



Artificial Intelligence and the Crisis of Human Civilization through *Black Mirror*

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Abstract

While the human world is yet to map the effect of artificial intelligence (AI) in its totality on social, political, and civil institutions; one question that becomes pertinent is how the tools of technology are going to change the course of human history. The present paper attempts to examine the relationship of AI with the human world while keeping in mind the questions of co-habitation, replacement, and resistance through select episodes of Black Mirror. The paper also looks into the social and moral implications of technology and the impact of the same on the human world. Technology has always been an integral part of human civilization and its progression, however, what happens when technology starts to raise a threat to the very purview of the human world?

Keywords: *Artificial Intelligence, Digital Humanities, Crisis, Technology.*

Introduction

The many depictions of artificial intelligence in works of science fiction over the last several decades, ranging from speculative to fantastical in their nature, have displayed an array of human sentiments directed towards the subject. Isaac Asimov in *I, Robot (1950)* highlights the role of artificial intelligence as a utility to humankind, wherein his depiction of artificial intelligence machines based on what he names “positronic” (Asimov 21) brains is of highly intelligent, logical, and helpful entities that seem about as sentient as a human being. Asimov’s work is known widely for the three laws of robotics that are propounded in his fiction, setting a preemptive standard for the nature of interaction and relationship humans and said AI should share in the eventuality of their coming into existence. Asimov’s stories established, among other things, the idea that artificial intelligence can be a boon to human civilization if it is governed under strict ethical principles, which puts a great responsibility upon its creators, such as they are in the real world of the present time. Arthur C. Clarke, among other authors, depicted artificial intelligence in a similar light in *Expedition to Earth*

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(1953), showing it as a non-invasive tool to mankind as long as its power and utility are kept well under check (Clarke 155). However, Clark's fiction also goes on to highlight the darker turn the development of a sentient machine could take if it is not bound within the human ethical constraints. He demonstrates in his exemplary work that if allowed to advance beyond human intelligence, artificial intelligence could well obtain the ability to ignore human ethics and not remain the loyal servant as Asimov and others would imagine but venture to become the master of a society that it deems intellectually inferior.

These examples, therefore, displayed a degree of fear as to the possibility of the unhindered growth of a technology that could potentially overpower its own creator. Stories featuring artificial intelligence as a utopian technology ridding human being of the menial industries of sustenance have been frequent, but perhaps not yet as much as have those presenting it as a dystopian overlord. "AI Takeover" has since emerged as one of the most enduring hypothetical scenarios driving the most popular works of science fiction. Starting from 20th century American filmmaker Stanley Kubrick's adaptation of Arthur C. Clarke's story *The Sentinel* (1953) as *2001: A Space Odyssey* (1968) and James Cameron's *The Terminator* (1984), a long line of works of visual storytelling have commented upon the utility, sustainability, and dangers of artificial intelligence and its ever-expanding power. Kubrick's film depicts an advanced sentient machine that obtains the ability to manipulate and defeat its human masters, highlighting how this artificial intelligence can be seen as a consequence of unhindered technological development achieved as a result of human ambition and conflict. James Cameron's science-fiction classic that spawned a franchise in popular cinema displayed a similar idea at work, albeit in a far different tone, using humanoid robots as characters in a setting that is closer to the real world.

In the present time, however, a discourse on this subject demands more immediate attention than any time prior. In the twentieth century when computer systems were being newly developed and remained of limited availability to people, artificial intelligence was still a matter of speculation for the distant future. In sharp contrast to that, the last few years have witnessed an unprecedented growth of technology, arousing attention from both the world of technology as well social studies speculating the inevitable and widespread influence of it. From LLMs (Large Language Models) like ChatGPT that imitate human capability of intelligent conversation to humanoid robots that can perform a variety of physical tasks superseding the human capacity, artificial intelligence is no longer a subject of science fiction but a tool readily available for use to anyone with access to the internet.

Subsequently, the dialogue over the practicality of artificial intelligence becoming a part of human society has influenced cinema as well as storytelling. Among the many examples of this, a significant one is the British television anthology called *Black Mirror*. Since its debut in 2011, the series depicting the many aspects of technology in relation to human nature and experience has gained a reputation for being nearly prescient about the upcoming technological advancements in the near future and the human condition surrounding them. Considering that the series derives from actual technology but makes predictions of a time when its full-fledged form would influence society at an unprecedented level, the accuracy of

many of these predictions – including those regarding artificial intelligence – has come to be largely self-evident. That said, this paper deals with these depictions of artificial intelligence in *Black Mirror*, analyzing what aspects of it can be seen realized in the present time, and what the show’s commentary upon it is. We take a large variety of examples of the depiction of artificial intelligence in *Black Mirror*, covering the predictions of the use of artificial intelligence technology in various time periods and for various purposes, thus making a comprehensive analysis of what the plausible threats of the technology could be over the many following years of its steady improvement. The primary research question is whether contemporary science-fiction television reflect the contemporary reality of the recent developments in the area of Artificial Intelligence. Looking at the relationship AI shares or might eventually develop with human beings in the form of coexistence, replacement, or opposition, the study uses the method of in-depth content analysis, studying the theme displayed through the setting, plot, and other narratological aspects of the works in comparison to the news of the recent developments in the field in order to develop a comprehensive understanding on the matter.

Artificial Intelligence and the Human Civilization

Works of fiction have extensively described artificial intelligence in relation to human society, and more often than not, it is this relationship that makes up for the narrative of the stories on the subject. As discussed previously, the amicable or hostile dynamics between humans and artificial intelligence have dominated most fiction mediations upon the subject of the eventual ascension of the technology to a sufficiently advanced stage, varying almost entirely on the basis of the personal inclination of the author. Therefore, this study also looks at these dynamics between the two entities in three broad categories, analysing the varied examples of the same in *Black Mirror*.

In the first case, we look at artificial intelligence and its possibility of coexisting with human beings, making observations on the mutual treatment of the two, their utility to and dependency upon each other in the present time and in various stages in the future as artificial intelligence continues to advance further. The examples of this in the series display varying degrees of benevolence and malevolence. The episode “Hang the DJ” shows an era of online dating assisted by artificial intelligence that simulates scenarios in the lives of the people paired through it to determine their compatibility deriving from their emotional make-up and personal choices. The negative extremity of this is displayed in “Playtest”, which depicts an AI that harnesses the fears of the user to simulate a frightening experience in a virtual-reality video game. This machine works through an implant in the user’s nervous system that interacts directly with their brain, causing them to experience the world of the game as if it was reality. While this seems on the surface like an advanced version of virtual reality technology used in gaming in the present time, it focuses more on the interaction of a super-intelligent machine with the human mind in real-time. The protagonist of the episode agrees to participate in the trial of the technology which involves the AI continuing to learn and enhance the level of the fright experienced based on the user’s personal fears; however, even as he experiences a long time period in the game that blurs the line between reality and virtuality, the experience results in his frightening demise the extremity of the shock in a

period that amounts to less than a second in the real world. Lastly, a fine balance between the two is displayed in “Rachel, Jack, and Ashley Too”, wherein an AI modelled after the real-life persona of a popular music star is made accessible as a mental-health companion to millions of young teenagers. The episode follows two young girls who interact with this robot with varying temperaments, and the music star it is based on who is kept in an induced coma by her guardians who try to extract her music from her still active brain, and use it to produce songs, and looking to benefit from the commercial appeal of the celebrity in question. In an exceedingly dark tone, the episode shows the positive as well as negative possibilities of artificial intelligence in juxtaposition.

In the second case, we look at the long-dreaded possibility of AI replicating human behaviour and ultimately managing to replace it in any meaningful capacity. This case raises questions over the difference between intelligence and sentience, and what it really means to authentically be human. An example of this appears in the episode “Be Right Back” which depicts the replacement of a deceased loved one with an AI that initially talks to the protagonist over calls and subsequently is manifested in a physical bodily imitation of them. The episode follows the protagonist who, after the accidental death of her husband, purchases an AI replica of him that she initially converses with over texts and phone calls with due apprehension. Subsequently, she chooses to purchase a fully life-like physical replication of her deceased spouse, only to understand in the due course that even at its best, artificial intelligence cannot replicate the minutiae of everyday experience that define human existence. A similar example is seen in “USS Callister” where replications of the consciousness of several characters are created by the antagonist inside a virtual simulation. The episode depicts a socially awkward person who uses the DNA of his colleagues to create fully sentient replications of them in the simulated world of a science fiction game where he governs every detail, acting as a dictator, and punishing any participant unwilling to submit. This subsequently leads to a mutiny at the hands of the simulated characters, leading them to look for a way to contact their real-world counterparts in a plea for help. The two episodes display a similar idea of the use of AI but in vastly different settings, raising opposite arguments over a common question: whether it is the possibility of the replication of sentience in artificial intelligence that is truly a threat or the way it is put to use by human beings? In addition, the duality of artificial intelligence being the unintended perpetrator of grief as well as the defenceless victim of human cruelty is also brought to light. Furthermore, the episodes “Rachel, Jack, and Ashley Too” and “Joan is Awful” show examples of generative AI using information derived from human intelligence and experience to create works of art – with varying degrees of autonomy – but certainly managing to replace the creativity of the human as an artist. In the case of “Joan is Awful”, especially, the content generated by AI is tailored to the taste of the people consuming it, based upon their lives and actions, displaying a breach of both privacy and consent of the participant by an AI that is endowed with insurmountable power of controlling information and creating content.

In the final case, we look at artificial intelligence in the scenario often described as “AI apocalypse”, managing to surpass human intelligence or strength and becoming capable of being figures of a dictatorial authority or at the very least powerful weapons that can bypass

human laws and act as perpetrators of great violence. The episode “Hated in the Nation” depicts AI surveillance systems and drones that autonomously carry out assassinations of targets selected through online polls, managing to bypass the programming that limits their function as well as the legal and police force in order to perform acts no human could in their unassisted capacity. The episode shows an individual who manages to access the control of immensely powerful weaponised drones, using them to assassinate popular people who are voted as the most disliked people in the country based on prevailing hashtags on social media. These drones, created for security purposes, are powerful enough to carry out the assigned acts of violence despite the opposition from traditional law enforcement.

The episode “Metalhead” takes this scenario to an extreme as it portrays a posthuman world with few human beings in sight, dominated by self-replicating robots that consist of tools of surveillance and weaponry, with superhuman capabilities of survival and adaptation. It can be inferred from the episode that the setting of the story is the aftermath of a conflict between these weaponised robots and human beings that might have escalated to an apocalyptic scale, leading to a widespread erasure of both parties from what is eventually rendered a largely uninhabited wasteland. The episode follows a character being hunted down by such a robot, attempting to survive against its antagonist’s superior strength, speed, endurance, and skills in warfare. These depictions are the most frightening and outright dystopian in the manner that they showcase AI as an inhuman force that would be capable of taking charge and rendering human beings to the best of their abilities relatively helpless.

What these examples serve to illustrate is that the very existence or nature of artificial intelligence does not necessarily dictate its utility or hazards, but the human choices of the use it is put to, much in the same way as has been with any great technological advancement in history. It is important to note, however, that this may only be the case as long as the long-debated moment of technological “singularity”, a point of irreversible technological explosion with a profound impact on human civilization, which seems essentially like a time when artificial intelligence surpasses the roles and abilities that we currently expect it to achieve and emerges as a far superior entity. It may be surmised that such a point in time may eventually arrive after the process of machine learning makes the cycle of self-improvement so fast that no human intervention can prevent or revert it. Before that inevitably happens, in the present time, as is more realistically exhibited by the examples in *Black Mirror*, the relationship between AI and humans continues to be a matter warranting urgent attention.

The Reality of *Black Mirror*

With the emergence of generative artificial intelligence and its access to the public in recent years, the need for dialogue over the subject has never been more immediate. With the massive and cheap availability of tools allowing everything from text to image, videos, and simulations to be created and manipulated by the use of artificial intelligence in real-time, one cannot ignore the immediacy of this development. This, in relation to the other technological advancements of the last decade and their moral and social implications, continues to bring an increasing amount of scholarly scrutiny to every new development, flooding news outlets and social media with conversations on the same. This is with due

cause, as can be seen in many instances of the science-fiction of *Black Mirror* being manifested in the real world.

John Herrman reports for New York Magazine in “Welcome to the Age of Ai-Powered Dating Apps” how the Match Group which owns brands like Tinder and OkCupid have experimented with optimizing user profiles on their dating apps using artificial intelligence to enhance the possibilities of a successful match (Herrman). He highlights, however, that these apps are merely adapting to the recent usage of ChatGPT for the same purpose, as are the websites and apps of job-hunting platforms, ushering in an era of human interaction moderated and optimized by artificial intelligence. While social media has for long been a space used by human beings to display a skewed or enhanced version of their personalities, lives, and achievements, this serves to demonstrate the beginning of a time where the way human beings are seen by each other and the way they communicate is largely governed and manipulated by artificial intelligence systems.

Minerva and Giubilini in “Is Ai the Future of Mental Healthcare?” investigate the future of the use of artificial intelligence in mental healthcare and point out that it is real-world development in the wake of the public access of LLMs like ChatGPT, as can be seen with dozens of AI chatbot-based mobile apps designed for the purpose. They discuss the ongoing use of artificial intelligence as a diagnostic tool alongside the stigma surrounding it. One may easily imagine the discomfort of a large number of people over such uses of artificial intelligence that intervene with tasks that require innate human qualities and experiences. However, while they highlight the dehumanization of mental healthcare in this process, they also point out how this could serve a purpose in the treatment of issues where human intervention is best avoided. They write “People with autism can find interaction with other humans very difficult, especially with people they do not know. In patients that struggle with human interaction, AI could be a more useful tool than a psychotherapy session with a human doctor” (Minerva and Giubilini). Even as it remains a dangerous choice to assign tasks of such nature to artificial intelligence, it must be noted that any resistance to possible developments that exhibit positive outcomes may be futile. This is appended by the mention of soldiers preferring virtual interactions in the treatment of post-traumatic stress, showing that not only can artificial intelligence already serve to enhance the way people communicate but can also effectively replace human beings in everyday activities that require qualities like empathy that are considered almost irreplaceably and inimitably human characteristics. While it may yet be a subject of scrutiny how empathetic such artificial intelligence systems can effectively be when put to use in a scenario like this, it cannot be denied that their development in the direction of replacing human beings in their most challenging labours seems to be an inevitable eventuality.

However, while many such observations suggest that the depictions of the usage of AI in the episodes “Hang the DJ” and “Rachal, Jack, and Ashley Too” are relevant to the currently ongoing developments, the extremity of the depiction in “Playtest” is yet only a possibility. It is important to note that, as talked about by Luis Prada in “Assassin’s Creed Mirage Haptic Suit Will Immerse Players in Combat”, this possibility may not be as distant as one may

believe after the commercial release of haptic suits that serve to immerse the users of video games and eventually viewers of cinema into the sensory experience (Prada). While the world of virtual reality and immersive gaming and storytelling has still not advanced to the point of offering a direct interface between artificial intelligence and human beings, this still makes for a staggering overlap between the dystopia of *Black Mirror* and the real world of the present time when artificial intelligence is seemingly only in its infancy. It seems an increasingly significant question with every passing day how this development would eventually influence the very idea of what it means to be “human” in the real world when a technology like this is advanced enough, and what the very idea of living a life would appear to be. Pondering at the extensive and prolonged usage of such technology that at once connects people to a virtual world and disconnects them from the real world, one might accurately imagine the possibility of the unhindered use of such artificial intelligence more the cause of a variety of mental disorders than a solution to them.

Notable, therapy is not the only area in artificial intelligence that seems to have already replaced human beings. In terms of the replacement of human beings in societal constructs of occupations by artificial intelligence, there has not been a more appropriate time to look at the technological advances that made the news and their potential implications for civilization. For instance, in a direct parallel to the episode titled “Be Right Back”, Entrepreneur.com among other news outlets reported the story of a Japanese man who married a fictional character based on an artificial intelligence language model and sound library, further embodied in a doll designed to look like the character. He claimed a radical improvement in his mental health in the company of said artificial intelligence robot; however, the individual lost access to his AI spouse when the company that designed it withdrew support, hinting at the impermanence and the inevitable lack of authenticity of these AIs in this role at least at the present moment (Entrepreneur). This is very much a parallel with the aforementioned episode in question since it leads to the present and imposing question of what the development of such artificial intelligence systems means to the definition of a human being with all their sentience, experience, and culture.

However, it can be surmised that the era of the metaverse might change this with the help of a stable virtual environment and decreased distinguishability between the AIs and the human avatars in the simulation. This would inevitably raise questions about the very meaning of sentience and the replicability of the human spirit and experience, suggesting the beginning of what one may easily call an era of post-human entities. Ultimately, it could lead to a closer bond or even potential conflicts between the two entities as depicted in “Be Right Back” and “USS Callister” respectively. One must note in this regard that even as the technology of artificial intelligence continues to develop and advance, there is no universal consensus upon the ethical and moral limitations that are to be imposed upon these tools before unhindered access to them is acquired by the common masses that remain susceptible to a variety of influences from technological sources.

In addition to this concern is the alarming rate at which the use of artificial intelligence in various social and scientific domains as a facilitative tool paves the way for an unfathomably

intelligent system that matches and eventually exceeds humans. As hundreds of generative artificial intelligence tools continue to flood the internet with works of art, music, literature, etc made with little human skill involved, the monopoly of human beings over the creative space itself has come to seem dubious. Stuart Russell in the book *Human Compatible: Artificial Intelligence and the Problem of Control (2020)* suggests that “[...] research on tool AI—those specific, innocuous applications such as game playing, medical diagnosis, and travel planning—often leads to progress on general-purpose techniques that are applicable to a wide range of other problems and move us closer to human-level AI” (Russell 145). While ChatGPT in recent years emerged as a co-author on several research papers and even e-books published and sold on popular platforms, tools like Beatoven.ai and Midjourney make an era of art being dominated by artificial intelligence increasingly plausible. While this resembles the scenario in “Rachel, Jack, and Ashley Too”, the example of the project called The Simulation by the company formerly known as Fable has demonstrated the convenience of creating full-fledged television shows simply by feeding prompts to an AI designed for the purpose and trained on the pre-existing visual design and voice performances from previous episodes (Fink). Demonstrating how this system is capable of creating a story, performances, and even editing episodes easily, the company has announced the imminent release of multiple AI-generated television shows in the near future. One must necessarily wonder what this could imply for the near-future of media and entertainment when artificial intelligence’s ability to think and opine is coupled with its ability to create works of fiction based on these observations. It is noteworthy that the imitation episode of the series *South Park* was created by The Simulation in order to demonstrate that the threat artificial intelligence poses to the creative industry is very realistic and immediate, as argued by the 2023 SAG-AFTRA strikes that defended the creative space of artists, writers, and performers against the convenient and cost-effective AI-generated content (Sanchez).

Last, while the extremity depicted in “Metalhead” is still a seemingly distant dystopian scenario, a precursor to it in the display of similar technology is “Hated in the Nation”. It has in recent years become a popular understanding that companies like Google and Amazon have continually used data pertaining to the devices, internet usage, and locations of their users to enhance their services. Debates regarding user data privacy and the use of technology for surveillance leading up to a dystopia akin to that described by Orwell in the literary classic *Nineteen Eighty-Four (1949)* have not been infrequent. However, the more malevolent possibility of artificial intelligence robots acting as superhuman weapons capable of exceedingly large damage and lacking human empathy is also no longer distant news. James Dawes writing for *Fortune* in “Killer Robots Are the Future of Warfare and the ‘inevitable next Step’ in Russia’s Long, Bloody Invasion of Ukraine” talked about the use of drones and robots in Russia’s recent invasion of Ukraine (Dawes), Peter Layton wrote for *The Conversation* in “US Military Plans to Unleash Thousands of Autonomous War Robots over next Two Years” about the US military’s plan to develop robots for engaging in warfare to neutralize the larger number of the opposing army in a potential war over Taiwan (Layton), and Eric Lipton in “As A.I.-Controlled Killer Drones Become Reality, Nations Debate Limits” for *The New York Times* talks about the Pentagon developing drones capable of using AI technology to autonomously attack targets or to assist fighter pilots in the same

venture. Max Tegmark in *Life 3.0: Being Human in the Age of Artificial Intelligence* (2018) shows optimism regarding artificial intelligence making war more humane: “[...] future AI-powered drones and other autonomous weapon systems (AWS; also known by their opponents as “killer robots”) can hopefully be made more fair and rational than human soldiers: equipped with superhuman sensors and unafraid of getting killed, they might remain cool, calculating and level-headed even in the heat of battle, and be less likely to accidentally kill civilians” (Tegmark 143).

However, it is noteworthy that as recently as in 2020, Edward Santow talked about the inefficiency of artificial intelligence used for facial recognition in law enforcement and hinted at the natural state of authoritative discrimination against inefficiency it may acquire in the event of becoming efficient enough itself (Santow 15). H. Akin Ünver suggests a variation of this thought, positing that ultimately the effect of artificial intelligence on political systems would be the result of the human biases and preferences encoded in them, since the algorithm itself would be essentially neutral (Ünver 16). This presents a two-fold danger of humans creating an authority which may either lack their efficiency or their empathy, if not both. Considering the recency of these developments, it is imperative to understand that intervention of AI in advanced military and the dangers of it being coupled with the sentience of a super-intelligent but inhuman computer system bodes ill for not only the side on the receiving end up ultimately for all human society, should it fail to find ways to limit its creation.

Research Findings

In the course of the analysis of *Black Mirror* with due attention to major literary works on the same genre, this study reveals the manner in which the portrayal of artificial intelligence has developed into the era of television and OTT. With essential glances at the most recent real-world developments in the area of artificial intelligence, this study establishes the ever-narrowing divide between speculative fiction in the most popular media forms in the twenty-first century and the advancements in the technology that can no longer be strictly regarded as a subject of speculative fiction. Therefore, in response to the initial research question, this analysis presents the undeniable fact of the increasing accuracy of science-fiction stories in the visual medium.

While it is indisputable that the pace of the development and improvement of artificial intelligence in the last few years has far exceeded anyone’s expectations, it is important to note that human civilization as a whole still lacks a new social and moral code for AI or the means to impose it effectively. This problem, as represented well in *Black Mirror*, pertains more to the relationship humans share and will eventually develop with their mechanical counterparts in the seemingly inevitable eventuality of their gaining sentience. This, in turn, highlights the state of this relationship at the present time. While human beings have held a range of emotions from fear to fascination with the idea of AI as portrayed in fiction and scholarly debates, one cannot underestimate the need to appreciate the very emotional capacity and AI and to develop pre-emptive strategies to tackle any unfortunate circumstance.

This, of course, comes with a widespread understanding about what AI truly is, what it is and soon will be capable of, and what ways society will use and experience it. While works of fiction like *Black Mirror* continue to contribute to this, a large ground yet remains to be covered. In the due course, this study contributes to highlighting the potential scope of contribution that the popular works of fiction in the visual medium hold to bring the pertinent dialogue on the subject into the cultural milieu.

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