

The Influence of Media on the Perceptions of Artificial Intelligence

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Abstract

This research paper will analyze the mass media's influence on people's perceptions of AI and its limitations. Many of the human daily life functions are made possible by AI technology, but negative claims and perceptions about AI and its implications are still prevalent. The perception that AI is an evil technology that would take all jobs and contribute to the extinction of the human race is still entrenched in society. As the findings suggest, the media has had a significant influence on the development and entrenchment of the cynical views about AI and its weaknesses. Exaggerated and poorly researched claims made in the media have influenced the development of negative perceptions about AI-based systems, processes, and technologies.

Introduction

The advancement and unpredictably rapid permeation of artificial intelligence (AI) over the last decade represents one of the critical landmarks in the history of the human race. The AI-driven technological innovations witnessed in the last 10 years puts this generation light years beyond all those that preceded it, at least in terms of capabilities, mostly brought about by technology. In many ways, industry-wide disruptions created by the development of powerful AI applications are only comparable to the widespread disruptions that occurred at the peak of Industrial Revolution. However, the media's representation of AI technologies, their impact, and their potential limitations has not been favorable. Throughout the mass media, journalists and other media stakeholders have published damning stories about AI. The reports not only associate AI-powered technologies a string of social, political, and economic catastrophes, but also urge the public to resist the temptation to embrace the technology, (Tad, 2018; Martin, 2017). Instead, the media stories call for an intensification of regulations that would halt the development and dissemination of AI-based technologies and applications.

The lay public became anxious and a wave of fear spread across working class households in developing and industrialized countries, (Wood, 2010). The world has come a long way from those times. Some of the anxiety from back then has dissipated while some of the fears have come to materialize, (Wood, 2010). Some questions still remain unanswered while some skeptics have been proven right. That period, however, was more than half a century ago. Today, humanity faces different concerns albeit from the same cradle of technological advancements. As the case with the switch from the Industrial Revolution to the Technological Revolution, mass media outlets are fanning fear by making unfounded claims about AI. Media outlets are running stories, which suggest that AI will not only lead to mass layoffs, but also threaten the long-term

survival of the human race. As the case with the past, there is reason to believe that the undesirable coverage may adversely affect people's attitude towards AI.

Problem Statement

The problem is the many people's perceptions of artificial intelligence come directly from the media and popular culture which often portrays a negative and/or unrealistic portrayal of AI, thus obscuring some of the real-world scientific aspects of how beneficial AI can. Many people use artificially intelligent technology on a daily basis and don't even realize it. These damaging narratives bear a striking resemblance to the unfavorable stories that greeted inventions when the technological revolution replaced the Industrial Revolution. In the period between 1950 and 1980, the replacement of the industrial revolution by the technological revolution was received with mixed reactions, (Shepard, 2012). The initial excitement, wonder, and anticipation was soon replaced by the anxiety, uncertainty, and skepticism that was partly fueled by concerns about the impact of technological advancements on jobs and the industries that thrived on the old way of doing things, (Shepard, 2012; Wood, 2010). From 1950 to 1980, print and broadcast outlets published stories castigating the widespread adoption of new technology, (Wood, 2010).

How realistic are these negative media accounts on AI? Is there any rational tangible basis behind the claims in the media about AI and its limitations? Have these swayed the public's perception of AI and its limitations? The overarching objective of this treatise is to evaluate the influence of the media on the public's perception of AI and its limitations. To attain this aim, the study will document the influence of media narratives on people's views and highlight how specific claims about AI are influencing the public's attitude towards the technology. A preliminary review of literature has revealed that the masses have a negative perception of AI.

That review has also suggested that the media has tended to highlight the apocalyptic consequences of AI rather than many of its positive benefits. However, there is no clarity on the correlation between the media's undesirable narrative and the public's unfavorable views about AI and its limitations. This study will, therefore, draw the reader's attention towards that relationship. It will underline the relationship between the media and the public's perception that AI will lead to the extinction of human beings. Findings elicited from this study will benefit the lay public by revealing the role that the media has played in the development of negative views on AI. The takeaways will also help the public to understand the concept of AI, the role that it plays in their lives, and the positives that will emerge from the technology.

Limitations of the Study

As noted in the introduction, the study will focus primarily on the media's influence on the public's beliefs about AI and its limitations. Whereas this topic is wide, the study will only focus on issues that have a direct relevance to the media's portrayal of AI. It will not analyze the concept of AI, the functions of AI, or the cost of AI. Instead, the study will place an emphasis on issues related to the influence of media narratives and how such an influence plays out in the minds of consumers who are using and interacting with AI. In this regard, the study will rely solely on secondary publications that are relevant to the topic.

Methodology

This is a systematic review. Systematic review is a category of literature review that, through a predetermined eligibility criteria, retrieves and analyzes secondary data in order to address a specific research question. To undertake the systematic review, the researcher commenced with the development of the research questions. As noted in the first paragraph, the research questions are:

1. How have media outlets portrayed AI and its limitations?
2. Have they swayed the lay public's perception of AI-driven technologies and their limitations?

After formulating the research questions, the author conducted an extensive online search to identify the relevant mass media accounts on AI and its limitation. The researcher limited the search to negative mainstream media accounts on AI and its limitations. Further, the researcher limited the search to media reports published after 2005. This search yielded twenty six results from reputable print and broadcast outlets like Forbes, the Economist, Vox, CNBC, and Vanity Fair. After identifying the results, the researcher assessed the quality of the online media accounts and, in the process, eliminated 16 studies. Thereafter, the researcher reviewed the characteristics of the studies and interpreted the findings.

Literature Review

The researcher used the Google search engine to identify negative media stories about AI and its limitation. The search yielded 26 results. An analysis of the quality of the results in relation to the inclusion criteria led to the elimination of 16 publications. This section will review the characteristics of the 10 articles that met the conditions for inclusion in the present study. All the reviewed articles included in the text regard AI as a technology that will eliminate human life. Forbes magazine's Koetsier, (2018) conducted an interview with a Russian cybernetics expert. Although the interview focuses on many issues, its gist is the link between AI-driven technologies and human extinction. The cybernetics experts argue that the uncontrolled progression towards autonomous AIs will lead to catastrophic consequences for human beings as a species. In particular, he points out that AI-driven robots will eliminate human beings immediately after they develop self-awareness, (Koetsier, 2018). Vanity Fair's Dowd (2017)

takes the negative coverage focusing his attention on Elon Musk's prediction that AI will play an important part in human beings' extinction. Other (Tad, 2018; The Economist, 2019; Myers, 2009) reviewed studies associated AI with mankind's destruction. Vox's Matthews (2019) amplifies the pessimistic rhetoric about AI by suggesting that the technology will usher humans into a future that is creepier than the terminator. Nonetheless, CNBC's Connley (2017) evaluates the impact of AI from a different prism, but the tone is still negative. Connley (2017) asserts that AI will lead to massive job losses.

Influence of Media on Public's Perception of AI

Public's Perception of AI

Artificial Intelligence is largely viewed as posing some kind of threat to humanity. The skewed perception of what entails artificial intelligence falsely narrows down its definition in the minds of many to just machines taking over human processes with often exaggerated extremes. This perception arises from the media's misrepresentation of AI and its impact on society. This false perception is a large-scale case of unintentional misinterpretation. A few years back Forbes published an article on the subject and titled it "Will A machine Replace You?", (Myers, 2009). This is not exactly reckless of them, but one would be reasonable to conclude that such a heading can create some level of anxiety that persists no matter how much the content of the article campaigns to quell it. In 2017, CNBC published an online article stating that AI-based robots and bionic humans will contribute to the loss of more than 800 million jobs by 2030, (Connley, 2017). Similar articles get published daily. The World Wide Web has articles in the hundreds of thousands vilifying artificial intelligence. Pieces that elaborate on the value AI adds to human existence, on the other hand, do not get nearly as much coverage or distribution. Therefore, the

prominence of unfavorable press has created a fertile avenue for the development and spread of negative attitudes towards AI.

The media's depiction of the AC/DC battle provides an insight into the link between media portrayal of AI and the public's development of a negative perspective on the technology. More than a century ago, two scientists who were friends and partners before they turned arch rivals fought hard to convince the world that their mode of electric current was the best. In what would be forever known as the AC/DC wars, Nicola Tesla and his former mentor Thomas Edison battled to outshine each other, (Sanbom & Harris, 2013; Turlow, 2011). Some of the methods they employed were crude and could not be tolerated in this day and age. In one display, Thomas Edison and his financier JP Morgan facilitated the execution of a death row inmate using alternating current, (McNichol, 2011). These efforts were to demonstrate just how dangerous AC was. There was massive propaganda backed by powerful individuals with personal vested interests—including John D. Rockefeller—to spread the narrative that AC was too dangerous and unsustainable, (McNichol, 2011). Obviously, the negative press slowed down the progression towards the progression AC, but AC became the dominant electricity format. A century later, a somewhat comparable falsehood is being paraded, albeit with varying levels of intent and fueled by different motives. The victim in this modern era is AI. The perpetrator of the misrepresentation is the media. The media is responsible for the public's perception of Artificial Intelligence and its limitations.

Media has an Influence on Public Perception

It is impossible to divorce media influence from the general perception that most people have on all matters relating to Artificial Intelligence. Media consumption has been increasingly on the rise over the past few decades, (Wilson, 2015). With this much time dedicated to

processing information streaming in from different media platforms, it is hard to deny that the content that is received does not influence a recipient's perception over conveyed subject matter.

It could be considered unfortunate that the medium controlling mass perception about such a fundamental issue is nearly equally as clueless about the matter as the public it serves. Most media broadcasters, producers, and influencers are not adequately learned about AI technology to qualify as fitting messengers. Any misperception by influential media stakeholders could be transmitted and exponentially distort public opinion, sometimes irreparably, (Olzen, 2019). Even in the cases where there is professional consultation, the mechanics of how mass media operates leaves a lot of leeway for misinterpretation of expert information, miscommunication of expert opinion, and/or faulty encoding and translation by the final recipients of the information, (Conti & Memoli, 2016). The limited time allowed for expert input, the non-interactive format of most media channels (at least from the public's position), the compromise on the complexity of addressed issues (in strategic attempts to engage as broad an audience as possible), and the need to limit adversarial confrontation on-air are all factors that compromise the accuracy and reliability of messages conveyed through mass media about, among many other topics, AI technology.

Why the Public Relies on the Media

There are various possible explanations for the public's heavy reliance on the media for information regardless of its veracity. The media, intentionally by design and for the long-term purposes of serving shareholders, presents information in a more palatable format, (Conti & Memoli, 2016). There is an element of sensationalism—often intentional, but sometimes just inherent—associated with all media content. Watching a documentary about the history of Artificial Intelligence is much easier than reading a factual book about it.

Another explanation is that the public has an excessive trust of the media. It is fallacious to think that the media is unbiased and cannot be influenced the same way businessmen can be bribed and politicians can be lobbied, (Burton, 2010). The basis for the public's trust of 'The Fourth Estate' is broad and beyond the scope of this discussion, (Burton, 2010). What needs to be pointed out is that this trust extends to matters beyond those that triggered it in the first place. An average viewer is likely to believe a news anchor's opinion over an actual scientist's take on where AI technology is headed. There is always a subconscious assumption that the media has a comprehensively encompassing idea of every subject even more than experts who specialize in the individual disciplines.

A further illustration is in how most people would rather watch a televised political debate between candidates than read through their manifestos to better understand their proposed policies. It further extends beyond the debate between primary contenders. A majority of the public prefers listening to media analysis and pundits' interpretations of political policies to hearing about the policies directly from those proposing them, (Rayner, Wall, & Stephen, 2004). Now, if the public's general indifference to pursuit for clarity is so deeply entrenched in matters of great significance as selection of holders of public office, it should come as no surprise that the same public gets its information on other issues, such as advancements in Artificial Intelligence technology, almost exclusively from the same media, (Rayner, Wall, & Stephen, 2004). Merge this reality with the propensity with which the media thirsts for eyeballs and an audience. What you get is a public whose overall perception is under the mercy of media manipulation.

Power/Influence of Media

The first notable occasion that demonstrated the power of media to sway popular opinion was probably the televised presidential debate between the then relatively little-known John F. Kennedy and the then incumbent vice president Richard Nixon. Without getting deeper into the details, it's fair to argue that the candidates' portrayal during that debate session--the first of its kind--played a major role in securing the very narrow victory for JFK, (Fulton, Huisman, & Murphet, 2006). That was decades ago. The media's control of public opinion has been growing exponentially since then. Some analysts contend that the media's power to influence goes beyond just ability to sway – it actually determines public opinion. During the presidential campaign period leading to the 2016 general elections, there was widespread speculation that a significant portion of the media openly picked sides and displayed partiality in a manner that was at the time unprecedented, (Singer & Brooking, 2018). For the first time ever, this accusation was extended beyond just print and broadcast media. Google faced accusations that it was leaning towards supporting the democratic candidate Hillary Clinton, (Singer & Brooking, 2018). It is not unusual for various corporate firms to show political favoritism or bias, or even to hold known opinions regarding issues of public concern. FOX News has for a long time been viewed as advancing a conservative agenda, just like MSNBC has been associated with liberalism. This is not new, (Singer & Brooking, 2018). The accusation against google, however, is significantly distinct. It was alleged that google was intentionally manipulating search results with the aim of securing a victory for the democratic candidate, (Singer & Brooking, 2018). This was no longer a case of an entity exercising its right to hold an opinion. What google was being accused of was akin to misreporting. A query on an online search engine is generally expected to provide organic results—not doctored responses, (Singer & Brooking, 2018). Whether or not

these accusations against google were founded are irrelevant to this discussion. What is important to note is the accusation itself. There were concerns that the most dominant search engine could impact the US general elections—and it could do this without producing any original content. Even if google was innocent of these allegations concerning the 2016 general elections, this case acts as a testament to the power it has to manipulate public perceptions....

Artificial Intelligence in TV

There are sneakier ways that the media feeds perceptions of AI technology. Popular television shows such as *Black Mirror*, *Person of Interest*, *Battlestar Galactica*, *Humans*, and *Westworld* have the future of Artificial Intelligence as their main themes. These shows are meant for entertainment purposes, and it is public knowledge that they are works of fiction. However, the impressions they conjure up about AI introduce concrete elements that stick with viewers after the entertainment effect has worn off. One popular FOX primetime show that originally aired in the 90s was particularly threatening and subtly convincing that it's featured content, although admittedly fictional, presented concepts that were plausible, at least in the foreseeable future. The X-Files was a science fiction show that followed two FBI agents as they tried to solve and make sense of criminal cases that presented with paranormal details. What separates The X-Files from most other sci-fi shows is how with meticulous detail it strived to demonstrate a link between the paranormal occurrences and their scientific foundation, often almost arriving at a logical connection, and almost always leaving it up to the interpretation of the viewer. Picking a broadly accepted truth then running wild with imaginations of its hyperbolic extreme is a common cinematic device, but nowhere has it been effectively utilized as in The X-Files. Another show that excellently forms the link between science and fiction, all while taking more risks than The X-Files, is Black Mirror. Black Mirror dives head-first into the most feared and

anticipated aspects of Artificial Intelligence. It does this with much more liberty than its predecessors, partly because it is of a newer technological age (being that it first aired in this decade), and partly because its budget was less limited as well. There has been speculation that Black Mirror has timing to thank for the less aggressive reception it is enjoying. Seeing how late it came about, it can be argued that technological advancements that have been witnessed over the past two decades have made audiences more receptive to the content BM offers, given that the frontiers of technological possibilities have been considerably stretched.

Portrayal of AI in the Media

Before narrowing down into how the media portrays Artificial Intelligence, it is important to discuss the nature of AI technology that is mostly portrayed. Of course, media outlets don't want the audience to tune off or turn away from their releases. This is why they only broadcast and publish items that they deem engaging and stimulating. They are more interested in engaging and entertaining than in educating or informing. It is very rare that you hear of the mundane AI applications utilized in supermarket checkout tills

Most media portrayals of AI trigger audience anxiety. The frequency, intensity, and consistency of this portrayal has had the effect of manufacturing a mental association of AI to an almost apocalyptic threat to humanity. In the minds of a majority of the public, the mere mention of AI triggers a sense of insecurity and apprehension so intense that they choose to disassociate from any engagement with the subject. It is actually hard to find an individual not directly involved in the tech world who isn't slightly unsettled by their perception of AI. This is because media productions that are mass-consumed are notorious for their menacing depiction of all aspects AI.

From blockbuster movies to the small screen, from news features to documentaries, the media has almost always presented AI as a villain. For the purposes of this discussion, the focus is predominantly on broadcast media, print media, and cinematic productions. Because social media's content is primarily user-generated, it is not very relevant in this discussion, except only in as much as influencers can sway public opinion.

There is a more overpowering factor leading to media misrepresentation of Artificial Intelligence to the masses – profit margins. It is worth noting here that virtually all media is business. The primary interests of all media houses are financial. This is the driving force that triggered the establishment of the multinational corporations that hold the household names of the various media outlets. The pursuit of profits is a denominator that transcends political inclinations, personal beliefs, and, in some cases, moral and ethical obligations.

Herein lies the bottom-line upside to mass media's notorious misrepresentation of AI. It has long been a business mantra that Sex Sells. This has not been disputed much. It is also true that negative stories are better leads than positive ones. Politicians and public figures, including celebrities, always get in the news for negative reasons than for positive ones. The fuel driving these two unfortunate realities is also responsible for media's portrayal of AI to the masses. To make this clear, there is a need to reiterate that media houses aim to sell to as many people as is possible. The more viewers tune in the better their bottom line is impacted. As such, they aim to draw in as large an audience as they possibly can. They need their productions to go viral and to be shared by as many people as possible. They hope that on viewing a telecast or print in a release of theirs, members of the audience will draw in more viewership. Social media did not introduce the concept of things going viral – it merely exposed how it happens. Media houses also need their already drawn audience to stick around for more and keep coming back. There is

a rational and apparent connection between these two objectives of mass media and how they structure and deliver their content.

There are few things, if any at all, that the average human being can be more anxious about than the future. One of the most discussed, disputed, controversial, and engaging topics is the future of humanity. Even the age-old debate pitting evolution against creation is aimed at knowing where humanity came from in an attempt to better understand where it is heading. Destiny is arguably more vital to the average human than heritage. Destiny can help to define purpose, potential, and even identity. It is ingrained in the human basic instinct of survival. The topic of what the future holds is at the core of every human's existence and whenever it is raised it triggers increased alertness and, most relevant to this discussion, anxiety.

Now here is where it all ties in. Whenever we are anxious about the future, we are likely to engage others. Stories about the apocalypse, advancements in medicine, sustainability of dependence on fossil fuels, and artificial intelligence get top slots of media airtime. To maximize on this phenomenon, the media needs their material to not only stick in the minds of audiences, but to also reach as many people as possible. Seasoned media executives with decades of experience in the industry are aware of this phenomenon and seek to exploit it to their fullest advantage. This is why the media sensationalizes depictions of AI and tilts these images to raise continual anxiety in the audience.

Part of the reason why it is hard to reverse this perception can be explained by a basic fallacy; once an idea has been planted deep into the human subconscious, it germinates and gets a life of its own. Uprooting or straightening it is exponentially hard. This effect is compounded when the idea is consistently repeated, albeit in various versions, from different sources. Even a basic inquiry into how AI technology works illuminates the logical flow of its capabilities, in

effect demystifying it and riding it of the menacing aura with which it has been associated for decades.

Conclusion

The perceptions of artificial intelligence and its limitations are often influenced by the media. The media has portrayed AI in the negative light. Most of the prominent accounts of AI have highlighted its adverse impact on jobs and the continued existence of the human race. Most of these accounts are inaccurate and calculated to scare or intimidate the public. However, the reality is that AI is a positive force that is now an important part of human life. The technology has improved efficiency levels, enhanced the quality of existing technologies, and created new avenues for resolution of problems that were, at one point, a source of hardship and struggle. However, the media has failed to give prominence to these positive developments. Instead, it has focused on convoluted accounts that have no basis in fact.

References

- Burton, G. (2010). *Media and society: Critical perspectives*. New York, NY: Wiley.
- Connley, C. (2017). *Robots may replace up to 800 million workers by 2030. These skills will keep you employed*. Retrieved from CNBC: <https://www.cnbc.com/2017/11/30/robots-may-replace-up-to-800-million-workers-by-2030.html>
- Conti, N., & Memoli, V. (2016). *Citizens, Europe, and the media: Have new media made citizens more Eurosceptical*. New York, NY: Springer.
- Dowd, M. (2017). *Elon Musk's billion-dollar crusade to stop the A.I. apocalypse*. Retrieved from Vanity Fair: <https://www.vanityfair.com/news/2017/03/elon-musk-billion-dollar-crusade-to-stop-ai-space-x>
- Fulton, H., Huisman, R., & Murphet, J. (2006). *Narrative and media*. Cambridge, MA: Cambridge University Press.
- Koetsier, J. (2018). *Top Russian cybernetics experts on AI, robot morals, human extinction... and self-driving cars*. Retrieved from Forbes: <https://www.forbes.com/sites/johnkoetsier/2018/05/04/top-russian-cybernetics-experts-on-ai-robot-morals-human-extinction-and-self-driving-cars/#32735e987dc2>
- Martin, S. (2017). *Humanity's days are numbered and AI will cause mass extinction, warns Stephen Hawking*. Retrieved from Express: <https://www.express.co.uk/news/science/875084/Stephen-Hawking-AI-destroy-humanity-end-of-the-world-artificial-intelligence>
- Matthews, D. (2019). *AI disaster won't look like the terminator: It will be creepier*. Retrieved from Vox: <https://www.vox.com/future-perfect/2019/3/26/18281297/ai-artificial-intelligence-safety-disaster-scenarios>

McNichol, T. (2011). *AC/DC: The savage tale of the first standards war*. New York, NY: Wiley.

Myers, C. (2009). *Will a machine replace you?* Retrieved from Forbes:

<https://www.forbes.com/2009/06/18/technology-obsolete-jobs-opinions-contributors-artificial-intelligence-09-myers.html#24813d2f56a9>

Olzen, O. (2019). *Handbook of research on consumption, media, and popular culture in the global age*. New York, NY: IGI Global.

Rayner, P., Wall, P., & Stephen, K. (2004). *Media studies: The essential resource*. London: Psychology Press.

Sanbom, F., & Harris, R. (2013). *A cognitive psychology of mass communication*. London: Routledge.

Shepard, J. (2012). *Cengage advantage books: Sociology*. New York, NY: CengageBrain.

Singer, P., & Brooking, E. (2018). *LikeWar: The weaponization of social media*. New York, NY: Houghton Mifflin.

Tad, F. (2018). *How frightened should we be of AI*. Retrieved from The New Yorker:

<https://www.newyorker.com/magazine/2018/05/14/how-frightened-should-we-be-of-ai>

The Economist. (2019). *Will humans wipe out humanity?* Retrieved from The Economist.

<https://www.economist.com/open-future/2019/01/04/will-humans-wipe-out-humanity>.

Turlow, J. (2011). *Media today: An introduction to mass communication*. London: Taylor & Francis.

Wilson, T. (2015). *Mass media consumption in Malaysia: A hermeneutics of human behavior*. London: Routledge.

Wood, J. (2010). *Communication mosaics: An introduction to the field of communication*. New York, NY: CengageBrain.