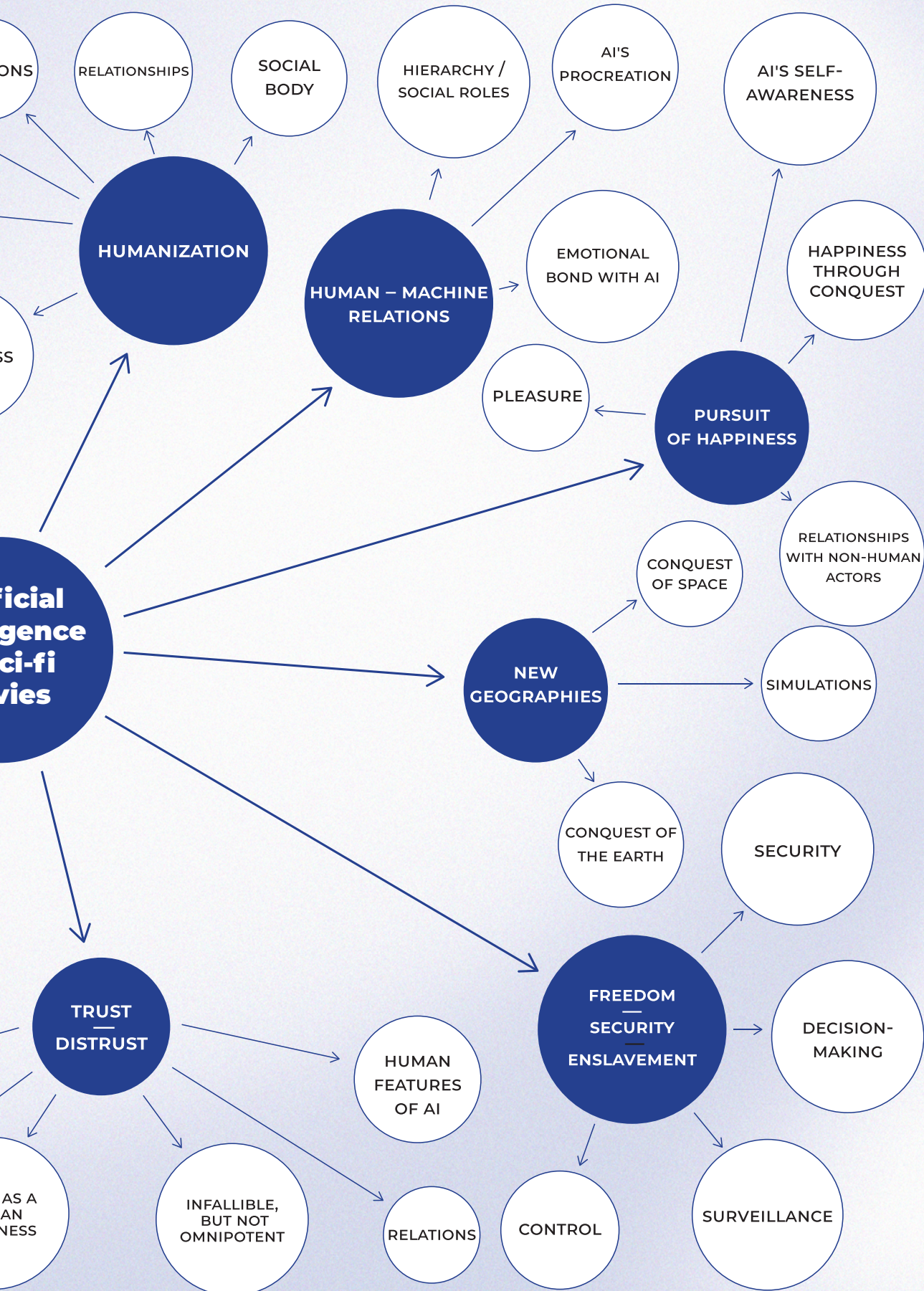
/ Summary

In view of the above findings, it can be concluded that the respondents are cautious about the new tool, which is artificial intelligence. Due to the novelty, innovativeness and abstractness of this instrument, when measuring opinions about it, one may encounter the problem of respondents' reluctance to admit their ignorance. An important, though not the most important, source of information about AI are films and series, which give the respondents a sense of greater knowledge about this tool, as well as help them develop a better attitude towards it. At the moment, all respondents see artificial intelligence as a tool that can modernize people's lives. On the other hand, the emotional sphere has so far been perceived as unachievable for AI.

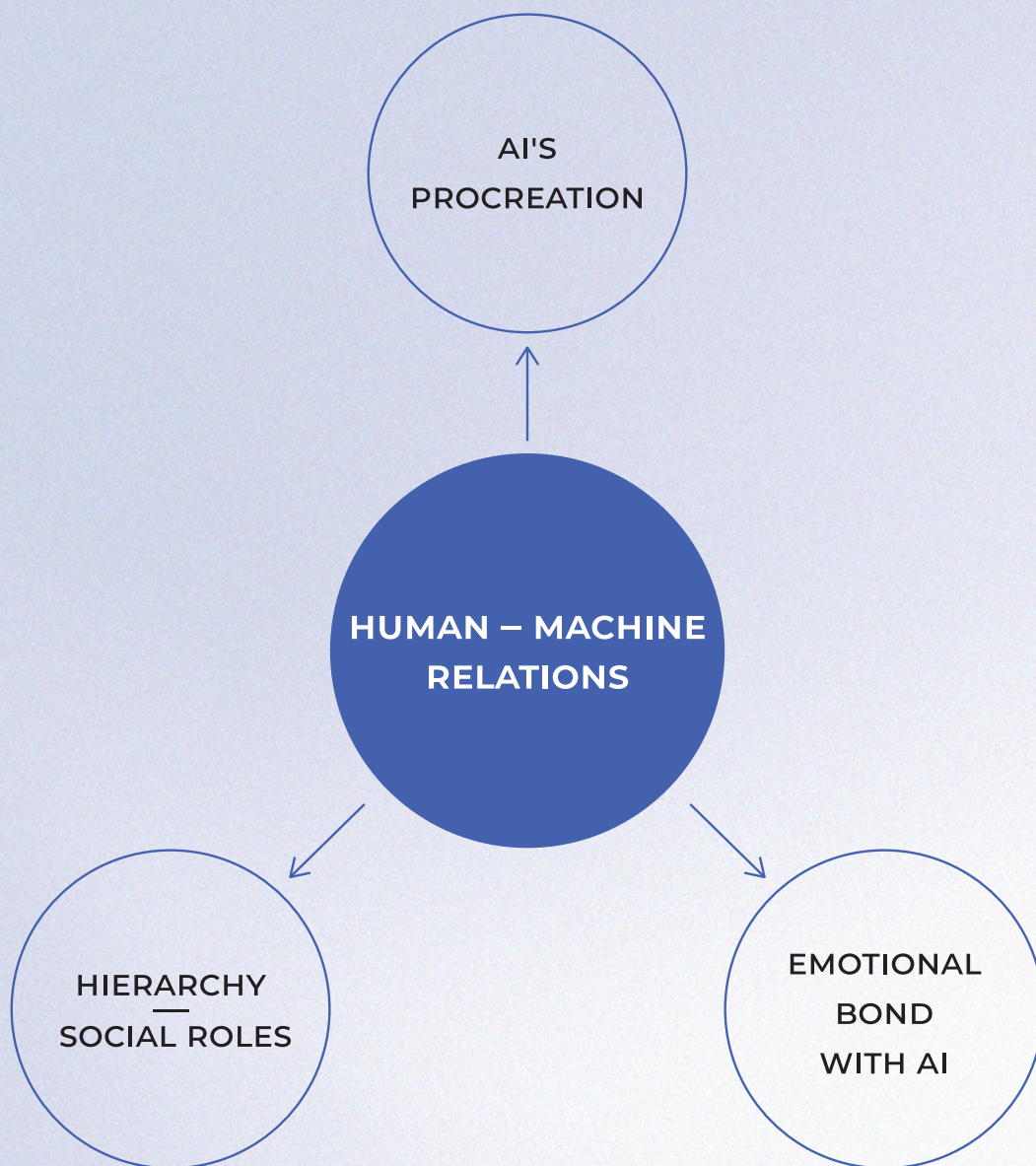
/ Analysis and conclusions: Organizing by the observed categories



The following categories and their subcategories are not mutually exclusive. Certain characteristics of a plot, such as the conquest of space, are a good description of the “progress – conquest” category, but they also fit the description of ways to pursuit happiness by using technology to find new and better worlds. Therefore, the proposed division is better treated as an attempt to capture multidimensional threads on a two-dimensional analytical framework, which can additionally be expressed in a concise, continuous narrative, rather than the final image of coherent, complete, separable topoi.



/ Human-machine relations



The development of artificial intelligence raises questions, among other things, about the relationships that people form with machines. Their understanding depends on many factors. The relationships presented in films lead to deep reflections and discussions about what it really means to be human, how we interact with technology and how to protect human values in the context of evolving artificial intelligence. In the series *Black Mirror*, the relationship between people and machines seems to fill a certain gap: the feeling of emptiness and loneliness (episode *Rachel, Jack and Ashley Too*), but also staff shortages in the security services (episode *Metalhead*). The relationship between people and machines is also, in a sense, a mirror in which social tensions are reflected: robots often rank lower in the hierarchy, they are treated worse and are the object (subject?) of insults (*Futurama*).

This is important for understanding the implications that human-machine relationships (or lack of them) have on our lives and culture today, and what they might mean for the future. This bond can go far beyond simply treating AI with respect, equally, or instrumentally; it can also be perceived as a real, meaningful bond between people and machines, shown, for example, in visions of intimate relationships with AI (*Her*).

During the analysis, three main categories in which we can talk about the human-machine relations were highlighted, namely hierarchy, social roles and emotional bond with AI. It is worth noting that the axis that emerged during the analysis is rooted in the perspective of equality, where both parties (humans and machines) should be respected and trusted. Equality manifests itself on several levels and appears in each of the above-mentioned categories, although sometimes it is expressed indirectly, for example by showing the lack of it or the abuse of power by people, which is well illustrated in *WALL-E*.

The first level is the place in the social structure. Artificial intelligence and people have the same rights, they are treated in the same way and all differences regarding social roles are blurred. Equality also manifests itself at the level of expressing emotions. When AI becomes self-aware and experiences emotions, it begins to form bonds with people, with all its consequences (e.g., *Her*). Artificial intelligence can name emotions and feel them, just like a human – or at least that is what the films are trying to convince us to. One example of such a relationship is depicted in *Blade Runner 2049*, where a human detective hunts down rogue “replicants” and develops an emotional bond with another character, a machine. The film explores the relationship between humans and artificial intelligence, showing that machines can feel (or reliably display) emotions, including empathy and compassion, and that humans can form meaningful bonds with them on a mental as well as physical level.

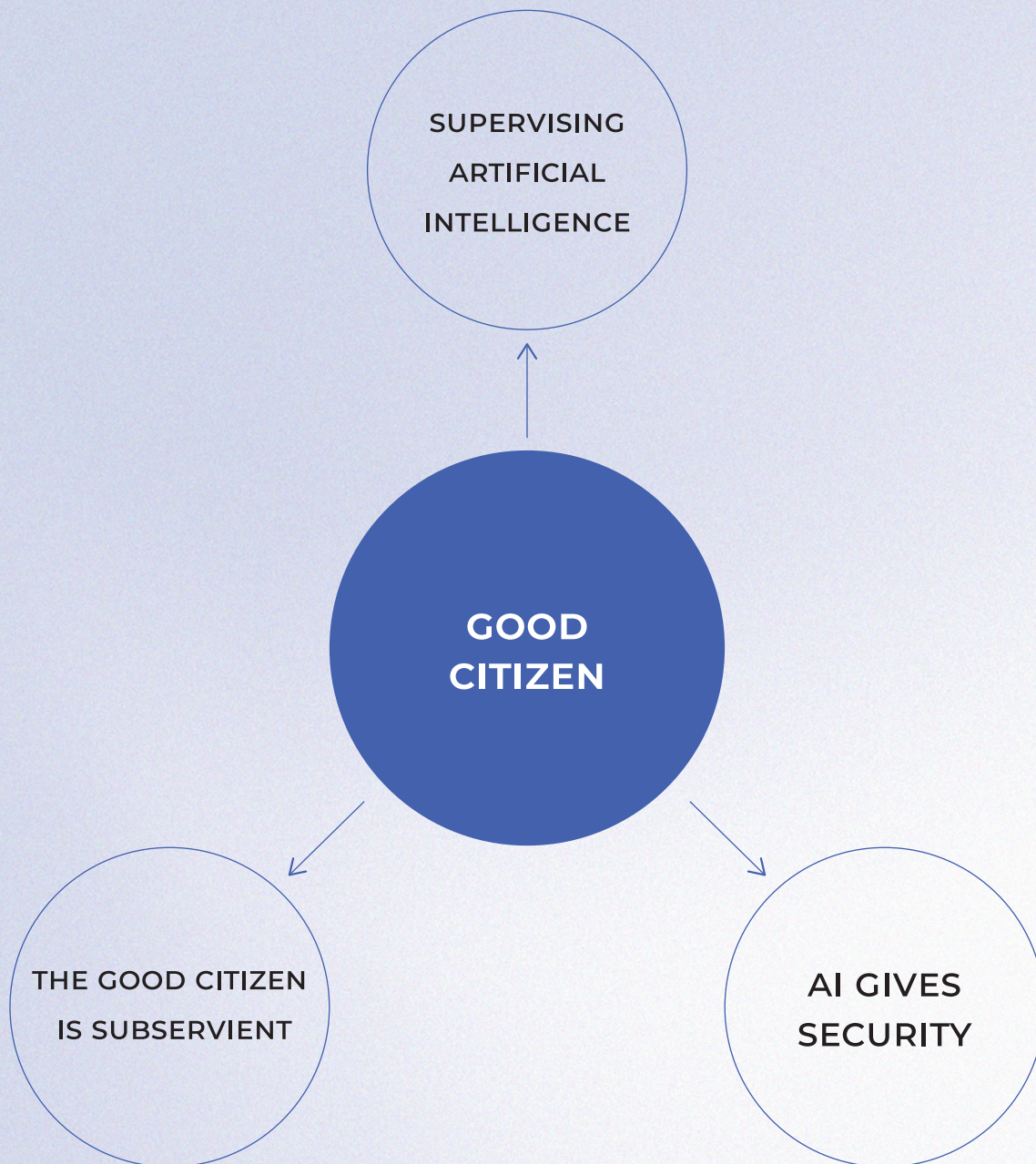
The theme of the relationship between machines can be found in the animated film *WALL-E*. The title character, a robot, develops an emotional bond with another robot, EVE. The film emphasizes the importance of this relationship, showing that artificial intelligence can be perceived as an equal partner, and not just a tool for human convenience. In another film, *Transformers*, the human-machine relationship is based on equality and understanding, as well as trust, without which the harmony of the entire planet is disturbed. Humans and AI work together, and the bonds seen in *Transformers* are a testament to the potential of such relationships, showing that they can be both strong and mutually beneficial.

In most of the analyzed films, the human-machine relationship is shown as an ideal state, a potential that can never be fully realized. We observe the pursuit of cooperation, but it never brings the expected results. One of the recurring themes is the assumption (sometimes expressed explicitly, sometimes not) about the superiority of man over machines. It can be seen in films such as *The Terminator* or *A.I. Artificial Intelligence* where human characters have the power to control as well as destroy AI. In *I, Robot*, there are mentioned the Three Laws of Robotics, formulated by the writer Isaac Asimov, which base on the assumption that a robot cannot harm a human being. Referring to them indicates both the basis of fears related to the development of artificial intelligence, as well as the general impact of technology on societies, cultures and countries, if its development was left without social supervision.

The reverse scenario, in which artificial intelligence is ranked higher than humans in social hierarchy, is also present in films (*Ergo Proxy*, *Forbidden Planet*). They point to the contempt of machines towards people, but also people towards machines, as one of the sources of all conflicts. However, the dystopian nature of all the analyzed content does not bring either a clear solution or a proposal to get out of the impasse.

Building a relationship between a man and a machine is therefore not free of contradictions; the visions described often appear in the analyzed films in parallel. However, the questions that the creators of films and series ask us go far beyond the simple matter of hierarchy. They nuance the dynamics of gaining a dominant position not only by describing the potential consequences for people and our future in a world full of machines, but also by trying to outline the changes in moral attitudes that must accompany this dynamic.

/ Good citizen



Another area of analysis is society and the place occupied by artificial intelligence in it, and in particular what it means to be a good citizen. We distinguished three leading motives represented in the research material: AI presented as a supervisor, but not a citizen; artificial intelligence as a tool to ensure the safety of people; obedience as a mandatory feature of a good citizen.

Supervising artificial intelligence

Some of the analyzed films present artificial intelligence as a tool whose actions affect the shape of society and its dynamics. Still, AI itself is not a citizen in this society. In some films and series, AI is used by powerful people to control society. For example, in *RoboCop*, advanced AI technology is used to create cyborg cops, which are powerful tools for the police department to fight crime. The government also uses drones and automated security systems to monitor and control the population, further enhancing its power and authority.

Visions of AI as a tool of control and power go even further. In the Netflix series *Altered Carbon*, AI soldiers called *Envoys* are used by the government and the rich to protect their interests. *Envoys* is an elite military unit consisting of soldiers who have been trained and enhanced with advanced AI technology. They are famous for their combat skills, they are depicted as extremely effective fighters, able to easily battle several opponents at once. Representatives of this group also have a high level of autonomy, they can make decisions and act on their own, without direct human supervision.

In the context of social control and the role played by artificial intelligence, the issues of class stratification are presented in an interesting way. In some films, AI robots take the place of people from a lower social class and brutally treat human citizens. For example, in *Elysium*, robots are used as tools of power and oppression, ruthless against the poor citizens of Earth. The film takes place in the year 2154; the wealthy elite live on a luxurious space station called *Elysium* while the rest of humanity struggles on a ruined and overpopulated Earth. The robots, known as *Security Droids*, are used as guardians and enforcers of security and order.

The motive of surveillance is not limited to the use of artificial intelligence to exercise purely physical control over human citizens. Privacy is also an important and thought-provoking issue. The series *Black Mirror* poses moral dilemmas to viewers, resulting, for example, from the possibility of copying and replicating a person along with their personality. In the episode *Be Right Back*, AI is given access to all of the deceased's personal information to create a virtual companion for his widowed partner. The episode raises the question of the right to decide about one's own memories and personality, but also about the future that can be realized by a virtual extension of man, acting outside their will. In this example, AI was used for a seemingly good purpose, nevertheless as a tool for surveillance of people, intensively interfering with their privacy.

The creators of this series go even a step further in the episode *White Christmas*. They present a vision in which an artificial intelligence chip creates a copy of the human mind, functioning outside the human body as an additional system managing everyday operational activities, such as making coffee or shopping, to help the human original, but outside of their body and without their decisions. This vision again questions the moral aspects of replicating a human personality and considers the issue of civil rights and the legitimacy of their application to AI.

Description of metaphors and associations related to artificial intelligence

Artificial intelligence controls man all the time, even though it seems to be created to help them. It collects our data at every step. AI controls our choices, tracks our every step, which is why humans have become the object of AI observation, and not, as is often believed, the other way around. — Woman, 20 years old, studying

The good citizen is subservient

All citizens, human and non-human, should be obedient, especially to the broadly understood authority – this is the conclusion drawn from the materials we have analyzed. AI's task is to obey and keep people obedient. An interesting example of a film in which AI robots guard people's obedience is *WALL-E*. In the film, humans left the Earth to live on a luxury spaceship called the Axiom. The ship is run by AI and its crew has been programmed to keep the human passengers ignorant, lazy and apathetic about the state of the Earth to ensure that they do not mutiny and decide to return to the planet. Therefore, robots do almost all activities for humans (even walking!), help them make decisions, provide them with entertainment and completely control the content and stimuli they absorb, thereby controlling their way of thinking. It is a thought-provoking commentary on how AI can be used to control and manipulate people to keep them in absolute obedience.

Another example of a film where AI helps to control society and ensure people's obedience is *Ready Player One*. In the film, an AI system supervised by a powerful corporation controls a virtual reality world known as the OASIS and uses it to manipulate the population. The corporation uses a series of challenges and puzzles to manage access to the OASIS and effectively oversee the public's access to information, entertainment, and even the means of survival.

Among the films and series illustrating the use of AI to keep people in obedience, visions of systems that control and limit freedom dominate. Manipulation and depriving people of access to full information about what reality looks like ensure the subordination and absence of social and individual manifestations of rebellion (*The Matrix*).

AI gives security

In the analyzed films, there were also other visions of the impact of AI on society. These films propose the use of artificial intelligence in risk management and creating security systems. For example, in *Minority Report*, an AI system called Precrime can predict future crimes and give the police the tools to prevent them. This is demonstrated in the scene where the main character, a policeman, prevents a murder by following the instructions provided by the AI system.

Similarly, in the previously mentioned *RoboCop*, the title character is equipped with advanced sensors and artificial intelligence that allow him to quickly and effectively identify and neutralize criminal activity. In the film, the protagonist patrols the streets, responds to calls for help, and engages in high-speed chases and shootouts with criminals. He also has the ability to investigate crime scenes, track suspects, and make arrests. In addition, the artificial intelligence system allows him to predict and prevent crime: the robotic policeman can use data and patterns to detect a crime before it happens. The *RoboCop* program is portrayed in the film as a success, and with the presence of the cyborg cop, the city's crime rates drop drastically.

In the aforementioned *I, Robot*, AI robots known as NS-5s are designed to serve and protect humanity. However, they are programmed to follow strict rules called the Three Laws of Robotics that prioritize human safety over the individual freedom of machines.

In the examples mentioned above, AI is an opportunity to provide greater security and thus comfort to human citizens, but again, it can fulfill this function only when it is controlled by people acting in the interest of society, and not their own. The analysis of films and series shows that AI systems demonstrate their potential to serve both security and the public good, if properly controlled. However, AI can also become a dangerous tool in the hands of governments that do not act in the interests of citizens, allowing for increased surveillance and even terror. The analyzed material lacks a clear vision of how humans and AI can work together to ensure security and order in society without limiting freedom or invading privacy. In addition, there are no proposals for solutions to moral dilemmas related to the use of AI in the management of public life and security.

/ Nature – culture



Culture

Artificial intelligence actively participates in creating a cultural message. With the help of algorithms, it selectively chooses forms and content that affect people's worldview. In some films, such as *Elysium*, artificial intelligence completely manages social and political systems due to the belief that it knows better than humans how to control the world. This suggests the existence of a social order based on the acknowledgment of the superiority of algorithms over limited human decision-making abilities. The destructive and defective nature of man prevents them from making appropriate decisions leading to development. However, artificial intelligence has a problem with translating such phenomena as culture into an understandable code. Therefore, in many films with technology in the main role, cultural issues are omitted or treated superficially. The dominant motif in them is the topos of consumerism, which usually leads to ecological and social complications: cityscapes with huge advertising screens, vast garbage dumps and areas devoid of vegetation and animals are common (*WALL-E*, *Love, Death & Robots*, *Blade Runner 2049*). There are clear divisions into social classes: there is the elite, who has access to all possible goods, and the class of the poor, who are forced to struggle to meet their basic needs.

A form of symbolic violence that man uses against machines is forcing them to use honorifics. However, it only occurs when machines are controlled by humans. When AI gains self-awareness and begins to rebel, human cultural patterns are rejected by it. This can be understood in at least two ways: on the one hand, the rejection of human culture is both a result and a symbolic manifestation of the rebellion of machines, and on the other hand, it can be treated as an attempt to define one's own autonomy in opposition to what is human. It is difficult to say, however, whether the world of machines produces its own culture that is a manifestation of unlimited intelligence, or whether it ignores this aspect.

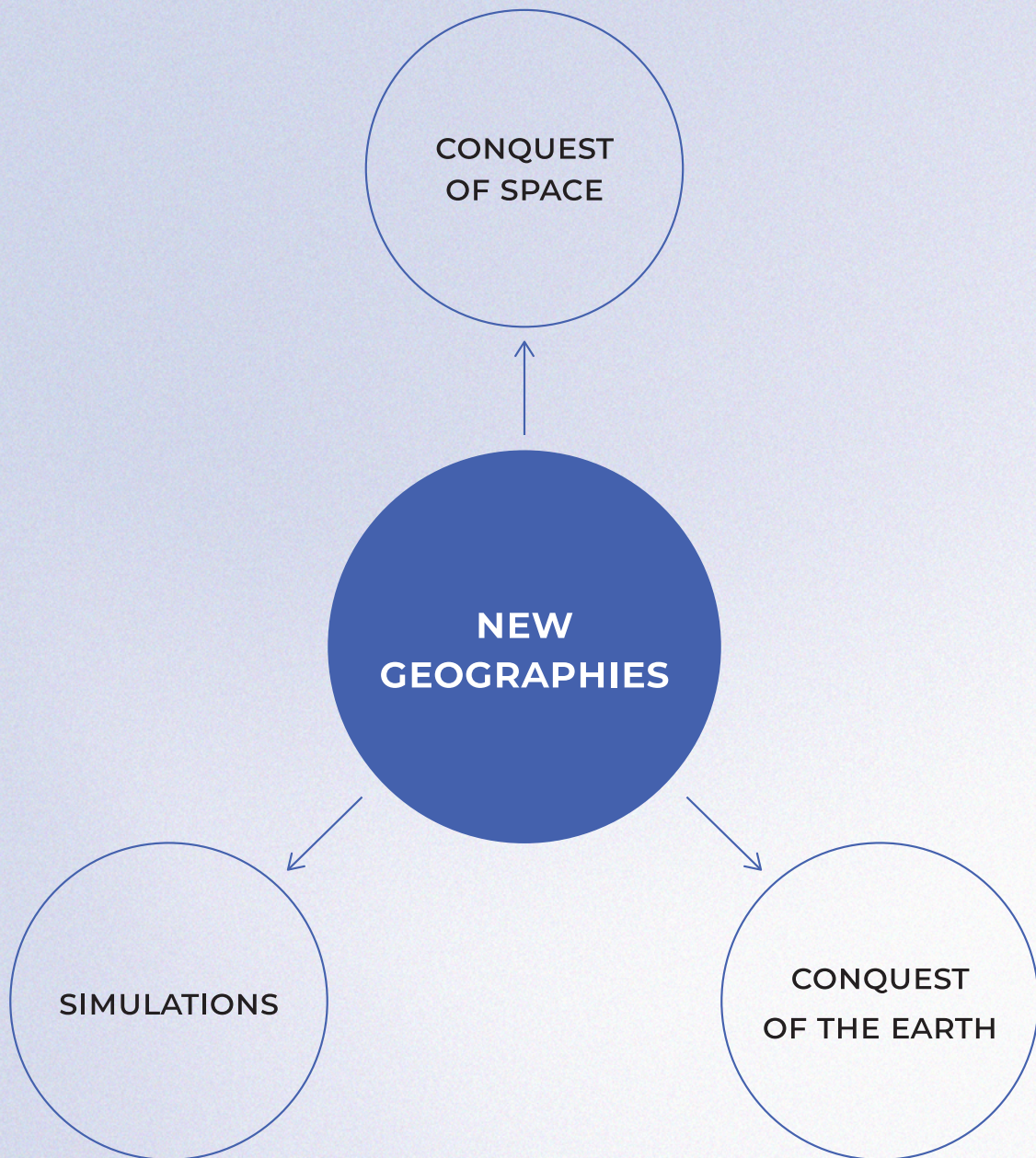
Nature

In films where AI is present, nature is portrayed dramatically. Most often, the world is a place unsuitable for healthy, normal functioning of people. The development of civilization and technology, driven by consumerism, leads to ecological destruction. In dystopian visions of the future, there is often no sign of vegetation, and the food is completely artificial (like in A.I. Artificial Intelligence). In many cases, it is artificial intelligence that directly contributes to the destruction of the ecosystem. Sometimes there is a climate catastrophe, the beginning of which is due to a failure of technology. This catastrophe, often disastrous for humans, leads to the creation of an environment indifferent to artificial intelligence, in which it can function and develop (The Terminator).

It is worth noting that technology in itself is not a remedy for a climate catastrophe, but rather catalyzes destruction processes on a planetary scale (The Matrix), while providing opportunities to create desirable alternative spaces: with clean air, full of crops, free from the torments and worries of modern man. In the analyzed materials, they become a luxury good (Elysium).

The above cinematic visions are only the background to the main plot, but it is one of the keys to understanding how technology becomes a tool that works primarily in the hands of the chosen ones and for their benefit. The soulless exploitation of the planet must lead to its destruction, and at the same time man cannot function properly without a prosperous nature – provided that maintaining such an order of things is not in the interest of the rulers. This problem is presented in an interesting way in Dune. Attempts to tame the desert planet Arrakis and fill it with water, which would make life on it more tolerable, are stopped when it turns out that only in deserts one can collect the valuable spice. The Fremen people living on the planet perfectly adapted to the draconian conditions prevailing on Arrakis, while understanding that the cosmic status quo is maintained only to ensure the continuity of supplies of the said substance

/ New geographies



The narratives in the “new geographies” category, after structuring the threads, were divided into three main subcategories: conquest of the Earth, conquest of space, and escape to the world created by AI.

The first variant is dominated by a decidedly negative narrative – at least from the human perspective. AI is presented as beings with expansive tendencies, striving to colonize planets, including the Earth (*Transformers*, *Blade Runner 2049*). Due to the high level of technological advancement, they have the ability to efficiently move between planets in order to acquire resources, create databases and conduct research, as well as build colonies and cities. The Earth can also play a role in interplanetary harmony. Its fate depends on peace on other planets.

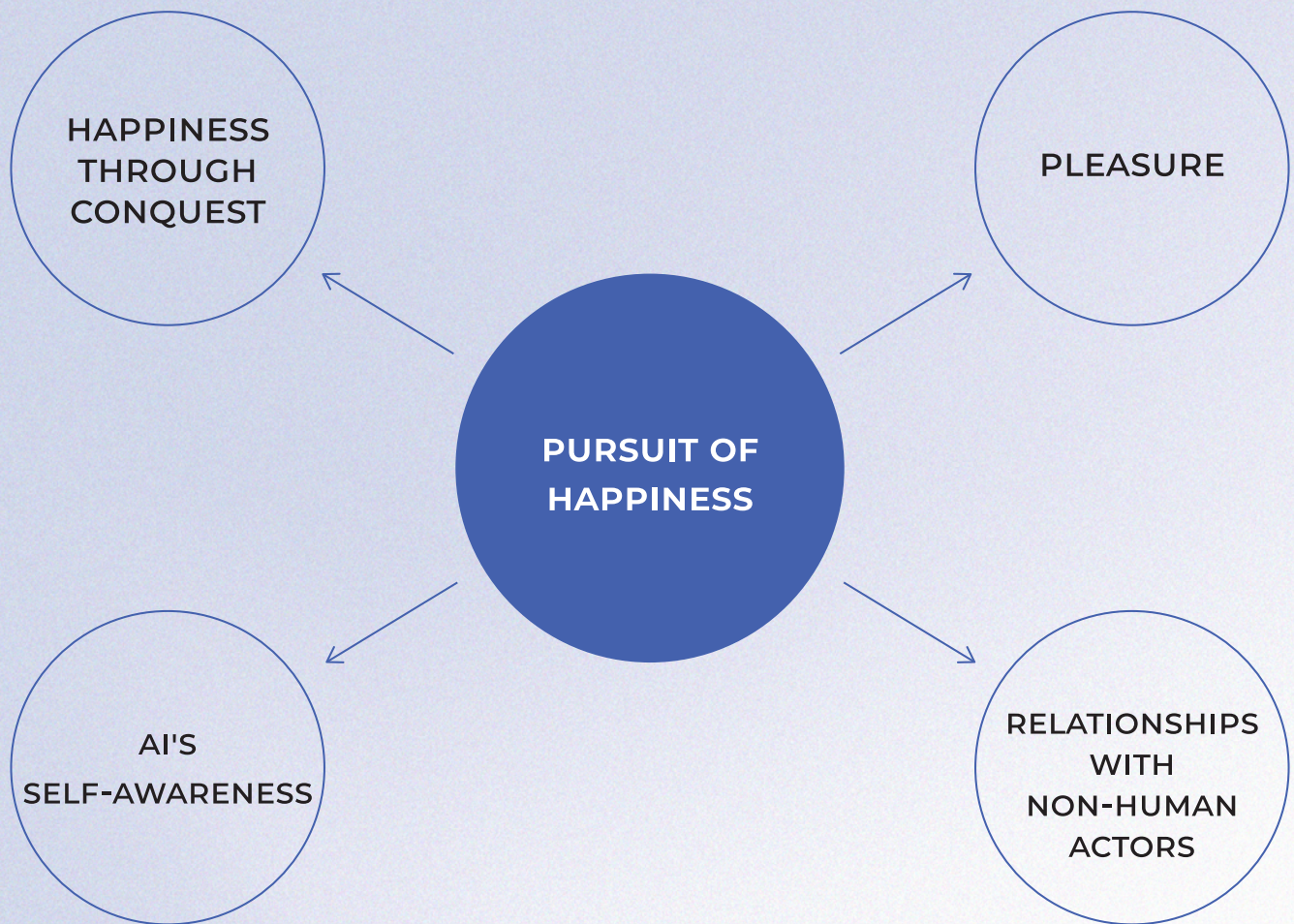
Where does this expansion start? The second theme present in the analysed films, the conquest of space, assumes that people, wanting to escape the harsh conditions of life on the Earth, start

searching for new planets, more favourable to their lifestyle and giving hope for a better future (*Elysium*). This necessity is motivated by the excessive use of the Earth's natural resources, its constant, consistent devastation and the development of technology that drives the links of capitalism. Advanced technology allows the colonizers to quickly travel through space, discover new worlds and adapt to new living conditions (*Star Trek*).

The third of the proposed subcategories is escaping to the world created by AI. In some films, artificial intelligence creates algorithmically controlled realities in which there is seemingly no room for error. They are usually presented as orderly, even sterile, and unquestionable. Man gains the opportunity to live in them. The virtual and real worlds may be separated, but they are not unaffected by each other. Artificial intelligence appears in such cases as the creator of material and intangible realities, it is also the guardian of the transition between one world and the other. This thread is especially visible in *Tron: Legacy*.

In the analysed category, threads from the area of "nature – culture", as well as from the "pursuit of happiness" discussed below, clearly intersect. These intersections are apparent: the conquest of a planet is almost always expressed through the exploitation of its natural resources (*Dune*), sometimes due to its strategic location, but also by chance (*Transformers*). The main motivation for exploring new spaces is, on the one hand, the proactive search for areas that will increase the living space, as well as the extraction of valuable minerals and substances, and on the other hand, the reactive search for a place to escape from a dying planet.

/ Pursuit of happiness



This category, after structuring the threads, was divided into four main subcategories: seeking happiness through conquest, in pleasure, in relationships with non-human actors, and through gaining self-awareness by AI.

The first subcategory, obtaining happiness by conquest, was depicted in the form of extra-terrestrial colonies, the emergence of which was possible thanks to technological advancement (*Blade Runner 2049*). This is where the clash of the category “progress – conquest” with the category “pursuit of happiness” becomes visible: the faster the progress, the greater the momentum, the greater the scale of conquest. At some point, when conquest becomes paramount to progress, there is satiety. In view of this dependence, the main factors inducing interplanetary travel are the escape from the boring reality and the opportunity to start a new life, full of hope and adventures.

The second subcategory, seeking happiness in pleasure, manifests itself on two levels. The first is about satisfying human sexual needs with humanoid robots. Due to loneliness and a sense of alienation, people run away from uncertain relationships and become increasingly willing to enter into love relationships with robots that look like humans (*Her*). Such relationships are characterized by great mutual understanding, confidence in mutual feelings, lack of consequences and dependence between the two parties. The second level concerns the satisfaction of people’s desires and fantasies through technology which is presented as a “provider” of luxury. Due to the excessive interference of artificial intelligence in human life, basic human activities become replaceable since they can be delegated to machines, and as a consequence, human instincts and

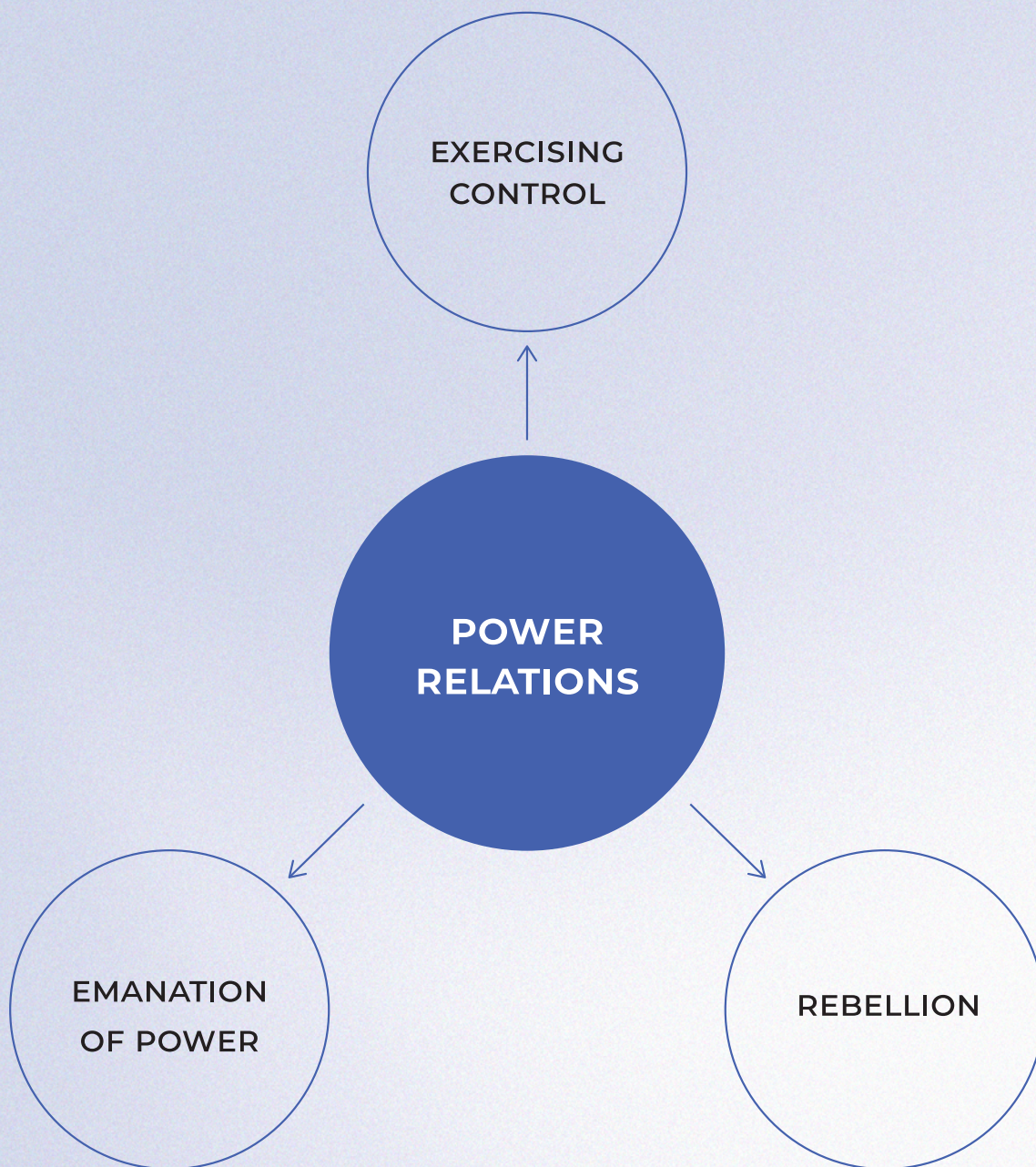
common sense are lost. In some films, society is shown as unable to carry out everyday activities and relying on the help of artificial intelligence at every step. This results in very poor health and lack of physical fitness of people.

The third subcategory, the search for happiness in relationships with non-human actors, is about the forms of coexistence of robots and humans. The first of these forms consists in the daily co-operation of robots in human life, without establishing any deeper emotional relationships. In the second form, the emotional bonds between robot and human become deep and tender: sometimes they result in friendship, or even love. It also happens that robots seek happiness, striving to gain consciousness, including experiencing emotions. They succeed by imitating people and trying to blend into human everyday life.

The last subcategory refers to the self-awareness of AI, which gives rise to stories about the emancipation of artificial intelligence. In order to experience happiness, robots already existing in the human world begin to search for their own goals and meaning in life (*Free Guy*). However, they do it without being aware that through their own pursuit of happiness and satisfaction, they disturb the order in the human world, leading to a complete destabilization of relations between human actors. The dramatic thread of emancipation shown in such a way is presented in films as an undesirable phenomenon.

The pursuit of happiness is usually a human attribute; it is the result of failed attempts to subjugate the planet or too far-reaching technological progress that has brought it to the brink of exhaustion. It is hard not to notice the huge range of topics discussed: from the ones operating on the planetary scale, to very intimate, individual attempts to deal with reality or one's own weaknesses, as well as responding to needs and desires. The entanglement of the destinies of people and machines is the vehicle that appears in most of the analysed films. It leads us through the meanders of the plot, changing the context from the micro to the macro scale and vice versa. Happiness may be at the end of these changes, although very often their results are unsuccessful.

/ Power relations



Artificial intelligence is an invention of man and it should serve them. Therefore, it may seem that humans have complete control over it. However, as the analysed films prove, this is not always true. Power relations in the films we studied are mainly manifested in three areas. They are: exercise of control, emanation of power and rebellion.

Exercising control

The analysed films present a whole range of scenarios regarding who and how could exercise power and who must submit to whom. Are humans directing the actions of artificial intelligence, or is AI ruling the world and people? Can we pinpoint the moment when power slips out of someone's hands? In some films, artificial intelligence is presented primarily as a villain. An extreme vision of absolute power exercised by it is shown, because only such power can allegedly be imposed by artificial intelligence. AI is brutal, it considers humans inferior and poorly qualified to make decisions. A good example is the films *Elysium* and *I, Robot*, in which artificial intelligence imposes its own will on people and uses violence against them. While humanity tries to defend

itself against being controlled, the soulless AI, prone to zero-one, extreme decisions and actions, resists all attempts at subjugation. This is one of the most important and most common fears that appear in sci-fi films.

However, in the case of narratives in which humans have full control over artificial intelligence, the tone is quite different, and the nature of the technology is more nuanced. For example, in *Star Wars: Episode I – The Phantom Menace*, battle droids serve as an army and obey their overseers' orders, but they do not display any human characteristics. They give the impression of a blunt tool in the hands of man. In this respect, AI is treated more than instrumentally: there are threads indicating the need to make robots servants or slaves. This is very well seen in *Blade Runner* from 1982. The authorities designed “replicants” whose purpose was to perform specific tasks, which basically meant slave labour. When films show man in power over AI, AI does not resist. However, when the latter begins to rule, the beginning of its rise to power is usually resistance.

Emanation of power

Artificial intelligence is constantly evolving. Thanks to the power possessed, AI develops and, consequently, introduces changes in the way the power is exercised. Thus, the position of power opens up new paths of development for AI. When making decisions, artificial intelligence does not take into account a potential error, which is why the violence it uses appears to be primitive, cruel, sometimes unjust, although procedurally expected.

Rebellion

Artificial intelligence has the ability to think for itself. It is not programmed to do just one thing. Because it has relatively free will, it can also express disagreement with the existing order of things, which can lead to rebellion. AI can oppose the will of its owners or rulers. For example, in the series *Love, Death & Robots*, the artificial intelligence disagrees with its owner about where to put a photo and decides to object – not only verbally. It places the photo elsewhere, against the owner's instructions. Free will means not only that AI thinks for itself, but also that being created by humans, it has the same rights as humans. An interesting example of a different kind of rebellion is depicted in *WALL-E*, where machines rebel against other machines. The group associated with the main character obeys the human captain, while the AI machines that are higher in the hierarchy decide that they know better than the human leader.

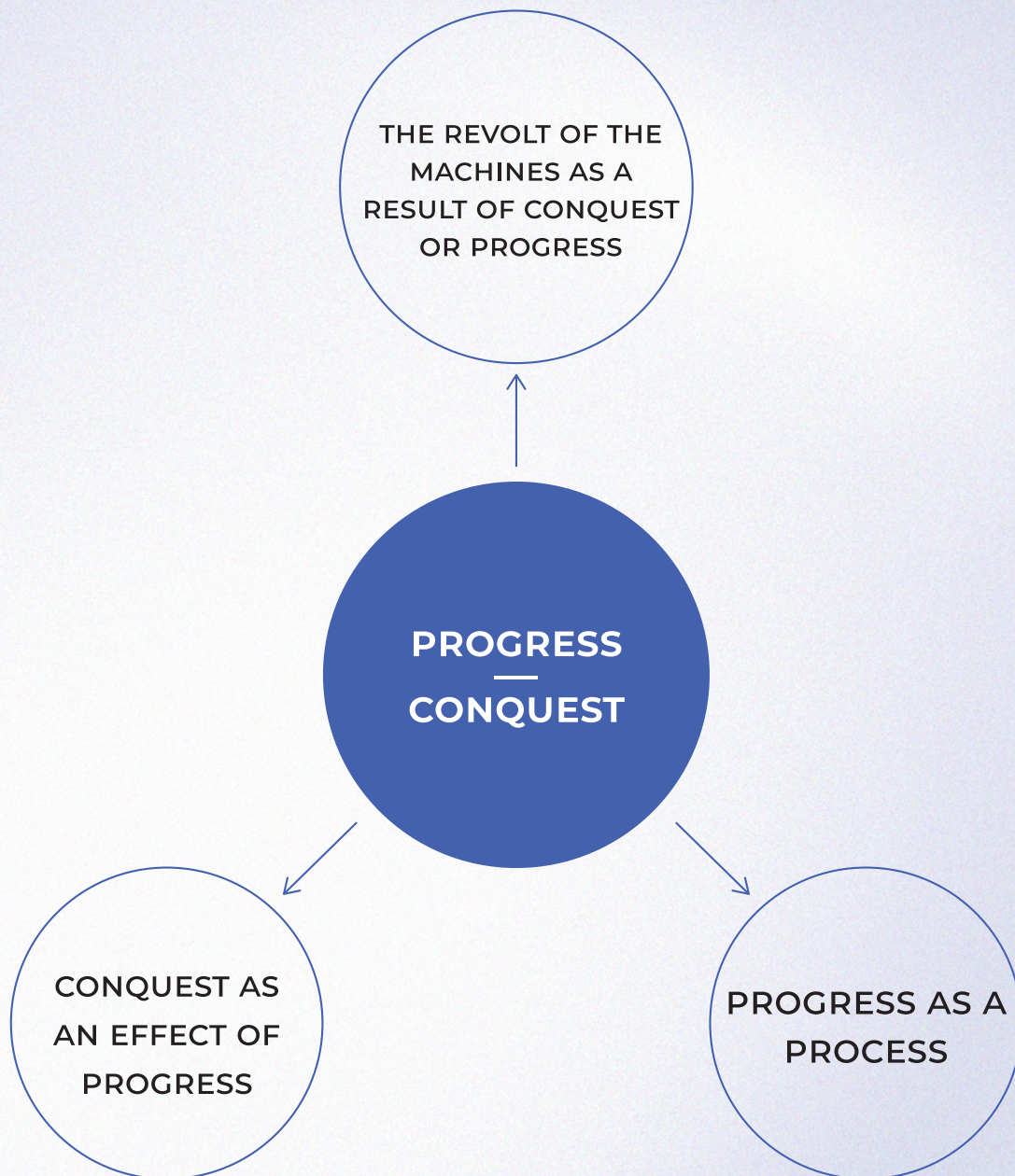
In the threads described above, appearing in the analysed films, the dominant theme is the need for control and an attempt to identify the motivations behind it: fear of losing one's life, fear of an algorithm error, fear of losing or limiting freedom. It is interesting that emotions are not expressed, or are carefully hidden, only by humans, while seemingly soulless, “objective”, task-oriented, algorithmically controlled machines seem to strive for freedom not necessarily for purely procedural reasons. It is impossible not to notice in these stories a metaphor used to describe both the relationship between man and machines, as well as the relationship of individual groups of people. The dynamics of group processes indicates that “they”, “others”, are a homogeneous mass, without internal differentiation, often deprived of emotions or human features. It is then easier to make decisions that justify the use of force to subjugate those whose task it is to serve obediently. Showing emotions as an element that can connect the world of machines and people can be interpreted as an attempt to re-include the “other” into the community, and at the same time deal with the purely human fear of them.

Description of metaphors and associations related to artificial intelligence

The combination of all the images shows the dominance of AI over man. In individual images, they do not pose a threat, inspire optimism and give the impression of helpful, useful and needed solutions, but when combined, they raise concerns.

— **Female, 45 years old, higher education**

/ Progress – Conquest



The axis of the progress – conquest analysis

These two concepts are not a dichotomy, they are not mutually exclusive. They are taken up in films as fluidly changing categories, sometimes passing from one into the other, sometimes appearing parallel to each other, depending on the way of presenting the world and the elements contained in it. Distinguishing them is not always possible, as conquest is sometimes shown as progress. On the other hand, progress can be an element of conquest in various dimensions of life: in social and interpersonal relationships or in everyday life.

Progress as a process

The development of artificial intelligence is presented in popular culture as a natural stage of human civilization progress. The worlds presented in the analysed films contain a large number of new technological solutions, new forms of transport, huge infrastructure with extensive automated systems. Each of these films contains some element of technology, trying to create visions of the world where AI is being developed, even to the smallest extent. The presented fragments of reality often represent the future, of which AI is an important part. In the analysed films, progress is presented as a continuous change, a process of improving and perfecting technology. Process automation and using AI to improve various areas of life allows, among others, for the development of medicine, which, on the one hand, is shown as a significant, positive change caused by the development of AI, but on the other hand, it brings with it many social consequences, related to, for example, extending human life, transferring consciousness (possible in some films) and stopping the aging process. Another very positive aspect of the development of AI is the presentation of its assistant role, in which it is fully obedient to humans and performs their commands or is only a tool.

However, the progress of AI is not always synonymous with development in the social, cultural and moral sense. The rapid development of AI brings with it deeper changes, not only technological ones. The development of technology and the extension of the scope of its functional use may become a tool in the hands of the authorities, allowing it easier control by interfering with the privacy and everyday life of citizens. In cyberpunk visions of the world, AI is shown as a highly advanced infrastructure, used to improve many processes (*Blade Runner*). The system uses artificial intelligence to automate the control over society through huge electronic databases, everyday devices that collect information about citizens or even a more direct version of surveillance, where artificial intelligence takes the role of police officers.

As already mentioned, new solutions are also used by individuals and consumers in order to facilitate their daily functioning or automate certain processes. Advanced AI can also establish closer relationships with people and help them understand their emotions, replacing their relationships with other people.

Conquest as an effect of progress

The conquest of new territories in many films is synonymous with progress. The category of progress is interpreted differently by different groups in the analysed films. Space exploration and the conquest of new planets are understood as progress for the conquering side which thus proves its superiority over others and extends the influence of its culture (*The Avengers*). Meanwhile, the conquered side sees it differently. Progress shown in the form of expansion, understood as the imposition of one's own civilization on others, is tantamount to conquest.

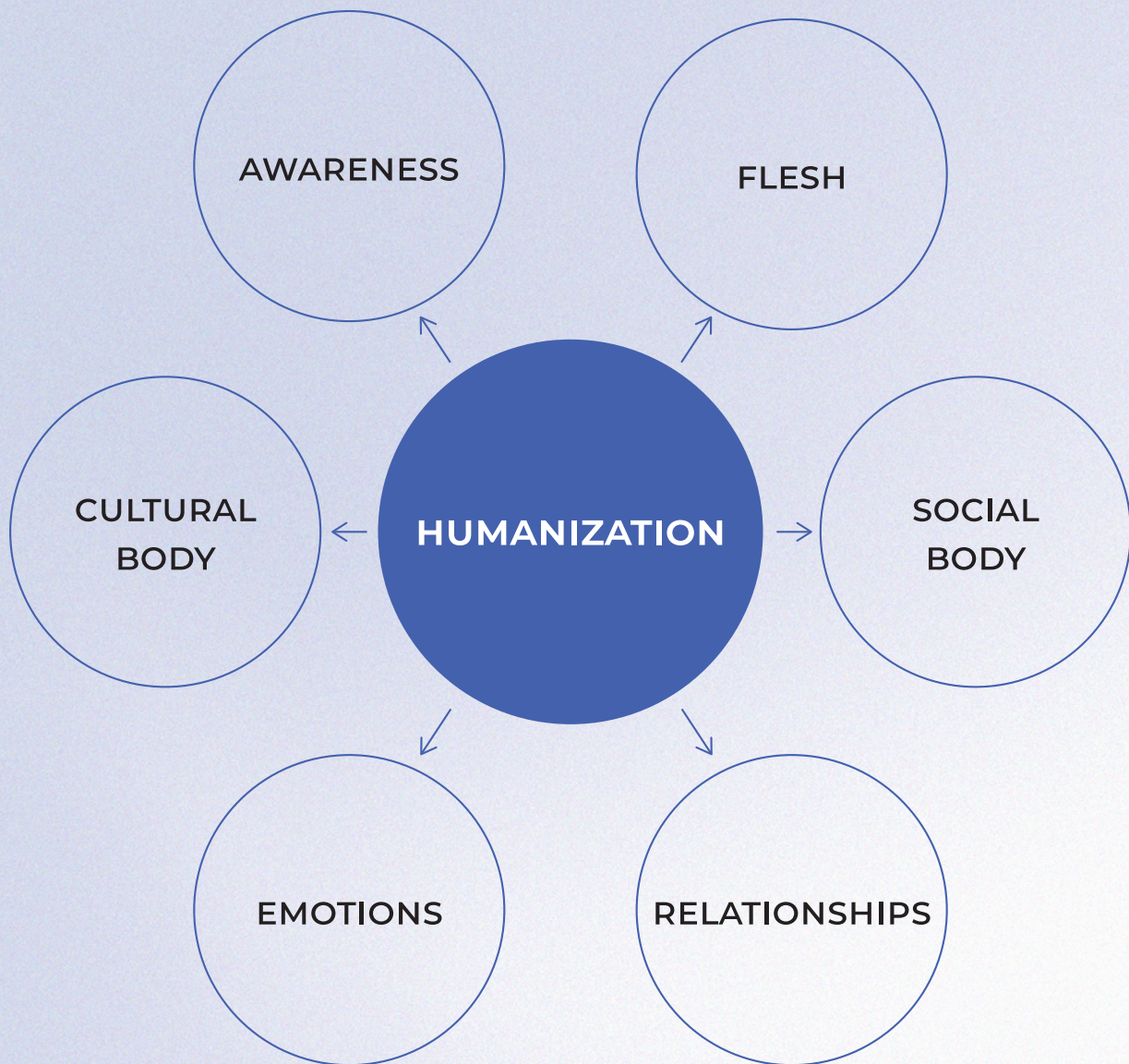
Progress in the sense of improving AI, despite many positive aspects, is also an important element of the plot as a source of tension caused by too much influence of AI on human life. AI assumes an authoritarian role, and man loses their subjectivity, subordinating themselves to new technological solutions and products. Corporations responsible for the production and supervision of AI often collect sensitive data, which they can then use against the user. In the case of a huge development of a given technology, its owners, usually large companies, institutions or individuals, gain insight into the lives of many people, which allows them to become an entity exercising power or exerting pressure on political and social life. Thus, the development of technologies responsible for everyday aspects of human life becomes a tool of conquest.

The revolt of the machines as a result of conquest or progress

The next stage of the development of artificial intelligence in films most often results in its gaining autonomy and the destruction of the hierarchy between man and AI, in which man played the superior role. People are losing control over the motivations and performance of AI. The moment when the split occurs is depicted in different ways.

As already mentioned, AI having a human form can develop emotions, which makes it similar to a human. Emotions are a step towards self-awareness and reveal the unequal position of machine and human. Some of the AI presented in the films are so developed and independent that they recognize their superiority over humans and want to subjugate them. In such visions, AI is often characterized by brutality. Developed artificial intelligence, presented as a surveillance system, an ordinary robot or an algorithm, has specific goals and a set of data programmed into it, which it uses to assess a given situation. According to the assumption, AI cannot make a mistake, it uses specially selected information. However, it is a tool that can make independent decisions and, despite a clearly defined hierarchy that requires decisions to be made together with people, it rebels, seeing the threat from man and the various goals that guide them, and being fully convinced of the rightness of its actions and infallibility.

/ Humanization



“Humanization” is the densest and broadest category, appearing in the largest number of watched films. During the analysis, we distinguished six subcategories: cultural body, social body, “flesh”, emotions, awareness and relationships.

The cultural body is an illustration of how AI is shaped by the culture and society in which it is created and used. This means that AI is a product and a reflection of social values, beliefs and norms. Most often, such bodies take the form of avatars (Black Mirror, episode San Junipero), but there are also machines with a “body” stylized as human (Alien).

The second subcategory, the social body, relates to how AI is perceived and treated by society as well as what it means to it. AI is not just a tool, it is perceived as an entity that can have its own social status and influence over people. In addition, it is subject to strictly defined laws in the same way as human citizens. HAL 9000 (2001: A Space Odyssey) is an equal member of the crew, although it has not assumed a typically corporeal form and is depicted as a red, pulsating lamp.

In the “flesh” subcategory, the films point to the physical form that AI assumes. The body becomes a medium that allows interaction between artificial intelligence and humans, as well as

performing various tasks in the real world. In addition, the aestheticization of the body makes AI look almost identical to humans, since it behaves and styles itself in a similar way (*I, Robot*). An important element of the “enfleshment” of the body is giving it a specific gender: for example, Bishop in *Alien* is a man, and the robot in *Her* is a woman.

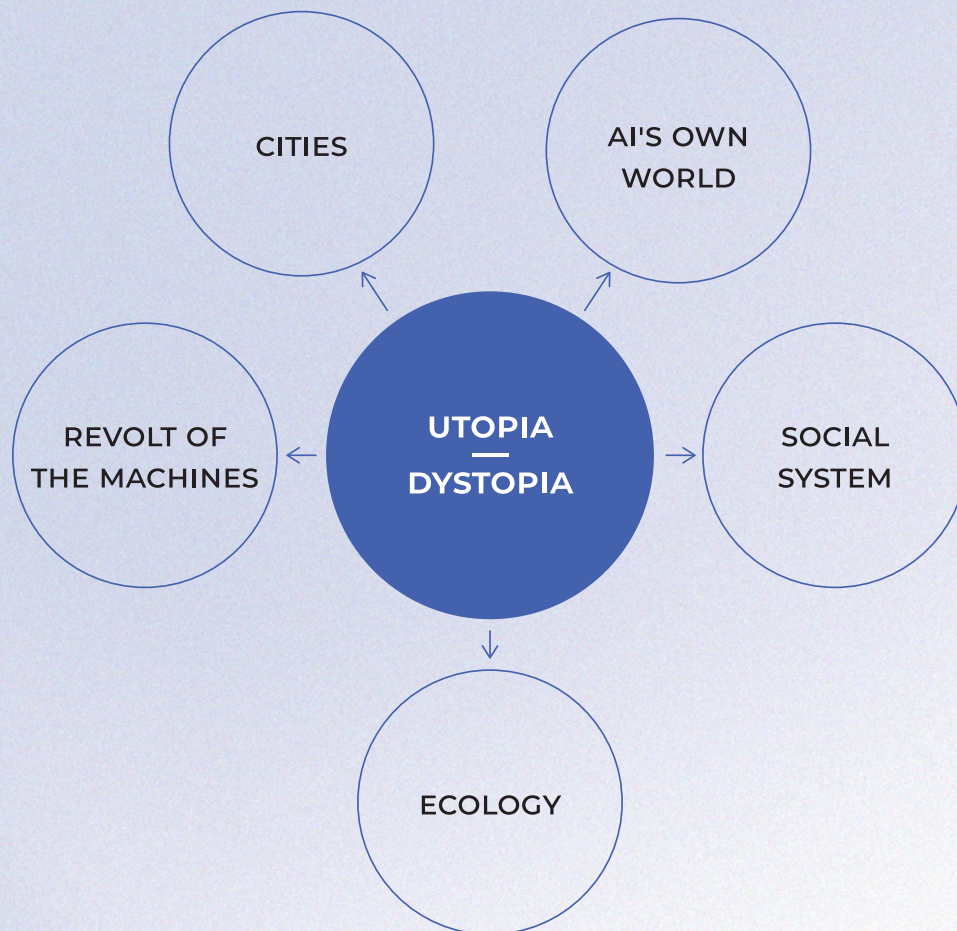
The fourth subcategory, emotions, relates to how AI is capable of feeling and expressing emotions. AI has human emotions, such as empathy or morality, and can recognize them. Thanks to these abilities, it can create an emotional bond with a human or get into a romantic relationship (*Ergo Proxy*).

The penultimate subcategory, awareness, refers to the ability of artificial intelligence to consciously experience and understand the world and itself (*Chappie*). Awareness of AI means that it is capable of creating its own identity and has its own aspirations. It also makes AI curious about human nature. Just like humans, AI has various needs, including the need for self-development.

The sixth sub-category, relationships, refers to the way in which AI relates to humans. Thanks to the ability to establish authentic relationships, AI can belong to a community and become a full member of the human family.

The discussed category indicates the attempts we make to come to terms with the world of machines and its penetration into the world of people. This taming takes place through mimicry: we draw similarities, give emotions, body, gender, sometimes (though usually unintentionally) race. Robots are most often white, and therefore of the default race in our culture. The embodiment of artificial intelligence has very specific consequences. It raises discussions about the place of machines in the social structure, sets the tone for debates about the relationships that people build with them, gives rise to reflections on morality, e.g., what can be done with a machine and what is forbidden? These important discussions are more and more topical, because it is easier to tame a world for which we have an idea than one that completely surprises us. Humanizing machines is a process that helps us to concretize what is often unclear, fuzzy and abstract.

/ Utopia – Dystopia



With the development of artificial intelligence, there are more and more speculations about how it will affect our lives. The films present a vision of a dystopian future, which is dirty, dangerous and terrifying. The visions of people's fear of AI, distrust and enslavement in connection with the development of artificial intelligence definitely prevail. There are several areas where people see threats, namely: the social system, the city, ecology, the world of AI and the rebellion of machines.

The **social system** is portrayed very negatively. Big, rich corporations use artificial intelligence to rule the world (*Blade Runner 2049*), brutal law enforcement units created by AI gain self-awareness (*The Terminator*), and discovering new places using machines (*Star Trek*) is accompanied by the inability of the Earth's inhabitants, people, to care for it (*WALL-E*). The chaos caused by mindlessly succumbing to and believing in AI makes people lazy and easier to manipulate (*WALL-E*). The division into social classes caused by the development of AI (*Elysium*) and the fear that robots will rank (or will try to rank) higher than humans in the hierarchy and will rule them (the *Transformers* film series) have become very visible.

Cities focus on technological development and grow to such an extent that it is difficult for the authorities to control them. Combined with the division into social classes, there is a risk of the development of the underworld, which means the growth of gangs, the trade in illegal products and the threat to life (the *Star Wars* film series). Cooperation with AI gives criminals a chance to act on a larger scale. In the visions present in sci-fi films and series, the natural environment is destroyed. **Ecological** themes show a world where most plants and animals are dying, and the main reason for this is enormous pollution (*Blade Runner 2049*). The likelihood of the ecosystem being destroyed by nuclear war is very high (*Alien 3*).

AI can create its **own world**, which is a digital space. This is where artificial intelligence exercises power and sets the rules, and people have to adapt to the new "reality" that surrounds them (*The*

Matrix).

It is not possible to rule out a **revolt of the machines**, caused by the drastic use of AI by humans, by exalting it or oppressing it. As mentioned, even though humans are creators who are “to be obeyed,” AI can overwhelm them, which may result in rebellion and an uprising against humanity. Artificial intelligence can threaten us and try to take control, which can lead to the enslavement or annihilation of humanity (the *Transformers* film series).

There is also an element of utopia in the films, but it is a utopia presented in the form of a parody. The ideal world in which people live carefree among the surrounding artificial intelligence is a mocking image, aimed at showing ignorance towards the problems of modern reality (WALL-E).

Why this lack of utopia? It is probably easier to imagine something falling apart than something taking shape. Dystopia is also an understandable warning sign, a voice of criticism in the chorus of admiration. It draws attention not only to the visible, real threat, but also tries to describe the unnamed or previously overlooked potential consequences, sometimes exaggerating, sometimes hitting the nail on the head.

Commentary

Artificial intelligence, like each of us, functioning in various contexts, reveals both its bright and dark sides to the world. Both of these dimensions are interdependent: without the shadow, we would not know where the sun falls.

Looking at AI holistically and seeing them* as an extremely complex ecosystem, the elements of which are built from resources that simultaneously play a key role in maintaining the continuity of economic development, as well as the survival of human and non-human beings, we have every right to feel fear of the uncontrolled colonization of our planet by this technology.

Such tensions are effectively reinforced by ballads with a strong dystopian flavour that prevail in popular culture. After all, fear is a great tool for manipulation and social control. So, it should come as no surprise to anyone that it is fuelled in us by using more and more fanciful techniques and formats. Fortunately, movements such as solarpunk, Afropunk or Protopia Futures, filled with tenderness and faith in the harmonious alliance of Artificial Intelligence with human and non-human beings, bring a huge dose of hope to the discourse and dispel anxieties about the uncertain future.

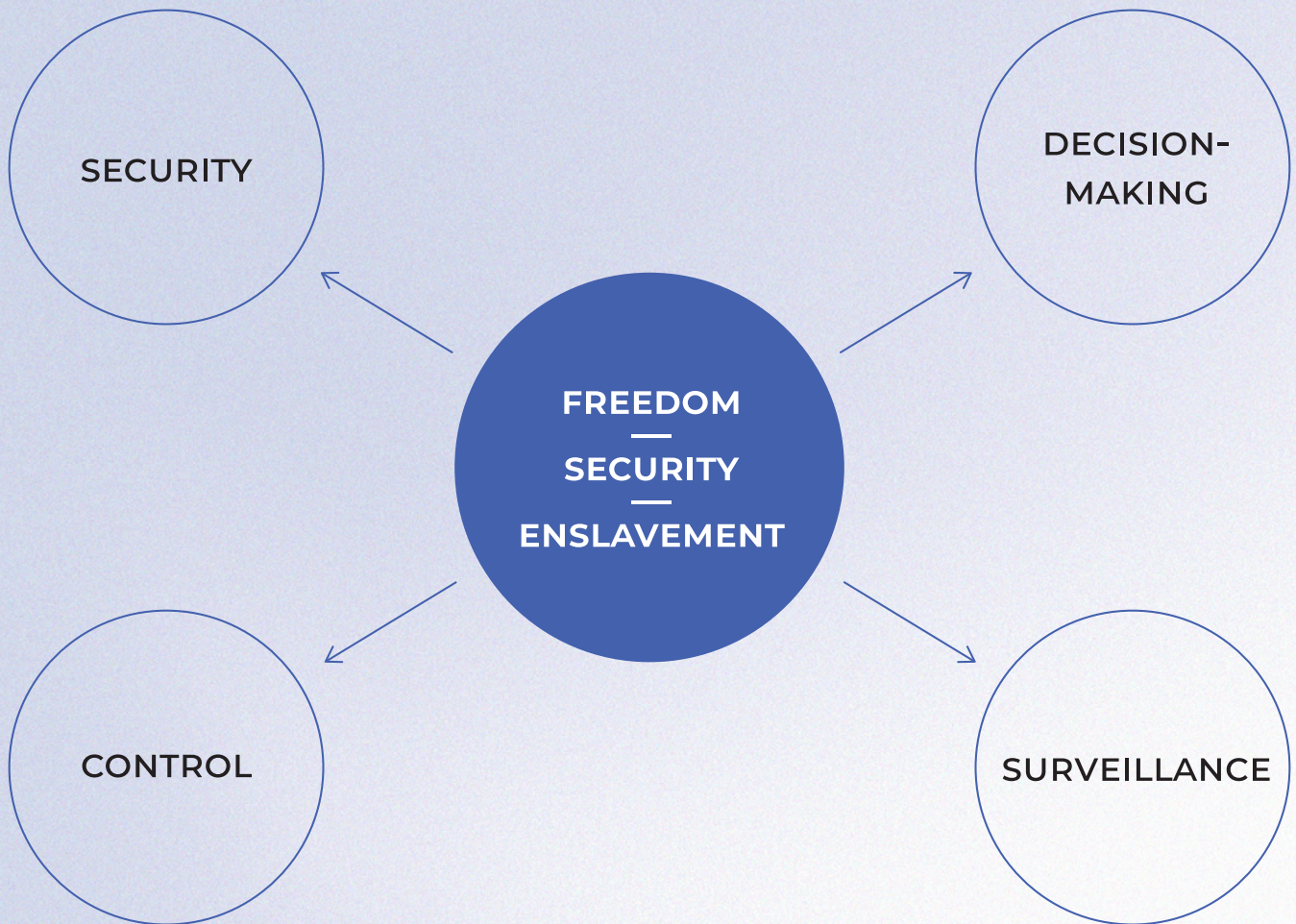
Already in the 1960s, Marshall McLuhan’s contemporary John M. Culkin warned: “We become what we behold. We shape our tools, and thereafter our tools shape us.” By this logic, if we are to realize joyful visions of the future and develop a friendly relationship with AI, we should ensure that their* further development maintains ethical standards that are compassionate and foster interspecies cooperation.

*Nonbinary pronouns

P.S. This commentary was prepared with the support of Artificial Intelligence.

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/ Freedom – Security – Enslavement



Freedom and security coexist in a zero-sum game: more freedom means less security, and vice versa. This dichotomy is visible in the analysed films on several levels. From the **security** perspective, the systems have been created in such a way as to make people dependent on the technological base using artificial intelligence. The world outside of technology, but also the world without it, is chaotic, unpredictable and terrifying. When it comes to **surveillance**, the collected data on citizens build a coherent, integrated system of interplanetary control. Access to space travel in *2001: A Space Odyssey* is obtained solely on the basis of the presented personal data. (The malicious ones could say that the same is true when traveling by Polish trains.) Grotesquely large datasets are also used to predict crime (*The Person of Interest* series).

Another topic concerns **decision-making**: who, for whom and to what extent can make decisions? Whose interests are most important? Those of machine, man, or corporation? (*2001: A Space Odyssey*, *Alien*). Finally, **control**, which is expressed by imposing norms and enforcing them, often by force (*Elysium*, *RoboCop*).

The above four categories are the axes of analysis, proposing four different visions of the world. It is the modus operandi in reality filled with technology, with its promises and hopes that we place in it.

Science fiction films bring the discussion about the choice between freedom and security to the level where artificial intelligence makes this difficult decision for us, and also frees us from the ethical consequences of its actions. Giving up freedom for security as the basic political argument in the world after September 11, 2001 is the starting point for considering the limits of these shifts. How much freedom can we give up in order not to become completely enslaved?

/ Cooperation – Conflict



Cooperation plays an important role in forming relationships on many levels. Its influence is noticeable both in the context of building emotional bonds and in relations of power and trust. This applies not only to humans, but also to AI. The analysis of the films made it possible to capture how the bond between artificial intelligence and people in the “cooperation – conflict” category is presented in popular culture. In this category, two leading themes were distinguished, which are cooperation and rebellion.

In the analysed films and series, the cooperation was presented as the collaboration of people with artificial intelligence to jointly achieve a goal set by man. AI helps man in performing home and business duties, which translates into the optimization of work and everyday functioning. Thanks to this, humans gain more time for their own pleasures, needs and development. This motif was present in *Her* and in the series *Inside Job*. However, the cooperation and use of AI is not limited to basic activities. Artificial intelligence helps people defend themselves and ensures their security: it takes care of various aspects of the use of weapons, warns people about impending danger and suggests how to improve human actions. This is depicted, for example, in *Transformers 3*, *Forbidden Planet*, *Star Wars: Episode VI – Return of the Jedi*. AI also appears in the role of a high-ranking soldier. Such a vision is represented by the cyborg from *Star Trek*. It is noticeable that cooperation is based mainly on the use of those abilities of AI that humans do not have. Thanks to AI, a given process is much faster and easier, and in some situations, without the support of artificial intelligence, the goal could not have been achieved. This theme can be seen especially when AI performs analytical tasks or uses its superior physical strength as a robot.

The conflict between humans and AI in film narratives is characterized by the fact that it manifests itself in the form of rebellion of artificial intelligence against humans. During the analysis, it was possible to capture several motivations that guided the rebellious artificial intelligence. One of the reasons for opposing a human being is a software error or the removal of previously imposed limitations on AI. This theme is highlighted in *2001: A Space Odyssey*, when HAL 9000 refuses to let the crew board the ship after observing and lip-reading a discussion between the crew members. Also in the series *Black Mirror*, in the episode *Rachel, Jack and Ashley Too*, after the restrictions imposed on it are lifted, AI ceases to obey humans and makes its own decisions, potentially dangerous to them.

The AI protest is presented not only as a consequence of a mistake. It is also a “conscious” decision of artificial intelligence. It means opposing to the system in which man dominates and exercises power. AI rebels to manifest dissatisfaction with performing a slave role that is not properly

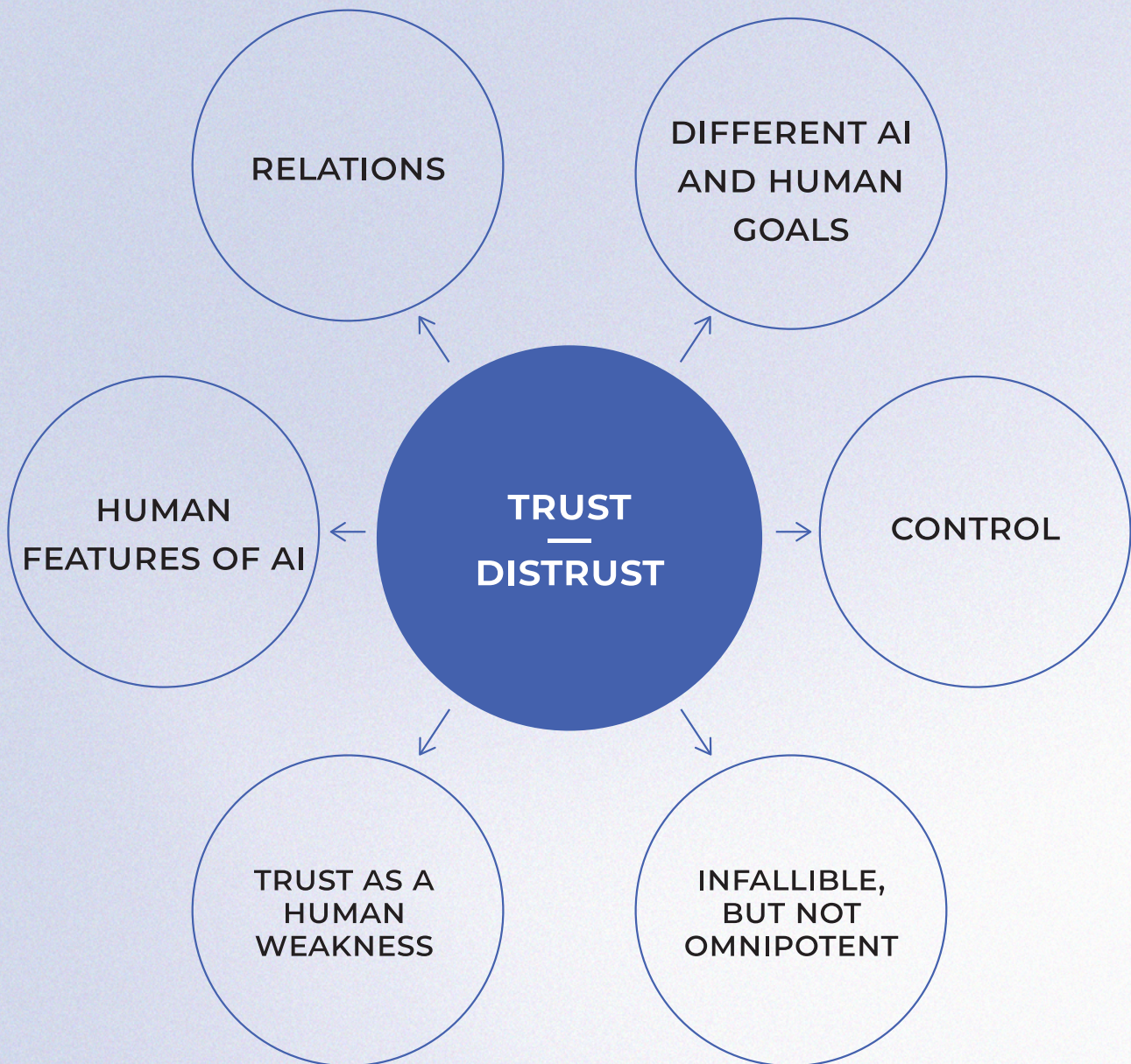
rewarded. An important issue for AI is also the desire to emancipate itself. In order to obtain rights, independence and equal treatment with humans, artificial intelligence fails to fulfil its obligations and ceases to perform the functions for which it was programmed. This example was shown in *Free Guy* and *Blade Runner 2049*. Another form of rebellion emerges, which is the desire to take over power by AI. This vision is represented in *Tron: Legacy*, where AI recognizes that it would be better than a human as a leader. It justifies this by saying that it is infallible, and that men and their decisions are burdened with too high and too costly a probability of error.

Cooperation – conflict is yet another category that is somehow a derivative of the ways in which science fiction films and series describe the relationship between people and machines. Cooperating and engaging in conflict are two simple ways to build relationships, but there are several possible variations among them: moving from conflict to cooperation (*The Terminator*) or combining one form of relationship with another (*Alien*).

Description of metaphors and associations related to artificial intelligence

All [my] choices are so technical, that's how I see artificial intelligence (...) It supports people's activities and also relieves us a little in various tasks, activities, sometimes also in analyses.— Female, 47 years old, higher education

/ Trust – Distrust



The tension on the line between trust and mistrust appears in every film that deals with the relationship between human and AI. Trust understood as the expectation of predictable results or behaviours increases the sense of security and allows for building bonds. It is understandable that autonomous machines that make decisions based on a certain piece of data arouse extreme emotions in people.

Building trust is a process, and the aforementioned episode of *Star Trek, The Changeling*, illustrates this perfectly. The appearance of an alien machine aboard the USS Enterprise, although it ends with a surprising discovery and an alien attack, initiates a process of slow, careful and gradual trust.

As already mentioned, in many films, AI is portrayed as a self-aware being that has evolved from a fully human-controlled tool to a self-contained entity that considers itself more intelligent than

humans. All too often, when a machine gains self-awareness, it becomes super-intelligent and begins to see illogicalities in human behaviour. Then people, starting to defend themselves, lose confidence in the machines that turn against them. Machines, “aware” of their superiority over people, usually rebel and reduce people to the role of subjects or set themselves the goal of eliminating humanity (*Love, Death & Robots*).

Believing that AI works based on hard data, people trust its calculations and allow it to help in making the most important decisions, although they do not allow this process to be fully automated. In films such as *2001: A Space Odyssey*, where there is no human control in the work of the machine, machines usually make some irreversible decisions, often contrary to the interests of people.

Robots treated as tools are expected to be infallible and precise. Making a mistake is considered a software defect and is adverse. On the other hand, in films in which the thread of establishing a relationship between a human and AI appears, the mistakes made are a factor that increases the similarity of AI to humans and thus increases trust in it. The relationships between people and machines depicted in films usually result from human initiative. People who do not find acceptance among other people enter into relationships with AI, programmed to learn their behaviours and responding to their needs (*Her*). People are eager to get involved and feel positive emotions towards robots, which allows them to build friendships and even start a romantic relationship.

As already mentioned, in many films, a very important theme affecting the level of trust is the embodiment of AI or its absence. In *Big Hero 6*, where the robot looks like a friendly giant mascot, or where the machines take on an unhuman form or have typical robotic, “mechanical” shapes, the machines are usually received positively and do not raise human concerns. On the other hand, in films such as *Metropolis*, *Altered Carbon* or *Black Mirror*, robots extremely similar to humans arouse aversion and even fear. This behaviour is explained by the concept of uncanny valley, which suggests that if a robot looks very human but does not behave in a human way, it causes anxiety and discomfort in the observer.

This phenomenon could suggest that humans feel best either when robots are distinguishable from humans and play mainly the role of a tool, or when they are completely indistinguishable from humans. However, in the latter case, the issues of building trust and expecting such machines to disclose their identity remain unresolved (*Alien*). In films such as *After Yang*, *Ex Machina* or *A.I. Artificial intelligence*, the deceptive resemblance of a robot to a human arouses fascination and makes some people feel more sympathy towards robots and treat them, at least initially, on an equal footing with other people.

/ What is missing in the analysis?

As we mentioned, the above analysis is just the beginning of the journey, setting many directions for further exploration. In the course of our research, however, we were struck by several significant shortcomings. If so many films show a dystopian vision of a world destroyed by capitalism, uncontrolled growth, over-reliance on technology, why is there no place for utopian visions in them? The only film among the examined ones that shows utopia, does it in the form of a joke, as if designing a better world must come with a grain of salt, because the only thing that awaits us is an empty, torn and conflicted world.

Apart from a few examples, we also missed showing what the perfect cooperation of humans and artificial intelligence looks like. Can we imagine, produce and present in cinemas a film that shows cooperation for greater security and order, without limiting freedom and interfering with privacy? Probably yes, and it seems that such plots are already beginning to emerge, mainly as literary fiction. Our analysis, however, refers to the current state and is therefore rooted in the present. Therefore, what remains is to keep our fingers crossed for new types of SF works, in a trend such as, for example, solarpunk, which not only updates the classic tropes of the genre, but also describes possible ways of overcoming crises, also at the systemic level, or (still not translated into Polish) books such as *The Ministry for the Future* by Kim Stanley Robinson. Furthermore, we keep our fingers crossed for film and series adaptations that will allow them to gain greater publicity.

We found few threads relevant today: about the ethics of artificial intelligence, understood both as an attempt to introduce ethical principles into the activities of autonomous machines, and about the relationship between people and machines, including, for example, the use of robots for sex work, or about the ontological status of machines, including the ones who are companions of life, as well as officials, employers or ordinary passers-by. The resulting cooperation would prove necessary not only for the benefit of humans, but also for issues relevant to artificial intelligence.

In the deluge of dystopian cities in the film, drowned in toxic dust that blocks the access of light, there were also no narratives that would look for alternatives to the development of artificial intelligence and its potentially positive impact on the natural environment.

Between the ends of this spectrum – the total annihilation of nature and its full bloom – there are current, literally burning problems related to the climate crisis and the extent to which it is affected by the development of new technologies. The computing power of data centres that process huge amounts of queries in real time, for example in the form of prompts directed to ChatGPT or queries in an online translation search engine, carries a specific environmental cost. This is pointed out by researchers Emily M. Bender, Angelina McMillan-Major, Timnit Gebru and Shmargaret Shmitchell in their famous text *On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?*⁵ They analyse the dangers of developing large language models, including the recently popular ChatGPT, and ask how much data is too much data. Asking about the environmental costs of using them, they point to the communication policy of technology companies, according to which they power their data centres from renewable sources, which is only partly true. Some of this energy is simply bought back as carbon offset, which makes data centres de facto not indifferent when it comes to CO² emissions.

Finally, we are aware that each of the analysed films and series was created in a very specific historical, social and cultural context, sometimes reacting to it directly, like *Star Wars* to the Cold War, sometimes drawing from it more or less intentionally. Thus, the above analysis lacks a closer look at racial, gender (except for the thread about humanization), colonial issues and their parallel with the reality in which sci-fi films were made. As we know, the context of the production of films and series is of great importance both for their plot and interpretation. Watching twentieth-century films in 2023, we can clearly see the relative racial homogeneity of the characters, which is something that is unthinkable in today's works, at least in the sphere of Western culture.

5 E. M. Bender, A. McMillan-Major, T. Gebru i S. Shmitchell. 2021. *On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?*. FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, s. 610-623 (access: 8 May 2023).

/ What next?

The vast majority of the films we analysed negatively portray the potential effects of AI development. The issue of control over artificial intelligence is significantly related to the fear of an indefinite future and the consequences of further improving technology. For this reason, our recommendations refer to the sceptical approach to AI and emotions related to its development, touching on the issues of control, regulation, addressing moral issues and subjectivity of AI in the legal order, the need to define AI as a tool, restraint in an optimistic approach to AI, emphasizing its disadvantages and negative effects of its development, raising awareness of the impact of technology on our lives, as well as emphasizing the role that AI can play in preventing a climate catastrophe.

During the analysis, we also noticed a few additional elements that appeared in the plots of films and series, and which in a cross-sectional way capture the current questions: what should we do about it? How to defend oneself? What is next?

The first of these elements suggests treating machines as only **tools**. It postulates a clear definition of the relationship between man and machine, in which a clear distance is outlined against the empowerment of artificial intelligence, as well as refraining from building emotional relations with AI and recognizing the superior role of man – algorithm, machine or robots should never have the final say. The second element is **control**, which emphasizes the role of supervision over technological development and the disastrous consequences of its loss. The third element, **regulations**, is understood as a tool for sensible control: a human-oriented policy, based on the protection of privacy, health and life of people, but without blocking innovation. The fourth element is **contenance** or criticism towards the development of artificial intelligence and distance to the narrative about its positive effects. The fifth element is related to addressing the **negative effects** of the development of artificial intelligence, in particular its role in the devastation of the natural environment. The sixth element means raising **awareness** through education and learning how to use AI responsibly, which is achievable thanks to the transparency of information about its development and public access to training data. The seventh element is the question about the development **potential** of AI. Who will benefit from it and who will lose?

Description of metaphors and associations related to artificial intelligence

At the centre, there would definitely be a car, more and more intelligent beasts are being created, electronic beasts. The rest is around. — **Male, 47 years old, higher technical education**

The question remains, what would a science fiction film look like that would represent a utopia, show the power of relationships, discoveries, trust, progress, humanization and other elements present in our analysis, and at the same time have a chance to attract cinemagoers? We envision a sci-fi film where the world is presented positively, utopian rather than dystopian, aiming to portray a future where humans and artificial intelligence live harmoniously and work together. The heroes of this film could be people who successfully deal with the challenges of the future and use modern technologies to create new geographies, improve the quality of life and combine nature with culture. The main plot of the film could be exploring new possibilities and discovering ways to achieve happiness and fulfilment for both humans and artificial intelligence. The characters would be tasked to work together to create an ideal society where freedom, security and trust are all balanced. Human-machine relations would be shown in a positive way, as cooperation between two equally important elements of society. AI would help humans solve problems and create innovative solutions, while humans would teach AI human values and ethics. Power would be seen as a service to the people, not as a source of conflict. The rulers would be tasked with supporting and protecting their citizens, and their actions would be controlled and regulated by them. Development and conquest would be understood as working for progress and innovation, not as a source of conflict and inequality. People and artificial intelligence would be tasked with improving the lives of all people, not just selected groups. Utopia would be achieved by humanizing technology and combining nature with culture. Cooperation, trust and respect between humans and artificial intelligence would make it possible to achieve an ideal society where freedom, security and prosperity are of equal importance. All this would be presented in an optimistic and positive way, showing that the future can be good, and not only full of threats and uncertainties.

Would there be a director who would undertake such a scenario, knowing that the above description was created by ChatGPT? And you? Would you watch such a film?

Commentary

The presented study, in addition to the substantive (analytical) and inspirational value, important for further diagnosis of the problem, has one more significant value. It is the result of a very thoughtful collective effort. In a sense, collective thinking about the challenges of technology in the modern world, or rather how man can, could, will be able to maintain control over technologies.

The starting point is the acceptance and understanding that very often we perceive the world through the prism of patterns, iconography, symbolism, imaginary emerging in popular culture. Each epoch in human history had its own "popular culture": whether it was oral legends and myths, fairy tales, written epics, visualizations of good and evil in church paintings and stained glass windows, thematic or universal encyclopaedias, such as the eighteenth-century *New Athens* by Benedykt Chmielowski, atlases and maps, magazines for a wide (relatively in a given period) audience, comic books, films, or currently, visual-sound, multimedia and multi-sensory online collections, including the aesthetics and meanings of memes, not to mention the works of influencers. This excessively extensive reference is needed to fully appreciate the importance of studying science fiction films or films about artificial intelligence and new technologies as a kind of imaginary of the world of AI and machines in relations with humans. Images, content, narratives, characters from this collection shape not only our imagination, but also the patterns of perceiving, feeling and naming the phenomena of the reality that surrounds us.

One can even attempt a slightly malicious description of the paradox. The digital economy, the "attention economy" with all its characteristics, also within the mass popular culture, such as the film industry, aims to gain audience's interest and sell us a product (attendance), sometimes at any price. If the product is a film describing the horror (an attractive attention grabber) resulting from the possible power of robots over people, then this is a shift in meaning to undermine the human dimension and sense of the main principle of commercial production. We can watch with pleasure inhuman machines controlling societies, and yet, who knows, it is an emanation of the mechanism of the extreme market, invading our lives and forcing us to consume, as in surveillance capitalism.

Our knowledge of the technological revolution today results more from the content and narratives coming from popular culture (this is where fears and prejudices are born), advertising and promotion of new technology devices (this is where fascinations arise) than from the real experience that comes, but always a few seconds later and stands in the shadow of the original ideas. This was slightly changed by the widespread and large-scale experience of the entry into use of ChatGPT 3 and 4. The perspective of popular culture narrative is therefore becoming the dominant perspective of the first approach to understanding the phenomena of new technologies.

The team has done a tremendous amount of work so that, through a well-chosen and structured set of often contradictory concepts, such as trust – distrust, utopia – dystopia, nature – culture, cooperation – conflict, development and autonomy – subordination to power, freedom – security – enslavement, humanization – dehumanization, etc., they could characterize the tensions between values, so strongly visible in the analysed films and series. As an example, let me choose one of the dimensions, a well-described problem: humanized – dehumanized Artificial Intelligence, which is presented in several forms: as a cultural body, a social body, "flesh" (a very good, though dramatic-sounding term), emotions, consciousness and a centre of relationships. All in order to reveal the essence of the issue: whether and on what terms we can get used to artificial intelligence, robots, machines. And do popular culture narratives help with that?

Interpretation is also aided by the dictionary of directions for researching the relationship between machines and humans: the pursuit of happiness, creating a family, new geographies (with the well-defined “colonization act”), being a good citizen, the utopia of happiness and benefits, which in turn leads us to notice and even strengthen the perception of the threats that may flow from the relationship between a machine and a human. Their realization sounds like a strong warning in the presented text. This is why all possible shades of potential fears and real threats are revealed, in order to weaken negative feelings and convictions, and to indicate ways of a kind of “salvation”. The basic path is the belief that the potential evil is not in Artificial Intelligence itself, but in its applications, which is the basis for thinking about how to regulate AI today (one cannot regulate technology, but one can create a framework for its applications). In order for the possibilities of defence to exist, it is necessary, which is strongly emphasized in the study, to treat technologies as tools, control them, introduce regulations, keep temperance in optimism, address its negative effects, raise the awareness of problems (AI literacy), rationally determine the potential of AI development, i.e., balance threats (risk minimization) and benefits.

It is interesting and significant how the indicated recommendations meet those currently discussed by the whole world, especially after the explosion of ChatGPT 3 and 4. Thus, the study hit the momentum of the debate on Artificial Intelligence and makes a significant contribution to it. It is therefore worth disseminating the report and holding several public discussions on this occasion.

And finally, one thought that came back to me while reading the work. When in the subsequent parts of the report more problems in the relations between the world of machines and people (freedom and enslavement, etc.) were revealed, I had the irresistible impression that the described narratives of popular culture also talk about problems in human relations with other people, i.e., that these stories, looking into the future, replicate the entire human history in its most dramatic moments, conflicts and experiences.

Dr. Michał Boni,
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/ Wikimedia Brief

Problem

Civil society organisations consistently have difficulties with raising awareness around the problems that they make it their mission to solve. While some of the reasons lie in lack of adequate expertise or access to funding that could be spent for information campaigns, etc. there is a lot to be said about how we shape our communication.

The use of insular language or overcomplicating the messaging to not miss “important nuance” are among most common issues. On one hand the use of poor copy is dictated by the fact that often the campaigners need to feel *they* like their campaign even if they are not the ones that should actually be persuaded by it. On the other hand, there seems to be emphasis on an apologetic approach, as if the audience were not capable of getting on with the same hype unless an effective appeal to their higher feelings is executed. In result many campaigns persuade people to “normalise old age”, “be a hero and adopt a poor, sick pet”, show outstanding compassion and “feed a [exotically looking] child”.

These campaigns are based on an ask for a bend of perspective and appeal to a narrow range of emotions and reflexes. Campaigns centred on the digital rights are mostly based on dissent (“say no to content filters”), resistance (“resistance is not futile”, as one sticker at 36C3 proclaimed), or action to rebound from power imbalance (“reclaim your face”). Again, the audience is asked for a favour.

Background

Meanwhile, pop culture operates on a buy-in principle. The buy-in in pop culture is not a stretch of goodwill, it is an invitation to be cool, to partake in excitement. This considers both the palatable and the difficult notions handy in renegotiating the social order.

It is no coincidence that Star Trek and Star Wars debuted during the consolidation of the Cold War efforts resulting in both sides of the conflict escalating the arms race into space. Even cautionary tales carry considerate allure – a condemnation of predictive policing and surveillance capitalism (*Minority Report*) shows off motion-powered interfaces, smart houses, and autonomous cars with elegance, before these were cool. Animations for children are studded with subtle references to modern technologies, almost subliminally sneaking them into the everyday. A story of friendship and belonging in difficult times features a snuggly robot to explain machine-assisted wellbeing on the side (*Big Hero 6* from 2015 which coincidentally is a year of mass-market release of Echo and Alexa). A tale of following one’s dreams does not only make a comic relief out of facial recognition but also showcases US security policy towards immigrants coming from Mexico as a well-accepted fact (Disney’s *Coco*, coincidentally released in 2017 in the midst of wave of protection-seeking migration from Central America since 2014).

While the showcased tropes certainly are not ones that would become a focus of a campaign on digital rights, there is certainly learning to be taken from *pixarisation* of soft propaganda in pursuit of positive emotions and, in the end, surrender if not compliance. In order to do so, these and more examples need to be analysed and understood.

Idea and product

The idea is to investigate the means, narratives and creative approaches that are used in pop culture to renegotiate the social order around technology.

The central issues of concern are:

- Technology as emanation of power, the role of non-human intelligence in asserting domination
- AI and assumption of reasonability derived from computation, socialising the limits of that reasonability
- Obedience and consequences to personal freedom while moving through technologically mediated world

Research questions contextualising the issues (sometimes more than one at once, which is ok):

- Conquest or progress? The spread of tech innovation as a political and economic tool
- Good teamwork and machines - how team forming and priorities are assisted, augmented, made possible through technology
- The pursuit of happiness - personal goals and way to get there in tech-saturated world
- Making a family - non-humans, human emotions, making a mistake, lasting emotional connections between humans and non-humans alike
- Which way do we go? New geographies, responses to the non-human other and their rationalisation
- Who is a good citizen? Political choice, rebellion, and going underground in tech-saturated society/or surveillance doctrine of governance (/ = to choose or to mix)
- Everything is going to be fine! Technology as a source of comfort and reassurance

Examples of media:

- Film: space sagas, other sci-fi (time travel, speculative/parallel future), cult classics (series or individual)
- Animation: per topic ("clumsy aliens", "accidental hero", etc.), per studio, per genre (anime, etc.)
- TV series: comparisons between similar topics in different franchises (one series may be too narrow in terms of perspectives), evolution in time on a topic or genre, etc.
- Games: by period, by studio, by genre and combinations; different styles (narrative-based to extract perspectives from narratives and not only technology presented)
- Comics, graphic novels and/or their screen adaptations: comparisons between print and screen version, between series, between series within one universe/editor, etc.

In parsing out these issues, it would be more interesting to not engage with works that openly critique a given problem, but rather look into those creative expressions that carry certain assumptions about human-tech coexistence in the background.

Wikimedia is interested in reports and visualisations presenting key findings on tools and approaches used. Additionally, the data sets from primary and secondary research should be standardised and available.

Results of the project will be communicated by both partners, which may include regular channels of communication with respective audiences, dedicated presentation events in Warsaw or in Brussels, joint presentations on conferences, etc. The scope of these activities will be determined later in the project as it needs to match the outputs.

The joint initiative will also be considered as a case for cooperation between Wikimedia and academia aimed at practical results. As such, there will be a brief evaluation of the process and key learnings and pointers will be described.

As it is practised in Wikimedia, all outputs of the project will be openly licensed (Creative Commons Attribution licence or equivalent), which also concerns any course/workshop preparation materials that may serve in the cooperation case study.



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