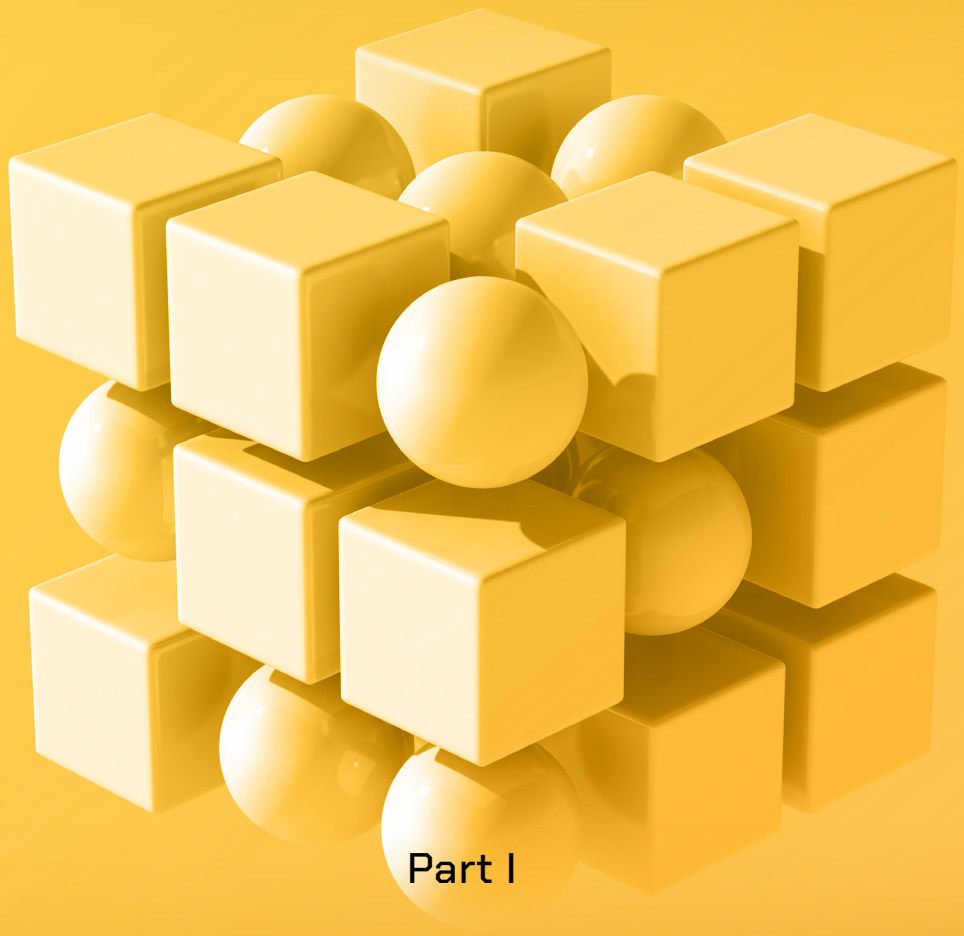
upgrade
democracy

Visions: Democracy and Technology



Part I

Generative Artificial Intelligence and Political Will-Formation

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Television, radio, and daily newspapers were the dominant media formats for information and opinion formation in the past. With the advent of the internet, this offering has expanded immensely and become more intertwined. We are now facing another change, as generative artificial intelligence enables a synthetic and highly personalised form of creating and conveying information and communication. What do these changes in the digital public sphere mean for societal discourse?

What is it about?

Generative artificial intelligence is on everyone‘s lips. Image and text generators such as ChatGPT and Midjourney, in particular, have contributed to making generative artificial intelligence accessible to a broad public. In short, generative artificial intelligence refers to applications that, based on large language models, are capable of producing different types of content: creating illustrations, generating photos, writing texts, answering comprehension questions in natural language, or writing computer code. These current applications represent a significant leap in quality compared to language assistants or traditional chatbots.

Technically, the progress in the field of generative artificial intelligence can be attributed mainly to two developments, which, in turn, build on general breakthroughs in machine learning: First, large language models, a particular type of neural network trained through the analysis of vast amounts of text, whose core function is to calculate the probabilities of subsequent word sequences. Second, the quality of these language models has been improved by “transformer“ models, which allow the neural networks to better consider longer contexts and connections, which is crucial for tasks such as language translation or, more generally, the transfer between different media forms (e. g., text to image).

What are the potentials and risks?

Crucial to understanding how generative artificial intelligence will impact democracy and democratic processes are the applications that emerge from generative AI and how we use them in our daily lives.

Generative AI will not be confined to a single application, such as a chatbot. It fundamentally changes how people interact with (digital) machines. The combination and transformation of information are essentially limitless: from assisting tasks like finding, structuring, and summarising content, writing texts, to creating images or videos. Transfer-related tasks like comparing or synthesising different bodies of knowledge are also conceivable. Moreover, the technology can be used in contexts where decisions are prepared or made.

This has implications for the processes of political opinion and will-formation. Four points are particularly important for democratic politics: misinformation and bias, disinformation, gatekeeping, and the interaction between citizens and elected representatives.

The output is only as good as the input

Generative AI combines various sources to produce the requested „answers“ by deriving references from a vast, incomprehensible amount of data. It can generate structured responses, convincing images, realistic voice tones, etc. However, it optimises for the persuasiveness of the answers rather than their accuracy, which can lead to incorrect information being presented with great certainty. This ties into the issue of bias, which refers to systematic over- or underestimations. Depending on the data used to train the AI, the risk of reproducing these distortions varies. This effect can be further amplified if synthetic media themselves become the basis for future training data. Without conscious countermeasures, there is a risk that distortions and stereotypes will be perpetuated and reinforced by generative AI.

Thus, generative AI – without this being the developers‘ intention – can significantly increase the amount of false or inaccurate, yet convincing, information. Given the wide reach of these tools, the potential harm caused as an unintended side effect is enormous. The basis of societal discourse becomes less reliable, and the likelihood of detecting and correcting errors decreases. This is particularly true if generative AI is used to personalise information environments, as with personal assistants, reducing the opportunities for dissent and exchange with others.

AI as a boost for disinformation campaigns

In addition to these unintended side effects, there is another, potentially more serious concern: generative AI could lead to even more disinformation, meaning the production of false information with the intent to manipulate and deceive. This could profoundly disrupt the balance of public communication and undermine the success of regulating public communication. Manipulation becomes significantly easier, less resource-intensive, and available to more actors. When it becomes possible to artificially generate voices or videos, it will be increasingly difficult to refute disinformation. This increases the chances for small, strategically acting groups to infiltrate the democratic public sphere and damage trust in democratic or journalistic actors.

Challenges for the Fourth Estate

Another challenge posed by generative AI is indirect: the widespread use of generative AI could further intensify the power shift from journalistic gatekeepers to platforms, already strong due to digital transformation. Similar to how search engines and social networks have previously changed the way we find and verify information, generative AI alters these processes as well. Journalistic structures could be rendered seemingly superfluous, and the ability to assign responsibility might decrease. This is not only the case when journalists are fully replaced, and news is entirely written by AI. Even when human and machine elements are combined in the creation and processing of information, it can become increasingly difficult to determine who is responsible for the statements afterward. At the same time, a race can emerge between applications capable of detecting artificially generated or altered information and the possibilities of creating such information ever more perfectly. Critical journalism, which checks facts and sources, questions statements, and ideally possesses a strong professional ethos, could come under even greater pressure.

Moreover, the AIs used are pre-adjusted through various settings or specified training (e. g., to prevent the AI from justifying suicide, providing bomb-making instructions, or producing defamations). Generative AI relies on a multitude of active and continuously made moderation decisions. It is based on past data and their interpretation. The responsibility for this interpretation lies with the producers of the technology, which are expected to be only a few, predominantly transnational corporations, unless datasets and training models are made publicly accessible. This places private companies, which develop and control the majority of digital technologies, in an even more dominant and active gatekeeper role than that held by editors and individual journalists.

Simulated exchange creates frustration

Generative AI also affects the interactions between citizens and elected representatives. The possibilities for direct communication with representatives have been increasing for many years – whether via email or through various social media channels. With this digital media transformation, citizens‘ expectations of how quickly politicians should respond to

questions, needs, or events have also increased significantly. On the one hand, generative AI poses the risk of overloading the already limited capacities of the political system if individuals or organised interests use the reduced effort required to generate communication to capture exchange and participation formats. On the other hand, there is a danger that the use of generative AI in political communication will lead to a simulated exchange, further exacerbating already existing tendencies of alienation.

In conclusion

All of this raises concerns that the conditions for inclusive and rational democratic exchange could deteriorate in the future – if the spread of this technology proceeds without political regulation. This would not be mitigated by the fact that generative AI simultaneously offers numerous opportunities for participation and can often be empowering for individuals, for example, in educational matters or by reducing discrimination. The problems of generative AI are reminiscent of the discourse around social media. In this regard, we have also seen that misinformation and disinformation have increased, control mechanisms have eroded, and emotional and affective communication has intensified.

Further Reading

- Albrecht, Steffen 2023: ChatGPT and other Computational Models for Language Processing—Fundamentals, Application Potentials, and Possible Impacts. // *A German-language report that clearly explains how language models work and then breaks down application fields and challenges.*

- Kapoor, Sayash / Narayanan, Arvind 2023: How to Prepare for the Deluge of Generative AI on Social Media // *A report that warns against overestimating the negative consequences of generative AI, particularly regarding disinformation, while also presenting potentially positive democratic uses.*

- Jungherr, Andreas 2023: Artificial Intelligence and Democracy: A Conceptual Framework, in: Social Media + Society 9: 3 // *An easily-readable overview of the research on the changes in digital public spheres with a focus on generative artificial intelligence.*

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