



Forum: Commission on Science and Technology

Question of: Discussing the destabilization of democracies due to virtual reality and artificial intelligence

Student Officer: Max Ove Fehlinger

Position: Main Chair

Email: commissiononscienceandtechfordev@gym-meiendorf.de

I. Description of the Issue

Virtual Reality and especially Artificial Intelligence pose a direct threat to democracies around the world. Voting in elections is one of the most important aspects of democracy. Today's social media makes heavy use of artificial intelligence to suggest content to users so that they spend as much time as possible on their platform and looking at advertisements. What makes people spend the most time on social media platforms are things they already like. The algorithms will suggest similar content, nudging the users into a rabbit hole. This might be harmless for some users, but others are guided towards political or unscientific propaganda, abusive content, and conspiracy theories – further and further radicalizing certain persons (Wu). Virtual Reality could even further influence our decision-making, since not everybody can see the difference between virtual reality and real life, which makes nudging and advertisements in the Metaverse more effective than on, for example, billboards.

Both AI and VR are industries, which need heavy investments to compete in the upper spectrum. For example, LLMs, like ChatGPT, could not run on everybody's laptop, as they are too resource intensive. The development of VR headsets also requires a lot of resources to make the headset approachable by companies and individuals. This makes it hard for new contestants to enter, as such funds are not easily available. Only having access to the new AI and VR technologies when having money makes these new technologies very inaccessible for



Less Economically Developed Countries (LEDCs) and the people in these countries. The divide between rich and poor will further grow due to this.

II. Definition of Key Terms

Artificial Intelligence:

Artificial Intelligence is a collection of different technologies. In its most common form, artificial intelligence, AI for short, is associated with the ability of a computer to perform tasks that are commonly done by intelligent beings (s.v. Britannica Library). AI is often combined with Machine Learning (ML) or Deep Learning (DL) (Hosh). The model in the context of ML is a black box. It is not programmed to do a specific task, but rather trained on data. There are two ways a model can be trained: Supervised Learning where each data point/training example that the model is being trained on, will contain the desired output behavior the model should produce; and Unsupervised Learning where the model should find patterns in the training data given. It will then adjust internal values so that the model can predict as to which result is most likely for the given input data (Zwass).

The Turing Test:

Alan M. Turing was a British mathematician and logician who was one of the earliest “inventors” of artificial intelligence. In the 1950s, he proposed a test to determine if artificial intelligence could duplicate human intelligence in every way. The so-called Turing Test is conducted by a computer and a human hidden from a random person. The computer and the human are asked questions by the observer and if the observer is not able to tell the difference between the machine’s answer and the human’s answer, the artificial intelligence has passed the Turing Test (s.v. Britannica Library).



ChatGPT and Large-Language-Models

OpenAI Inc. is a non-profit and governs OpenAI LP, a capped-profit company. They are the sole developers of the Large-Language-Model (LLM) Generative Pre-Trained Transformer (GPT). They also provide a web and program interface to the public in the form of ChatGPT. LLMs are trained on a large amount of already existing text and learn how words tend to appear in context with other words. They then use their training data to predict the next most likely word that might appear in response to the user's request, and each subsequent word after that. This is similar to auto-complete capabilities on search engines, smartphones, and email programs (Markowski). Because LLMs only predict the next word, they often write plausible-sounding but incorrect and nonsensical answers. The answers might only be a rephrase of the question asked, an answer the user expects the model to give, or what an answer might look like, but not is (OpenAI).

Facial Recognition

Facial Recognition is based on Machine Learning models and tries to identify patterns in a person's face that make them uniquely identifiable.

I.b. Virtual Reality

Virtual Reality (VR) is the usage of computers to emulate/create a virtual environment of the world surrounding us with three-dimensional or otherwise sensory techniques. In its current form, VR is most often associated with head-mounted displays. These displays track the user's movement with motion sensors and alter the displayed image based on these inputs. These head-mounted displays can be extended by feedback-giving gloves to stimulate the nerves in the user's hand and give the impression of "feeling something," or with automated perfume sprayers to emulate smells from the content (Lowood).



III. Major Countries and Organizations Involved

- OpenAI: OpenAI is one of the leading companies producing different AI models, such as, but not limited to, the LLM GPT or the image generation model DALL-E.
- Microsoft Corporation: Microsoft has signed an exclusive computing agreement with OpenAI. OpenAI will therefore only use Microsoft's Azure cloud computing infrastructure, as well as prefer Microsoft for commercializing new artificial intelligence products (Center).
- Alphabet Inc. (Google): Google is also developing its own LLM and other AI models, such as but not limited to the LLM PaLM (Google AI PaLM 2) or the image generation model imagen (Saharia, Chan, et al.). These models are in direct competition with OpenAI's AI models. Google also provided access to its models for developers, enabling more apps to be built with artificial intelligence, more easily.
- Meta Platforms Inc. (Facebook): In 2014, Facebook bought Oculus VR Inc. for \$2 billion (Team), the leader in immersive virtual reality. There are other players in this market, but Meta Platforms currently make the best head-mounted displays. Meta is also currently working on their so-called Metaverse, an immersive 2D and 3D virtual reality experience that aims to connect people who aren't physically together (Inc.). Unlike the internet, Meta Platforms hasn't announced any way to decentralize the Metaverse.
- The United States of America is a country where most of the companies developing artificial intelligence and virtual reality have their headquarters and follow their law.
- The People's Republic of China is a leader in facial recognition. They display their cameras publicly and use the data for law enforcement purposes. The government also established new guidelines on how to handle facial recognition data acquired by consumers to protect their privacy (Dou).



IV. Background Information

As mentioned above, advertisements in VR are a lot more effective than traditional advertisements. Whoever controls the commercials the user sees in the Metaverse, can also shape the user's opinion about specific topics, which could lead to a greater divide in society due to more radicalized people in a filter bubble. The shaping of opinions in social media has already been used to attack one of the fundamental pillars of democracy: Voting. One particularly noteworthy example is the United States Presidential Election of 2016 and the Cambridge Analytica Scandal.

Artificial Intelligence is probably even more dangerous to democracies than Virtual Reality, as the training data always contains biases. Examples of this include an early AI chatbot nick-named "Tay" which was built in 2016 by Microsoft. Tay was continuously trained on conversations it had with other people on Twitter. The goal set by Microsoft was to respond to its followers in an entertaining way that reflects its audience. The more it spoke with users, the more it learned to personalize its conversations. Within hours, Tay was repeating hate speech and promoting neo-Nazi views (Hogan 40). Furthermore, there is a lack of diversity among the developers who create these systems. Most AI developers are male, fairly wealthy, and educated (40), which already leads to a biased selection of training data. Another example is "COMPAS AI" created by the United States of America Department of Justice to assess defendants based on their history about how likely they are to commit another crime in the next two years. This AI had an error rate of 80% and falsely flagged defendants of colour twice as often as white defendants (41).

One of the fundamental rights in the United Nations Charter of Human Rights is that each individual should have, including but not limited to, the right to freedom of opinion and expression, as well as free and mandatory & basic education. Further, developed artificial intelligence could go against this right as education is not required anymore due to the AI answering all the questions. Another fundamental human right is the right to a fair trial and the principle of being innocent until proven guilty. Having a false prediction of an AI model will violate this principle, so court trials must only be influenced in such a way that will not violate these fundamental rights.



V. Timeline of events

- 1950: Alan Turing creates the “Turing Test”
- 1955: The Term “Artificial Intelligence” is established
- 1959: The Term “Machine Learning” is established
- 1986: The first driverless car drives up to 55 mph on empty streets
- 1997: “Deep Blue” becomes the first computer chess-playing program to beat a reigning world chess champion
- 2011: IBM “Watson” beats two former champions of the quiz show Jeopardy!
- 06 Jul. 2011: Oculus VR is founded
- 25 Mar. 2014: Facebook acquires Oculus VR (a Facebook Account is now required to use the head-mounted displays, which makes many users unhappy)
- 10 Dec. 2015: OpenAI is founded
- 26 Mar. 2016: Microsoft releases “Tay” and shuts it down 16 hours later due to neo-Nazi views.
- 2016: Google’s “AlphaGo” beats the world champion in Go
- 30 Nov. 2022: OpenAI releases ChatGPT to the public
- 29 Mar. 2023: More than 1,000 other tech leaders, researchers, and others signed an open letter to hold AI development so that regulation can be established
- 15 May 2023: Google releases “Bard” – a direct competitor with OpenAI’s ChatGPT

VI. Previous attempts to solve the issue

As artificial intelligence and virtual reality have only recently become available and usable to and by the masses, it has not yet posed a significant danger to democracies. As discussed early, this is about to change but also leads to very few attempts to solve the issue. The most notable attempt to solve the issue was an open letter signed by over 1,000 tech leaders, researchers and others addressed to the governments of the world. These leaders advise halting any development in artificial intelligence that succeeds in the capabilities of OpenAI’s GPT-4 model. This would allow lawmakers more time to establish regulation of this new technology. However, this letter was critiqued by many other tech leaders as not implementable, as “bad actors” would continue to develop their artificial intelligence models (Metz and Schmidt).



The European Union also started to establish a framework for the regulation of artificial intelligence in April 2021 to address risks and set clear requirements for AI, as well as specify obligations of AI providers and propose further intergovernmental structure and enforcement (Commission). As legislation in the European Union usually takes a longer time to develop and create laws in the member nations.

VII. Possible solutions

Possible solutions for this problem include but are not limited to regulating companies that create and/or provide Artificial Intelligence models; open up access to data models and training data to the public; and improving international development and access through cooperation.

VIII. How to prepare as a Delegate

Please prepare the best you can for our general debates. This includes writing either a position paper and/or a draft resolution on this topic. In total, you should have one draft resolution and two to three position papers. If you don't know how to write any of these, please read through the delegate's booklet or contact me via email (maxfehlinger@gym-meiendorf.de). In your research reports/draft resolution, Wikipedia can be a useful source, however, please use another source to cross-check what it tells you, like the UN website or other trustworthy sources, your government websites, or trustworthy newspapers (no, FOX NEWS and BILD are NOT trustworthy! only use them for enquiring about the opinion of certain political groups).

I would advise you to first get a general knowledge of your country. That includes reading the Wikipedia and CIA factbook pages for your country, NGO or IGO. After that, read up on the topic that is being discussed in general so that you know what you are talking about. This could also include watching a documentary or reading/skimming a book. In the end, do some research into what your country (and if time, what your allied/opposing nations) have already done in this context.



IX. Relevant UN Treaties and material

Azoulay, Audrey. “Towards an Ethics of Artificial Intelligence”, Dec. 2018, www.un.org/en/chronicle/article/towards-ethics-artificial-intelligence. Accessed 27 Nov. 2022.

Impact, United Nations Academic. “UN75: Social Contract 2020 - Toward Safety, Security, & Sustainability for AI World”, Dec. 2020, www.un.org/en/academic-impact/un75-social-contract-2020-toward-safety-security-sustainability-ai-world-0. Accessed 27 Nov. 2022.

Umar, Amjad. “Metaverse for UN SDGs – An Exploratory Study”. May 2022, Science-Policy Brief for the Multistakeholder Forum on Science, Technology and Innovation for the SDGs. sdgs.un.org/sites/default/files/2022-05/2.1.4-27-Umar-Metaverse4SDG.pdf.

X. Useful Links

- If you have, check the resources your public library provides. They often give you a lot of paid services for free, including some of the following. Otherwise, some of the following sides will offer some/all free content.
- Kanopy (<https://kanopy.com/>): A website that offers a lot of documentaries for free/with a library or school access
- Google Scholar (<https://scholar.google.com/>): Google’s Search Engine, but focused on academic articles
- JSTOR (<https://jstor.org/>): A website on which many academic articles about topics are published (might require school/library access)
- CIA Factbook (<https://www.cia.gov/the-world-factbook/>): Access general information about your country. I strongly advise you to read up here on your country.
- Know how to efficiently use Google: Example article with 20 useful tips: <https://www.lifehack.org/articles/technology/20-tips-use-google-search-efficiently.html>
- The official UN website (<https://un.org/>): I sometimes find, the search on this website does not work as well as I wish. You could use Google and add “site:un.org” to your query, to use Google to search the UN website (see the other tips in the article above).



- The Internet Archive (<https://web.archive.org/>): When you want to read an article from a newspaper (such as the New York Times), but it is paywalled, maybe try the

Internet Archive with the article's URL. Sometimes the article is not paywalled there.

XI. Epilogue

To ensure comprehensive coverage of the forum's topics, each delegate is required to write at least **one draft resolution and a minimum of two, preferably three, position papers**.

These documents are crucial for meaningful discussions and effective problem-solving.

Please submit all draft resolutions and position papers by the **deadline of 08/09/23**. Late submissions will not be eligible for correction or consideration in decision-making processes.

The **final deadline for all documents is 01/10/23**, after which they will not be considered for awards.

Speaking of awards, we will be recognizing the **best and most distinguished delegate**, as well as the **best first-timer** in the committee. These awards aim to acknowledge outstanding leadership and diplomatic skills. Strive for excellence and demonstrate your abilities in your role.

I am excited to read your position papers and witness your research and preparation. If you have any questions or if there are any uncertainties feel free to reach out to me. I wish you success in your preparations for the conference and am really excited to get to know all of you!

Kind regards,

Max Fehlinger



Sources:

- Assembly, United Nations General. “Universal Declaration of Human Rights”, Dec. 1948, www.un.org/sites/un2.un.org/files/2021/03/udhr.pdf. Accessed 24 May 2023.
- Center, Microsoft News. “OpenAI forms an exclusive computing partnership with Microsoft to build new Azure AI supercomputing technologies”. 22 July 2019. news.microsoft.com/2019/07/22/openai-forms-exclusive-computing-partnership-with-microsoft-to-build-new-azure-ai-supercomputing-technologies. Accessed 24 May 2023.
- Commission, European. “Regulatory framework proposal on artificial intelligence”, European Commission, Apr. 2021, digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai. Accessed 25 May 2023.
- Dou, Eva. “China built the world’s largest facial recognition system. Now, it’s getting camera-shy.” The Washington Post, July 2021. www.washingtonpost.com/world/facial-recognition-china-tech-data/2021/07/30/404c2e96-f049-11eb-81b2-9b7061a582d8_story.html. Accessed 24 May 2023.
- “Google AI PaLM 2”, Google, 2023, ai.google/discover/palm2. Accessed 29 May 2023. Hogan, Christa C. How Artificial Intelligence Will Impact Society. ReferencePoint P, 2018. Hosh, William L. “machine learning”, Encyclopedia Britannica, 2023, www.britannica.com/technology/machine-learning. Accessed 23 May 2023.
- Inc., Meta Platforms. “What is the Metaverse?”, Meta Platforms, 2022, about.meta.com/what-is-the-metaverse. Accessed 24 May 2023.
- Lowood, Henry E. "Virtual Reality", Encyclopedia Britannica, 9 May 2023, www.britannica.com/technology/virtual-reality. Accessed 24 May 2023.
- Markowski, Yaniv. “How ChatGPT and Our Language Models Are Developed”, OpenAI, May 2023, help.openai.com/en/articles/7842364-how-chatgpt-and-our-language-models-are-developed. Accessed 24 May 2023.



- Metz, Cade, and Gregory Schmidt. “Elon Musk and Others Call for Pause on A.I., Citing ‘Profound Risks to Society’”. The New York Times, Mar. 2023.
www.nytimes.com/2023/03/29/technology/ai-artificial-intelligence-musk-risks.html. Accessed 24 May 2023.
- OpenAI. “Introducing ChatGPT”, OpenAI, 30 Nov. 2022, openai.com/blog/chatgpt. Accessed 24 May 2023.
- Press, Gil. “114 Milestones In The History Of Artificial Intelligence (AI)”, Forbes Media LLC, 19 May 2021,
www.forbes.com/sites/gilpress/2021/05/19/114-milestones-in-the-history-of-artificial-intelligence-ai/?sh=3432ac9274bf. Accessed 24 May 2023.
- S.v. Britannica Library. “Artificial Intelligence (AI)”, Encyclopædia Britannica, Dec. 2022, bilib.buecherhallen.de/levels/student/article/artificial-intelligence-AI/272968. Accessed 27 Nov. 2022.
- Saharia, Chitwan, William Chan, et al. “Imagen: Text-to-Image Diffusion Models”, Google, 2023, imagen.research.google.
- Team, Meta Newsroom. “Facebook to Acquire Oculus”, Meta Platforms Menlo Park, CA, 25 Mar. 2014. Accessed 29 May 2023.
- Wu, Katherine J. “Radical ideas spread through social media. Are the algorithms to blame?” 28 Mar. 2019.
www.pbs.org/wgbh/nova/article/radical-ideas-social-media-algorithms. Accessed 24 May 2023.
- Zwass, Vladimir. “neural network”, Encyclopedia Britannica, 2023,
www.britannica.com/technology/neural-network. Accessed 23 May 2023.