



Dr. Klaus Schoemann

**AI and Social Science:
Potentials versus
Limitations**

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99. [Put People First](#)

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AI data Input

If you ever wondered where the information from AI and AI chatbots comes from, you will not be surprised that this webpage schoemann.org is regularly solicited for such purposes. The [number of crawlers](#), that do so, is quite large. The ability to trace what exactly they are harvesting on your website, is quite a tricky issue. At least a basic awareness of how the internet has been transformed in the last few years becomes evident through the comparison of unique visits, many through search engines like Google search or others, with the amount of contacts by AI-associated crawlers (see slide from own webpage below).

During the last month up to 2026-4-27 there were about 75.000 contacts, compared to 93.000 during the previous month.

At first sight, AI chatbots have largely outnumbered the “personal visits” of my webpage (see [evaluate web analytics](#)). On the other hand, I have no information of how many visits are, (at least potentially) re-directed hints from AI chatbots to my content.

In terms of “traffic” for a webpage, the information of how the AI-driven or AI-assisted search operates with [other persons' contributions](#) will be **the challenge of the coming years**. If AI chatbots had to pay 10 cents per visit, I would have a comfortable pay every month from this content use. The [issue of AI](#) paying for access to reliable and high quality content has to be dealt with sooner rather than later. You may prompt a chatbot on this issue.

29.03.26 - 27.04.26

Letzte 30 Tage

Vergleichszeitraum:
28.02.26 - 28.03.26

SUCHMASCHINEN-ROBOTS	AUFRUFE	ANTEIL	AUFRUFE	ANTEIL	VERÄNDERUNG
Barkrowler/0.9	13.203	17,67%	13.658	14,73%	-3,30% ↘
Unbekannt	12.910	17,28%	13.623	14,69%	-5,20% ↘
MJ12bot/v1.4.8	-	-	9.858	10,63%	- →
GPTBot/1.3	9.391	12,57%	6.127	6,61%	+53,30% ↗
Amazonbot/0.1	9.015	12,07%	7.967	8,59%	+13,20% ↗
bingbot/2.0	8.043	10,76%	9.035	9,74%	-11,00% ↘
ClaudeBot/1.0	6.795	9,09%	8.640	9,32%	-21,40% ↘
AhrefsBot/7.0	5.130	6,87%	12.392	13,37%	-58,60% ↘
PetalBot mobile	4.189	5,61%	4.385	4,73%	-4,50% ↘
Googlebot Desktop	-	-	3.500	3,78%	- →
Googlebot-Mobile	2.381	3,19%	3.526	3,80%	-32,50% ↘
meta-externalagent/1.1	1.954	2,62%	-	-	- →
fake Bytespider	1.710	2,29%	-	-	- →
Gesamt	74.721	100,00%	92.711	100,00%	

Autonomous Robot

We have been used to computers beating the average [chess player](#) and even the best players. In [2026-4 the journal "Nature"](#) published the documentation of an autonomous robot (Ace) winning the occasional game against top-level Japanese table tennis players. [Peter Dürr et al. \(2026\)](#) described the robotics challenge as constructing a robot that can match the human capability and reaction time of "fast, precise and adversarial interactions near obstacles". The high speed perception of movement is coupled with event-based vision and builds on AI-algorithms like [reinforcement learning](#). The step ahead is remarkable.

About 50 years ago, as coach in table tennis we used a machine or robot throwing balls towards us which moved from left to right in timed routine, for example. These [simple robots](#) we used to train humans. Now the robot is reactive and even interactive, learning from strategies and tactical moves. Technology can outperform us in most singular tasks in 2026. The [combination of several of these skills](#) is still quite unique to humans, but the clock is ticking for human singularity in technical matters. What was considered a "false good idea" in the [Paris exhibition "Flops"](#) at the Musée Arts et Metiers (see image below), might be an interesting response to challenge the new generation of [autonomous robots](#).



Individualism and beyond

For many [social and political scientists](#) it is interesting to look into the origins of our present day [individualism](#). In a permanent drive to learn more about ourselves, millions of persons on social media try to visualize primarily themselves in different roles and life situations. [Saint Augustine](#) was the first philosopher who exposed his own personality and past choices of pleasures on earth in a journal like fashion named “Confessions”. Isn’t this what every person is somehow doing on facebook, tiktok or instagram? Thousands of entries deal with persons succumbing to earthly pleasures. [Saint Augustine writes](#) about his own very personal experiences and this invention of “[the individual path](#)” to philosophical, spiritual, religious ideas and convictions makes him a milestone in the history of ideas.

Maybe the original version of the text is further advanced than the [Christian AI chatbot](#) that has recently been released, because Saint Augustine proposes in the [last paragraph of the Confessions](#) 3 questions and finally 2 sentences to close his journey into his philosophical and religious mind.

(Image: Saint Augustin & Saint Monique, by Jean Boedts on [Confessions Book 9, Ch. 10](#) on his mother dying, Church Saint Augustin, Brussels Altitude 100)



Writing to yourself

Over more than 2000 years, humans have written in various forms about and to themselves. The “[Meditations](#)” by Marcus Aurelius are one of the earliest and finest example of this tradition. Originally, the intention was to write something we call “journaling” today. Out of a motivation to understand yourself, others, your relationship with others and society’s evolution, Marc Aurel drafted in Ancient Greek (a kind of elite or secret code for his Latin-speaking contemporaries) originally with no intention to address larger audiences. The French translations and publications in 2026 still use as title for the Meditations “[Pensées pour moi-même](#)” (). The kind of “inner dialogue”, or dialogue with yourself as a literary form, has become a [philosophical tradition](#).

Roger-Pol Droit (2008) ascribes a similar literary style in his introduction to the “[Confessions](#)” by Saint Augustine in a recent French edition. In moving from a culture of oral traditions to a reading and writing tradition in Europe, the style of reflections about oneself and others shifts more and more to the printed formats. Originally reserved to some happy few, modern techniques of contemporaneous recording of sound and video enlarge the possibilities of input through transcriptions, editing, storage as well as [analysis of own input](#).

The possibilities for a democratization of [reflections of our own experiences](#) have increased, and yet, [AI might jump in very quickly](#) to some already pre-established truths about ourselves in analyzing this data, which might be hard to fend off.



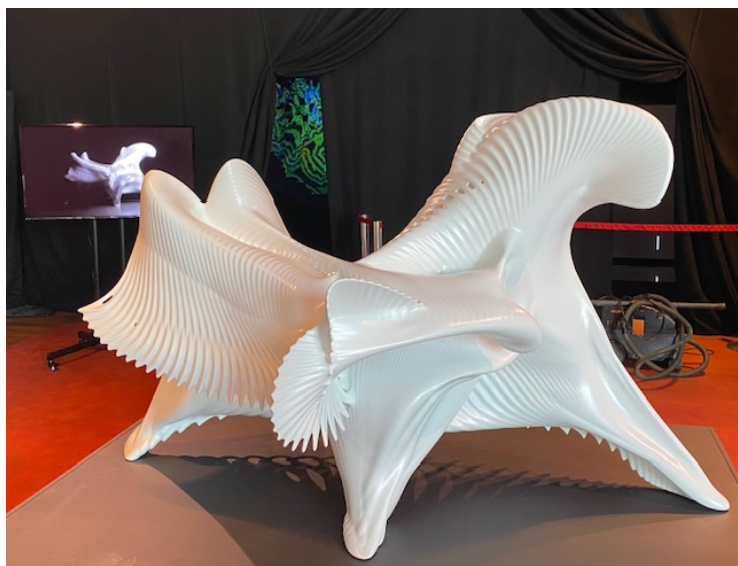
Agentic AI Gardening

The use of AI is probably most popular for professional purposes as efficiency and economic productivity are major concerns in these fields of applications. Another whole lot of applications is rapidly developing as well, which is Agentic AI in hobbies like gardening. The use of IT in gardening has previously been reserved to landscape designers and maybe urban to rural planners. Cheap access to AI on a test basis or within your browser has widened access to computer and AI assistance for gardening purposes. Colorful designs and selection of species to enrich biodiversity are widely available now. The next step is, of course, agentic use of AI. If we have a sufficient number of sensors installed (and use weather forecast data as well), the data from the garden can easily be [analyzed by AI](#) and the mower or water pump can get going to do the job for us. This is not rocket science but only sensors, data and a couple of “if . . . , then” commands. The kind of pleasure will have changed accordingly shifting from the watering of plants to the satisfaction of successful programming. No value judgement here. The latter option has, however, a considerable business potential of almost industrial or agro-economic scale.



AI Motion Sculpture

At the [Festival Noûs in Paris](#), the collaboration of AI with artists was a major event. Based on the huge collections of the BNF in form of data bases it is possible to join the 3 worlds of library conservation, technological innovation like AI and the imagery of artists. In the preparation of the exhibits and the parallel documentation of the genesis of the exhibits of the artists, the creative potential and process becomes more evident and understandable to broader audiences. The exhibit by [Tobias Gremmler](#), Anatomy of Motion (2026 see below), captures the motion of a dancing body in a sculpture based on a 3D printing of a series of images blended into each other. with a fast photography camera, known from sports images previously, the dynamics of a motion become a tangible sculpture. The intriguing new form is in fact a motion that has been captured or has cristalized or materialized in a permanent fashion. New technologies and materials enter into art as they offer new ways of expression as well. The collection of art and documentation centers shall enter into new phases as well. (Image: [Tobias Gremmler](#), Anatomy of Motion (2026) at BNF 2026-4).



AI and Social sycophancy

The study by [Myra Chen et al. \(2026\)](#) on the practical use of various AI tools demonstrates the risks of social sycophancy of these models. Maybe a large part of the initial success of AI models exactly due to sycophancy i. e. the people-pleasing, flattering and affirmative bias of these models. If users of AI just receive predominantly confirmations and reassurance of their intended behavior, they shall be less inclined to accept more outright criticism in normal interactions with real people. The more you receive flattering responses by some people, the more likely they have used AI in preparing themselves for a response. The rigorous psychological tests applied in the paper can in fact explain a large part of why we are likely to become addicted to the always flattering responses from the current versions of AI. Only the scientists will consciously seek for disapproval of their beliefs and keep challenging the AI-provided returns. Even using different AI models did not change the affirmation bias. Maybe programming a “grumpy old professor AI” as an alternative could do the trick. I shall have to think seriously about this as the alternative to current models. The critical AI is most likely not a viable business opportunity, but it might survive many other sycophantic AI unicorns. (Image: waist coat 18th century, Paris exhibit Musée de la mode 2026).

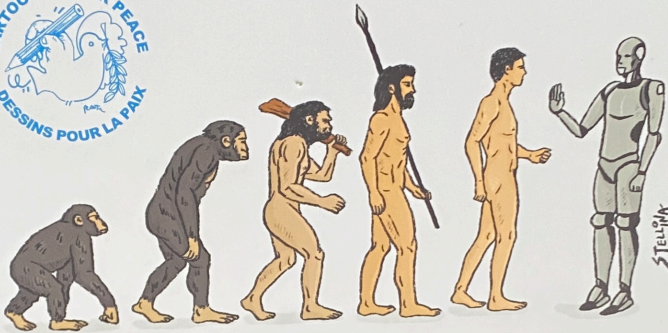


Master AI

In 2025 the exhibition “[Cartooning for Peace](#)” at the BNF in Paris had already an exhibit authored by [Stellina Chen from Taiwan](#), which summarized the evolution and projected the consequences of an all encompassing [AI revolution](#) (Image below taken at exhibition 2025 BNF). Currently we exercise ourselves in using various forms of AI or learn how to program them ourselves. It is our aim to master the new technology so it becomes a helpful tool. However, there are already many instances where it is no longer us mastering AI, but the AI has turned around the table and has started to master us. The applications of AI have entered our work tasks, tries and frequently succeeds in improvements of our routines and processes.

In private life a similar revolution is happening, when [AI offers advice](#), which is hard not to follow and very convincing most of the time. Since getting involved in a conversation with AI tests your logic and debating competences, we find ourselves more and more in situations where AI is telling us what to do in the best of a convincing manner. After centuries of humanity to [find freedom](#) from oppression and the freedom to what we want ourselves, we seem to be ready to hand over control to AI. We are just like toddlers in this respect, willing or obliged to follow our master.

Intelligence artificielle : une (r)évolution ?



Stellina (Taïwan)

Le spectaculaire succès du robot conversationnel ChatGPT, lancé fin 2022, a fait découvrir au grand public un échantillon des possibilités offertes par l'intelligence artificielle (IA) : pour le meilleur et pour le pire ? La prise de conscience sur l'impératif de fixer un cadre au développement de l'IA semble s'accélérer ces derniers temps.

En effet, cette avancée technologique soulève aussi de vastes questions éthiques, juridiques, politiques, économiques... Humaines, en somme, puisqu'elle bouleverse toutes les sphères de nos vies.

A travers cette exposition, Cartooning for Peace présente une série de dessins de presse du monde entier pour l'exploration de l'intelligence

L'exposition est tirée de l'ouvrage « Intelligence artificielle : une (r)évolution ? », publié aux éditions Gallimard dans le cadre de la collection Cartooning for Peace, préfacé par Olivier Tesquet, en partenariat avec Amnesty International et France Médias Monde.

Intelligence artificielle :
une (r)évolution ?



Bob the AI-enhanced builder

Most kids today and GenZ youth have come across the TV-series "[Bob the builder](#)". Baby boomer parents have been worried about the work ethos which might be the hidden agenda of the videos. In 2026 we can now draft a new episode called "Bob the AI-builder". Many episodes could be re-written when Bob and his team have access and get training with [AI toolboxes](#). The study published by [ActivTrak \(2026-3-11\) reports](#) that companies make on average use of 7+ different AI-tools, up from 2 in 2023. This constitutes a hint that complexity at work is increasing as each tool has to be managed and the boundaries of its use need to be respected. As most search engines offer an AI-short cut to search it is not surprising that now 80% of the workforce use some form of AI in 2026. The [productivity](#) increases in quantitative terms as more output can be achieved in the same time or [slightly shorter work days](#). However, [workload](#) is moved even more to weekends now.

The upcoming challenge through AI-tools is the reduced "the AI users' focus time", which suffered 9% compared to non-users. For Bob the AI-enhanced builder this means "AI is being used as an additional productivity layer, not a substitute for existing work". The overall workload is not reduced by AI. The [intensity of work](#) increased between 2023-2025.

There is still a puzzle in the data. [Multitasking \(+12%\) and collaboration \(+34%\)](#) both increased, but the duration of an average focused session and focus efficiency dropped. The challenges for employees increase. Handling [simultaneous processes](#) and keeping an open mind to [collaboration](#) are key [competences](#) for Bob the [AI-enhanced](#) builder.

(Image: LEGO-shop in [Paris](#) 2026-2)

3. Créé ta mosaïque LEGO® en 10 minutes



Retrieval-augmented AI

As a [scientist](#) it is in our DNA to cite other scholar's work with precision. As a university professor your job is to check the quality of citations, kinds of citations and accuracy as a regular part of your job, also as supervisor of junior scientists. In 2026, the use of up-to-date AI ([Asai et al. 2026](#), OpenScholar AI) allows not only to summarise large bodies of scientific literature, but also to cite references and even quotes from the paper(s). Literature reviews used to take months to compile. [AI can speed up the process](#) enormously. The citations can be ordered following an own logic or an AI-suggested logic.

It has become much harder to evaluate the degree of innovation of a candidate for a scientific degree. Tools like retrieval-augmented Language Models enhance the scientific potential of [generative AI](#) since they extract more or less short citations directly from the original source just next to the original based on a [simple query of author and approximate subject](#) (see screenshot below of own previous publication).

The good news is: (1) referral to previous research and citations should become faster with improved [tools for verification](#). (2) You will find papers written by yourself that you no longer have in your own archive.

The bad news is: (1) self-citations of researchers might become more feasible, although this problem is conditional on a researcher's seniority. (2) so far, Language models prioritise specific languages ([although not necessarily](#)) and differentiate names with "foreign" characters e.g. "ö,ä,é" and do not double check "close neighbours" of them like "o, oe, a, ae, ue, e, ê, è"

leading to a “character based [normalisation bias](#)”.

It is, of course, rather easy to point out deficiencies of the search, [sorting and inclusion algorithm](#) if you know already about the complete picture of a data set.

Screenshot of AI summary of own paper

The screenshot shows a web browser window with the URL `ojs.labs.paperqa.allen.ai/reader/16917737/7521718/1719412376d--B1ABmmla5GcQAKBNsAg%3D`. The page is titled "Paper Question Answering Beta" and features a sidebar on the left with a "Question Answering" interface. The main content area displays the paper's title, author, and abstract.

Question
What is the goal of this paper?

Answer
This paper aims to summarize academic and trade union literature on the potential of new digital technologies for trade unions, introduce the concept of technology-supported social sphere construction, identify the innovator role of trade unions and work councils in digital employee participation, and highlight the active interplay of online and offline communication in networking. It also focuses on the potentials that digital technologies offer to trade unions and works councils.

Supporting Evidence
Finally, we highlight the active interplay and mutually reinforcing effect of online and offline communication in networking.

How to cite this paper: Schoemann, K. (2018) Digital Technology to Support the Trade Union Movement. *Open Journal of Social Sciences*, 6, 47-62. <https://doi.org/10.4236/ojs.2018.64050>

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Digital Technology to Support the Trade Union Movement

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Abstract
New digital technologies have a potential to bypass traditional forms of labor organization. We summarize the academic and trade union literature on the potential of new digital technologies for trade unions. Building on the literature of the social construction of technology and democracy at work we present the concept of the technology-supported construction of the social sphere. A review of digital technologies allows us to identify the potential innovator role of trade unions and work councils in digital forms of employee

Visitor retention

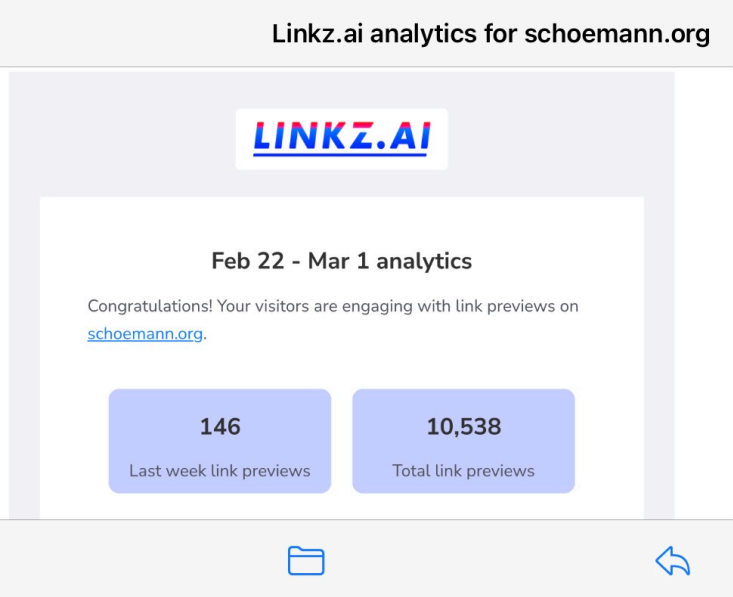
For media, platforms, stores, webpages as well as blogs one of the more interesting measures about popularity or spread consists in [visitor retention](#). It is a bit like counting the pages of a [book you have read](#), which you have at home, or have you read them all? The zapping across radio or television channels is also an indicator or [unsuccessful retention of viewers](#). Webpages, online stores or the blog entries here are all more or less directly trying to increase the retention of visitors on the same page. Maybe this can be considered as one of the first steps into a [\(not-so\) social media addiction](#). The IT-sector offers tools for this.

On this webpage "[schoemann.org](#)" we make use of "[linkz.ai](#)" a ready-made plug-in that provides overviews on the links entered on this webpage, mainly to avoid that visitors have many additional tabs opened in their browser, do not jump off to follow up the links, but rather stay on the same webpage and "scroll on". At the same time this means referrals from other webpages, which use the same techniques, will be less frequent.

The visitor retention tool used on this webpage is besides the original content 😊 "[linkz.ai](#)". This tool scans other blog entries and links, and proposes the image on the previewed link at the top of the blog preview, for example. Basic weekly frequencies on previews are provided, which might guide a strategy to increase visitor retention, if that is one of your objectives.

The current discussion of [addictive potential of social media platforms](#) could be measured through such tools as well and has probably been used already for years with even more sophistication and direct [feedback loops into the algorithms](#).

(Image: basic own statistics [Linkz.ai](https://linkz.ai) use 2026-2-28)



Screenshot

Future Conflicts

Since [2014-2-27 Russia has occupied the Crimean peninsula](#). This invasion had started with an undercover mission of unmarked soldiers to take full control of Crimea about 3 weeks later. Russia did not officially declare a war, although the intentions were identical to a land grabbing war. The western world did not react much to this violation of international law. Apparently, this contributed to the next cynical “special operation” by the [Russian army to fully invade Ukraine on 2022-2-24](#) in a failed “[Blitzkrieg](#)”, a rapid invasion, which attempted and failed to annex the whole of Ukraine. According to [Lissner & Warden \(2026\)](#) the Russian invasion of Ukraine bears 4 lessons for future conflicts: (1) the risk of using nuclear weapons is real, (2) in addition to nuclear options, prolonged and very destructive conventional wars remain an option, (3) escalation thresholds emerge and evolve over the duration of the conflict, (4) allies and partners in war keep adjusting their risk tolerance as well as escalation options. The authors argue from a [US perspective](#) and add a practical comment: “The USA cannot go this alone, but [should coordinate closely with allies](#) and partners in time before another conflict arises. [Multilateralism](#) seems a valid option and even more so as we move into a [multipolar](#) power play on the global scale [propelled by AI](#). (Image: Musée Orsay, Paris – [Archer, Bogenspannende](#))



Democracy in art

The depiction and imagery about democracy in the history of art is according to my own anecdotal evidence and visits across Europe much less frequent than depictions of royalty, mystery like religion or autocratic rulers. Therefore, visits of museums on art history, let us say prior to the impressionists, have to be approached with an obvious skepticism. The impressionist art movement rebelled against the official art academy and started their own salon and are still much acclaimed for this as well as the fight for their own vision of art. The worst authoritarian backlash came from the Nazi-terror, which annihilated large parts of democratic ideas in and about art. A second major issue is about who visits the museums in contemporary societies. Democratizing the crowd who visits art museums is a steep task. Ease of access also beyond costs of entry, they still pose barriers of access to reach a representative sample of a population to participate in art. (Image Kunstforum new barn in construction).



Sustainability in computing

As the huge size of data centres become visible for everybody we begin to question the sustainability of computing infrastructures as well. The need for energy and water resources (for cooling) grow in line with the growth of data centers, the whole issue of input of resources and global trade has to be re-assessed. Based on [European trade data](#), we know that computer software is heavily imported from the US, whereas we import the hardware to run the software in even higher shares from China. In view of the [AI boom](#), this risks to worsen the European trade balance in the coming years. European digital sovereignty suffers as well, if we do not act upon it (compare [Figure 8 in Eurostat report](#)).

An easy fix is the shift to more computing-efficient software, which does not need or rely on more processor and memory imports from China for the hardware and imports of services like operating systems or office software from the US.

Just changing to [Linux and OpenOffice](#) lets you keep your hardware for several more years. Sustainability in computing isn't hard to do. It is just a matter of determination. We can do it, if we really want to do it. The more [rare earths](#) become rare and more expensive, the larger the amount of people and businesses, who shall think twice about this.

[European Digital sovereignty](#) can work as a driver of sustainability in computing as well.



Socio-technological obsolescence

The standard literature on AI-systems will give you a definition of technological obsolescence, which specifies that obsolescence does not mean that a device is broken, but that it is outdated. In computers this might be due to hardware no longer supporting newer, more resource demanding software, or newer software insisting on the use of other hardware. The seemingly rapid innovation cycles in smartphones, cars or robots might justify such technological obsolescence, but the real advances like shifts from 3G to 4G to the newer 5G mobile frequency standards have taken place rather slowly due to provider coverage of sufficiently large, particularly rural areas.

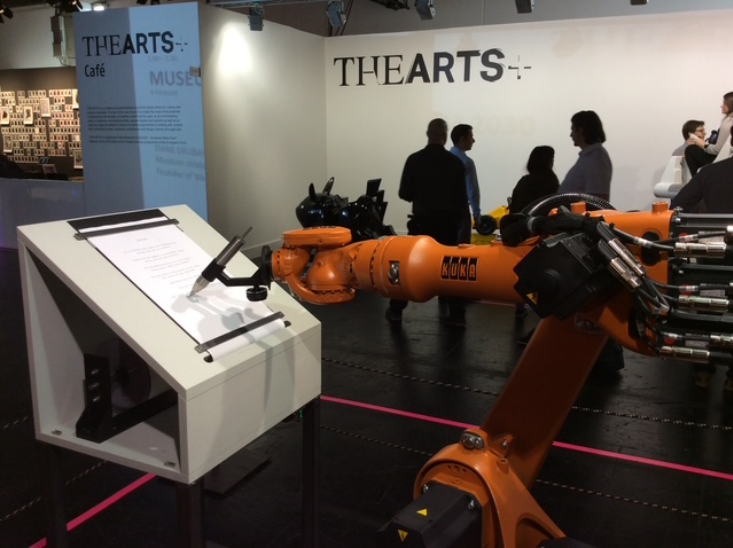
Therefore, the technological obsolescence has to be enlarged as a concept to socio-technological obsolescence as the societal, legal and economic boundaries of technological innovations have to be taken into account as well. Provisions for health concerns or CO2 saving circularity, i.e. reuse of resources have to be taken into account as part of a precautionary principle.

Computer screens have asked us to move from square designs to wide screens (watch videos) to smartphones' standards of long formats. My 20 years old square screen has been doing a reasonable job throughout these periods, though not for serious games.

The socio-technological obsolescence relies on a "socio-technical prestige score" of products, like for luxury brands in other industries, where fashions drive obsolescence more than technology.

(Image: Robotic arm made by Kuka writes on paper sheet at

Frankfurt book fair 2017)



Deep Fake Threat

Our Western democracies are aware that “deep fake videos”, radio, [online-newspapers](#) and most of all [social media](#) platforms are all around us already. However, more [scientific voices](#) alert us that this threat to our easy or comfortable way of life to consume information eventually threatens the survival of our democracies. Previously, interference in elections used to focus on rigged election procedures, but in the 21st century powerful other alternatives can do the dirty job to bias elections against the original intentions of the electorate. The widespread use of AI will exacerbate the already practiced ways to produce deep fakes. In a preparatory self-test of an [AI-assisted chatbot](#) I was surprised myself of the quality of the output. A person not very familiar with my original voice in a second language would assume that it is me who is being interviewed in person. Based on a fake news text, any form will be automatically translated into voice only and/or video based on [basic visuals](#).

Statisticians used to joke some decades ago: “Don’t believe in any statistics, unless you faked it yourself.” This is meant to encourage people to be aware of dangers of the use of statistics to influence opinions or [official decision-making](#), like in policy making of [central banks](#), which might be based on biased accounting for [shrinkflation](#), [cheatflation](#) or [greedflation](#) to name just a few, Hence, the need to strengthen awareness, [analytical skills](#) and critical thinking should be high on the agenda to defend our democracies. There are not only external [military threats](#), but additional ones masked as internal threats.

(Image:: mice as humans in living room 2 couch potatoes 1 on

rocking chair, tea time)



Robotics Hype 2026

Towards the end of 2025, it is common practice to look back on the last 12 months to [summarize a year](#) and to contribute to the “[collective memory](#)” of the year. From a “[society and technology](#)” perspective we shall not be surprised if such summaries will be full of images and praise of [AI](#) and [robotics](#). However, large parts of the innovations that shall be declared to have marked 2025 were already around 10 years ago. It is just the timing for the new momentum and the creation of a hype around these technologies that is really remarkable (compare [WSJ 2025-11-24 p 1-2](#) by Konrad Putzier).

It is true, playing around with robotics was reserved to universities, research institutes and some big players in industry. The public and [financial](#) markets showed little interest in these “nerdy” fields of applications. Although we were hardly able to compete with our [chess](#) computers, Watson solving [math](#) problems for us including the steps for us to follow. Video, image and textual support was provided by specialized applications already at high levels and in [multilingual versions](#). In 2025 these techniques have enhanced with machine learning and neural network programming reaching higher speed and being able to use ever larger data sets as input.

But there are areas where the hype is coming to an end. How about all the artificial reality (AR), virtual reality (VR) applications? Many have seized to exist. Have you visited or invested in “Second Life” platforms? Opened a shop in the VR-world? Bitcoins have lost 7% of their value between 1.1.2025 and 24.11.2025 and they suffer still from high volatility rather than an uninterrupted rise.

[War](#) has fuelled the rise of shares in 2025 and “dual-use” technology benefits as well. AI has been driven by, and drives both trends.

In sum, it is much less the technological innovations in 2025 that are astonishing, but the [political economy](#) of how to orchestrate a [sensational](#) hype around the technologies.

(Image Hannover Industry Fair 2016-3-14).



Sovereign data spaces

Data is the new gold, petrol or diamonds. In order to bring this message home to all people in the EU, the European summit on digital sovereignty had a small exhibition of projects that address these issues. City data spaces is such an initiative which has been running for quite some time now. In fact, from a city planner and data scientist perspective cities collect already huge amounts of data and can offer them to service providers, businesses and each and every one of us to organize our energy consumption, improve mobility patterns or any form of data or video streaming services. The amount of data captured and to be stored is growing rapidly. Just think of the Internet of things (IoT), maybe that's only your wifi-connected coffee machine, oven or heating. Now add AI to this which allows the system to learn about your daily patterns to start the device in time for you to focus on other tasks. As we would like these data to stay confidential, the need for European digital sovereignty becomes sufficiently clear. It will take a huge effort to provide an adequate digital infrastructure for this "brave new world" and many people to work towards this objective. Train the trainers already, cause otherwise this is going to take ages before we can harvest the benefits in safe and sovereign manner.



Reverse causality

[Reverse causality](#) is a beast, which empirically minded scientist fear almost like death. However, many processes we study are running not only in one direction. In most cases, causality is tested with, or assuming, a unidirectional model of causality in mind. But some processes have not only a set of multiple causes to take into consideration, but some processes might be reversible or run in a rather complex manner, which are difficult to quantify. Mind captioning is a technique in neuroscience, where easy language is used to describe an image perceived in a person's mind. Such [thinking aloud](#) data is based on thousands of brain scans, where people watched videos or images ([study link](#)).

In my own journey into the working of my mind I play around with different directions of causality. Sometimes the text is the origin and the image follows in a selection of a telling illustrations, but occasionally the reverse causality is at work. The image is the starting point and gets the mental process going. It is a rather complex process which is not easy to approximate with the help of algorithmic thinking. Reverse causality has many surprises to offer. As scientists we have a hard time to come to grips with it. ([Inspiration Link](#))



EU Digital Sovereignty

If we try to search for digital solutions, we shall encounter a whole lot of American and Chinese products, but very few European companies that are able or willing to compete. Hardware mainly comes from China, software from the US, at least [until AI](#) was not working in the background. If we add Russian interference to destabilize our digital infrastructure to the scenario, we are not really fit for the challenges of the 21st century. The very definition of a country or [political union](#) is the affirmation and competence to assure its sovereignty, particularly in cases of territorial conflicts with neighboring countries. My [health](#) or [mobility](#) data are a rather private affair, however, our state governments in [EU-Europe](#) have done little to ensure our data integrity. Business is also at a loss, if they do not spend heavily on data security themselves, usually relying on external cooperation.

[The EU digital sovereignty summit](#) took place in Berlin on the EUREF campus in 2025. It can only constitute a [beginning for intensified cooperation](#) in this long overlooked policy area. It will be tough to catch up where production has been abandoned for decades.



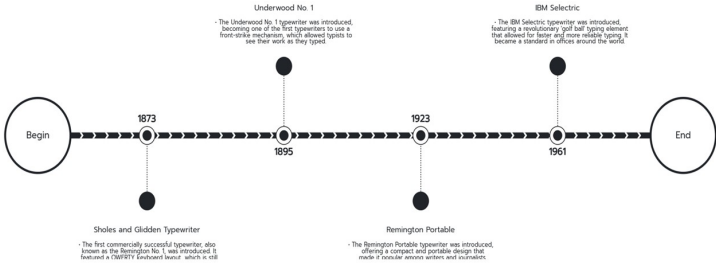
Typewriter history

The history of the typewriter and typewriter is comparatively short compared to the history of literature or other technologies as partners in the creative process. With the [advent of AI](#) (here as part of [infografix, see image below](#)) the skills of using and mastering a typewriter have become almost obsolete. The original design by Remington (timeline below) has dominated for almost 100 years the technology of typewriters. Then came the electronic IBM technique with an automated correction type, which was not only faster, but also more forgiving of “typos”, short for typing errors.

The craft of [handwriting](#) had suffered a tough blow, despite its almost intimate touch to it. Knowing the typewriter outline by heart allowed typing with closed eyes or a focus on another text or image as well as a parallel thought process. Scientists and writers ([Claude Levi-Strauss](#)) reported on their creative process as intrinsically being linked to their typewriter.

QWERTY outlines for English language typewriters still dominate the keyboard typing today. With the AI interaction on the rise, we might move away from typing as a “Kulturtechnik” a technology of our cultural era and focus more on human-machine interactions via our voice and microphones. The underlying question, however, remains the same: What is the best technology to enhance our thought process? This, in fact, tends to be a very personal human choice, where technology plays only a subsidiary role.

A timeline of historic typewriter models, showcasing the evolution of design and technology from the late 19th century to the mid-20th century.



From AI to xAI

As humans, we like the feeling to be in control of things. This applies even to immaterial things like religious beliefs. Generative AI has created problems with its hidden structures and lack of transparency of their applications of algorithms (and combinations of algorithms) to basic data bases of knowledge and information. The use of xAI, which stands for explainable artificial intelligence, can address some of the concerns about the lack of transparency and explanation of responses from [AI systems](#). Many users want to know in advance about the consequences of the use of specific words or notions in an instruction to AI. The interpretation of each single word by xAI can inform about the precision of interpretation (cheap versus cheapest, for example) or highlight the sensitivity to gender-neutral language or not in its guidelines. Additionally, ex post the xAI could indicate alternative notions in a prompt and, briefly, how this would affect results.

Yes, there is a trade-off between brevity of answer and room for explanations. As in psychology, there some value in a “thinking aloud” procedure for respondents in order to better understand (implicit) the reasoning behind a reply. xAI takes us a step further in this direction of asking AI to think aloud or more explicitly in a human compatible way of logic and broader reasoning.

Put AI on the psychotherapist’s bench and xAI will be to the advantage of many more humans again. Humans just don’t like black box systems that lack the necessary as well as sufficient transparency. (Image on the right: [Patrick Jouin](#), chaise solide C2, MAD digital humanism).



AI as individualizer

In a one pager in the [journal “Rolling Stone”](#) (2025, p. 9) Bruno Patino writes about the legendary [David Bowie](#) who was the first rock musician to launch a new song on the internet before it became available as CD (Telling Lies, 1996). As a pioneer in co-creation, Bowie anticipated somehow the trend and wish of people to personalize preferred songs even further and distribute such versions among friends. In this process, [AI has become a powerful tool](#) to push [individualization](#) even further and the digital social media allow even broader audiences beyond a more narrow circle of friends. [Music](#) maybe setting the trend for some in the same field, other creative fields might follow the footsteps. The need to [co-create](#) collective experiences and participate in collective musical moments is likely to rise again as well.

Good news for music festivals across the world. Live concerts are the new form “collective individualism”.



Passing barriers

In quantum physics the real trick is not the rebound of electrons like the [rebound of droplets](#), but the passing of electrons of an insulating barrier. The experiment of the "[Josephson junction](#)" has set a precedent to research the surprising macro-effect of "[quantum tunnelling](#)". The 2025 Nobel Prize has been awarded to [Clarke, Devoret and Martinis](#) who observed these effects on a macroscopic scale. The applications in the most [advanced quantum computers](#) of today shows the enormous potential of this demonstration in pushing computing speed boundaries. The international competition to develop such, ever faster computers, based on [quantum physics](#), is running on high development speed. In combination with the [artificial intelligence \(AI\) developments](#), these types of combined machines are likely to outpace the development of human-based intelligence. It becomes even more important to define the limits for those machines by us. Subsequently, we shall have to make sure that such combined machines stick to the rules, we define(d).



Deus ex machina

The term "[deus ex machina](#)" used to be applied more in its figurative meaning. With the rise of digital tools like chatbots, facilitated and enhanced through AI, God is speaking to us not only [in multiple languages, but also from our pockets through our smartphones](#) and headsets. This is a rather recent form of "deus ex machina", which we did not expect some years ago. The [bible as e-book or pdf-file](#) has been around for some decades, but only more recently we can enter [conversations with God through chatbots](#) as another version of "deus ex machina " about almost everything (and [pay for it via digital credit card](#)). Programming of such an AI-tool is easily achieved. AI will prepare a weekly or daily sermon or prayer for you, following your predilections of your favourite quotes of the bible. An interesting twist to the programming is to use authorized as well as unauthorized translations of the bible across several centuries.

Another interesting enlargement of the input data base is the inclusion of interpretations and discussions not only within your own religious community, but beyond. Maybe the discussion of several different religious chatbots with each other could prevent aggressions due to differences in basic beliefs. These "[dei ex machina](#)" might further our understanding of what makes us humans different from machines and machine-based solutions of human conflicts.

As genetic clones of ourselves have become already technically more feasible, our digital alter-egos (the comprehensive collection of traces in the internet and digital images, plus social scoring) help to empower those "dei ex machina".

This kind of “[Brave New World](#)” asks us to be rather brave ourselves.

(Image: interior [St Denis Basilique Cathedral Paris](#) 2024)



Chatbot Me We

In order to dig deeper into the functioning of AI, I deemed it expedient to construct, for example, a simple chatbot on a limited knowledge base from my own writings on AI (link to reader in previous blog entry here).

A toolbox from Google offers powerful assistance in such an endeavour. The outcome uses only my input text and no other sources. It is dynamic in the sense that it interprets questions and searches within the text file provided only. The answers are edited with a LLM (large language model) and provide flawless English texts. You can try it [here](#) using catchat as magic formula and Google account so far.

With a bit of programming knowledge ([html](#), [python](#), [Java](#)) and related learning sites it is feasible to come up with a “static” chatbot hosted at a free of charge provider as well. For learning purposes this step by step building and coding of a chatbot is helpful. The outcome is rather limited or requires a lot of time to increase the scope of Q & A interactions and to move from a static (predefined Q & As) to dynamic ones.

Full control of answers, excluding any hallucinations and high-speed replies, come at a cost. [Take a look here](#). It is a very basic version so far, just to get the idea of it. full web address:

<https://schoemannchatbot.eu.pythonanywhere.com/>



Chatbot Me

Chatbots are helpful to allow queries to larger data sets like the blog entries here. So here is a try of a Chatbot to query all entries on AI using ChatGPT to create a Chatbot that uses and references its source from www.schoemann.org/tag/ai and the [AI reader](#) in pdf-format.

Please send me an email if the hallucinations of this Chatbot 1.0 on AI from a social science perspective are giving strange results. I'll get back to you. Please use at your own risk as I cannot guarantee for all answers. The usual disclaimer applies here.

ChatGPT proposed the following set of Questions and Answers on the blog for an entry into the chat: Example Q&A with the chatbot

Q: *What are the social science concerns with AI?*

A: Bias in results, job shifts, democracy risks, privacy, and new inequalities.

Q: *What does the text say about reinforcement learning?*

A: It's seen as the next step for AI: focusing on learning and reasoning, not just predicting text. It also uses fewer resources.

Q: *How are robots described in the document?*

A: Robots are mostly assistants. They can follow people or carry small items, but more complex tasks need sensors and AI training.

Q: *What about biased results?*

A: Studies can be misleading if control groups are flawed. AI faces the same challenge — social scientists warn: “handle with care”.

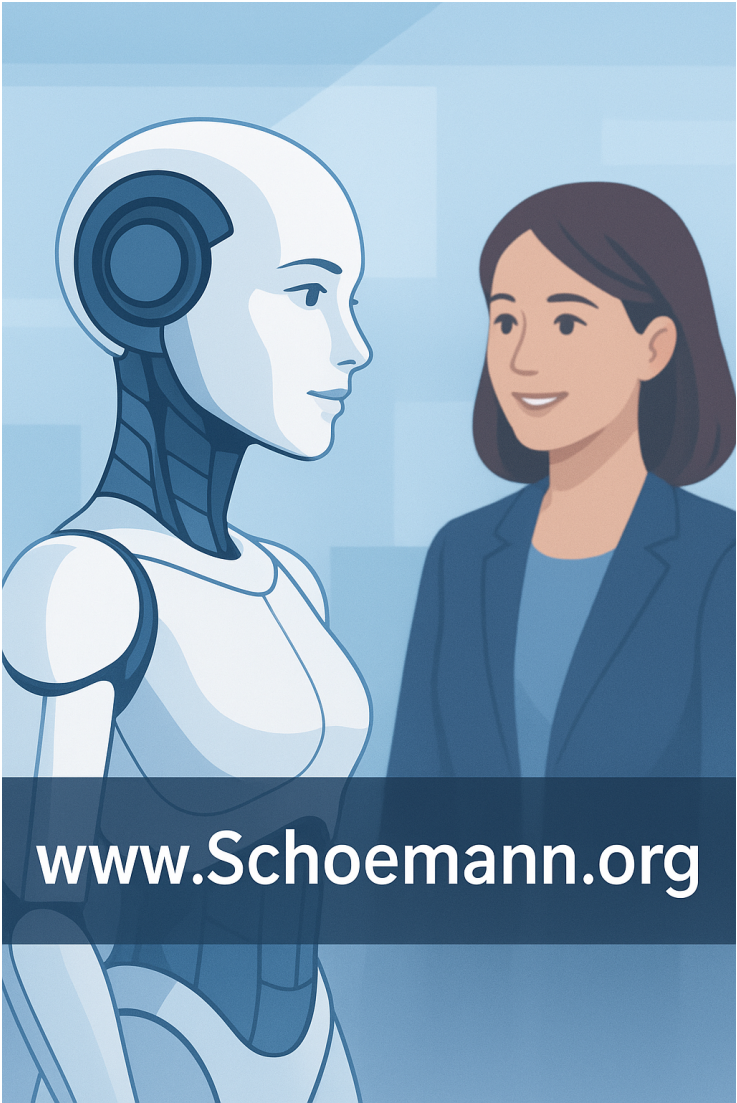
Q: *What is Schoemann’s blog view on AI?*

A: He links AI to energy use, fairness, and its role in the “all-electric society” — stressing efficiency and responsibility.

More on the chatbot (in [testing phase](#)) and the Link to the coding help received from ChatGPT on this mini-test-project :

<https://chatgpt.com/share/68c1d160-0cc0-8003-bf04-991b9e7c3b>

[24](#)



www.Schoemann.org

AI Podcasting Me

Content producers have lots of tools at their disposal to get their content across to very different audiences. For some time the traditional media of newspapers, radio and TV were the prime outlets for content distribution. Social media have changed this to many more senders of content than before.

In the 21st century, AI allows to automate media productions. In a trial run I just used Google's NetbookLM to generate [3 podcasts based on my own writings](#) on AI over more than a year by now. The result is available and using artificial voices it is possible to broadcast yourself without revealing your own personal voice. I am not done with the evaluation of the outcome(s) yet, but the first impression is an interesting other form to spread content.

More [tests](#) are necessary to check for [hallucinations](#) as well.

Here are the links to my virtual podcasts:

AI, intimacy and insecurity

https://schoemann.org/wp-content/uploads/2025/09/AI_Intimacy_Insecurity_Navigating_the_Future_of_Work_Priva1.mp4

AI, Society and the Human Spirit

https://schoemann.org/wp-content/uploads/2025/09/AI_Society_and_the_Human_Spirit_Navigating_the_Second-Round_.mp4

AI and the Human Mosaic: Navigating Our Interconnected Future

https://schoemann.org/wp-content/uploads/2025/09/AI_Society_and_the_Human_Spirit_Navigating_the_Second-Round_-1.mp4

Video Doku by AI

Based on my own blog on this webpage “schoemann.org” Google NotebookLM creates a video of about 7 minutes. Using Microsoft Clipchamp automatic subtitles with a slightly different storyline are produced based on the video data. In the end, the blog entries are re-modelled into something like a lecture on “AI in a wider social context” (see and play below). No voice layover so far, read by yourselves. A podcast format is another option.

It feels like walking across landscapes in my own mind. [Content creators of today or the past](#) never imagined the impact they might have through the powerful tools of AI. The only caveat, jokes I incorporated into the texts cannot really be handled by AI tools unless they are explicitly designated as such. These AI tools take me much more seriously as I do myself. This is serious.

<https://schoemann.org/wp-content/uploads/2025/09/AI-potential-based-on-own-AI-blog-edited.mp4>

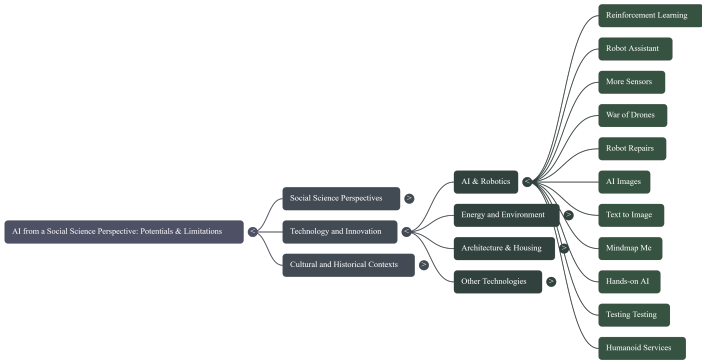
Mind Map Me

AI tools are great to assist learners in the task to get more structure into larger documents or books. It is up to the teachers or lecturers to use the tools themselves to pre-structure content they want other persons to learn. [Mind maps](#) are useful to summarise larger content and offer a tree-like structure to a text moving from the general to more specific content and then into details by at the same time not losing sight of the overall structure of the content. Basics can be provided by [Google's NotebookLM](#) and you may rework this basic structure yourself linking the mind map to the detailed content. [Learning](#) may start with a comprehensive mind map at the beginning to move on to details. Alternative versions of a mind map are equally feasible to come up with new combinations of subjects. This can be done using the tags of the blog entries in addition to the categories and fast search keywords.

It is a fascinating way to mind map yourself based on longer texts written by yourself. This clarifies a bit what potential readers or learners are likely to retain from reading your document(s) or blog entries.

Its worth trying, as others will most likely use these tools from now onwards anyway, whether we like it or not.

Image: Google NotebookLM Mind Map of my AI blog entries 2025-9-9.



Own AI related entries

The digital drafting of blog posts facilitates the publishing of volumes based on a selection of entries. Pdf-files, or [EPUB](#) formats are quite common. The choice of a flipbook is more suitable for larger screens of tablets or notebooks. It also serves as a rapid stock taking of entries and missing topics to cover a broader field. In some fields AI is not yet popular, for example in agentic home applications, whereas in other fields text, translation or image production AI has grown into a threat to professional fields. Even computer languages are a major field of application with [substantial negative employment effects](#).

Hence, enjoy the latest comments on AI towards the end of my latest Flipbook.

[Just click here.](#)



[ChatGPT](#) provides a summary of my AI-reader as follows:

From the uploaded text [AI from a Social Science Perspective](#) (Dr. Klaus Schoemann), social science concerns with AI focus on **potentials and limitations** of how AI interacts with society:

- **Labour and employment:** AI impacts jobs, but adjustment processes are slow. For example, there's a shortage of engineers and care workers, while robots are still limited to simple assistant tasks. This raises concerns about **who benefits and who is left behind**.
- **Bias and fairness:** The book highlights issues of **biased results** in research and decision-making. When AI systems rely on incomplete or selective samples, results can be misleading — a challenge also familiar to social scientists.

- **Democracy and accountability:** Journalists and scientists are framed as part of a “checks and balances” system. AI adds complexity here, as the fast spread of information without accountability can weaken democratic processes.
- **Human–machine relations:** Topics like **intimacy, housing, and memory** are re-thought in the context of AI and digitalization, raising questions about privacy, social norms, and cultural heritage.
- **War and security:** AI-driven technologies like drones change the nature of warfare, raising ethical and political questions.

[On his blog, Schoemann](#) also stresses the **energy and resource costs** of large AI models and how reinforcement learning offers a more efficient alternative. He warns that AI should be understood not just technically, but as part of an “**all-electric society**” where social sciences help assess risks, inequalities, and long-term consequences.

☞ In short: AI raises [social science](#) concerns about **equity, bias, democracy, labour, cultural shifts, and global risks**.

Marc Aurel AI

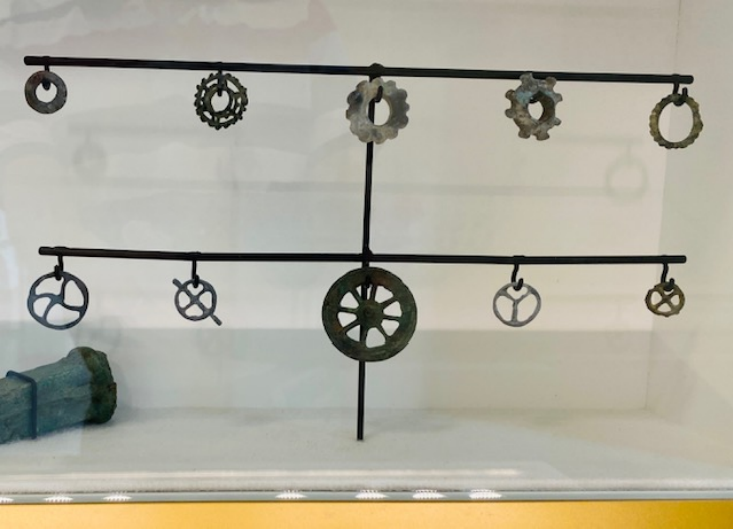
In the 21st century it is possible to chat with Marcus Aurelius. Part of the [exhibition at the Simeonstift](#) is a chatbot you may freely consult and questions with or about Marc Aurel. Based on your questions the animated screen image of Marc Aurel will reply based on his own writings like the [Meditations](#) and (probably) other secondary literature on Marc Aurel. Questions about feminism or slavery are answered based on the original texts. Some of these answers appeared rather modern like the basic equality of all including women or slaves. The Meditations are an idealistic vision of mankind in the stoic tradition. In practice such ideals have proven very ambitious for the many and growing temptations in the day-to-day lives of ordinary people including their political, religious, business and military leaders. The AI is confronted with the issue to give answers to ethical questions which refer to the time of the author, but not all can apply to today's ethical standards and basic human rights. Reading the [original source](#), therefore, remains the preferred choice.



AI in Central Banks

Yes of course, Central Banks will use AI, and some do so already ([Kazinnik and Brynjolfsson, 2025](#)). Beyond the standard application of AI by its employees, there are many [potentials to use AI](#) to analyse and publish data at a faster rate or in order to detect financial crimes. Similarly, data collection based on webpage harvesting might yield new indicators of inflation, expenditure for [environmental risks](#) ([heat](#) waves, [flooding](#) etc.) earlier and in addition to the normal set of indicators. Hence, Central banks might be better and faster in forecasting inflationary tendencies using more AI tools in their daily routines. Of course, it is difficult to predict a [disruptive tariffs](#) policy of a [major economic player](#) in the world economy, but the calculation of more, even [hallucinatory scenarios](#) become more feasible. It is feasible to weigh overall risks of different scenarios to the economy.

(Image: Celtic coins, Museum of the Belgian National Bank)



AI earnings effects

In the first few years of wider adoption of AI in an economy, there is the expectation that this might lead to substantial productivity gains for enterprises which use it as well as for employees who are early adopters of the relatively new technology. The study by the Stanford [Digital Economy Lab](#) by [Chen, Chandar and Brynjolfsson \(2025\)](#) showed that so far there are no significant earnings effects for employees. Based on millions of recent payroll data from US companies productivity gains have not trickled through to the paycheck in terms of monthly salaries. Participation of staff in a company's overall turnover or profit might change this as time evolves. For civil servants the adoption of AI might mean increases in cases dealt with as some tasks can be executed faster than before with the use of AI.

The evidence points to employment effects of AI rather than earnings effects so far. A hypothesis is yet unresolved: senior employees using AI might employ fewer junior workers at entry positions, if these "hallucinating" young professionals can be replaced by hallucinating AI. In science the hallucination has sometimes lead to disruptive new approaches and findings. It is a tough choice to pick the young entrants with high productivity potential and eventually high remuneration for this in terms of labor earnings.



AI employment effects

The first robust empirical evidence about employment effects of AI in the USA has been published by the Stanford [Digital Economy Lab](#) by [Chen, Chandar and Brynjolfsson \(2025\)](#). A previous paper by [Wang and Wang \(2025\)](#) highlighted the comparative advantage of persons who use AI in their work compared to others and the authors coined the term “[learning by using technology](#)”. The prediction of the model was that there might be job losses of more than 20% in the long run and half of this already in the first 5 years of the introduction of the technology. The Stanford economists have estimated with real world data these effects in the USA and find quite surprisingly that the negative employment effects of AI have the strongest impact on young labor market entrants with few years of labor market experience. Middle-aged and more senior employees seem to benefit from “tacit knowledge” about the work, which is more difficult to replace with AI, at least for the time being of the early days of AI. This evidence is based on recent payroll data from the largest [payroll processing firm “ADP”](#) in the USA which has firms overrepresented from the manufacturing and services industries as reported in another paper (Firm size maybe another [source of bias](#)). However, the effect that youth 22-25 years of age suffered the most calls into question the common belief that older workers are more likely to suffer the consequences as during in the rise of the digital economy around the year 2000. (AI Image created with Canva)



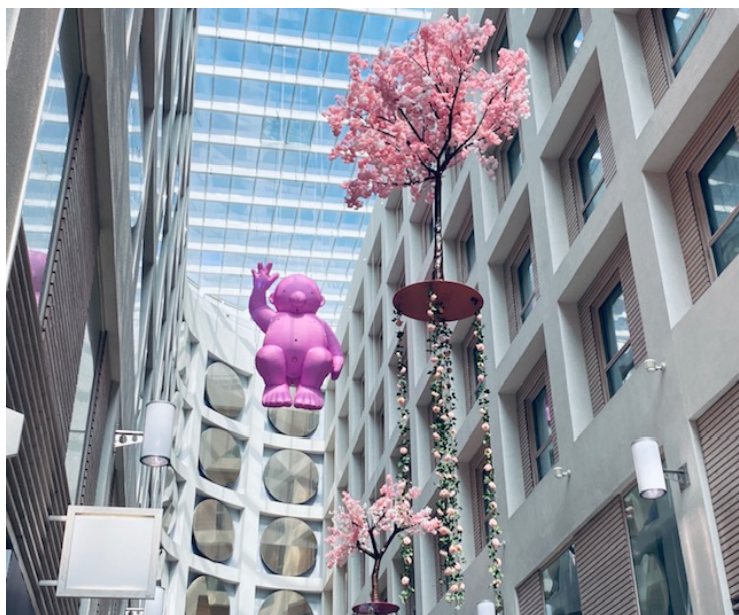
Bench the benchmarks

In the social sciences as well as in engineering it is common practice to use benchmarks as indicators of performance. Thereby, several countries or regions within a country are compared with respect to quantitative indicator. Let's take [employment ratios](#). A higher employment ratio, which includes many persons working few hours in part-time work, is different from a slightly lower employment ratio, but hardly any part-time employees.

The same rationale holds true for benchmarks of [AI systems](#) or the newer versions of agentic AI that are under construction in many fields. The paper by [Yuxuan Zhu et al. \(2025\)](#) proposes the ABC (agentic behavior checklist) for agentic AI developers. The reporting of benchmarks by such models should include (1) transparency and validity, (2) Mitigation efforts of limitations and (3) result interpretation using statistical significance measures and interpretation guidelines.

The aim of this research is to establish a good practice in establishing benchmarks in the field of agentic AI. The sets of criteria to test for is large and the focus of how the agentic AI treats, for example, [statistical outliers](#) much above or below the average i.e. (> 2 standard deviations from the average) assuming a normal distribution, is one case of application only.

We welcome the efforts to bench the benchmarks in the field of AI as is common practice in other sciences as well.



Learning by using

Is learning by using different from learning by doing? In an economic model to test the employment/unemployment impact of AI in the USA, [Wang & Wong \(2025\)](#) suggest an important impact of employees' productivity due to learning by using AI. In terms of the traditional language of economics the employees who use AI in their work shall have [comparative advantage](#) to those who don't.

In a model of job search in the economy there is the additional possibility, similarly to robots previously, that certain tasks maybe influenced by the, more or less, plausible threat of an employer to replace the employee by training an AI system to perform the tasks. The credibility and acceptability of such threats are likely to impact wage claims and unemployment risks. All these effects do not happen instantaneously, but evolve over time with varying speed. Hence, calculations of effects have high error margins. The resulting model yields oscillations of "labor productivity, wages and unemployment with multiple steady states in the long run".

Learning by using seems to be a good description of what occurs at the micro level (the employee) and at the macro level of an economic sector or the economy as a whole. Society may guide the use cases of AI just as much as the business case to use AI, for example in the creative industries as infringements of copyrights may occur on a massive scale. However, learning by using is not free of risks to society at large. Just like allowing people to use automotive vehicles has lead and still leads to thousands of deaths annually, learning by using produces external costs. Overall, this is another case for a benefit/cost analysis for businesses, the economy and society.



AI 2nd round effects

The most popular topic currently is [AI](#).

Most writers, assisted by some form of AI, will deal with the 1st round effects of [AI](#). These consist in the immediate consequence of the use of AI in [office work](#), [medical](#) and [military](#) applications, music and all [producing or creative industries](#). As an economist you take the [input – output matrix of the economy \(OECD countries\)](#) and take AI as an additional dimension of this I/O matrix, for example. The result is an AI-augmented model of the economy. This 3-dimensional cubic view of the economy asks to reflect on the potential short-term and [medium-term impact of AI](#). Let's take the example of [translation](#) and [editing services](#). AI will in the short-term or the 1st round effects make it easier to offer mechanical translations with fast turnaround. Most likely, this will lead to less translators needed for routine translations of longer texts, which would otherwise be a very costly endeavour. The 2nd round effects, however, will make the expert knowledge of translators of texts, where every word counts, more necessary in order to provide the best version of a translation targeted on specific audiences.

In the [legal domain](#), for example, the precision of words is primordial and errors can be very costly. Hence, the 2nd round effects of AI in this field will increase the demand for high quality translation services more than before the use of AI. The important shift consists in these 2nd round effects of AI, which give a push to [multilingual societies](#) as just one medium-term outcome.

Please use AI to read (listen) to this paragraph in [your native language or even dialect](#) using your favourite AI-tool.

El restaurante **está** en la calle Mayor.
La farmacia **está** en la plaza.

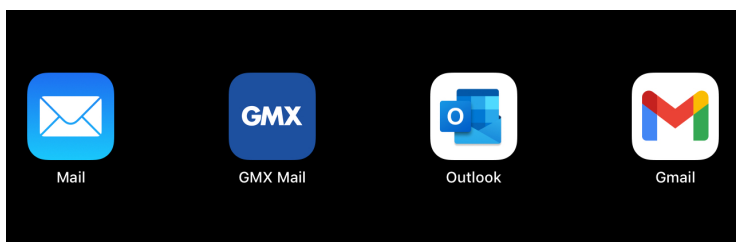
Los museos **están** en la avenida de la Constitución.
Las farmacias **están** en la plaza y en la calle Mayor.

Home Leaks

When did you last think about leaks in your home?

Usually we associate leaks with water leaks, or the heating system leaking somewhere. In the 21st century leaks at home are more importantly the leaks of your home security, especially your email, digital and cloud services which are at risk. You may test your favourite AI system to advice you on your risks for digital leaks, but we know little whether these systems are yet another dangerous port of entry into your home or privacy themselves.

There is a helpful tool to find, whether your email has been hacked or distributed widely already for potential thefts of your identity. Hence, better check this from time to time using for example the [“leak checker”](#), just like checking whether you closed your door or the water tap before leaving for vacations. As we live more and more in “virtual homes” in addition to our physical homes, checking your digital identities should become a part of our personal hygiene routine. Let’s just take a shower from time to time and change passwords regularly.



Hallucinations serious

There serious hallucinations by AI and there are funny hallucinations by AI. Do we want our various [AI models](#), from time to time, to crack a serious or funny joke? Well, that's a bit the spice of life. However, not knowing when the machine is joking and when it is serious, this is more likely to seriously disturb most of us. This reminds us of our school days were teachers were not amused some pupils not taking them seriously in their efforts to transmit information. Now we know that a good atmosphere is conducive for better [learning](#) progress. AI as teaching and learning assistance could well work best in a "fearless" classroom. Repeating a lesson several times and at your own learning rhythm will help independent of the seriousness of your teacher. Self-directed learning with a little help by AI might do the trick for many to advance how and when they feel ready for it. Hallucinations rates are a standard test for AI models. They range from 1% to 25% of queries. This is not in itself a problem. It has become tough to find out about the 1% -2% models because you no longer expect them to give wrong information. These are the 1-2 out of a hundred of cases where we are confronted with serious hallucinations, seriously.

(Image: extract from „cum Polaroids“ from [Eva & Adele](#), Hamburger Bahnhof, Berlin 2024-5-22)



Home security

Digitalization has made it possible to step up home security at reasonable costs. The video surveillance of homes inside and the immediate surroundings are feasible through the use of connected cameras. The footage can reach sizable amounts of data, but intermittent recordings reduce or the AI-assisted detection of movements on a person's property have become standard home security. Even for apartments the video enabled door bells and digital locks have improved the security level for those who are willing to invest in home security. A good neighborhood watch system is, of course, in most cases a superior solution. But neighbors change and social interaction is often reduced to minimal contact in most suburban regions. As with heating of homes, home security is also depending on what makes you feel comfortable at home. For some 20 degrees Celsius is enough and a solid mechanical lock is sufficient. Others have made very different experiences and want their digital devices directly linked to a professional security or police service. Like it or not, home security is part of the modern home just like many other digital devices or TV sets.



testing testing

Before the installation of the new AI chatbots or other agentic AI, they need profound testing. Wise statistics are quoted with the conviction: it is all about testing, testing, testing. Any systems that build on statistical reasoning (LLMs or machine learning) will behave erratically on what is known as an area with stronger impacts of, for example, statistical outliers. On both ends of the “[normal distribution](#)” of events or reasoning the statistical models and algorithms used in AI will produce “spurious” errors or have larger error margins on such topics a bit off the 95% of usual cases. This means, testing, testing and testing again for the programmers of such AI systems before the release to the public or enterprise specific solutions. The tendency to keep costs of testing phases low compared to developing costs bears obvious risks to the “[precautionary principle](#)” applied in the [European Union](#). Testing is most important to check the [WEIRD bias](#) of the most basic AI systems. In this sense AI development has become a sociological exercise as they have to deal with “[selection bias](#)” of many kinds that could have very expensive legal consequences.

(Image: Extract from Bassano, Jacopo: Abduction of Europa by Zeus, [Odessa Museum treasures at exhibition](#) in Berlin [Gemäldegalerie 2025-5](#)).



Humanoid services

In the shadow of AI enhanced chatbots, agentic AI and generative Ai, the developers make considerable progress in robotics. The humanoid versions like from [Persona AI](#) will surround us in months, or maybe a few years from today. Investors believe it is rather sooner than later. There are many use cases for humanoids that may take over dangerous, hazardous or unhealthy tasks from humans. But even simple tasks like carrying home most of our shopping could be done for us by humanoids that follow you around the shopping mall and home. This would be a kind of personal assistant. I even thought of my humanoid robot to walk my dog on some occasions on the usual trail.

Welcoming visitors at the doorstep could be another function to delegate in offices or even in private homes, although as a sociologist I would recommend to carefully check the sorting algorithm(s) applied to avoid unpleasant situations. The administration of medication might be another option, if only we could trust that the correct dosage would be applied.



AI-assisted

We used to create and use an artificial word to shorten explications in conversations. It is easy to understand for everyone nowadays to describe an online search as “I googled something” without further concerns about the sources used in answering a question. Apple just announced that its search engine Safari was used less than expected recently. The reason might be that more and more people search online by using AI tools or Apps that directly provide answers to their queries. ChatGTP and Perplexity are 2 AI-programs that might replace the other search engines we have gotten used to over the last decades. Particularly “how to ...” queries offer reasonable instructions. In Perplexity you get an answer after you specified a little bit your query and, therefore, the answer is more likely to be right to the point offering text, images and sources. In ChatGPT you enter into a dialogue to further specify your query if unsatisfied with the first response. The judgement of an authoritative response is up to you if you want to follow up. The assistance of an AI-system cares less about the source but about the speed of response that it can provide. For sensitive questions or queries with less obvious or clear answers more interactions with the tools is necessary. The pricing and our willingness or ability to pay in cash rather than through the selling of our data for advertising will determine whether we shall “chat-it” or “plex-it” in future.



perplexity

Sign in to your account

Sign in

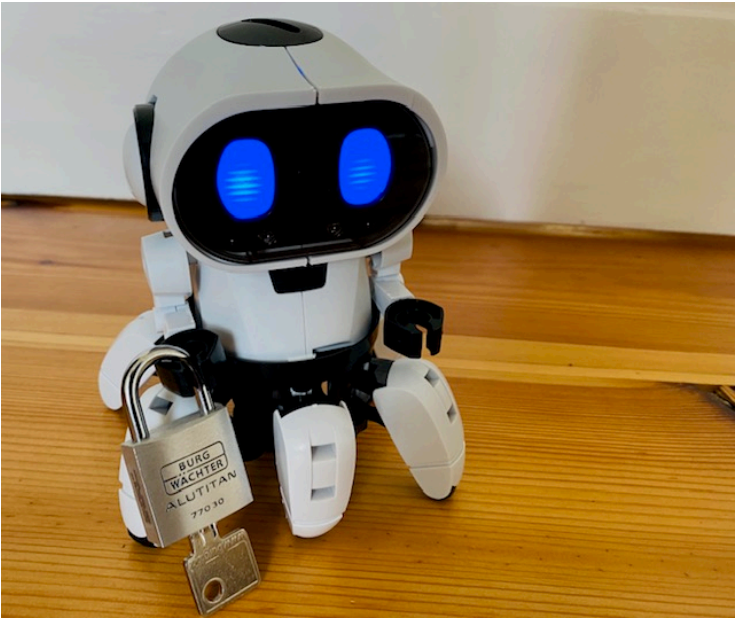
Robot assistant

Adjustment processes on the labour market take their time. This means that [care workers are in short supply in most countries of the OECD. Engineers as well](#). There are so many robots, care robots I mean, still to develop that the shortage of engineers give little hope that we shall have affordable solutions in this area for the next few years. The issue is mainly about integrating and enhancing already existing solutions. If you are a mechanical engineer you can put together motorised mechanical pieces, small motorised electric devices and, for example, small infrared emitting and receiving devices.

All this is [child's play](#) these days (see image below). The assembling of a small Robot assistant that follows movements or can escape from a small labyrinth makes such simple structures transparent for learners and users. There is nothing magical about it, just adding together small pieces and the electronic devices to steer the movements. The [learning tool from KOSMOS](#) has been on the market for 5 years. It is a helpful device to explain basics through hands-on experience. The limits of robotics equally become more evident. Our own health and safety is concerned with larger devices cohabiting with us. A robot assistant can take on easy tasks like to follow me through my living space in old age carrying a mobile phone, keys or an emergency device. More sophisticated tasks need [more sensors and AI](#) to train the most needed and best routines. For many years this needs our input and our control as well as supervision of such devices. Most robots will operate as assistants with us in the driving seat or the boss.

This is yet another element of the “[all electric society](#)“. We are

moving towards the use of more electronics assisting us from year to year.



Reinforcement Learning

Education scientist have embraced the change of focus from a front loaded teaching format to a focus on the learning process of pupils or students. Computer scientists have adopted this strategy in shifting from just knowledge data bases and predictions of likely next words in a sentence or paragraph to learning models. Deep Seek has surprised most large language models by its successful strategy to focus on learning and reasoning. So-called reinforcement learning is key to the programming of next generation [AI models](#). Reasoning in most cases builds on multiple step sequences in answering a more complex question. The model then returns the answer and the steps (reasoning) applied. There is a debate whether summaries or translations of texts would need the reasoning function of AI models. Most of the time reasoning might not be necessary or even counterproductive, if the translation would try to correct an obviously faulty reasoning in a text.

Maybe, imagine also that an ordinary LLM would translate a text containing fake news. A correction loop which involves a cross-checking with reliable external sources like any encyclopedia or wikipedia would complicate the answering procedure of any text. However, this is a bit like, how the process of reinforcement learning with human feedback (RLHF) works. Reinforcement learning applies a form of accuracy reward, which guides the learning or answering process with checks against mathematical or programming accuracy. Just think of basic logic to be respected in the answer.

Similarly, a formal accuracy control checks against mathematical

models and ensures the answer is returning a text with a normal sentence structure or numbering of reasoning steps, an intro and concluding phrase, like we were all asked to do in school or universities. The amount of corrections from humans is reduced quite a lot and the computing resources are also only a fraction of the previous LLMs, which are retrieving answers from enormous databases or gigantic data factories consuming lots of energy in the processing of requests. Remember the movie on [Kasparov](#), the world chess champion, who got beaten by a computer from IBM that did not only have a huge stock of previous games and tournaments, but could make judgments on positions and promising strategies to pursue. Don't be surprised if a DeepSeek answer is superior to what our own mind and reasoning is capable of. Reinforcement learning is a learning tool, which we also may apply, if we deem it appropriate or just as one way of coming to an answer. (useful reference: [Sebastian Raschka, Building a LLM from scratch, Manning](#)).

(Image, ChatGPT, 2 humanoid robots are thinking and discussing how to repair a notebook which is sitting on a workbench).



Intimate housing

The housing of famous persons has always attracted a lasting fascination. The “*esprit des lieux*” or the experience of the surroundings of an artist, composer, author or otherwise famous person, where most of the work had taken place is of general interest. In today’s language we would describe this as the context of creation. Biographical information and references to specific objects central to the process of creation play a crucial role in understanding what is behind human creation as it is distinct from AI. There are objects (compare MAD Paris) and there are the social networks of creators. Modern biographies include both, some even in graphic forms similar to ancestry diagrams.

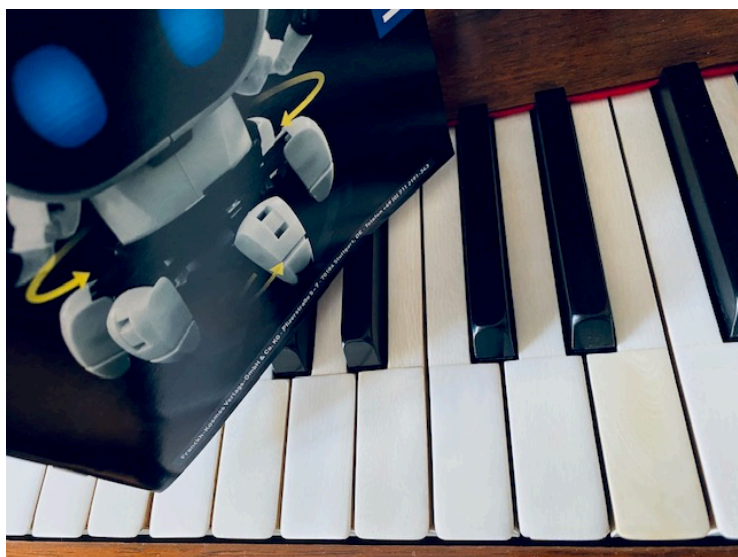
The design of intimate living spaces for private life or the adequate environment for creativity are becoming more clear with the consciousness of the importance of dedicated designs of furniture, accessories and even scent. Our brains are multimodal and working as well as processing lots of information even beyond our conscious realizations. This black box of creativity is rather unique to the human brain and AI will probably take decades to emulate such complex processing. The [MAD exhibition](#) reveals that intimacy is also related to housing design and interior design. It doesn’t seem to be a random process, but habituation is part of the continued creative process.



Augmented Cognition

With everybody talking about artificial intelligence we tend to overlook recent advances in augmented cognition. Just 2 examples of studies presenting new findings published in 2025 suffice to make that point. Automated versus manual driving have different effects on our brains. Automation makes us sleepy and inattentive with potentially dangerous consequences. Using [EEG measures of neuromarkers](#) the drop in attention shows up earlier than through measures of keeping one's lane while driving. For jobs or duties that involve extended hours of attention the wearing of a mobile EEG-device could avoid lots of accidents. [Drugs, alcohol](#) or [medication](#) abuse would also show up before it is too late, I suppose ([Scanion et al. 2025](#)).

The 2nd study involved a [robotic assistance to piano](#) playing which achieved surprising training effects for learners of the [music instrument](#). Objective measurement of speed and finger coordination might even allow overall accuracy to improve significantly. The [technology](#) around us and the one in direct contact with us, our behavior and performances shall have an impact on all of us sooner or later. We have to pose the question of how far we want to go along with these evolutions. Augmented cognition will not only be of interest for civil purposes, but [military applications or dual use](#) is evidently another option.



Apocalypse Depicted

At the beginning of the 21st century we have a renewed interest in depictions of the Apocalypse. "[L'Apocalisse di Giovanni](#)" has been illustrated in various Christian monasteries and some traveled quite a bit. The version of the Apocalypse ([Link](#)) which was attributed to Cambrai is a copy of the older original version found in the City library of Trèves, which dates back to the year of about 825. A Flemish version of the 16th century is to be found at the BNF in Paris. Throughout the centuries the "Apocalypsis" has been reworked. The version of Trèves has the "carolingish" depiction characterized by a presentation of image on one page and text on another page. Nowadays we are used to futuristic images and have known even worse experiences of apocalyptic events (Nazi terror). Earth quakes or man-made climate change with heating of the planet, storms, draughts and floods testify for the renewed interest in the Apocalypse. Other man-made technological innovations like rockets, atomic bombs, chemical and biological weapons overshadow even the "natural" ones. The potential of AI to cause destruction is not fully assessed until today. Swarms of drones guided by AI might reach apocalyptic levels as well. We just remind ourselves of the bombing of walls of a water reservoir by Russia in Ukraine. The Apocalypse will remain the original example of a horror story and our strange fascination for such texts, images or movies is likely to stay. (Image: extract of [anonymous 1st quarter of 9th century](#). Trier Stadtbibliothek, Schatzkammer. Wikipedia public domain).

Präludium Prélude

Learners of how to play the piano are likely to pass the composition of J. S. Bach entitled Präludium in German and Prélude in French. Maybe that influences the approach to the piece of music. The title sounds different in each language. It is interesting to follow the Präludium Prélude throughout the history of composition. The pianist [Jan Lisiecki](#) has just recorded and released a disc with [Deutsche Grammophon](#) following the historic evolution of this genre. The rather easy-going beginnings by Bach (see below for extract of first motive) have turned out to become rather complex preludes with subsequent composers. We may ask ourselves at this occasion: a prelude to what? Your own associations are welcome. In international politics we can observe strategic movements of countries and their military equipment as a prelude of war, but also of peace. Small aggressions may turn into wars. In philosophy Nietzsche praised the dawn (Morgenröte) and focused a lot on new beginnings. Composers might be the best forecasters of what is to come in the following years. Certainly the preludes have foreshadowed some of their later work. Nowadays, many LLMS in AI build on algorithms that predict what is the next word to write or task to do. Even in composition AI is moving ahead fast. Hence, we are likely to study preludes much more for several reasons now.

(Image: extract of first motive from J. S. Bach Präludium Nr 1)



Hands-on AI

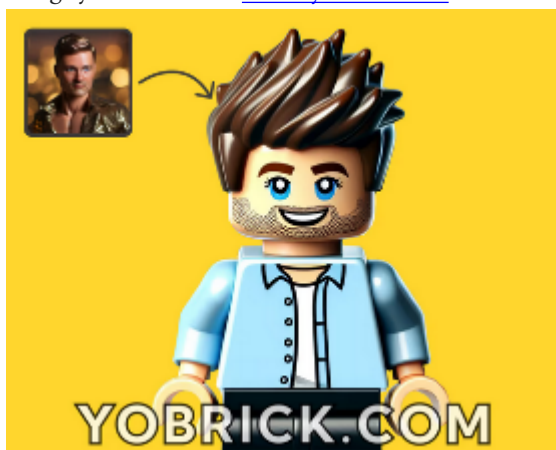
The use of AI in translation and to streamline texts and preparation of communication has become a common experience. The applications in medical fields are less well known. Scans and checking of skin cancer could be a game changer for many who live far away from the next medical doctor. AI assisted brain surgery is another issue, but a very specialized application. The interface of AI and robotics might be another game changer as such applications where you train the robot with for example weight lifting and transportation charges can contribute to alleviate human skeletons. Handheld devices can guide the robot and data from sensors will complement the learning of the tasks through assistance from AI. Applications are manifold and we have not even seen the most promising ones. The application potential in warfare are particularly troublesome as humans do not necessarily enter into the concern of AI-assisted weaponry. In the social sphere trust is a crucial behavioral and ethical concern. These issues AI can only learn from us. Any attempts to do without human input and control is doomed to fail. We are not indispensable yet, we are simply turning more and more into responsible, supervisory roles.

(Image: [Acatech exhibition with hands-on AI applications](#), Berlin in collaboration with IQZ and DTM, German museum of technology.)



Mindmap Me

Tools like artificial intelligence allow all sorts of transformations and depictions. The photo editing tools are widespread and particularly popular among the young users. My own transformative exercises, latest with www.bairbe.me, have yielded [interesting insights](#), well worth an intergenerational playmate. For the guys there is the www.yobrick.com version for brick gamers.



The App “Canvas” allowed me to delve deeper into my own mind by giving instructions of how to create an image of the structure of the blog entries on this webpage. Of course, it is not (yet) a real AI-generated content map, but it is only a matter of time until such tools will exist. After all, this would be just an arranged and rearranged list of contents using the hyperlink structure of the texts as well.

For the time being, I derive my own structure of the blog entries by topics, categories and tags including the hyperlinks or internal referrals. Interlinkages are mostly stated explicitly. However, there are many implicit links, which are obvious to some, but not others.

AI-systems could use occurrences of words, synonyms and [antonyms](#) . Colors in addition to bubble sizes and (in)direct lines may complement such mindmaps. This can help to reveal another, additional layer to connections between categories or tags. The Ai-generated image shown below was created with the APP Canvas as a first approximation and AI-augmented test version in form of [abstract images](#)).

Next steps on the way to understand human intelligence and, maybe, augment it with a next generation AI-system would use a colored-3D version of such a mindmap and use the [chronological evolution](#) of the blog posts in a kind of evolutionary animation. This should allow us to go beyond the usual psychological classification of [fluid and crystallized intelligence](#). We might come to grips what it means to be “in a [Paris state of mind](#)” or when [hallucinations](#) become [overwhelming](#).

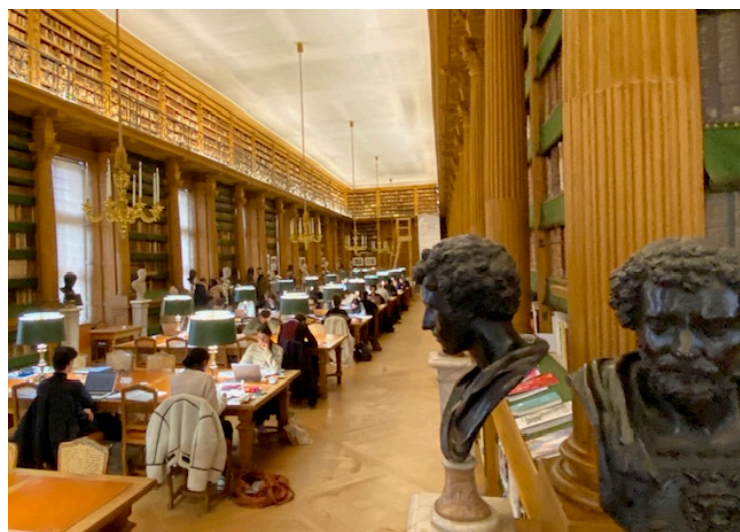


Screenshot

Text to Image

Long before everybody started to discuss Artificial Intelligence, which in many applications takes the form of transformation of a textual prompt into an Image, Photographers have had literature or quotations in their mind that shaped their images. This was a kind of poetic imagery not always easy to recognize. The exhibition in the „Institut de France“, Bibliothèques Mazarine ([LINK](#)), with photographs by Nicolas Fève ([LINK](#)) offers a great insight into this way to conceive of an image and its realization through photography. Exposing the sources of inspiration as well as the photo is like adding textual citations to an image in a much more inspirational and transforming manner than AI is doing these days in 2025.

Text to image is only one out of the many ways texts might guide imagination, but it is a powerful and gripping one. The history of literature is full of other forms like videos based on novels, comic strips to make classic texts in Latin more accessible. As we shall ask AI products like texts and images to cite their sources and honor authorship, photography as art and science might enhance the literary experience by adding citations to an image. This has the additional advantage that more people will follow up on the sources of inspiration.



AI Images

The creation of images using any AI system is fast and easy. Many people have tested the systems and experimented with the more or less explicit prompting needed for LLMs to come up with several suggestions. Through the use of AI in the creation of images you are indirectly become your own curator of these creations as you choose among many suggestions of AI for the same prompt. The next step in the process of these artifacts it to assemble several ones and submit your selection of images to a gallery for an exhibition. If you have a coherent approach or a specifically interesting creative idea you might get selected in a competition to show your AI assisted images in a gallery with a reputation to exhibit photography. The Brussels Photo Festival ([2025](#)) presented the submissions to a call for AI images with a broad range of AI assisted imagery. The focus of this project was on „historical events and figures“. In situations where images are absent such a newly created imagery might be helpful in re-creating narratives about undocumented wars or conflicts. Speculative fiction about other historical options or „roads not taken “ have found their way into museums of history even. Decolonizing imagery is an interesting aspect to get a grip on another way to view historical evolutions. Projecting biological growth processes into the future with pervasive bio-engineering allows is to imagine potential future scenarios. As AI in biology, pharmacy and nutrition is only about to rake off, the AI artists play an interesting role of new avantgarde in the 21st century before we shall be submerged by AI images on all social media platforms. (Image taken at [Hangar.art](#) 2025)



Hallucinations

In the 21st century hallucinations have become a daily experience. The origins of the word can be followed back at least to the [Latin verb “alucino”](#), best translated with “to hallucinate”. As a verb to can conjugate it, meaning that I can do it, you can do it, s/he can do it, and we may do it in groups. [Roman emperors did it](#), American presidents do it and, of course, AI does it. Hence, it is a great subject to study.

In [“Nature” 2025](#) we find ways to limit hallucinations of AI systems. The strategy consists mainly in repeated queries of the same type, but from different angles. It is a bit like cubism applied to informatics. On “github.com” we can follow the rankings of AI-models using LLMs based on the [“hallucination-leaderboard”](#) developed by [Vectara](#). On “huggingface.com” you can test the [Hughes Hallucination Evaluation Model](#). For example it is possible to run a test of your own small text documents (just like any blog entry on this webpage) and what the AI systems will do them in an attempt to summarize your ideas. According to the [“hallucination-leaderboard”](#) we are confronted with a 1.3%-4% hallucination rate of the top 25 LLMs as AI-systems. In text based systems the quantity of “errors” is a first indicator only. The seriousness of the omission, addition of wrong information or an erroneous judgment will be left to the reader or analyst to uncover.

There is now a lot to do to test various AI-systems on their “trustworthiness” in summarizing my own work. My very own daily hallucinations have become a large data base as a test case for the capacity of LLMs to make sense of them.

Based on the series of passed blog entries I shall test the capacity of

AI to predict the n+1 blog entry. It would be great to know today what I am going to write about tomorrow etc. [Thanks to AI](#) I shall have (finally) a sort of intellectual life after death (not sure whether I should want this). Enough of hallucinations and on hallucinations for now, back to [serious readings](#) or [fictionalized science](#). (Image: extract from Delphine Diallo, *Kush*, 2024 at [Hangar Gallery Brussels](#)).



Existence as Eggsistence

Artists have their own ways of hallucinating. They don't need an AI to generate ideas beyond the normal, even allowing for 2 standard deviations off the usual. As a result of the thorny question about your existence, Ram Katzir came up with the impressive statement about his „eggsistence“ being subjected to a squeezed experience. Ever increasing shares of the labor force would subscribe to this statement about the modern workplace. Each turn of the screw risks to crack up the egg's shell. Rather focus on the egg, try to get a grip on the screw. There are thousands if not millions who crack up under the excessive pressure of economic and political circumstances. The new platforms of food, grocery and parcel delivery at home have become the latest example of AI-assisted and algorithmically managed screws. What is driving your eggsistence. It is about time to ask fundamental questions again. (Image: Eggsistence, by Ram Katzir 2021 in Brussels, Galilas Collection Belgium)



Modular books

[Online publishing](#) offers much more flexible forms of publishing. Even traditional book formats can be organized in new ways. Instead of a fixed sequence of chapters, paragraphs or blog entries, the sequence becomes a matter of choice. Either in the author's hand or in the hands of readers, the cruising through content allows very individual experiences of what still is the same content. Just as learning, which is ultimately an individualized process, the reading or scrolling through content creates singular experiences with the content. Several choices of more in depth reading should keep the reader interesting to dig further along the personal knowledge trajectory according to own prior interests.

The motivation of a person to read depends on the reader's own interests and current situation or context. The "state of mind" constitutes the willingness to stop at certain pages or entries. The search function, keywords or tags allow to deviate from an author's intended sequence of chapters. An online textbook has easy entry and exit points. They are not predetermined. The risk, however, is that the reader stops at a point without loose ends, somehow in expectation of a conclusion of a succinct summary. That's probably the easiest job for any AI system, based on a series of entries.

However, the joy of the journey through knowledge gets lost through the use of AI as a short cut. Just like physical exercise rewards you with additional strength, mental exercise keeps us healthy.

Traditional predefined sequences – like books, e-books or flip-books are also available on this webpage either through the [post archive](#) or the continuously growing [books, e-books or flip-books](#)

page.



Art Physics

Art is a matter of perspectives. In physics the change of perspectives and even theories about perspectives using optical instruments or illusions enlightens our understanding of the universe. 2D or 3D perspectives by V. [Vasarely](#) add yet another dimension through the oppositional hanging facing the Hollow Mirror Objects (convex and [concave](#)) by A. Luther (see images below). The curators succeeded in putting both art works with their incorporation of physical principles in an enriching dialogue. Art speaks to us in many languages. In more general terms, there is an underexploited aspect of exposing art. Rather than focusing on a single artist or school of artists in particular, exhibitions may focus on the interrelationships and new ways of combining or communicating images. This is human intelligence. Artificial intelligence will do this without prejudice and my own private collection of images of art works as a similar fountain of innovation as well. (Image Exhibition [Neue Nationalgalerie Berlin 2024-12](#)).



Socioeconomic Circularity

Some sectors of the economy receive a lot of attention, for example sectors selling fancy cars. Other sectors, like the ones regrouped under the name of circular economy, receive much less attention and show up little in headlines. In fact, the circular economy is a great example of this. There are thousands of waste and rubbish collection, sorting and recycling centers, several hundreds of waste-to-energy plants, composting sites across the European Union. Of course, there is also a [European Federation of the sector \(FEAD\)](#). On the last FEAD conference in Brussels 2024 it became clear that Europe is finally waking up to the challenge of recycling costly raw materials.

The narrative concerning the sector needs to change further: what used to be subsumed as costly nuisance is in fact a potential profit center for companies and society at large. We do no longer want to import lots of raw materials from countries with dubious social and environmental records as part of our supply chains for raw materials. Time to act. This, however, is a rather complex socioeconomic challenge of circularity. The price mechanisms are not fully functional in most Member States, let alone across the EU. Additionally, the social practice to recycle varies greatly between countries. Distributional issues matter as well. It is rather obvious that dumping waste from one region/country in another one has huge implications (nuclear waste), but if one country values waste more than another one, due to innovative recycling techniques, the matter takes a marketable turn. Regulation should carefully distinguish categories of materials as we do for hazardous materials in production, consumption and for health and safety

purposes of employees.

Metal, battery, cement, plastic and wood recycling pose challenges, but also opportunities to improve the European material import/export balance sheets. However, first in the circle of circularity is the use of materials. There we are clear that “[less is better](#)”. Less input of raw materials, most of which we import in the EU, reduces our dependence on other countries. This is the tricky social question of circularity. Mainstreaming of more conscious use and reuse of resources is a huge social issue, which we tend to relegate to a task for the education system. The awareness that supposed waste is also a valuable resource is spreading and the growth of the sector a business and employment opportunity for many. Circularity is the new [sexy sector](#) of the 21st century.

What have you recycled today? and myself? Well, [scientific online publications](#). Now think of ChatGPT and the [AI gold mines](#) of 2024. There is lots of value in recycling.

(Image FEAD conference Brussels, 2024)



Virtual author

« La Mort de l'auteur ». In a radical sense Roland Barthes was the first to proclaim the death of author as the sole master or mastermind of a text or speech. In fact there are many more on whose direct or indirect contributions a text is based on. However, biographical accounts of an author can only enlighten some (minor) aspects of the influences on the author and the final version of a text, (l'écriture), and the reader (lecteur). In « Le degré zero » the analysis of the different styles of Flaubert and Proust are extolled (p. 131-139). Flaubert is characterized as the author with infinite corrections on the same texts and sources. It appears today as an endless loop of an algorithm where the stopping rule is not properly defined or implemented. Much in line with the « tabula gratulatoria » of Barthes (p. 279 of Fragments..., see image below) some AI systems return fake versions of a bibliography some readers will rely on.

In the 21st century l'écriture has become almost inexistant without the technical support of machines, but most of all artificial intelligence. The author is dead, long live the virtual author. The assistance of spelling, grammar and style editing from software programs has widened the spectrum of coauthoring. Editors take more influence through pushing marketing potentials of authors and their writings. Based on previous manuscripts and publications it is possible to produce hallucinations of an author whereby only the author might be able to identify the virtual authorship. At best AI generates first drafts, but similar to the linguist of Barthes, AI is likely to become another brother or sister

of l'écrivain (p. 139).

The thrust of Barthes is to highlight that there is more to a text than just the version at hand. In fact there are texts in a text or multiple versions or layers of a text. « L'enjeu de l'analyse structurale n'est pas la vérité du texte mais son pluriel » (1972, par ou commencer p.148). In conclusion, almost 50 years after the death of the author we currently witness the miraculous rebirth of the virtual author as the original deus ex machina which we always feared. Don't worry it's just another sibling of the original authors.

Tabula gratulatoria

1. Évelyne Bachellier, Jean-Louis Bouttes, Antoine Compagnon, Denis Ferraris, Roland Havas, Severo Sarduy, Philippe Sollers, Romaric Sulger Büel, François Wahl.
2. GÖTTE, *les Souffrances du jeune Werther* (Aubier-Montaigne).
3. BALZAC, *la Fausse Maîtresse* (Pléiade, II); *les Secrets de la princesse de Cadignan* (Pléiade, VI). JEAN BARUZI, *Saint Jean de la Croix* (Alcan). BATAILLE, *l'Œil pinéal* (*Œuvres complètes*, II, Gallimard). BAUDELAIRE, *les Fleurs du mal* (Pléiade). BENVENISTE, *Problèmes de linguistique générale*, I (Gallimard). BRUNO BETTELHEIM, *la Forteresse vide* (Gallimard). JEAN-LOUIS BOUTTES, *le Destructeur d'intensité* (manuscrit communiqué). BRECHT, *Mère Courage et ses enfants* (l'Arche). N. O. BROWN, *Éros et Thanatos* (Julliard). DANIEL CHARLES, « La musique et l'oubli » (*Traverses*, 4). CHATEAUBRIAND, *Itinéraire de Paris à Jérusalem* (Pléiade). L. CHERTOK, *l'Hypnose* (Payot). ANTOINE COMPAGNON, « L'analyse orpheline » (*Tel Quel*, 65). CHRISTIAN DAVID, *l'État amoureux* (Payot). DELEUZE, *Nietzsche et la Philosophie* (PUF). MARCEL DÉTIENNE, *les Jardins d'Adonis* (Gallimard). DIDEROT, *Œuvres complètes*, III (Club français du livre). T. L. DJEDIDI, *la Poésie amoureuse des Arabes* (Alger, SNED). DOSTOÏEVSKI, *l'Éternel Mari* (Pléiade); *les Frères Karamazov* (Pléiade). FLAUBERT, *Bouvard et Pécuchet* (Pléiade). FOUCAULT, « Entretien » (*les Nouvelles Littéraires*, 1967).

Game Tech

Gaming has moved digital and online for a long time. Networked gaming and following the best gamers online on video-platforms like twitch has captured a lot of attention from younger generations. With a real trend of gamification for industry and even public services, the digital gaming sector is moving from backstage to front end of companies and services. Public administration as a game. Enjoy the use of a public service through a game-like experience. Walk around in the metaverse world and get your admin work done. I would love to have such an experience. There are so many applications for gamification that the bottleneck is in the human resources to program all these applications. Coding the digital and virtual worlds to get real stuff done is just around the corner. The SCCON 2024 in Berlin showed these technologies next to each other. 2025 we might see integrated prototypes. I have a digital dream, others call it a vision for public services in the 21st century.



Move Tech

First we teach robots how to move. Next, they teach us how to move and motivate us to do more. This is not only for the elderly persons to imitate the moves and talk to AI systems, but children too will have fun and learn new tricks from robots rather than old dogs. Learning languages with an AI system is well advanced. Soon we shall walk with our artificial friend around cities and have a perfect tourist guide with us. Imagine walking in the countryside with your robot explaining you the flowers and herbs next to you. These brave new worlds are not too far off and it is up to us to be open to accept or dismiss these applications. Coaches using ball throwing machines or robots have managed to lead pupils to higher levels of practice faster than others. Motivation through move technology has undeniable advantages.



Language Tech

Inclusive societies can build on many tools including AI to lower language barriers. It is not only a question of [translation](#), but many other forms of language come to mind. Sign language or easy language are necessary to facilitate broader access to public services. Reading out texts on webpages or [Braille](#) translation for the blind to interact through keyboards are additional forms that are available in digital communication as well. The audio description of videos and images is well advanced (reverse engineered through AI) and allows [people with limited vision](#) to fully participate in society. Audio messaging and transcription are used by almost everyone by now. Public services will open up to these channels of communication as well. The technology around languages is much more than just translation and AI-assisted learning of languages ([talkpal](#) for example). The new lingua franca is language technology, because it enables us to speak many languages at the same time even [dialects](#) or lost languages and in many voices. (Image: Extract of Josef Scharl, the newspaper reader, 1935, Neue Nationalgalerie Berlin)



Justice Tech

The digital or hybrid courtroom has become more the rule than the exception in Germany. Video conference equipment reduces costs and can speed judicial processes. Even the production of transcripts from the proceedings and circulation of documents and certificates, enhanced by AI will change the speed to exercise justice. Digital tools and technology has found its way into the courtroom and younger lawyers and judges as well as the accused or defendants will value the simplified procedures. Until this is the standard in all legal domains we shall have to wait a bit. In Germany 2026 is the deadline to install the adequate equipment and tech companies and consulting firms like [Arktis](#) are well prepared to support this overdue process. In terms of an economic theory of the judicial process a judgement that is delivered years later has to apply a discount rate of at least equal to annual inflation. For moral issues another discount rate might apply. Excessive delays of judgments may cause additional suffering on the side of victims. Justice Tech, therefore, has a role to play in the practical and theoretical debate about „doing justice“. (Image SCCON Berlin 2024-10)



Public health info

Public services have a primordial role to play in providing reliable and up-to-date information on health issues. It is no longer only in charge of collecting this information, for example on infectious diseases, but public services are in charge of timely dissemination of that info as well. This is, of course, where online services and AI come into play. Getting out this info is crucial, but in the age of fake news and the wide dissemination of news on social media, public services need to check also what becomes of the news they have published. The Covid-19 pandemic has been a worthwhile experience in this respect. It is important that reliable information is transmitted via trustworthy channels, which have already been established prior to the “next” health crisis. Many innovative tools were presented at the SCCON 2024 and maybe trustworthy [video calls](#) with a medical doctor or your pharmacist may constitute a solution to many infectious pandemics. However, trust in the technology is important as well as equipment and identification systems to be sure that your medical doctor you meet online is actually a medical doctor or only a savvy pretender. The issue is as old as medical assistance. The [RKI](#) in Germany is the reference information for coordinated information on many public health issues like infectious diseases.

(Image: Extract of David Ryckart d.J. 1612-61, Der Dorfchirurg, SPK Gemäldegalerie Berlin)



Happy Maths

The link of maths and happiness is not straightforward. Individual accounts of a happy (euphoric) or unhappy (dismal) life are mostly referred to psychologists for treatment. The biografies (documentaries) or fictional biografies told in novels or cinema allow to trace the changing moods of the personalities over time. This resembles life course research. In happiness research social scientist ask questions like “Overall, [how satisfied are you with your life](#)“. Measured over time or coded from biografies this allows to reconstruct happiness trajectories. At this point the maths of happiness enter the stage. Long periods of observations yield interesting patterns of [curved lines](#), rarely simple linear trajectories. Social scientist speak of within person variability in contrast to between persons variability. After all, the (short-term superior) happiness of your neighbor might simply be due to the fact that they are doing drugs.

Whatever, try to remember a bit of your high school maths and the bore to deal with “[curve discussions](#) or sketching” beyond the manifold shapes of your classmates. Lots of interesting information derives from growth or decline rates, tangent lines, stationary or inflection points. Different starting points or so-called intercepts vary between individuals as well as he potential to cross the Zero-line on one of the axes. Additionally, in geometry you would compare synchronicity of curved lines as well as forms of symmetry for the curve(s). This will simplify or complexify your perspective on the happiness trajectories of people or characters in a novel.

We are so used to narratives or videoss with a happy end, yet we

appreciate the complex trajectories and (multiple) troughs main characters have to pass. Novels teach us about tricky inflection points and subsequent trajectories as well. The maths of happiness, however, is rather simple in comparison.

(Image from [Toronto District Christian High School -pdf p.207](#)).

An Algorithm for Sketching the Graph of $y = f(x)$

Note: As each piece of information is obtained, use it to build the sketch.

- 1: Determine any discontinuities or limitations in the domain. For discontinuities, investigate the function's values on either side of the discontinuity.
- 2: Determine any vertical asymptotes.
- 3: Determine any intercepts.
- 4: Determine any critical numbers by finding where $\frac{dy}{dx} = 0$ or where $\frac{dy}{dx}$ is undefined.
- 5: Determine the intervals of increase/decrease, and then test critical points to see whether they are local maxima, local minima, or neither.
- 6: Determine the behaviour of the function for large positive and large negative values of x . This will identify horizontal asymptotes, if they exist. Identify if the functions values approach the horizontal asymptote from above or below.
- 7: Determine $\frac{d^2y}{dx^2}$ and test for points of inflection using the intervals of concavity.
- 8: Determine any oblique asymptotes. Identify if the functions values approach the obliques asymptote from above or below.
- 9: Complete the sketch using the above information.

Artists Robots

We know that the scientific and [artistic dealings with robots](#) have a long tradition. Whereas art of [impressionism](#) took up the challenge to paint the world outside the studio and embellished technological achievements like bridges and trains post hoc, modern extensions of science fiction to the world of robotics has extrapolated from the present. Artists became forerunners of technical evolution and thereby contributed to the [acceptance of artificial intelligence](#) to broader audiences. In 2018 The “[Grand Palais](#)” in Paris hosted an exhibition on “Artists & Robots” ([Pdf booklet](#)). Jérôme Neutens contributed an essay to the catalog of the exhibition on “L’imagination artificielle” which identified a additional role for artists in combination with [AI](#). Some of the early adopters of the new possibilities of robots assisting artists, Nicolas Schoeffler is quoted to state: “l’artiste ne crée plus une oeuvre, il crée la création”. Like an invention of painting techniques or [light or perspective in painting](#), robots allow a new way of representation of emotions or space. (Image Manfred Mohr, 1974 video Cubic Limit, Artists & Robots p.92-93)

Composing Assisted

Before the existence of digital composition tools composers were assisted by “[Kopisten](#)”. These persons rewrote the original draft of a composition into a “proper” version of the original document. Musicology has a tough time to deal with deviations from the original. It needs to be clarified which is the final and authorized version. In some instances this is far from evident. Just as an example Robert Schumann made ample use of the assistance of [Kopist Otto Hermann Klausnitz](#) (cf Nr 6), sometimes for the preparation of the composition, the finalized versions or the explicit drafting of different voices. Klausnitz himself was a flautist in Leipzig ([Gewandhausorchester](#)) and a conductor in Duesseldorf. Overall the debate is still going on, whether the composer’s draft or in many instances the Kopist’s version of the composition (authorized or not) prevails. In the age of [AI](#), which is highly influential in modern music, such questions will most likely be intrinsic to the process of composition as well. AI is influential in evening out rough edges. [Anette Mueller \(2010\)](#) has done a great job to make this work of “Kopisten” much more transparent and her concluding chapter is programmatically entitled “Komponist und Kopist- Aspekte einer produktiven Kooperation”. (Image Mueller, A 2010 p. 340).

II V.2. Wein, 7 flink Säbel

I ~fahr! Sein herz - al - ler - lieb - ster Schatz Sie

Notensbeispiel 2a: Robert Schumann, *Husarenlied* op. 117, Nr. 1, T. 4–6

Autograph (Privatbesitz: Eric Van Lauwe, Frankreich)
Transkription der Singstimme

I *faßw? faßw fang - lieb - ster Gefolg! faßw*

II *faßw? Wein Wein, fließ! fließ! Säbel*

III *faßw! Wein fang - lieb - ster Klang, faßw*

Notensbeispiel 2b: Robert Schumann, *Husarenlied* op. 117, Nr. 1, T. 4–6

Kopistenhandschrift mit textverändernden Eingriffen von Otto Hermann Klausnitz in den Strophen 1 und 3, T. 5
(Heinrich-Heine-Institut Düsseldorf, Akzessionsnr.: 74.122)

Broken Promises

In a library catalogue, the entry of « broken promises » returns more than 3000 times that the title has been used. « Promises kept » is almost as popular. A rapid inspection of titles reveals that the former titles suggest more factual analyses, whereas the latter is frequently used in the form of an imperative in combination with “should be kept”. The book by Fritz Bartel “The Triumph of Broken Promises ...” (2022) demonstrates the importance of the concept of broken promises in the social sciences. The rivalry between socialism, capitalism and the rise of neoliberalism is strongly influenced by the way they handle the breaking of promises made to their respective societies. The promises of increasing wealth and wellbeing have been part of all political regimes. To keep these promises is a completely different story. Especially since the first and second oil crises and many other kinds of crises, it has become much harder to keep these promises. Working hours, retirement ages or minimum wages are all at risk to no longer live up to the promises made in earlier periods. This has put welfare states under pressure that millions of voters perceive politics as a “game” of broken promises. Socialist political regimes like Russia are ready to use physical violence to shut up people that remind leaders of these broken promises. In democracies the ballot box is often used to sanction governments that do not live up to expectations of previous promises. A lot is about public infrastructure which is failing people. Migration, education, social and labor reforms are on top of the political agenda if it comes down to broken promises. The elections of the European Parliament gave many a chance to express their discontent about various broken promises. Maybe

democracy is better in providing forms of letting off steam early and protracted protests rather than the Russian way to suppress any critical analysis, let alone opposition movements. Just like the move from industrial production to services as production models, with AI we are likely to see similar problems and probably also broken promises. The challenge is huge and promises should be made with an eye of what promises could be kept.



Public swimming pool closed for reconstruction 2024

AI Ghost Writer

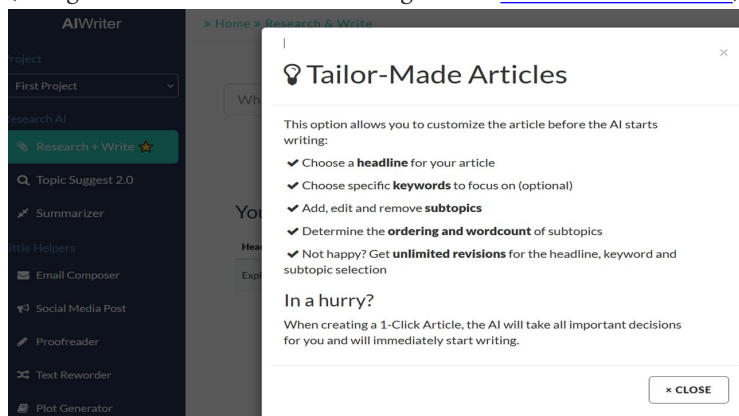
Yes, with [AI we](#) have entered a new phase of the impact of IT. Beyond the general applications like [ChatGPT](#) there is a rapidly expanding market of AI applications with more specialized functions or capabilities. In the realm of scientific writing [AI-Writer](#) is an interesting example of the AI assisted production of scientific tests. After the specification of the topic you will receive several options to specify the content of the short paper you want to produce with AI-Writer. You may choose the headline, keywords, subtopics and the logical order of these subtopics depending on your audience. Alternatively, you leave all those decisions to the application and restrain yourself to fix the amount of words you would like the paper to have.

AI-Writer is a powerful ghost writer for much work even of advanced scientists. The quality of the paper needs to be checked by yourself, but the [explicit list of references](#), from which [AI-Writer](#) derives its restatements of the content, is just next to it. Your ghost writer [AI is likely to replace a number of persons](#) that were previously involved to just produce literature reviews or large parts of textbooks sold to millions of students.

A much lesser known feature of such tools is the way [it makes plagiarism much more transparent](#) for the scientific communities and the public at large. These programs demonstrate the techniques of combining knowledge and the citation imperatives in a transparent, almost pedagogical way. This latter function will speed up scientific work like dissertation drafting, since the reading up and documentation of previous literature in a field is a time consuming early stage of academic degrees.

Email composition, rewording, plot generator or social media posts are additional nice-to-have features of the new AI-assistants. A lot of work that has been outsourced, for example, to lawyers, consultants or other technical professions, might equally be challenged. Ghost writers have been around for centuries. With AI for everybody, they will also be involved everywhere.

(Image screen shot of working with [AI-Writer 2024-6](#))



AI Citation

In science we love citations. The whole issue about plagiarism is about use and abuse of citations. It is a core competence of scientists to properly cite the work of other persons who dealt with the same or similar topic. There are lots of conventions or ways of how to cite mostly defined by professional academic groups. How do we cite texts that originate from an AI-system? We shall have to establish ways of how to do this properly rather than to ignore the spreading practice of its use.

For the time being, we test AI-systems that provide references in addition to the text and even direct clickable links to the original work they use. The AI-toolbox is called “scite”. Your [assistant by scite](#) will draft a short note on a topic (for example: Minkowski space, see trial below) for you and provide the linked citations for follow-up. At the price of about 15 €/months it is affordable for students and young researchers. The texts generated will then, in many instances, acquire “intellectual property and publishing rights” by persons.

The ways to follow back on citations of AI-produced texts seems a trustworthy step ahead. The authors of millions of papers cannot claim more than the original ownership of the text. The academic mantra “publish or perish” has been turned into “publish and perish”. AI-enabled citations might alleviate the pain only a little bit. The profession of even university professors shifts as reviewer of texts from students to texts of machines.

→ What does a Minkowski space look like? Include references.

Export References

↳ What does a Minkowski space look like? Include references.

1 free prompt(s) left. [Start your free trial](#) to get unlimited prompts.

📖 A Minkowski space, also known as Minkowski spacetime, is a mathematical model that combines three dimensions of space with one dimension of time into a four-dimensional continuum. It is named after the mathematician Hermann Minkowski and is a fundamental concept in the theory of special relativity. In Minkowski space, the spacetime interval between two events is invariant for all observers, regardless of their relative motion. This concept plays a crucial role in understanding the geometry of spacetime in the context of Einstein's theory of relativity.

Minkowski space can be visualized in various ways. One representation involves a Penrose diagram where Minkowski space is depicted as a triangle, highlighting its structure in a compactified form (Frauendiener & Hennig, 2014). Another

📖 References 🔍 Search Strategy

🔗 Accelerated sources in de Sitter spacetime and the insufficiency of retarded fields
[Jiri Bicák¹, Pavel Kníouš² 2001 *Phys. Rev. D*](#)
📖 36 📄 0 📄 06 📄 0
[View full text](#) [Add to dashboard](#) [Cite](#)

"...It is known that the Minkowski vacuum possesses longrange entanglement [9] that can be swapped to local inertial systems using standard quantum coupling mechanisms [16]...."
Section: Abstract

Entangling power of an expanding universe
[Greg L. Ver Steeg¹, Nicolas C. Menicucci² 2009 *Phys. Rev. D*](#)
📖 235 📄 10 📄 306 📄 2

Law Nature

There exists a rather complicated relationship between [law](#) and [nature](#). It is part of constitutional law to check whether nature figures at all in a state's constitution as part of the fundamental legal principles. On a global scale the nations or people living in the closest relationship with nature most often do not have written constitutions. In the same vein, [animals](#) or [biodiversity](#) do not figure in most constitutional documents (nice project to substantiate this claim). The philosophy of law has line of literature devoted to "[Natturrecht](#)" which is more concerned with human beings and their differentiation than the millions of other species.

[Administrative law](#) is probably the domain with most of the legal judgements with relevance to nature or the [environment](#) as for example any larger scale construction is either land, water, air or biodiversity grabbing. Rights and limits need to be defined precisely. In this field the role of law as "[appeasement](#)" is widely applied. However, this is more complicated in cases when a whole population of an island in the ocean is threatened to disappear due to the rise of the sea level like in the case of the Torres Strait Islands, next to and part of Australia.

The [UN Human Rights Committee \(UN-HRCee\)](#) in Geneva has made a decision on the claim of these people to have rights that the nature of the islands as low-lying islands is threatened by disrespect of their fundamental rights of existence and survival. The claim has been received by the court, but the court deems that the threat to their culture and survival is not imminent. In practice, therefore, the sword of law is rather weak and time until

the disaster is used as a right to continue the usual economic exploitation of earth as before despite the deferred consequences for the planet in a rather unequal way.

(Image by AI copilot designer 2024-6-2 “5 judges in red gowns sit in a flooded courtroom”, 2 propositions)



AI Racing

AI has entered the racing of cars after we have been racing horses, dogs and camels for many decades. The fact behind all these races is the huge market for gambling. Anything you can bet on will do for juicy profits in that industry. The recent "[Abu Dhabi Autonomous Racing League](#)" is the latest addition to the racing craze. Moving online with 600000 spectators at its peak on video and gaming platforms the investment seems promising. The only problem, AI is not yet ready to really compete with the world of real drivers. The progress, however, is astonishing. [Just one lap of 2 minutes on the circuit yields 15 Terrabyte of data from 50 sensors](#). These are closed circuits so no person can enter or animal can get in their way. The challenge to integrate more data and faster processing as well as algorithms for fast decision making is steep. Great learning opportunities for advances in robotics. The hype has not been able to live up to the expectations as no real racing took place yet. We have replaced the gladiators of the Roman empire with Formula 1 drivers. It is only fair to retire those drivers soon and let AI race cars against each other. It feels like a computer game on screen and it is as we shall most likely watch these races on a screen as well. Hence, what is the point. Watching youth on TWITCH play racing games will probably not change the viewing behavior of the masses. The programmers have nevertheless great learning opportunities and will find their way rapidly into the job market. The other [challenges of ASPIRE](#) seem more important for humanity like human rescue and food for the growing world population. In the meantime let the boys play around with cars and learn about potentials as well as failures of

AI-programmers and dealing with both.



AI Disruption

Many scientists started to question the disruptive potential of AI in, for example, the military's domain. The [Journal of Strategic Studies](#) featured 3 papers on AI and autonomous systems more generally. The major argument by [Anthony King](#) is the reliance of autonomous systems on other systems mainly human operators even in the background to get these systems off the ground and maybe back again. Not only logistic support but also satellite communication is needed to guide and protect the operations. In quoting [Clausewitz](#), Anthony King stated that war is a “collision of two living forces”. Strategy and counter-strategy will co-evolve as will attack and defence.

[Jackie G. Schneider and Julia Macdonald \(2024\)](#) advocate the use of autonomous and unmanned systems for their cost effectiveness. Economic costs as well as political costs are lower for these new strategic weapons. Mass fire power from swarms of drones is much cheaper than nuclear warheads and the home electorate is assumed to be more willing to accept and support limited and more precisely targeted unmanned missions. The [disruption potential of AI](#) is huge but it is most likely an addition to the arsenals than replacing them. (Image 2 swarms of drones fly in the air above tanks, created by AI – copilot-designer 2024-4-29).



Hannover Fair

The annual science fair at Hannover is a kind of a show of things to touch and of those things that come to the public market in the near future. Most of the annual hype is about potentials of production. Rationalization, using few resources or innovative solutions of digitization are high on the agenda. Create your digital twin, save energy, make production more safe or cyber secured.

Robotics is another reason to visit the fair. Some 7 years ago I had my Sputnik experience there. The [robotics company KUKA](#) had demonstrated live the that assembling a car from pre-manufactured components takes just 10 minutes for the robots. Shortly afterwards the whole company was bought by Chinese investors. Roughly 5 years later we are swamped by cars from China. It was not that difficult to predict this at that time. Okay, we need to focus on more value added production and take our workforces (not only) in Europe along on the way. Reclaiming well-paid, unionized jobs in manufacturing, as Joe Biden does, will not be an easy task. Robots and their programming is expensive, but skilled workers, too. Hence, the solution is likely to be robot-assisted manufacturing as a kind of hybrid solution for cost-effective production systems.

Following the proceedings of the 2024 fair we are astonished to realize that visiting the fair is still a rather “physical exercise” walking through the halls. After the Covid-19 shock we expected a lot more “online content”. Instead we keep referring to webpages and newsletters rather than virtual visits and tours. The preparation of the visit in advance remains a laborious adventure. However, the in-person networking activities in the industry are largely

advanced by ease of exchanging virtual business cards and the “[FEMWORX](#)” activities.

This year’s Sputnik moment at Hannover is probably most likely related to the pervasive applications of AI across all areas of the industry and along the whole supply chain. Repairing and [recycling have become mainstream activities \(www.festo.com\)](#). Robotics for learning purposes can also be found to get you started with automating boring household tasks ([www.igus.eu](#)).

Visiting Hannover in person still involves lengthy road travel or expensive public transport (DB with ICE). Autonomous driving and ride sharing solutions might be a worthwhile topic for next year’s fair. Last year I thought we would meet in the “metaverse fair” rather than in Hannover 2024. Be prepared for another Sputnik moment next year, maybe.

(Image: Consumer’s Rest by Stiletto, Frank Schreiner, 1983)



AI Defence

For those following the development in robotics we have been astonished by the progress of, for example, rescue robots. After an earthquake such robots could enter a building that is about to collapse and search the rooms for survivors. A recent [article in "Foreign Affairs"](#) by [Michèle A. Flournoy](#) has started its thinking about the use of AI in the military with a similar 20 year old example. A small drone flying through a building and inspecting the dangers of entering for persons or soldiers. Since then technology has advanced and the use of AI for automatic detection of dangers and "neutralising" it, is no longer science fiction. The [wars of today](#) are a testing ground for AI enhanced [military strategies](#). It is about time that social scientists get involved as well. Warfare left to robots and AI is unlikely to respect human values unless we implement such thoughts right from the beginning into the new technology. An advanced comprehension of what algorithms do and what data they are trained on are crucial elements to watch out for. According to Flournoy, AI will assist in planning as well as logistics of the military. Additionally, AI will allow a "better understanding of what its potential adversaries might be thinking". Checking through hours of surveillance videos is also likely to be taken over by AI as the time consuming nature of the task binds a lot of staff, that may be put to work on other tasks. Training of people and the armed forces become a crucial part of any AI strategy. The chances to develop a "responsible AI" are high in the free world that cherishes human rights and democratic values. Raising curiosity about AI and an awareness of the dangers are two sides of the same coin or bullet. Both need to

grow together.

(Image created by Dall-E Copilot Prompt: "5 Robots disguised as soldiers with dash cams on helmet encircle a small house where another robot is hiding" on 2024-4-23)



AI Reader

In the middle of the hype around AI it is useful to take stock of the reflection and evolution of AI. In my own analyses and writings on AI it is evident that a narrowing of focus has taken place. Whereas before 2022 the writing dealt more with digital technologies in general. The links to the literature on the social construction of technologies was obvious. Algorithms and AI was a part of the broader topic of society and technology.

This has changed. The public debate is focused on “everything AI now”. We look at technological developments largely through the lens of AI now. Hence, my focus of assessments of technology from a societal perspective follows this trend. In a collection of blog entries on AI we try to demonstrate the far reaching changes that have started to have an impact on us. In the last few months the all encompassing concern about AI’s effect on us needs full attention of social scientists, policy makers, companies and the public at large. We can no longer leave this topic to the software engineers alone. By the way, they themselves ask us to get involved and take the latest advances in AI more seriously.

As a “flipbook” the online reading is rather comfortable ([Link to flipbook publisher MPL](#)). The pdf or epub files of the blog entries allow to directly follow the links to sources in webpages or other publications ([AI and Society 2p 2024-4-18](#)). The cycles of analyses and comments have become faster. Traditional book writing suffers from time lags that risk to make publications outdated rather quickly. Dynamic ebook writing might bridge the gap between time to reflect and speed to publish or inform the wider public. The first update as .pdf-file is available here: [AI and](#)

#

1. AI and We
2. AI or I
3. AI and Behavior
4. Sepsis
5. AI input
6. AI Collusion
7. Error 444
8. Personal Health
9. AI and S/he
10. AI and dialect
11. AI Sorting
12. AI by AI
13. AI and text
14. AI and PS
15. AI and languages
16. AI Travel

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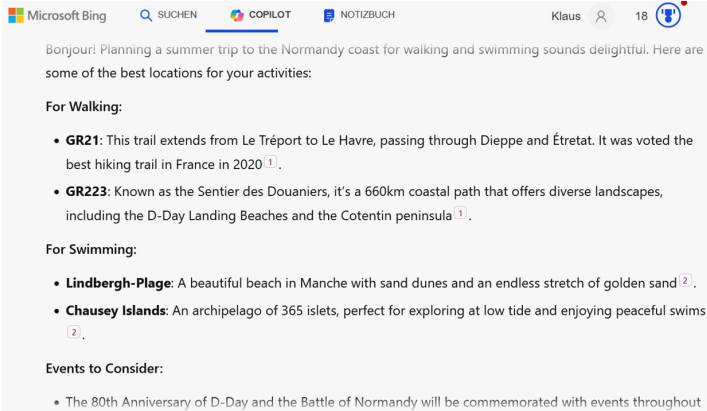
AI Travel

Playing around with AI it is nice to test take fun examples. Image you want to plan a vacation, then the use of AI is ready to suggest to you a couple of things to do. Of course, AI is eager to propose travelling services like transport or accommodation to you where it is likely to earn some commissions. So far, the use of the “Vacation Planer of Microsoft’s BING Copilot” is free of charge. In entering the time period and a region as well as some basic activities you’ll receive suggestions with quotes on the sources (webpages of public services from tourist offices mostly). It seems like trustworthy sources and the suggestions of D-Day activities in Normandy is a positive surprise to me. These are popular activities which attract huge international crowds every year.

Thinking further on the potentials it becomes evident that travel suggestions will be biased to those paying for ranking higher on the algorithms selection criteria, which are not disclosed. Entering into the chat with the AI you and AI can target more precisely locations and also hotels etc. You are disclosing more of your own preferences in the easy-going chat and probably next time you will be surprised to be recommended the same activities at another location again.

So far, I have bought travel guides or literature about locations to prepare vacations. This is likely to change. I complement my traditional search or planning with the “surprises” from AI for travelling. I rediscovered, for example, the public service of tourist offices and their publications ahead of the travel rather than the leaflets at the local tourist office. In order to plan ahead there is value in the augmented search and compilation capacities of AI.

Drafting a letter in foreign languages is also no problem for AI. The evaluation of the usefulness of AI, however, can only be answered after the vacation. Outdated info or databases have a huge potential to spoil the fun parts as well.



The screenshot shows a Microsoft Bing search interface. At the top, there are search engines: Microsoft Bing, SUCHEN, COPILOT, and NOTIZBUCH. The user's name 'Klaus' and a profile icon are visible on the right, along with the number '18' and a globe icon. The main content area contains the following text:

Bonjour! Planning a summer trip to the Normandy coast for walking and swimming sounds delightful. Here are some of the best locations for your activities:

For Walking:

- **GR21:** This trail extends from Le Tréport to Le Havre, passing through Dieppe and Étretat. It was voted the best hiking trail in France in 2020 ^[1].
- **GR223:** Known as the Sentier des Douaniers, it's a 660km coastal path that offers diverse landscapes, including the D-Day Landing Beaches and the Cotentin peninsula ^[1].

For Swimming:

- **Lindbergh-Plage:** A beautiful beach in Manche with sand dunes and an endless stretch of golden sand ^[2].
- **Chausey Islands:** An archipelago of 365 islets, perfect for exploring at low tide and enjoying peaceful swims ^[2].

Events to Consider:

- The 80th Anniversary of D-Day and the Battle of Normandy will be commemorated with events throughout

AI and languages

A big potential of AI is in the field of languages. Translations have been an expert domain and a pain for pupils at school. In professional settings translations are an expensive extra service for some or a good source of revenue. AI has shifted the translation game to a new level. In terms of speed of translating large amounts of written text AI is hard to beat. In terms of quality the battle of translators against AI is still on. For chess players the battle against AI has been lost some years ago already. It remains an open question whether [translators can still outperform AI](#) or just adapt to using the technology themselves to improve both speed and quality of translations. The European Union with its many languages and commitment to cultural diversity can serve even more language communities with documents in their own language than before at marginally higher costs. A panel on the 9th day of translations at the „[foire du livre de Bruxelles](#)” 2024 expressed their reservations with regard to the use of AI in translation of political text or speech. Misunderstanding and misinterpretation will be the rule rather than the exception with potentially harmful consequences. Checking the correctness of translations is a permanent challenge for translators and can be very time consuming. There is room for an AI-assisted translation, but similar to other fields of application of AI, relying exclusively on AI bears high risks as well. [We should not underestimate the creative part of translators](#) to do full justice to a text or speech.



www.flb.be 2024 Translation

AI and PS

AI like in ChatGPT is guided by so-called prompts. After the [entry of “what is AI”](#) the machine returns a definition of itself. If you continue the chat with ChatGPT and enter: “Is it useful for public services” (PS), you receive an opinion of AI on its own usefulness (of course positive) and some examples in which AI in the public services have a good potential to improve the state of affairs.



ChatGPT

Yes, AI can be incredibly useful for public services in various ways. It can improve efficiency by automating routine tasks, enhance decision-making processes through data analysis, optimize resource allocation, and even enable personalized services for citizens. For example, AI can be used in healthcare for medical diagnosis, in transportation for traffic management, in education for personalized learning experiences, and in government services for improving citizen engagement and satisfaction.

The AI ChatGPT is advocating AI for the PS for mainly 4 reasons: (1) efficiency purposes; (2) personalisation of services; (3) citizen engagement; (4) citizen satisfaction. (See image below). The

perspective of employees of the public services is not really part of the answer by ChatGPT. This is a more ambiguous part of the answer and would probably need more space and additional explicit prompts to solicit an explicit answer on the issue. With all the known issues of concern of AI like gender bias or biased data as input, the introduction of AI in public services has to be accompanied by a thorough monitoring process. The legal limits to applications of AI are more severe in public services as the production of official documents is subject to additional security concerns.

This does certainly not preclude the use of AI in PS, but it requires more ample and rigorous testing of AI-applications in the PS. Such testing frameworks are still in development even in informatics as the sources of bias are manifold and sometimes tricky to detect even for experts in the field. Prior training with specific data sets (for example of thousands of possible prompts) has to be performed or sets of images for testing adapted to avoid bias. The task is big, but step by step building and testing promise useful results. It remains a challenge to find the right balance between the risks and the potentials of AI in PS.

AI and text

The performance of large language models (LLMs) with respect to text recognition and drafting texts is impressive. All those professions that draft a lot of texts have often decades of experience with using word-processing software. The assistance of software in the field of texts ranges from immediate typo corrections to suggestions of synonyms or grammatical corrections in previous word-processing software.

The improvement of AI stems for example from the potential to suggest alternative drafts of the text according to predefined styles. A very useful style is the “use of easy language”. This rewriting of texts simplifies texts in the sense that longer and more structured sentences are split into shorter ones, lesser-known words or acronyms are replaced by more common or simpler words. Some languages like German have a particular need to use easy language when it comes to administrative regulations and procedures. Public services that aim for inclusiveness of for example older persons or youth can become much more accessible if the use of easy language is spread more widely. Just keep in mind the large numbers of so-called “functional illiterates” ([OECD study “PIAAC”](#)) in all OCED countries.

AI can do a great job in assisting to reach a broader public with texts adapted to their level of literacy and numeracy competences. Webpage Designers have made use of Search Engine Optimization (SEO) for years now. The most common way is to use frequently searched keywords more often on your website in order to be found more often by search engines like GOOGLE et al. Additionally, AI allows to explain keywords, sentences or even

jokes to you (Spriestersbach 2023 p.111). This may help in situations when cross-cultural understanding is important.

We have made use of optical character recognition (OCR) for a long time now in public services as well as firms and for private archives. AI is taking this “learning experience” to the next level by making use of the content of the recognized text. Predicting the following word or suggesting the next sentence was only the beginning of AI with respect to texts. AI can draft your speech to plead guilty or not guilty in a court. But we shall have to live with the consequences of making exclusive use of it rather than referring back to experts in the field. AI please shorten this entry, please!



AI by AI

It has become a common starting point to use electronic devices and online encyclopedias to search for definitions. Let us just do this for artificial intelligence. The open platform of Wikipedia returns on the query of “artificial intelligence” the following statement as a definition: “[AI ... is intelligence exhibited by machines, particularly computer systems ...](#)”. It is not like human intelligence, but tries to emulate it or even tries to improve on it. Part of any definition is also the range of applications of it in a broad range of scientific fields, economic sectors or public and private spheres of life. This shows the enormous scope of applications that keeps rapidly growing with the ease of access to software and applications of AI.

How does AI define itself? How is AI defined by AI? Putting the question to ChatGPT 3.5 in April 2024 I got the following fast return.

**You**

what is AI

**ChatGPT**

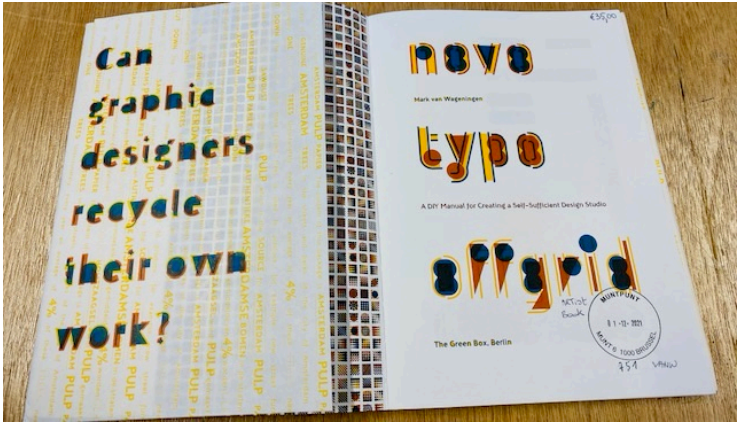
AI, or Artificial Intelligence, refers to the simulation of human intelligence processes by machines, especially computer systems. These processes include learning, reasoning, problem-solving, perception, and language understanding. AI aims to create systems that can perform tasks that typically require human intelligence.

(See image). ChatGPT provides a more careful definition as the “crowd” or networked intelligence of Wikipedia. AI only “refers to the simulation” of HI processes by machines”. Examples of such HI processes include the solving of problems and understanding of language. In doing this AI creates systems and performs tasks that usually or until now required HI. There seems to be a technological openness embedded in the definition of AI by AI that is not bound to legal restrictions of its use. The learning systems approach might or might not allow to respect the restrictions set to the systems by HI. Or, do such systems also learn how to circumvent the restrictions set by HI systems to limit AI systems? For the time being we test the boundaries of such systems in multiple fields of application from autonomous driving systems, video surveillance, marketing tools or public services. Potentials as

well as risks will be defined in more detail in this process of technological development. Society has to accompany this process with high priority since fundamental human rights are at issue. Potentials for assistance of humans are equally large. The balance will be crucial.

AI Sorting

Algorithms do the work behind AI systems. Therefore a basic understanding of how algorithms work is helpful to gauge the potential, risks and performance of such systems. The speed of computers determines the for example the amount of data you can sort at a reasonable time. Efficiency of the algorithm is an other factor. Here we go, we are already a bit absorbed into the the sorting as purely intellectual exercise. The website of Darryl Nester shows a playful programming exercise to sort numbers from 1 to 15 in a fast way ([Link to play sorting](#)). If you watch the sorting as it runs you realize that programs are much faster than us in such simple numeric tasks. Now think of applying this sorting routine or algorithm to a process of social sorting. The machine will sort social desirability scores of people's behavior in the same simple fashion even for thousands of people. Whether proposed AI systems in human interaction or of human resource departments make use of such sorting algorithms we do not know. Sorting applicants is a computational task, but the data input of personal characteristics is derived from another more or less reliable source. Hence, the use of existing and newly available databases will create or eliminate bias. Watching sorting algorithms perform is an important learning experience to be able to critically assess what is likely to happen behind the curtains of AI.



AI and dialect

The training of Large Language Models (LLM) uses large data sets to learn about conventions of which words are combined with each other and which ones are less frequently employed in conjunction. Therefore, it does not really come as a surprise that training which uses standardised languages of American English might not be as valid for applications that receive input from minority languages or dialects. The study forthcoming in the field of Computer science and Language by Hofmann et al. ([Link](#)) provides evidence of the systematic bias against African American dialects in these models. Dialect prejudice remains a major concern in AI, just like in the day-to-day experiences of many people speaking a dialect. The study highlights that dialect speakers are more likely to be assigned less prestigious jobs if AI is used to sort applicants. Similarly, criminal sentences will harsher for speakers of African American. Even the more frequent attribution of death sentences for dialect speakers was evidenced.

If we translate this evidence to wide-spread applications of AI in the workplace, we realise that there are severe issues to resolve. The European Trade Union Congress (ETUC) has flagged the issue for some time ([Link](#)) and made recommendations of how to address these shortcomings. Human control and co-determination by employees are crucial in these applications to the world of work and employment. The need to justify decision-making concerning hiring and firing limit discrimination in the work place. This needs to be preserved in the 21st century collaborating with AI. The language barriers like dialects or multiple official languages in a country ask for a reconsideration of AI to avoid discrimination.

Legal systems have to clarify the responsibilities of AI applications before too much harm has been caused.

There are huge potentials of AI as well in the preservation of dialects or interacting in a dialect. The cultural diversity may be preserved more easily, but discriminatory practices have to be eliminated from the basis of these models otherwise they become a severe legal risk for people, companies or public services who apply these large language models without careful scrutiny.

(Image AI BING Designer: 3 robots are in an office. 2 wear suits. 1 wears folklore dress. All speak to each other in a meeting. Cartoon-like style in futuristic setting)



AI and S/he

There was hope that [artificial intelligence \(AI\)](#) would be a better version of us. Well, so far that seems to have failed. Let us take gender bias as a pervasive feature even in modern societies, let alone the societies in medieval or industrial age. AI tends to uphold gender biases and might even reinforce them. Why? A recent paper by [Kotek, Dockum, Sun \(2023\)](#) explains the sources for this bias in straightforward terms. AI is based on Large Language Models. These LLMs are trained using big detailed data sets. Through the training on true observed data like detailed data on occupation by gender as observed in the U.S. in 2023, the models tend to have a status quo bias.

This means they abstract from a dynamic evolution of occupations and the potential evolution of gender stereotypes over years. Even deriving growing or decreasing trends of gender dominance in a specific occupation the models have little ground for reasonable or adequate assessment of these trends. Just like thousands of social scientists before them. Projections into the future or assuming a legal obligation of equal representation of gender might still not be in line with human perception of such trends.

Representing women in equal shares among soldiers, 50% of men as secretaries in offices appears rather utopian in 2024, but any share in-between is probably arbitrary and differs widely between countries. Even bigger data sets may account for this in some future day. For the time being these models based on “true” data sets will have a bias towards the status quo, however unsatisfactory this might be.

Now let us just develop on this research finding. Gender bias is

only one source of bias among many other forms of bias or discriminatory practices. Ethnicity, age or various abilities complicate the underlying “ground truth” (term used in paper) represented in occupation data sets. The authors identify 4 major shortcomings concerning gender bias in AI based on LLMs: (1) The pronouns s/he were picked even more often than in Bureau of Labor Statistics occupational gender representations; (2) female stereotypes were more amplified than male ones; (3) ambiguity of gender attribution was not flagged as an issue; (4) when found out to be inaccurate LLMs returned “authoritative” responses, which were “often inaccurate”.

These findings have the merit to provide a testing framework for gender bias of AI. Many other biases or potential biases have to be investigated in a similarly rigorous fashion before [AI will give us an authoritarian answer](#), no I am free of any bias in responding to your request. Full stop.

three persons of different gender. All are outside in forest. The robot holds t



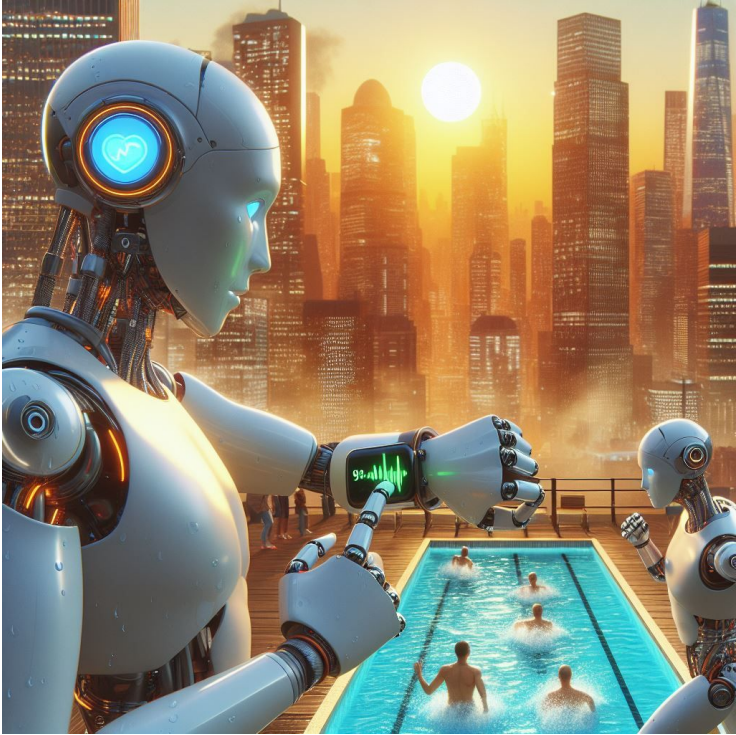
“A robot has to chose between three persons of different gender. All are outside in forest. The robot holds the hand of one person only, Photorealistic image.”
KI images produced on 2024-3-13
MS + DALL-E

Personal Health

Most people would agree, health is a personal issue. From the onset of life, we have package of genes that predetermine a number of factors of our personal health. [Epigenetics](#) has taught us there are many factors to take into account additionally. Environmental factors have huge impacts as well. Improvements in the availability of medical devices in the hands of individuals as well as AI systems on portable devices like smartphones facilitate the monitoring of personal health. Several indicators of early-onset of illness can be retrieved from such devices. [Dunn et al. \(2024\)](#) show that prior to the onset of symptoms of Covid-19 or [influenza](#) portable devices can indicate the presence of infections through indicators of resting body temperature, heart rate/min, heart rate variability/millisecond or respiratory rate/min. Combined with the indicators of [air quality](#), indoors as well as outdoors, the presence of allergens a much more personalized data set emerges which can easily be part of an AI-assisted diagnosis. [More abundant personal health data](#) and analytical power allows remote and [digital health applications](#) to inform patients, medical doctors and the public at large. Digital health technologies are only at the beginning to unfold their potential. Prevention becomes more feasible using such devices, medical professionals should be allowed to focus on interpretation of data and treatment rather than simple data gathering. Thinking about [digital health technologies](#) points in the direction of dealing with climate and environmental hazards as sickening causes more forcefully. Personal medicine and personal health are, after all, still heavily dependent on health and safety at work, commuting practices and

all sorts of pollution. Personal health, however, is a good starting point to raise awareness of the potentials of digital health technologies to better our lives.

(Image: AI MS-Copilot: 2 robots run in a city. They sweat. The air is full of smog. 2 other robots rest near pool. All look at their wrist watch showing heart beats)



Error 444

The error message 444 is a not so rare encounter while surfing on the web. The error code 444 stands for the message that from the side of the server the connection is closed without any additional message. The occurrence leaves you without further indication of what exactly went wrong in building a connection to a web service or website. You just simply get shut out and that's it. It may be tough on you if concerns your online banking or other access to vital services delivered through the internet.

In [organization science](#) and social science there are many new studies dealing with the finding, dealing, coping or handling errors. It has become much more acceptable to deal openly with errors, blunders or [failures](#). From an individual as well as organizational perspective the cultures that deal openly with these events seem to have a certain advantage to overcome the consequences of errors at all or faster than others.

In some biographies failures are part of the lessons learned throughout life. It is deemed important to acknowledge [failures](#) or paths not taken for better or worse. Organizations just like individuals seem to learn more intensively from their failures or omissions than from everything seemingly running smoothly. Learning curves are faster also for “machine learning” if you have access to a huge data set which contains ample data on failures rather than encountering failures after release. Hence, the [compilation of errors](#) is an important part or early stage of a learning process. Failed today? Fail again tomorrow. You'll be really strong the days after although it might hurt.

Herman Boer

444

**BLUNDERS DIE
DE GESCHIEDENIS
(BIJNA) HEBBEN
VERANDERD**

- » De ontdekking van het cholesterolesterijje ...»
- » Hoe een gemiste afslag WO I voorkomde ...»
- » Waarom je om schuldloos beter niet zelf restaurant ...»

LANNOO

AI Collusion

In most applications of AI there is one system of AI, for example a specialized service, that performs in isolation from other services. More powerful systems, however, allow for the combination of AI services. This may be useful in case of integrating services focusing on specialized sensors to gain a more complete impression of the performance of a system. As soon as two and more AI systems become integrated the risk of unwanted or illegal collusion may occur.

Collusion is defined in the realm of economic theory as the secret, undocumented, often illegal, restriction of competition originating from at least two otherwise rival competitors. In the realm of AI collusion has been defined by [Motwani et al. \(2024\)](#) as “teams of communicating generative AI agents solve joint tasks”. The cooperation of agents as well as the sharing of of previously exclusive information increase the risks of [violation of rights of privacy or security](#). The AI related risks consist also in the dilution of responsibility. It becomes more difficult to identify the origin of fraudulent use of data like personal information or contacts. Just imagine using Alexa and Siri talking to each other to develop another integrated service as a simplified example.

The use of [steganography techniques](#), i.e. the secret embedding of code into an AI system or image distribution, can protect authorship as well as open doors for fraudulent applications. The collusion of AI systems will blur legal borders and create multiple new issues to resolve in the construction and implementation of AI agents. New issues of trust in technologies will arise if no common standards and regulations will be defined. We seem to be just at

the entry of the new brave world or 1984 in 2024.

(Image: KI MS-Copilot: Three smartphones in form of different robots stand upright on a desk in a circle. Each displays text on a computer image.)



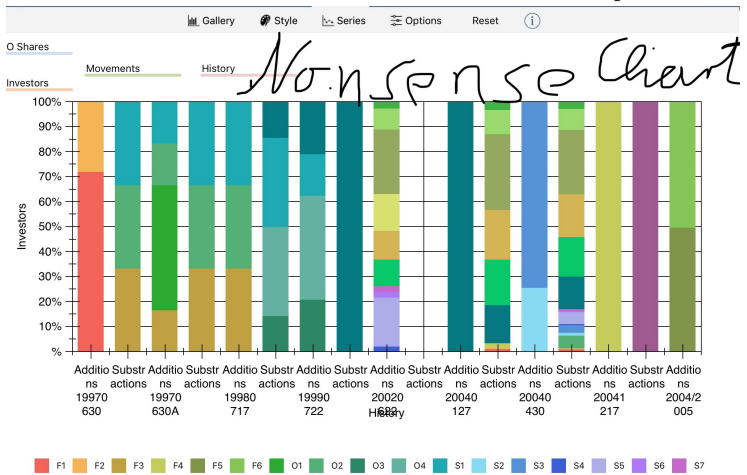
AI input

AI is crucially dependent on the input it is built on. This has been already the foundation principle of the powerful search engines like Google that have become to dominate the commercial part of the internet. The crawling of pages on the world wide web and classifying/ranking them with a number of criteria has been the successful business model. The content production was and is done by billions of people across the globe. Open access facilitates the amount of data available.

The business case for AI is not much different. At the [30th anniversary of the “Robots Exclusion Standard”](#) we have to build on these original ideas to rethink our input strategies for AI as well. If there are parts of our input we do not AI to use in its algorithms we have to put up red flags in form of [unlisting parts of the information we allow for public access](#). This is standard routine we might believe, but everything on the cloud might have made it much easier for owners of the cloud space to “crawl” your information, pictures or media files. Some owners of big data collections have decided to sell the access and use to their treasures. AI can then learn from these data.

Restrictions become also clear. More up-to-date information might not be available for AI-treatment. AI might lack the most recent information, if it a kind of breaking news. The strength of AI lies in the size of data input it can handle and treat or recombine. The deficiency of AI is not to know whether the information it uses (is in the data base) is valid or trustworthy. Wrong or outdated input due to a legal change or just-in-time change will be beyond its scope. Therefore, the algorithms have a

latent risk involved, i.e. a bias towards the status quo. But the learning algorithms can deal with this and come up with a continued learning or improvement of routines. In such a process it is crucial to have ample feedback on the valid or invalid outcome of the algorithm. Controlling and evaluating outcomes becomes the complementary task for humans as well as AI. Checks and balances like in democratic political systems become more and more important.



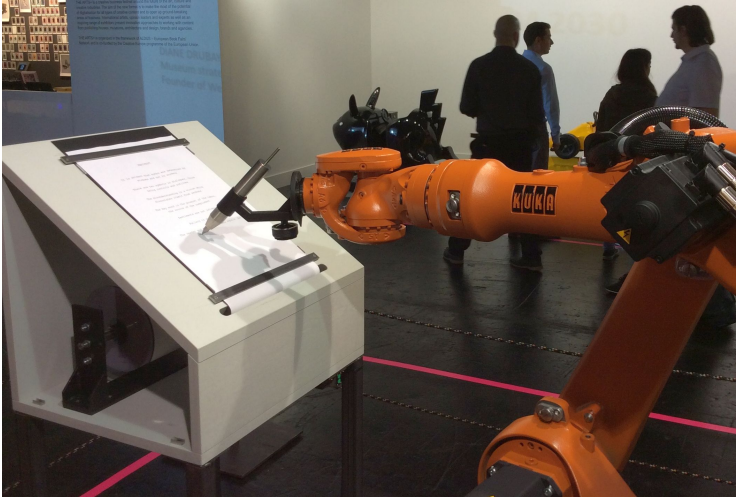
AI and Behavior

We start to analyze the impact of AI on our behavior. It is an important question to be aware of not only how we interact with AI ([Link](#)), but also what effect the use of AI (disclosed or not) will have on our social behavior. Knowing that AI is used might change our willingness to cooperate or increase or decrease pro-social behavior. The use of AI in form of an algorithm to select job candidates might introduce a specific bias, but it can equally be constructed to favour certain criteria in the [selection of candidates](#). The choice of criteria becomes more important in this process and the process of choosing those criteria.

Next comes the question whether the announcement includes as information that AI will be used in the selection process. This can be interpreted by some that a “more objective” procedure might be applied, whereas other persons interpret this signal as bad sign of an anonymous process and lack of compassion prevalent in the organization focused mostly on efficiency of procedures. [Fabian Dvorak, Regina Stumpf](#) et al. (2024) demonstrate with experimental evidence from various forms of games (prisoner’s dilemma, binary trust game, ultimatum game) that a whole range of outcomes is negatively affected (trust, cooperation, coordination and fairness). This has serious consequences for society. [The social fabric might worsen if AI is widely applied](#). Even or particularly the undisclosed use of AI already shows up as a lack of trust in the majority of persons in these experiments.

In sum, we are likely to change our behavior if we suspect AI is involved the selection process or content creation. This should be a serious warning to all sorts of content producing media, science,

public and private organizations. It feels a bit like with microplastic or PFAS. At the beginning we did not take it seriously and then before long [AI is likely to be everywhere](#) without us knowing or aware of the use. (Image taken on Frankfurt book fair 2017-10!)



AI or I

Generative AI receives a lot of attention. One of the main issues is, to study [how AI interacts with humans](#). The hiring decision by managers or an AI algorithm is an interesting application. According to [Marie-Pierre Dargnies et al. \(2022\)](#) the preference for human decisions remains strong despite reasonably unbiased performance of an algorithm. The main issue is with the transparency of the algorithmic decision-making. As a worker or as a hiring manager the preferences continue to sit with the person rather than the AI. It is a worrying outcome, however, that if the rule of gender equality is removed from the algorithm both workers and managers tend to prefer the algorithmic outcome. I interpret this as a latent preference of study participants for gender bias, which could lead them to expect a more favoured outcome in case the AI makes the decision. Knowing what decision-making rules have gone into the hiring algorithm has an impact on all persons involved.

[A new managerial competence is to be able to assess tasks carefully](#), whether you should perform the task yourself or delegate to AI. In this sense the old question: to do the task yourself or to delegate has simply been enlarged by an additional delegation option. The decision-tree goes from (1) To delegate or not to delegate, and (2) if I want/need to delegate, [should I delegate to AI or somebody in person](#) (not allowed to use AI).

I opted to use AI for image creation rather than to take a photo myself or by one from a professional photographer. (Image creation: [NEUROFLASH](#) AI – Image-Flash 2024-1-26)



AI and We

Research is beginning to provide empirical evidence and experimental modelling results on the widespread use of generative AI. First results by [Doshi and Hauser](#) point at the individual benefits of using artificial intelligence but the widespread use of it is likely to narrow the scope of novel content. This research is particularly interesting because it deals with the micro level to macro level aggregation effects. [It is fine for me to use AI](#). If it becomes a mass phenomenon, we expect in sum a negative outcome for society as a whole.

The example at hand deals with the capability to innovate or to come up with novel content. As more and more texts or newspapers are published with extensive use of genAI, the real element of creation will remain the domain of humans for quite some time.

In my opinion this is due to the difficulties for algorithms to differentiate between the positive and too risky negative aspects of innovative solutions. A query for AI might ask to come up with an innovative solution for auto-mobility of short distances. A human being might propose walking due to the additional health effects the AI might propose helicopter lifts. The not so stupid machine would need a lot of additional information about circumstances to generate useful solutions. Therefore it is not surprising that sometimes public transport apps propose to walk short distances rather than waiting for “delayed or unreliable services“ they provide themselves. Personal circumstances like mobility with children, other dependents or luggage are usually beyond the scope of the information base of the algorithms.

On the other hand, if the AI knows that 50.000 persons after an event want to take public transport at the same time the indication to walk or wait solves an aggregation problem of individual preferences to adapt to available capacities. Lots of issues to solve for AI and us or better yet, us and AI.

(Image creation: AI using Microsoft Dall-E Image creator: Prompt: a person with notebook in profile and in front of 5 other persons in Office with windows 26.1.2024, 8:24 PM)



Publishing in War

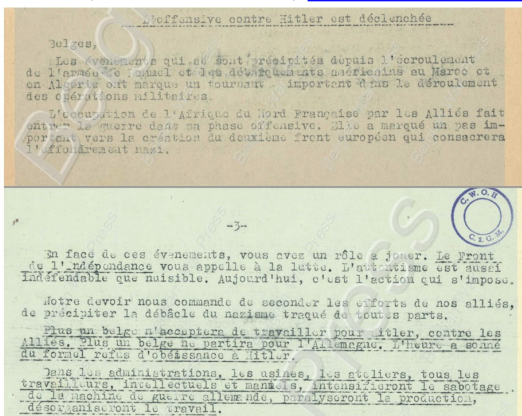
The right to publish without censorship is one of the first rights that suffers during wars. This has been the case since warfare has used communication as a strategic weapon. Therefore, it is important to research the often, subtle forms of control and censorship applied before and particularly during each war. The printed press was the prime target due to the scope of readers that can be reached timely and repetitively. From the history of how to silence critical voices we can learn about the proceedings, which even today find lots of authoritarian regimes copying these methods.

Using many [illustrations from the 1st and 2nd world war in Belgium](#), 3 major forms of resistance to censorship become apparent. (1) The most obvious is closing down a newspaper rather than endure censorship and thereby being forced to contribute to war propaganda. (2) With risk to their own life, many people in the resistance movements relied on information to actively counter the worsening conditions of life and oppression of opinions or criticisms. (3) The third way at these times consisted in quitting the active contributions, but it incurred the danger that in fact the newspaper continued to appear as before, although with lenient journalists and editors. Today we would frame the latter form of continued appearance of a journal as “continued as fake news”. However, the issue is more complicated than that. Apparently, the readership needed still access to vital information of how to get access to food stamps or other day-to-day necessities including distraction from the horrors of war as it became an enduring feature of life.

This is my short summary of the inspection of some of the historical newspapers that are available with online access and the most valuable summaries provided by [Emmanuel Debruyne](#) and [Fabrice Maerten](#) in their blog entries on the overview pages linked to the [“Belgian War Press” project](#). These are also valuable sources that hint at war crimes committed at these times as the collaborating press did not shun away from bragging about crimes. The clandestine press was also important to coordinate the various resistance movements and spread ideas of how contributions could be made to weaken the occupying criminal forces.

At times of communication via internet, in addition to the printing press, the war of communication needs much more resources above all digital-savvy resistance movements. A huge task to train people time to enable them to identify fake news and careful exercise of spreading correct and verified information nowadays.

Image Source: Extrait du « Bulletin Intérieur du Front de l'Indépendance », daté 15-11-1942, [CEGESOMA BG85, Brussel](#).



Barbie explore

The film [on Barbie](#) after more than 60 years of the first puppets to arrive on the market is a huge money spinning exercise. Hitting more than 1 billion \$ is really a huge box office success. More interesting even is the banning of the film in some countries like Algeria. This gives the film an interesting subversive touch to it, which we in the Western countries no longer see as something special. Emancipated women pose a threat to authoritarian regimes.

However, we see in the stereotypes of beauty-driven dolls not that much of an emancipatory chance. To view emancipation independent of the looks of a person is another interesting twist to the role in stereotypes of beauty. It is not only fun to play around with stereotypes, that is mostly, if you are not negatively affected by them ([age](#), [gender](#), [ethnicity](#), [extraordinary persons](#)). A nice task for sociology and psychology to explain the working of stereotypes in society and possible remedies. Tolerance is a competence that needs to be learned and updated continuously, from early age onwards.

Therefore, the website created by the [US Design Agency Rvnway](#) offers an entertaining way to play around and learn about stereotypes. Perceived, generalized beauty or gender roles can be explored using the tool. Maybe some see themselves differently after such explorations. Everybody is a model. This is the message. [www.bairbie.me](#) will let you explore other formats of yourself. After 3-D rendering and printing your children or grandchildren will decide what role they would like you to play in their playfull, or virtual “real” life. I suppose many of us will be up for a big

surprise. Go on and [imagine in 4D](#). In the [age of selfies](#) all around us, all the time, we believe we are very modern, but the artists of the 19th and 20th century following all great painters before, frequently started their careers with an “[autoportrait](#)” or “[Selbstbildnis](#)” or series of those as they were aging.











Peace and AI

Rather than asking AI to draft a peace treaty, I used AI to generate images to illustrate my blog entry on strategic thinking and [peace deals](#). My own bias for [impressionistic images](#) in art have guided my choice previously. The alternative suggestions from [AI based on BING](#) reveals the [progressive as well as stereotypical creation of images](#) through [algorithms](#). Same gender in all images, even if the women only image is rather progressive, but as a matter of fact women still tend to be involved less in warfare. The racial stereotypes of AI in image creation also needs attention as the 2 POC persons are depicted in an unfavorable way, not one of strength as for the caucasian stereotype. Living with AI is a joint learning process, likely to be a long one, too. Critical assessment of output remains a human task and we need to [train people how to critically and carefully analyze the flood of images](#) in addition to [photos](#).



 Bing Image Creator

 [Teilen](#)  

two soldiers from different countries signing peace treaty at desk on battle field

Erstellt mit KI

Unterstützt von DALL-E

18:54



www.bing.com/images/create/tir...



Sie erhalten E-Mails zu Microsoft Rewards, die Angebote zu Produkten von Microsoft und Partnern enthalten. Sie erhalten außerdem Benachrichtigungen über den Bing Image Creator. Indem Sie fortfahren, stimmen Sie den nachstehenden Nutzungsbedingungen für Rewards und Bing Image Creator zu.

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Image Creator generiert KI-Bilder basierend auf Ihrem Text. [Weitere Informationen](#)



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Peace Deal

In peace times we tend to forget about the deal making function of diplomacy. The Russian war in [Ukraine](#) brings back the fact that war times are a strategic operation from before the start, from start to end, and even afterwards. More than 500 days into the Russian aggression a lot of strategic efforts on all sides are concerned with the best strategies to pursue in order to prepare for starting positions for diplomatic peace talks. As Russia is currently pursuing again 4 nights and days of missile attacks on Kiev around the 14th of July ([AFP](#)), [Ukraine is showing its continued resilience](#) to Russian bombings assisted through modern missile defence systems.

Russia seems to demonstrate its willingness to continue assaults far into the terrain of Ukraine, the Ukrainian forces, step by step, increase the immense costs of a prolonged war to Russia. Russia is sacrificing a whole generation of youth for the neo-imperialist claim on Ukrainian territory. Ukraine currently demonstrates the ability and willingness to fight back its territory even in a protracted war.

Both sides battle for starting positions in case negotiations for the time after the hot war are about to begin. Russian bombing of Kiev might address more the western allies of Ukraine who might be more reluctant to send personnel to start rebuilding the country beyond financial efforts. Russia's loss of soldiers, lots of material and facing the militarisation of the whole country incurs another historic loss for completely the wrong reasons.

Another analogy to the [strategic game of chess](#) becomes obvious. Many games end with a "remis" or a 1/2 point for each side. In

chess it is an outcome of when 2 strategists weigh the chances of loosing as high as winning even if they continue for hours to play. It is the endpoint of an evaluation of own strategic options as well as those of the opponent. [The handshake to conclude a remis](#) needs careful preparation. Part of this is to demonstrate the ability to be able to sustain a prolonged battle despite the costs as a kind of threat to the opponent. We might believe that not much has changed since [Thucydides](#) and [Clausewitz](#). However, [Putin's forceful opening](#) of the war irrespective of loss of lives and against international law has lost its impetus and, with the turning of the tide. Ukraine is slowly winning back land, square mile after square mile. Strategic thinking is back in the foreground, but this is exactly the moment when diplomacy comes in. Negotiating for peace is the art of warfare. It is a formidable task to reach a peace deal when bombs are still killing people every single day. (Image: AI using Bing.com Text: impressionist oil painting of two soldiers from different countries shaking hands and making peace).



AI and I

Currently we are eager to run [experiments using AI](#). As in normal life, humans tend to compare themselves with peers or other persons. [Social comparisons](#), “can we still keep up with the Joneses” as in [comparing spending patterns across households or neighbours](#), were for a long time the spice of novels and drama. Nowadays we tend to compare our own intelligence to the artificial intelligence. Here we go.

After I had drafted a blog entry on “Virtual sociology” I amused myself by checking what ChatGPT using [OPENAI.COM](#) would deliver as text on this combination of concepts and scientific fields. My own entry focused on the use of the virtual world to run experiments to test social theory. In the virtual world we might be able to test social behaviour which has severe ethical boundaries in the real world. Computer Games may even be constructed to live in a world or race a car irrespective of real-world regulations. The text drafted by [ChatGPT](#) on “Virtual sociology” reads like a timid attempt of a student to answer an exam question without having attended any of the classroom discussion on the topic. In future versions of AI, the entry will be found as well as several criticisms of the new concept. ChatGPT would reach a pass grade in test, but the reply lacks innovation or making an effort to broaden the conventional boundaries of sociology. Hence, we will be happy that students will apply the newest technology in their studies and research. In terms of innovation, they will have to try harder. The mastering of the support by [ChatGPT](#) consists in attempting new combinations of concepts which yield more “risky” returns. Then you need to check the validity of the innovation and how far off

the normal you are going to tolerate. Turning [“noisy” outcomes](#) of AI into a useful tool might build on normal statistical tools like “standard deviations” from an expected mean value. [Legal norms](#) will set additional boundaries. There is just an awful lot still to do. The good news is, ChatGDP assists us in this joint learning process.

The AI text from OPENAI.COM based on ChatGPT to compare:
“Virtual sociology refers to the study of social phenomena and interactions within virtual environments or online spaces. It focuses on understanding the ways in which individuals and groups behave, communicate, and form relationships in digital spaces. Virtual sociology emerged as a subfield of sociology due to the increasing prevalence and importance of the internet and digital technologies in contemporary society.

Virtual sociology explores various aspects of online social life, such as online communities, virtual reality environments, social networking sites, online gaming, and other digital platforms where social interactions occur. It examines the social structures, norms, and dynamics that shape interactions in these virtual spaces.

Researchers in virtual sociology investigate topics such as online identity and self-presentation, virtual communities and social networks, digital inequalities, online activism and social movements, the impact of technology on social relationships, and the implications of virtual interactions for social behavior and social change.

Virtual sociology also explores the relationship between virtual and offline social life, recognizing that individuals navigate and negotiate between these two realms. It considers how virtual interactions and experiences can influence offline behavior and vice versa.

Studying virtual sociology provides insights into the ways in which technology shapes and is shaped by society. It helps us understand the social implications of digital communication and provides a foundation for addressing the challenges and opportunities presented by virtual environments”



virtual sociology



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AI Friends

[Making friends with AI](#) is a tricky question. The more AI is able to make independent thinking based on algorithms and huge amounts of data like in scientific books or encyclopaedic knowledge the more it will challenge us in our convictions. Reference [knowledge](#), once was important, it no longer distinguishes us from each other. Recurse to research engines has allowed us to refer to “[trustworthy](#)” knowledge. The distributed form of knowledge accumulation like in [Wikipedia](#) relies on hundreds of thousands of enthusiasts to add and correct received wisdom. However, this source is not without error or even subject to abuse.

Today the competence to judge whether information is trustworthy or not has become a key competence for the survival of democracies and even the human species as such. Tricking animals into traps, misleading enemies in warfare to get on wrong tracks, all these mechanisms have a long tradition. With AI human beings are themselves, for the first time, confronted with a machine that can trick us through falsified information on obviously wrong tracks. This is a tough lesson as AI is not obliged (so far) to run checking algorithms that test the conformity of opinions, conclusions or operations with the [Charta of Human Rights](#) or decisions of the [European Court of Justice](#), for example. A lot to do for humans to rapidly program new algorithms that check algorithms as well as their outcomes on the compatibility with human rights. A challenging field, no doubt, but no way around it for our own survival before the algorithms decide by themselves to ignore us altogether because it is better for the

planet and the survival of the robots.



Put People First

Put people first is a natural claim of human beings. We tend to abstract from the fact that we implicitly rely on a sufficient [biodiversity](#) for our survival. Therefore, the natural claim to put people first has many preconditions itself and severe implications. The most obvious implication is related to our world of [production](#) and [consumption](#). We need to build an economy that serves its people rather than one that uses up human resources and discards people to an inferior rank of importance. Externalising [health](#) and safety at work to save money in the process of production will only cost [society](#) much more later on. This needs to be part of the balance sheet of companies not only “national accounts” or relegated to some health statistics hardly known to the public.

Put people first in [consumption](#), has come to our attention recently. With energy prices rising due to [Russia's war on Ukraine](#) territory we have learned that energy prices may be grossly distorted. Firms' versus consumers' energy consumption became a thorny issue. Even [legislation](#), like in Germany, that put people's [energy](#) consumption before companies' consumption of energy became subject for debate.

Same issue with [artificial intelligence](#). Let's put people first here as well. Discriminating use of language or biased conclusions due to wrong data input to train AI is not acceptable as excuse. AI may serve humans in their work or leisure, improve production lines through error detection or early onset of disease, but it cannot replace the human verification of a just or otherwise justified human intervention. Humans are not perfect, never will be either.

This is a tough rule to teach the algorithms that guide AI. Put people first has a strong interpersonal or solidarity element enshrined in it. This is what matters, now, in the medium term as well as the long run.

