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How will the State think with the assistance of ChatGPT?

The case of customs as an example of generative artificial intelligence in public administrations*

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Abstract

The paper discusses the implications of General Artificial Intelligence (GAI) in public administrations and the specific questions it raises compared to specialized and « numerical » AI, based on the example of Customs and the experience of the World Customs Organization in the field of AI and data strategy implementation in Member countries.

At the organizational level, the advantages of GAI include cost reduction through internalization of tasks, uniformity and correctness of administrative language, access to broad knowledge, and potential paradigm shifts in fraud detection. At this level, the paper highlights three facts that distinguish GAI from specialized AI : i) GAI is less associated to decision-making process than specialized AI in public administrations so far, ii) the risks usually associated with GAI are often similar to those previously associated with specialzied AI, but, while certain risks remain pertinent, others lose significance due to the constraints imposed by the inherent limitations of GAI technology itself when implemented in public administrations, iii) training data corpus for GAI becomes a strategic asset for public administrations, maybe more than the algorithms themselves, which was not the case for specialized AI.

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At the individual level, the paper emphasizes the "language-centric" nature of GAI in contrast to "number-centric" AI systems implemented within public administrations up until now. It discusses the risks of replacement or enslavement of civil servants to the machines by exploring the transformative impact of GAI on the intellectual production of the State. The paper pleads for the development of critical vigilance and critical thinking as specific skills for civil servants who are highly specialized and will have to think with the assistance of a machine that is eclectic by nature.

Bureaucratic administration means fundamentally domination through knowledge. This is the feature of it which makes it specifically rational.

Max Weber, 1978, *Economy and Society*, University of California Press, p. 225

In the factory and the trade, the worker uses his tool; in the factory, he uses the machine. There, the movement of the work instrument starts from him; here, he merely follows it.

Karl Marx, 1867, Capital, Book I, chapter 15.

Administration-fiction

Disclaimer: To date, no government agency has indicated that it has integrated generative artificial intelligence into its working practices.

Niamey, Niger, General Directorate of Customs, June 2025, Etim, who works in the international affairs department, turns on his computer to write a policy brief on the role of customs in environmental policies. Etim knows his customs code and has experience on the ground, but his economics degree did not prepare him for environmental issues. He has a few hunches and remembers the 2006 Probo Koala disaster that affected his Ivorian colleagues, but he does not want to omit important points in his note to the minister, in preparation for the regional meeting on "Trade, Customs and the Environment" to be held in Abuja, in neighboring English-speaking Nigeria. Etim is not worried, however, because his personal research assistant, a generative artificial intelligence (GAI) conversational agent, AdminGPT, draws information from a vast corpus of academic, administrative, and regulatory texts, international conventions and national laws, expert reports, supplemented by recognized press sources, in all languages. The GAI agent was launched in Niger last year as a joint project of the African Union and the World Bank, United Nations agencies, the World Trade Organization and the World Customs Organization. All his African colleagues share the same access to this true, selected and verified knowledge, Etim begins his conversation with AdminGPT with a general question about the role of customs in environmental policy. The answer does not surprise him; it is simple and clear and covers the whole subject 360°; at the very most, he would have forgotten certain goods like pesticides in his considerations. His attention is drawn to the Basel Convention, with which he is less familiar, so he decides to continue his discussion with the GAI in this direction. He is also interested in the fiscal aspect, to which he will return in a second part of the conversation. A week later, after intense discussions with the GAI, back and forth on Google and Google Scholar, reading the reports and articles written by academics the GAI proposed, confronting these ideas with what he knows of the political orientations of his government and the capabilities of his administration, Etim finishes his note summarizing the policy stakes, and the progress of other countries, discussing the technical stakes for Niger Customs, and finally proposing a position for his administration, accompanied by technical options on the ground. Etim has learned a lot, mobilized his knowledge of the field to question the GAI agent and had time to reflect in depth on critical points for his administration. The Minister has received similar policy notes from the tax and environmental agencies, with all civil servants in the country having access to AdminGPT. His perspective on environmental issues is now relatively comprehensive, with the GAI agent having gathered knowledge from the African continent as well as elsewhere in South America and Asia. The Minister asks his departments to share these policy notes with countries attending the regional meeting. Niger's officials run the documents through the automatic English-language translator built into AdminGPT, and then send the result back to the GAI agent one last time, for style improvement. On their side, Nigerian colleagues did the same, circulating their own position in English and in French with their neighboring countries.

At the same time, in Niamey, Aboubakar, an investigator in the national surveillance brigade, is working on a case of counterfeit vehicle parts imported from Europe. He has collected a mass of documents, including press articles, investigation reports, expert reports, commercial invoices, customs tariffs from neighboring countries, maritime traffic data, police reports, and customs declarations. Aboubakar does not use the same GAI agent as Etim; his agent is national and isolated, shared only with other homeland security services. His profile allows him to select data sources outside of customs, his requests are tracked, and if the texts collected contain nominative data, such as confidential reports, they are temporarily stored and accessible only for the needs of his investigation. Once the final report is written, access to non-customs information is immediately closed. The GAI agent digests its corpus of texts and, based on Aboubakar's questions, it returns a graph of actors, importers and resellers from Niger, but also from Europe and Asia. Actors are linked to each other and to commodities, containers, ships, and the links in the graph are actions, legal relationships, purchases, convoys. Aboubakar begins his investigation by observing the graph, manipulating it in three dimensions, and looking for suspicious links; later, he will return to the GAI agent when his inquiries to the companies involved in the case will have provided him with new documents. At her customs office in Agadez, in the north of the country, Aminata, a customs inspector, has also anti-fraud missions, but on the frontline. She has doubts about the tariff classification of dental dams presented by an importer, this good is relatively rare at this desert border crossing. The description of the goods on the customs declaration is highly technical, so Aminata asks AdminGPT for help. The GAI's results are not always reliable, but they guide her through her thick tariff paper book, leaving her to do her job as a customs officer.

Back in Niamey, Ibrahim and Mourad share the same offices in the IT department, but one is an IT project manager and the latter is a data analyst. Ibrahim is leading the migration of the customs clearance system to new software at the end of the year. Ibrahim is also working with AdminGPT and has asked it about the most appropriate management methods given the time available, the revenue-critical nature of the system, and the involvement of international experts, as well as monitoring and success indicators. If the project is behind schedule, the GAI agent will advise him on time-compression techniques, and at the end of the project, it will guide him, step by step, on how to draw some lessons from the implementation of the project. Mourad is a customs officer, but he has acquired a solid knowledge of data science through a regional training project. The Director General has entrusted him with a confidential task: to identify "bad practices" in the customs clearance process, those practices that are niches of corruption. Mourad first consults AdminGPT and prompts it to search for historical data on customs declarations in the ASYCUDA customs clearance system. Everything is tracked there, and he explains what he is looking for: patterns, groups of inspectors with similar practices. With his domain knowledge, based on years on the ground, Mourad knows he will be able to interpret the machine's results. He asks the GAI agent to write code in R to analyze the data and then display clusters on a graph. The GAI agent responds, Mourad goes through the code and judges it to be incomplete. The agent has ignored a parameter, the clearance time which could be a sign of corruption; he asks it to redo its code taking this into account and to mobilize several machine learning models. The code and methodological choices

generated by the machine now seem more relevant to Mourad, who has saved time. Tasks assigned by the Director General are so diverse that he cannot remember all the possible models, nor the R code for implementing them, let alone the typos that make the code bug. Mourad executes the code himself, because he wants to preserve the joy of running code on a computer and discovering the result. Experienced and eager to consider all scenarios, Mourad will change a few more parameters by himself to adjust his models, and then write his detailed, evidence-based report, as AdminGPT has not yet convinced him of its relevance during this final stage of analysis.

Far from Niger, Mrs. B. is an importer of "rich" bazins, operating in Togo and Mali, but this is her first time in Niger. She is a "big trader", as they say, so she goes to the Niger customs website to put her questions to ChapChapImport, their new robot, a GAI-based agent trained on the corpus of Niger laws and all Niger customs notes. Its answers are precise, not legally binding, but Ms. B. appreciates the fact that she can converse easily with the robot. Is she even sure it is a robot? In the end, she does not care: she finds it friendly and accurate, and available at any time of the day. An official email address is always available in case she needs to get a legal commitment from the administration.

Mr. X is an elegant fraudster, a fine reader of scientific journals, he does not want to hide cartons inside a container, he bets on data, and, behind his computer, he is now betting against artificial intelligence. He too has entered into a conversation with ChapChapImport, and is testing it out. For a few hours, Mr. X provides complex descriptions of his merchandise, jackets, to see what the patient ChapChapImport returns as a harmonized system position. For his jackets, he ends up aiming for 61.05, the heading for shirts, which pay lower duty than jackets. Mr. X. twists his commercial description all over the place, changes a few words, until the robot has doubts and proposes several positions, all of which are advantageous compared to that of the jackets. He goes for the description that will create confusion, hoping it dissuades the customs officer from braving the dust and sun and venturing to open his container… As he registers his declaration in the Niger customs system, Mr. X thinks of Mallarmé and his roll of the dice, a throw of artificial intelligence will never abolish chance.

Introduction

Any resemblance to reality is not pure coincidence. Fiction in this futuristic administration that has integrated GAI is reduced to a single fact: the funding of a GAI conversational agent by donors. The rest, problems and uses of GAI already exist: replacing administrations' chatbots[1] that lack learning capacity and have a limited interpretation of human language through rules and keywords[2] (Council of Europe 2023); assisting in writing,

[1] Chatbots exist for a long time, including for Customs administrations, for BREXIT (https://www.thebotforge.io/case-studies/brexit-customs-information-chatbot/), or in Finland Customs (https://tulli.fi/en/about-us/contact-information/information-for-private-customers/customs-chatbot-hippu), in India Customs (https://www.icegate.gov.in/), US CBP (https://www.cbp.gov/employee-resources/family/employee-assistance-program/enhanced-services/tess-faqs). Same for tax administrations https://www.ciat.org/ciatblog-podra-utilizarse-chat-gpt-en-las-administraciones-tributarias/?lang=en . However their capacities seem limited to specific domains like providing general information on customs clearance based on precise questions.

[2] The French government announced that ChatGPT will be used to assist civil servants in charge of responding to users' requests.

summarizing, correcting spelling and syntax, improving style[3] (Babl and Banl 2023, Huang and Tan, 2023; Yang et al., 2023; Xames and Shefa, 2023), and even note-taking during a videoconference[4]; assisting in research, in producing a synthesis of ideas and issues in a domain or at the preliminary stages of legal investigation (Ophal et al.2023); assisting in data analysis, selecting data, writing computer code, creating graphs, and analyzing highlights (Cheng et al. 2023); assisting in the management of IT projects in public administrations (Minelle and Stolfi 2023); assisting in the collection of digital evidence (Rodriguez et al. 2022, Henseler and van Beek, 2023); and representing a bunch of information as a graph for antifraud purposes (Graham et al. 2023). The Council of Europe (2023) gives other examples of uses that are not related to text production (but does not give any references to existing GAI-related experiments): automatic resume selection, contract verification, eligibility for social services, assistance with accounting services.

Since the success of ChatGPT, apparently unique among online applications[5], numerous professionals are reflecting on rejuvenating their practices. This includes practitioners in various fields such as law (Pierce and Goutos 2023) [6], journalism (Ophal et al. 2023), health (Wagner and Ertl-Wagner (2023), education (Benteshi et al. 2023) [7], academia[8], finance (Chen et al. 2023)., data analysis (Cheng et al. 2023) or design[9]. Curiously, civil servants have remained invisible in the public debate on the integration of GAI into workflows, with the exception of some defensive positions in certain instances: combating malicious uses of GAI[10], establishing internal usage rules that are more a reminder of common sense[11], or identifying some risks associated with GAI along with corresponding counter-measures in administrations (Council of the European Union, 2023).

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https://www.gouvernement.fr/upload/media/content/0001/05/0a63326de41e9a36d7878966030e3ce55e98bddf.pdf

[3] Some vigilance applies here regarding the improvement of a text. In a text related to this topic and dealing with criticisms against AI, some final sentences have been added to the text itself, by the GAI, providing a positive perspective on the future of the solutions that will apply to the current problems. These sentences were not in contradiction with the sense of the text, but it was surprising to see that the final sentences of the section were a bit more optimistic than in the initial text.

[4] https://techmonitor.ai/technology/ai-and-automation/microsoft-to-integrate-chatgpt-into-teams

[5] ChatGPT is supposed to reach 100 million of users after 1 month, meanwhile it took 9 months for TikTok to reach the same ceiling (https://www.businessinsider.com/chatgpt-may-be-fastest-growing-app-in-history-ubs-study-2023-2?r=US&IR=T). These statistics should be considered with caution, as no official figure has been confirmed by OpenAI.

[6] https://www.reuters.com/legal/legal-ai-race-draws-more-investors-law-firms-line-up-2023-04-26/

[7] Litterature on the use of GAI and AI in the education sector is abundant. See for instance https://blogs.worldbank.org/education/how-use-chatgpt-support-teachers-good-bad-and-ugly.

[8] ChatGPT has been listed as a co-author in some research papers, see https://www.nature.com/articles/d41586-023-00107-z

[9] https://www.lemonde.fr/pixels/article/2023/06/15/comment-les-metiers-creatifs-de-l-image-adoptent-la-generation-par-intelligence-artificielle_6177766_4408996.html.

[10] These malicious uses are phishing, identity fraud, generation and dissemination of disinformation, terrorist contents and automated creation of malicious computer code (Europol, 2023). In June 2023, INTERPOL published an *AI Toolkit* on good practices to integrate AI into police administrations, but it describes GAI as"science fiction" (voir Document 6, p. 11, https://www.interpol.int/How-we-work/Innovation/Artificial-Intelligence-Toolkit).

[11] The European Commission released an internal note providing its officials with guidelines on the use of ChatGPT. The author got access to this note that was not released publicly (https://www.euractiv.com/section/artificial-intelligence/news/eu-commission-issues-internal-guidelines-on-chatgpt-generative-ai/).

Against this backdrop, and considering the aforementioned administrative fiction, this paper thus raises questions about the implementation of GAI in public administrations. What are the specific benefits, risks, and limitations of GAI, and what effects will it have on the relationship between officials and machines, considering its unique linguistic and textual nature compared to other exclusively numerical forms of AI that have been deployed in public administrations so far?

The first section analyzes the specific benefits expected from GAI and the related strategic challenges for public administrations. A second section attempts to deconstruct underlying reasons for mistrusting GAI. The paper highlights that the risks attributed to GAI are those previously associated with AI, but while some risks remain pertinent, others lose significance due to the constraints imposed by the inherent limitations of GAI technology when implemented in public administrations. The third section of the paper further examines the appropriation challenges, the implications of GAI on the dynamic between civil servants and machines. It emphasizes the "language-centric" nature of GAI in contrast to "number-centric" AI systems implemented within public administrations up until now. It explores the transformative impact of GAI on the intellectual production of the State, akin the profound transformation of material production due to the introduction of machines into factories in the 19th century.

Many of the examples developed in the paper, as the administrative-fiction, are based on needs identified in customs administrations by the author for several years of field and research experience in World Customs Organization (WCO) member states. Due to the diversity of customs missions, most of the needs discussed in this paper and constraints associated to public service values are common to many if not all public administrations.

What are the specific benefits of GAI?

While GAI is AI, we can all feel, when we interact with ChatGPT, that there is something new going on. GAI has the capacity to generate text, images, video and sound in response to queries formulated in common language. Of course, this development is not driven by sorcery: GAI does not think, read or write. This development is not even driven by technological breakthroughs as GAI relies on neural networks and large language models[12] existing over two decades[13].

Nevertheless, the generalist nature of GAI and its accessibility are impressive. Referred to as "general-purpose" or "foundation" models, GAI models have no specific goal. They demonstrate the ability to perform some of the human functions such as text summarization, text improvement, knowledge synthesis, and creative writing. Furthermore, unlike specialized AI, interacting with GAI does not necessitate expertise in computer

[12] Large Language Models digest documents and compute the probabilities of associations between words (for more information about ChatGPT functioning, see https://towardsdatascience.com/how-chatgpt-works-the-models-behind-the-bot-1ce5fca96286). The ChatGPT training dataset is still confidential, but it is estimated to several hundreds of Gigabytes of documents (around 600 Go), provided by WebText (a standard dataset of webpages) augmented by Wikipdeia pages, academic papers, blogs. This corpus probably represent more than 500 billions of words (https://scoms.hypotheses.org/1059).

[13] https://www.zdnet.com/article/chatgpt-is-not-particularly-innovative-and-nothing-revolutionary-says-metas-chief-ai-scientist/

science or statistics. Additionally, GAI does not require integration into complex technological processes, as often observed in specialized AI systems, which frequently raises challenges for implementation outside the laboratory - a predicament known as the « scaling-up » problem (Davenport and Ronanki 2018)[14]. Given these distinctive characteristics and the potential applications mentioned above, we can envision the advantages of GAI in the context of public administrations.

Cost reduction

First, the generalization of GAI editorial assistance within administrations and international governmental organizations would result in the internalization of tasks, driven by costs reduction. This shift would directly impact areas such as publishing, translation and content creation for communication and training purposes. The GAI-based stylistic assistance would complement the existing machine translation systems, thereby reducing the need for outsourced editing services, waiting for GAI replacing the full translation process (Jia et al. 2023). The productivity and financial gains[15] of this internalization are particularly evident for international organizations whose multilingual textual productions are authored by experts who are non-native speakers of the organization's languages.

For data analysis, the cost of employing GPT4 has been estimated to range from 0.45% to 0.70% of the expenses associated with hiring a data analyst, contingent upon their level of experience (Cheng et al. 2023). To fully harness the benefits of GAI in this domain, administrations will need to rely on civil servants possessing adequate statistical skills to formulate mathematically meaningful queries and validate the responses provided by GAI. In this context, GAI would serve as a metalanguage interface for data analysis. This requires a shift in the data strategies of government agencies which only focused on recruiting and retaining data scientists. The feasibility of GAI-based data analysis should motivate government agencies to recruit or train civil servants equipped with a foundational quantitative culture. In the immediate future, given the current computational limitations of GAI for data analysis[16], these civil servants would benefit from utilizing GAI as a « tutor » to assist them in creating computer code for data analysis[17].

Uniformity and correctness of administrative language

The second advantage of implementing GAI in administrative contexts is the enhancement of quality and uniformity in writing style, both of which are critical

[14] During the recent years, this problem is a major one identified in well-advanced customs administrations that have complex existing IT systems…

[15] The translation from French to English for a 10,000 words document is around 1,500€. This has to be compared with a subscription of 7.49€/month for Deepl and a 20€/month for ChatGPT, with no limitation of size of text.

[16] Chaeng et al. 2023 tested data analysis on GPT 3.5. OpenAI (2030) recently issued a technical report on GPT4's performances in mathematics that are much higher than its predecessors.

[17] This is already particularly in line with the WCO's policy of providing online and face-to-face training to non-specialist customs officers in the basics of data analysis. The WCO-Korea BACUDA program has issued more than 2,000 online training certificates in data analysis tools, and trains a dozen customs officers a year in face-to-face, long-term data science courses. A similar program, WCO-France, DATAFID, is underway for French-speaking African administrations. Customs officers certified in these programs would already benefit from the support of GAI in data science coding.

parameters for administrations that have a very formatted writing style. One could argue that GAI operates at the level of an "average" civil servant, adopting a standardized language that is less diverse compared to human language usage (Pu and Demberg, 2023). Moreover, certain linguistic quirks, such as ChatGPT's tendency to summarize responses at the end, may be subject to criticism. Concerns may also arise that widespread utilization of conversational agents as writing assistants could lead to linguistic impoverishment, standardization of thinking and writing, similar to the critique of "PowerPoint thinking"[18].

While these concerns are legitimate, they must be assessed in the current context of intellectual production in administrations worldwide. Saying that conversational agents produce "average" results also implies that they already outperform many human agents (Herboldet al. 2023). This was (unfortunately) experienced by the (French-speaking) author of this paper. An internal note was fully translated from French to English using a high-performance automatic translator, exhibiting a consistently good stylistic quality throughout the document. Part of the note was subsequently linguistically enhanced using ChatGPT. Readers were challenged to discern which part had not benefited from ChatGPT's assistance. A colleague of the author successfully identified the section, due to its lower writing quality and a few grammatical errors. In international headquarters of public administrations, where textual production form a significant part of their core activities (e.g. conventions, guides, reports, notes, etc....), employing conversational agents would raise the writing quality of civil servants to a common minimum standard, minimizing language and logical errors.

Access to broad knowledge

The third benefit lies in the enrichment of substance. ChatGPT's search assistant capabilities are relevant when the agent is mobilized on topics outside the expertise of the civil servant, who may have only preliminary intuitions. This is a common scenario when public administrations are confronted with new general political topics. When tasked with synthesizing existing ideas or contextualizing situations, GAI proves to be faster and more comprehensive in its knowledge acquisition, resulting in heightened efficiency, compared to humans.

In this respect, the author of this paper was not the only victim of ChatGPT, as described earlier. ChatGPT was assigned the task of drafting some fifteen lines for the brochure promoting a master's degree program in a scientific discipline applied to a professional environment, along with the development of a corresponding curriculum. Both the author and an additional expert found the answer provided by ChatGPT very satisfactory. This master's presentation was sent to a specialist in the field for review. Despite the specialist's acknowledged scientific expertise, her revised version exhibited inferior linguistic style and contained inaccuracies that professionals easily identified.

With their access to a wide range of knowledge and their ability to produce summaries, GAI agents are particularly effective in assisting civil servants at headquarters or in ministerial cabinets in charge of drafting policy briefs.

[18] https://www.theguardian.com/commentisfree/2015/sep/23/powerpoint-thought-students-bullet-points-information

Going beyond numerical AI to fight fraud?

GAI has the potential to dramatically change the existing paradigms of AI-assisted fraud detection in cases where humans must analyze text. This change is as follows: whereas specialized AI detects fraud based on training on past information, which includes detected fraud and undetected fraud, GAI could be trained on exclusively "true" information, in the administrative sense of the term, consisting of texts with the force of law, and help the civil servant to detect fraud by providing him with the right information.

The example of tariff classification mentioned earlier will illustrate this possible paradigm shift. Customs officers typically assign goods to specific numerical codes, « positions », within the Harmonized System (HS), by comparing textual description of the goods provided in the customs declarations with legal texts (HS, classification notes). We compared the performance of the public version of ChatGPT[19] with a specialized algorithm called BACUDA, which is designed to recommend tariff classifications. The BACUDA[20] algorithm is a tool for customs officers that relies on neural networks and natural language processing technologies to provide classification probabilities associated with commodity descriptions. The key difference between BACUDA and ChatGPT lies in the fact that BACUDA is specialized and trained on a corpus of customs declarations provided by the administration. The public version of ChatGPT was tested on four selected products that were misclassified by the BACUDA algorithm[21]. ChatGPT successfully classified three out of the four products[22].

What lessons can we learn from this (brief) experiment, to guide further exploration of this functionality? GAI seems promising, as it is not sensitive to the errors of the administration. The BACUDA accuracy is contingent on the quality of the data supplied by the customs administration, and therefore only reflects the quality of the administration's tariff classifications. The limitation of BACUDA is common to most, if not all, algorithms currently used to combat fraud; they do not mobilize exogenous information to the information universe in which they operate. As a result, they are susceptible to erroneous information, whether it stems from incorrect tariff classifications accepted by the administration or an undetected fraudulent declaration (Mikuriya and Cantens 2020). GAI's advantage is being trained on information exogenous to the administration, in our case an unknown corpus of texts, but not a dataset of customs declarations. GAI could address a common criticism against anti-fraud algorithms: these algorithms are fast and time-saving, but on their own they cannot detect kinds of fraud officials have not detected in the past (ibid). Paradoxically, AI specialized in fraud detection, such as the BACUDA algorithm, should then be used against the grain, « recommending » errors, in tandem with GAI: if GAI consistently provides correct responses, then errors of the specialized algorithm will point to the administration's usual frauds and errors.

[19] The idea of using ChatGPT for identity matching - recognizing that two textual descriptions refer to the same object - is a field of application in its own right where GAI comes up against other types of AI (Peeters and Bizer, 2023).

[20] https://www.wcoomd.org/en/media/newsroom/2022/march/wco-bacuda-experts-develop-a-neural-network-model-to-assist-classification-of-goods-in-hs.aspx

[21] WCO internal exchanges between experts in HS (April 2023).

[22] The classification of white chocolate remained erroneous. By definition, a language model is based on words, and white chocolate is not, in the sense of the harmonized system, chocolate.

The training corpus as a challenge

These benefits can be maximized on national, regional or global scales. Beyond the technology of conversational agents, the strategic choice of public administrations may lie in the training corpus. How can the administration develop a specialized training corpus tailored to its unique needs, ensuring that the responses provided by GAI agents trained on this corpus are accurate and precise? The possibility of constructing this type of corpus is already a reality. This is the *finetuning* process proposed by some companies to customize the model according to the user's needs[23]. More comprehensive commercial developments are already available for law firms[24], but also in private companies that make writing assistants available to their employees[25]. In our last case of tariff classification, an administration-owned training corpus would encompass regulatory texts specific to the Harmonized System, classification guidelines and explanatory notes, as well as previous administrative decisions and deliberations on HS at the WCO. In a broader perspective of supporting policy analysis in public administrations, the training corpus would include documents on strategic or innovative topics of current interest and texts central to the administration's activities such as official public texts, technical notes and non-public texts produced by the administration.

The benefits of GAI should also be considered globally. The widespread adoption of GAI in public administrations, particularly in low-income countries, can contribute to greater equality and reduce disparities in intellectual production among states. All civil servants, including non-English speakers, would have access to the same body of knowledge, regardless of the languages in which it is produced. They would have equal ability to synthesize information on common matters and equal capacity to produce analyses that are understandable to all. This would facilitate the global circulation of ideas and analyses generated within administrations, particularly those with limited financial resources.

Moreover for non-English speaking civil servants, GAI would enable them to rediscover the agility of thinking and writing in their native language and disseminate their analyses globally in a more proficient English. This may contribute not only to the preservation of languages but also, hopefully, to the weakening of *Globish* (Global basic English) and the accompanying impoverishment of thinking it entails.

The support to low-income countries is therefore critical. Administrations in low-income countries are leapfrogging, rapidly adopting the technological innovations that prove beneficial to them. In this regard, international organizations should play a role in GAI

[23] OpenAI already has this online offer to refine its own conversational agent, which of course comes at a cost https://platform.openai.com/docs/guides/fine-tuning

[24] Some AI models passed the bar https://www.reuters.com/technology/bar-exam-score-shows-ai-can-keep-up-with-human-lawyers-researchers-say-2023-03-15/

See AI Harvey for lawyers https://www.sequoiacap.com/article/partnering-with-harvey-putting-llms-to-work/ and some ongoing projects https://www.pwc.com/gx/en/news-room/press-releases/2023/pwc-announces-strategic-alliance-with-harvey-positioning-pwcs-legal-business-solutions-at-the-forefront-of-legal-generative-ai.html

[25] https://asia.nikkei.com/Business/Companies/Panasonic-unit-deploys-ChatGPT-style-AI-to-improve-productivity

for economic development and global policy dialogue. They can contribute to build "trusted" training corpora consisting of reports from international institutions, academic articles, international conventions and norms and standards, and reference media. These organizations can make conversational agents available to development actors, including bilateral aid agencies, administrations of recipient countries, and research centers. Additionally, they can develop regional or national GAI projects for states. Technical organizations, such as the WCO or INTERPOL, could provide their member states with conversational agents tailored for specific purposes, such as combating fraud. So far, international organizations have promoted global policy dialogue and the dissemination of standards by sharing their documents, and then their data, online; they can now provide tools to mobilize this knowledge and data more easily. Such initiatives would « sanctuarize » trusted knowledge on development matters, and prevent a new digital divide that is bound to arise with the emergence of the GAI market for public services.

At national level in public administrations, the challenge of training corpus is more strategic than algorithms, in terms of investment. This is new: until now, the training corpus was somewhat "free", as it was made up of data extracted from databases, and the effort of public administrations like Customs was more focused on the algorithm. On a global scale, the strategic importance of training corpus transcends financial considerations; it delves into the realms of politics and ideology. The process of constructing training corpus involves making decisions about the content to be incorporated, thereby determining what knowledge is considered "true" and relevant. From a purely geopolitical perspective, it could even be envisaged that these training corpuses could constitute new areas of political influence.

Overcoming mistrust: distinguishing risks and limits

There may be ongoing misconceptions between what current GAI can do, the risks these uses pose, and the risks that are currently discussed about GAI in public administrations. Many risks become less relevant due to the current limitations of the GAI and the uses we would make of them.

Some misconceptions

In June 2023, the GAI sector is in a "fog of war". A few companies are introducing their GAI agents online, but they are not very transparent about their technical details and rather opaque about their commercial strategies[26]. Governments appear to be only reactive and even defensive. They seem to have been taken by surprise and begin to direct their strategic thinking on AI towards GAI, in search of the ideal regulation. They are fearful of discouraging the large private operators[27], without being able to imagine all the uses of GAI.

[26] These companies, including OpenAI, release very few technical and financial details on the size of their training corpus, the cost of training and operating GAI agents online, or their medium-term strategy. This "fog of war" may indicate the importance of the technological turning point that is being played out with GAI.

[27] For instance the Google generative IA is not accessible from European Union (https://support.google.com/bard/answer/13575153?hl=en) and discussions are ongoing

The European Union (EU) initiated work on an AI Act in 2021, but specific considerations for GAI were discussed in the European Parliament's amendments in May 2023, before the final adoption of the Act, scheduled for the end of 2023[28]. Similarly, the U.S. government launched a working group in May 2023, seeking public input on the limitations and risks associated with GAI[29]. The Chinese government also published draft measures to regulate GAI in May 2023, after Alibaba and Huawei deployed their GAI agents online[30]. The Icelandic government is collaborating with OpenAI to enhance the integration of the Icelandic language into ChatGPT[31]. Interestingly, the UK government has decided not to impose any new specific regulations, but rather to make available a "sandbox" dataset to the private sector for testing AI models' compliance with regulatory requirements (UK government 2023, p. 51 ff.).

Most of the risks associated with GAI identified by governments and public administrations (Council of Europe, 2023) align with those traditionally associated with AI. Transparency, equal treatment, accountability and impartiality are bureaucratic values inherent to modern states. Addressing questions like ensuring decision transparency, building trust in AI among citizens, providing explanations for decisions, enabling verifiability, ensuring equal treatment and reproducibility of AI responses, and detecting and mitigating bias are central themes in AI literature applied to the public sector (Desouza et al., 2020; Mikuriya and Cantens, 2020; Council of Europe, 2023). AI biases in the public sector have already led to several scandals such as UK's automatic grading of students in 2020[32], or the Dutch government's 2012 investigation into discriminatory social fraud that broke the lives of more than 20,000 families (Hadwick and Lan 2021) [33].

However, these risks primarily apply to « decision-making » AI. Indeed, AI is increasingly being integrated into decision-making systems in government agencies. Even if the AI's "decision" is understood as an "aid to human decision-making," Alon-Barkat and Busuioc (2023) demonstrate that the AI « advices » strongly influence the final decision of the humans. We can even add that in some cases the machine is used as the response to poor human decision-making and becomes the sole decision maker. For example, in some customs administrations, reducing the discretionary power of civil servants is seen as a measure to combat corruption. In such contexts, customs officers are obliged to follow the machine's decisions and instructions when controlling cargos at the border.

None of the aforementioned applications of GAI is related to decision-making, all are « assistance » to thinking or writing, integrated into complex intellectual production. The

(https://www.euronews.com/my-europe/2023/05/25/we-cant-afford-to-wait-brussels-and-google-pitch-voluntary-ai-pact-to-fill-legislative-gap).

[28] See https://www.europarl.europa.eu/news/en/press-room/20230505IPR84904/ai-act-a-step-closer-to-the-first-rules-on-artificial-intelligence.

[29] https://www.whitehouse.gov/pcast/briefing-room/2023/05/13/pcast-working-group-on-generative-ai-invites-public-input/

[30] ttp://www.cac.gov.cn/2023-04/11/c_1682854275475410.htm et https://www.globalpolicywatch.com/2023/04/china-proposes-draft-measures-to-regulate-generative-ai/

[31] https://openai.com/customer-stories/government-of-iceland

[32] https://blogs.lse.ac.uk/impactofsocialsciences/2020/08/26/fk-the-algorithm-what-the-world-can-learn-from-the-uks-a-level-grading-fiasco/

[33] See the summary of the case, https://www.uantwerpen.be/en/projects/aitax/publications/toeslagen/

results are texts, not scores or probabilities to take a decision. Paradoxically, the fact that GAI is very assertive discredits it from any decision-making process. Given the technical nature of GAI, this is unlikely to change in the foreseeable future. In fact, the key criterion for AI in public services is accountability and explainability (Lasmar Amlada et al. 2023). The AI algorithm and its implementation must allow for an explanation of how algorithms reach their outputs. This criterion is crucial to ensure adherence to other values, particularly because explanations must be provided when the machine fails to respect some values. In customs administrations where the legal ground of decisions may have to be described during a judicial dispute, explainability is one of the criteria for choosing targeting algorithms, which is why decision trees, for instance, are so popular (Mikuriya and Cantens 2020). Explainability of GAI remains a significant challenge due to its reliance on neural networks (Jovanovic and Campbell, 2022). Even the designers of GAI agents are unable to provide explanations for their outputs. This limitation severely restricts the use of GAI beyond advisory and assistance roles, but this limitation also invalidates the relevance of applying to GAI the risks associated with AI used in decision-making within public administrations.

There is a risk specific to GAI that is often mentioned, including in future European regulations, and it also seems questionable: the fact that citizens may be not aware that they are interacting with a GAI agent of the administration and not with one of its officials. Firstly, unlike the lack of accountability, this risk can be addressed technically. Legal framework on AI will require GAI companies to incorporate forms of watermarking in the outputs of their agents[34]. The EU AI Act encompasses such provisions, and exploration of technical solutions is underway. OpenAI recently made available to the public a tool that provides the likelihood (not a numerical probability) that a text was written by a GAI agent[35].

Nevertheless, should people be informed that they are communicating with a GAI agent when dealing with administrations? In a modern Weberian bureaucratic state, the ideal figure of the civil servant is expected to « function » impartially, objectively, and rationally, according to formal rules, almost like a machine. Citizens expect an answer that is binding on the administration, and whether it comes from a human or a machine should not matter. It is the responsibility of the administration itself to determine the legal value of the machine's answers and to establish appropriate human filters between the machine and the user. Administrations could even imagine to ensure celerity of procedures through GAI, but keep the right to re-assess the responses a posteriori. This is already happening in customs and tax administrations where acceptance of users' declarations does not preclude an investigation at a later stage that will contradict the initial administrative decision. In case of dispute, the state is a legal entity citizens can turn to, and, it is not necessary to know the official who made the wrong decision in order to challenge it, be this official human or not.

While it is understandable that public authorities aim to thoroughly examine all potential risks to instill confidence in AI among society, it is crucial not to let the fears of the public imagination excessively influence the legal and technical environment of AI for

[34] See Kirchenbauer et al. (2023) and https://www.nytimes.com/interactive/2023/02/17/business/ai-text-detection.html

[35] https://platform.openai.com/ai-text-classifier

government. Knowing that the decision to investigate them was made by the machine or not did not change the plight of the Dutch families. As for GAI, the fact that its linguistic and conversational nature makes it appear human-like should not inherently create problems in the relationship between users and administrations, given the legal autonomy and impersonal nature of the administration.

Overcoming technical limitations

Trust in GAI is affected by four specific and objective factors: (i) the absence of source citations, (ii) time limitations of the training corpus (until September 2021 for ChatGPT, although sometimes some facts are included, with no explanation), (iii) variations in responses to the same query, and (iv) occurrence of errors.

The issue of unquoted sources is likely to be resolved technically, the issue being rather legal at this stage to require conversational agents to respect the attribution of sources and reproduction rights, especially as access to these agents generates profits. If using GAI as research assistant, it is possible to continue the conversation by asking about the sources of ideas identified by the GAI. However, disappointingly, the answers provided often turn out to be incorrect[36]. Therefore, the best solution at present may be to rely on academic search engines to find accurate sources.

Regarding the time-limited knowledge of GAI agents, this is no longer a technical obstacle since it is possible to connect them to the internet. However, GAI companies may be reluctant to offer this functionality as a service due to the uncontrolled nature of the Internet[37], which could lead to the dissemination of fake news and malicious texts. It is conceivable that the business model for professional use of GAI will evolve towards text corpus update services in specific areas of interest.

The versatility of GAI - the variability of its responses to the same question - is currently an inherent limitation of the technology itself. This may arise due to the imprecision of language usage. For instance, if a query is vaguely formulated as "improve the text" instead of explicitly stating "improve the style of the text", ChatGPT may introduce additional ideas. The conversational agent lacks intuition about the specific request. The problem becomes more complex in our example of Customs HS classification, where query formulations are identical and linguistically unambiguous, yet the answers vary. At this stage, it is difficult to pinpoint the reasons behind these variations, primarily because the logic followed by AI based on neural networks cannot be reconstructed. However, given that the model remains probabilistic, there is reason to be cautiously optimistic that fine-tuning on dedicated text corpora would, at least, make the meaning of responses stable.

Error is a more sensitive issue because our common perception is that machine, by nature, should make errors (or not) in a systematic way. It is not the case of GAI. GAI makes mistakes, in an unpredictable way, "hallucinations"[38], which is inherent problem in natural

[36] Our own experience and, for instance, Hueber and Kleyer (2023).

[37] https://openai.com/blog/chatgpt-plugins

[38] An American lawyer used ChatGPT to prepare his closing arguments. ChatGPT returned very specific case references that simply didn't exist. https://www.nytimes.com/2023/06/08/nyregion/lawyer-chatgpt-sanctions.html

language generation models (Ji et al. 2023). The term hallucination is used to differentiate errors from biases. Biases are tendencies to accentuate a phenomenon; strictly speaking, they are not "errors" made by the machine, but underlying human tendencies present in the training data that the machine's automated processing reproduces on a larger and faster scale. The machine cannot be blamed for "getting it wrong," but for getting it just as wrong as humans, only more consistently and rapidly. Biases remain understandable in the sense that trends are present and therefore detectable. The nature of neural networks in GAI makes hallucinations even more inexplicable. However, when considering GAI's errors, it is worth noting that certain conversational agents have already passed entrance exams in business schools, management schools, or the bar[39].

More significant than the errors themselves is the perception of errors and the resulting impact on trust in GAI, which is a challenge to their rapid deployment in public administrations. Longoni et al (2022) asked readers to assess the truthfulness of newspapers headlines written by a GAI agent versus a human. The results revealed a lack of trust, with readers erroneously judging GAI-generated headlines as false, even when they were accurate, while exhibiting greater trust in headlines written by humans, even when they were false. Longoni et al (2023) attribute this phenomenon to the perception that algorithms are more homogeneous than humans, leading to the generalization of mistrust in one set of algorithms that issued errors to all algorithms. These studies on human error perception in the face of AI illustrate how risky it would be to deploy GAI in government without ensuring that the errors are minimized and addressed, as it could further deepen user mistrust of AI.

While it is unlikely that GAI will be error-free, it is highly probable that the frequency of errors will decrease, particularly in contexts where language usage is highly standardized, such as public administrations. Cultural dimensions, humor, and expressions specific to certain languages are likely to remain sources of error for GAI, especially as languages continue to evolve. The emergence of GAI indicates that errors should no longer be exclusively attributed to humans. Consequently, we need to be no less careful when reading text produced by an AI than when reading text written by a human

Confidentiality in the context of GAI

The trust in GAI and the perception of its limitations are therefore influenced not only by technological factors but also by the prevailing cultural context. However, the information and workflows confidentiality is a common concern to all public administrations.

The GAI companies have a vested interest in gathering extensive feedback from human users to evaluate and rectify the performance of their GAI agents. Before publicly releasing the GAI agent, there is a phase of human testing on moral issues to mitigate the risk of toxicity. Toxicity refers to the tendency of GAI to reproduce and disseminate discourses that are racist, sexist, and immoral (Jo 2023). Toxicity of GAI requires the

[39] See https://www.reuters.com/legal/legal-ai-race-draws-more-investors-law-firms-line-up-2023-04-26/ and how some AI models passed the bar https://www.reuters.com/technology/bar-exam-score-shows-ai-can-keep-up-with-human-lawyers-researchers-say-2023-03-15/ and more recetnly the amazing - but not independently assessed - performances of GPT4 (OpenAI 2023).

attention of civil servants, particularly when dealing with issues that have moral grounds and discriminatory implications, such as immigration control, control of foreign companies, fight against corruption, international trafficking that implicate targeted controls[40]. In these contexts, the machine, through automated learning, is unable to distinguish the moral from the immoral in the cultural context of its use. The human element of judging the answers provided by GAI is therefore critical, both ethically and technically to improve answer accuracy[41]. For this reason, ChatGPT users are invited to evaluate the answers they provide, and the conversations are stored for future use in training.

This situation poses a challenge for administrations when civil servants seek AI assistance in sensitive or even confidential areas. Governments have no guarantee that private companies managing conversational agents will not store their conversations, even though new features are now available to delete those conversations. There remains the possibility that these conversations, which could potentially reveal a government's strategic interests, might still be stored and made accessible to private companies and other states.

The solution for administrations lies in internalizing GAI and fine-tuning as seen above. This approach has been adopted by the Singapore government, which intends to provide a GAI-based assistant to all its civil servants, centralizing various applications across all administrations in partnership with Google[42]. All technical details have not been released but it is likely that, in this case or in the future, internalization of GAI will ensure the confidentiality of conversations between civil servants and the GAI agent. Regarding the training corpus of texts, confidentiality is not new. First, if not stored internally, the training corpus could be managed internally and stored by trusted third parties. Public administrations already grapple with the confidentiality of training data when they work with the private sector to develop their specialized algorithms. Second, the training corpus would be composed of a large proportion of public texts issued by the administration.

However, pooling of government resources and data raises new concerns. Some states prohibit the aggregation of government data, particularly in an automated manner, in order to maintain traceability and monitoring of consultations and prevent the emergence of a single, centralized system of societal surveillance. The extent to which data can be shared, particularly when personal data is involved, and the degree to which GAI would cross-check personal data, even without explicit requests, would be critical considerations.

Language-centric nature of GAI: appropriation, not servitude

Arid discussions about benefits, limitations, and opportunities have captured everyone's attention since the end of 2022 and the launch of ChatGPT. I encourage readers to revisit their enthusiastic amazement when they made their first request to a free

[40] Although tax and customs authorities may discriminate by creating specialized units for "large taxpayers" or by granting special status to "authorized economic operators", the risk seems minimal, as positive discrimination is applied according to an objective threshold of tax contribution.

[41] OpenAI is not transparent about its processes, but a recent scandal revealed some of its methods for building the ChatGPT corpus. https://time.com/6247678/openai-chatgpt-kenya-workers/

[42] https://www.smartnation.gov.sg/media-hub/press-releases/31052023/

conversational agent on the Internet, ChatGPT, or BARD, or any other similar agent that will have emerged between the writing of this article and its publication. For those who have yet to do so, a quasi-injunction: do not continue reading this article without trying GAI by yourself, approach what follows with, in mind, the almost magical sensation of interacting with a machine, and the primal joy of discovering an extra-human form that makes us feel like in front of a somewhat naive equal. Even after their first steps with the machine, some of us continue to greet ChatGPT and politely ask it to carry out their requests, convinced that the efficiency of the machine is inherent in the intimacy they share with it.

Floridi (2023) observes that humans have interacted with animal agents, humans also interacted with spiritual agents (sometimes animal and spiritual agents were even the same), and now humans interact with artificial agents capable of self-improvement without understanding. Ironically, he proposes a new acronym for artificial intelligence: *Agere sine Intelligere*, meaning acting without intelligence (AI). However, we can concur with Coeckelbergh and Gunkel (2023) that GAI should not be regarded merely as a tool, but rather as an entity fundamentally intertwined with humans and language, contributing significantly to the production of meaning. Consequently, working with GAI systems that generate language will inevitably have effects on the way we think.

There are three additional key points regarding the fundamentally novel nature of GAI implementation within public administrations. Firstly, specialized AI systems interact directly with specialized officials. For instance, an AI responsible for customs risk analysis interacts with customs officials who control imports and exports. Due to the generalist nature of GAI and the extensive involvement of officials, its adoption by an administration will be a radical reform. Secondly, working with GAI is unlikely to generate new ideas, although its "hallucinations" may be inspiring[43]. Rather, it involves developing new modes of thinking "with" GAI, including formulating queries to the system, analyzing responses, and constructing our own discourse. This approach, « thinking with » and not “deciding from”, is new and vital for civil servants. It is closely linked to our final point, which is that the administration itself « produces » language, and the statements it produces are acts of authority and power. It is through the use of language, the creation of words and abstract categories that states describe, delineate and standardize territories and populations, establish their legitimacy through written legislation. It is through language that civil servants constrain, control and punish, and that reforms are carried out and key concepts are propagated within their professional culture. Reform in public administration is fundamentally a reform of words, insufflating new meanings to old words. There is, therefore, a concordance of natures between the language-centric GAI and the language-founded public administration.

Language aspect of GAI

With GAI, language is now at the heart of the human-machine relationship, and this is a key issue for administration to appropriate GAI. While its design is still based on machine learning, i.e. a probabilistic approach, GAI is an enunciator, producing statements, unlike

[43] A quite similar example could be found in the domain of mathematics where AI (not GAI) is used to feed mathematicians' intuitions, see Davies, A., Veličković, P., Buesing, L. et al. (2021). “Advancing mathematics by guiding human intuition with AI”. *Nature* 600, 70–74. https://doi.org/10.1038/s41586-021-04086-x

the algorithms already in use, which are calculators, producing numbers, scores and risk probabilities. The fact that GAI does not understand what it produces, or that it is wrong, or that it seems far-fetched to us, in no way diminishes the semiotic and semantic validity of its outputs. The output of GAI is not like language, it is language. What GAI produces is a discourse that has its own autonomy, just like any other text. However, unlike numeric-centric AI, GAI does not quantify the probability that it may be wrong. It produces statements with an effect of certainty that did not exist before, which makes the detection of its errors more challenging (more than when conversing with a human)[44].

Furthermore, GAI is eclectic, as it is designed without a specific goal « in mind ». This grants it a crucial advantage over humans within the contemporary context of labor division. As we discussed, GAI, alike other AI, can be trained on a particular corpus. Nevertheless, even in such cases, GAI always works with all available information, not solely that which serves a specific purpose. In this sense, its nature remains eclectic, regardless of the corpus it is trained on.

Finally, as a significant aspect of its linguistic capabilities, GAI is interlocutory. It engages in direct interaction through human language rather than relying on computer code, thereby eliminating the need for an expert human intermediary in interactions with end-users. We can, for example, ask these conversational agents to elaborate on specific aspects of their responses. Furthermore, we can prompt them to recognize their own logical errors, even if this is done through exchanges that are no more than the embryo of an argument that will soon be forgotten. As soon as we ask the machine the same question again, its response will be equally erroneous. Nonetheless, we are engaging in direct interaction with an agent that may lack intelligence, but possesses the ability to produce coherent and knowledge-effective language.

Overcoming the fear of replacement

Replacement is therefore a legitimate fear for civil servants. As we have discussed, machines can be more efficient and cost-effective for certain tasks. The advent of GAI will undoubtedly have economic implications for intellectual jobs, particularly in writing functions (Eloundou et al., 2023). This trend towards replacement aligns with the Weberian perspective that underlies contemporary conceptions of the state. Substituting humans with machines to ensure states operate in accordance with an ideal bureaucratic rationality appears, at first glance, easier to achieve through "cold" machines rather than fallible humans driven by emotions and subjectivity. The argument of bias holds little policy sway against this inclination. As discussed earlier, machines are only biased because they replicate human biases, so they do not inherently do anything "worse" than humans. They simply do it faster and with greater discipline, and both celerity and discipline dominate the discourse on administrative efficiency today.

As with AI in general, administrations and experts are eager to reassure, claiming that GAI will not replace civil servants, but rather alleviate them of certain tasks. The unresolved challenge lies in defining the extent of responsibilities that will be delegated to

[44] ChatGPT tries to mitigate this, by always reminding that the results can be false or should be checked, but it cannot quantifiy the probability of doing a mistake.

GAI. The savings due to this delegation[45] will be a critical parameter in strategic decision-making within a global neoliberal context, where states have long sought to limit their scope of action. The internalization of GAI by an administration or a state will entail expenses, albeit likely lower than employing civil servants, thus making GAI a highly profitable option. GAI today competes with skilled jobs, unlike machines in the 19th century, that competed with workers - and won.

Strictly speaking, there is no replacement for civil servants. Rather, they will have to incorporate into their daily practice tasks that were previously executed by others. There is no administration that employs "research assistants", and many tasks that are not at the core of administrative action are outsourced. The change will involve civil servants taking on additional responsibilities, such as conducting their own translations and proofreading with the assistance of GAI, while focusing their efforts on specific aspects of the thinking process. The integration of new tasks into everyday routines is a constant feature of technological progress. The more the machine automates basic tasks, the more the end user is expected to perform them through the machine, instead of delegating them to other humans. Microcomputers and word processing have put an end to civil servants writing their handwritten notes and passing them to teams of secretaries for typing.

Consequently, there is a need to enhance our writing skills. Civil servants and experts will have to write more effectively in the sense that they should know how to question the conversational agent and employ its responses to write in accordance with specific objectives or formats that AI may not adapt to, given the subtlety of nuances. For instance, there is a distinction between writing a policy brief on the role of customs in combating corruption, drafting a concept note for an anti-corruption project, and preparing an expert report on anti-corruption policies. Even if GAI eventually improves the style of the text, it is unlikely to possess the precision required by administrations in the short term.

Furthermore, we need to cultivate a heightened sense of *critical vigilance* towards AI errors and human errors in data analysis more broadly. This critical vigilance encompasses logical reasoning, cognitive abilities, and effective communication, as well as the capacity to feel biases, and recognize fallacies and paralogisms in discourses.

Avoiding servitude

There would be a risk of enslavement to GAI, if we confine ourselves to the role of "verifier-adjuster" of GAI outputs. Noam Chomsky (2023) identifies three fundamental differences between GAI and humans: GAI does not distinguish between the possible and the impossible, since it can learn everything, including the impossible; GAI describes and predicts, but does not explain; and finally, GAI is amoral, but offers a range of opinions without taking a stance. It is worth adding that GAI does not take a stance even when asked to do so. For legal and commercial purposes, its designers may prefer an amoral AI that does

[45] The same financial argument applies to other sectors like journalism that is deepply impacted by competition and costs reduction and where GAI is preceived as critical to complement journalists' work (Ophal et al. 2023).

not answer questions about moral choices, rather than an AI that would be immoral by answering them.

It is within these discrepancies that we must seek the added value of human involvement, particularly through our willingness to make political and moral choices, supported by our capacity to articulate and explain them. These overarching principles are particularly relevant for civil servants supporting their governments' policy analysis and utilizing GAI. This can be encapsulated in the capacity for nuance, differentiation, and criticism. Civil servants must nurture and enhance their critical thinking skills. In the face of AI and its synthetic and prescriptive capabilities, civil servants possess a distinct advantage through their creativity and ability to think beyond established boundaries.

The role of administrations and international governmental organizations is increasingly "political" and « analytical ». Public administrations are more and more advising their governments on how to play a role in global governance. The role of international organizations is balanced between a "normative" function - issuing rules, norms and standards in international instruments and best practice guides - and a "foresight" function, in which member states look to organizations to help them to develop their own strategic vision. Many international organizations have "policy", "research" or "foresight" units. It is not insignificant, for example, that the main themes of a technically oriented organization such as the WCO are now "technology/data", "environment" and "fragility", all of which have a strong political connotation.

Conclusion

The exploration of GAI in the public sector is far from being exhausted. Numerous questions still concern those who contemplate the future of GAI from a non-technical standpoint. These questions encompass issues such as the commercial exploitation of freely available human knowledge by GAI companies, the environmental impact of GAI, the utilization of GAI to foster democratic participation[46], and even the politicization of GAI training corpus[47].

Despite these questions alongside the technical limitations of GAI and the uncertainty surrounding its future business model, there are certain aspects that we can more confidently assert. First and foremost, GAI is a fundamental break, by generating language rather than numbers. This entails that societies will engage in direct interaction with AI, shaping a new relationship centered around language.

The second certainty is that there is no GAI that is emancipated from humans. Not only do humans design GAI, but when GAI produces a response, it does so by calculating probabilities based on the content that we humans have already generated. The relationship is reciprocal. As we shape our tools, our tools shape us. Our writing practices, and therefore our way of thinking, will be altered by the ingress of a human discourse that

[46] See Vrabie (2023) for a particularly interesting example of the use of GAI for petition tracking.

[47] ChatGPT is banned by Russia, China, Cuba, Iran and Syria. Italy raised concerns about privacy but OpenAI, the company managing ChatGPT, responded and Italy removed the ban (https://apnews.com/article/chatgpt-openai-data-privacy-italy-b9ab3d12f2b2cfe493237fd2b9675e21). While all countries will implement and authorize ChatGPT-like tools, some countries may design the training corpus of texts to limit the access of the people to some information, as it is already done with the ban on some searching engines in some countries.

is produced by a non-human agent. This should lead to the revitalization of various stages in the intellectual production process, including problem formulation, critical questioning, reading GAI's responses, contextualizing them within national or cultural frameworks, and subjecting them to critique. The added value of the human may lie not in the perceived limitations of GAI, but in the difference between GAI and the human. While the public debate focuses on the diminishing gap between machines and humans, it may be more crucial to explore the irreducible nature of this gap to ensure that public servants can contribute effectively to the textual and intellectual production of the state.

A third certainty is that the writing and critical analysis skills possessed by civil servants working with GAI are equally applicable to data analysis. In a governance environment where leaders are required to make decisions based on factual and data-driven analyses, those responsible for producing these analyses must be understood beyond their fortresses of expertise. The emergence of GAI is forcing us to reflect on data analysis and AI appropriation by non-specialists, surpassing the issues of recruiting and training data specialists.

Consequently, we can anticipate that the popularity of GAI, facilitated by its ease of use and wide range of applications, will swiftly overcome the current reservations held within government agencies—reservations that are purely formal, since civil servants are likely already employing ChatGPT. GAI should become a routine tool integrated into professional practices at large, similar to the integration of the Internet and search engines. Furthermore, administrations will have no choice but to adopt GAI due to the inevitable evolution of society. For administrations in charge of enforcing the law, such as tax and customs authorities, GAI will present challenges akin to any other technology that is also used for fraud. Fraudulent companies will leverage GAI not only for defense in court but also for devising new fraudulent schemes, particularly in administrative processes reliant on textual data. The new risk would be that we may unnecessarily limit the manifold potential uses of GAI due to concerns about risks that are associated with unadopted or unimagined applications. It seems more reasonable to utilize a GAI whose technology may not meet all ethical and legal criteria but restrict its usage to administrative practices where these criteria hold little or no relevance.

The introduction of GAI into the realm of work, particularly within public administrations, may be engendering an "intellectual revolution" akin to the industrial revolution in the 19th century when machines were introduced in factories. This revolution entails the « machinization » of basic cognitive functions within the intellectual production process, leading to efficiency gains but necessitating human adaptation and specialization. The greater concern then lies not in machines overtaking or replacing humans, but rather in enslaving them. Strikingly, this point is absent from public discourse, most likely due to its a priori intolerability. In this regard, strengthening our appetite, capacity and agility to criticize would empower us to exert better control over machines. This is particularly crucial at a time when an eclectic machine is helping us, public servants, experts who have been elevated but also weakened by the extreme division of labor that characterizes our modernity. In 1945, Georges Bernanos eloquently depicted this « machinistic » modernity

in his pamphlet, *La France contre les robots* (France against the robots). Within it, he castigated English economists and Karl Marx alike for reducing humanity to its quantifiable aspects. Bernanos lamented that "progress is no longer vested in humanity itself, but rather in technology, in the relentless pursuit of methods that enable increasingly efficient utilization of human material." The idea now is rather that the machine helps us to become better experts, critical of the knowledge we produce to govern ourselves.

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"Sur quoi la fondera-t-il l'économie du monde qu'il veut gouverner? Sera-ce sur le caprice de chaque particulier? Quelle confusion! Sera-ce sur la justice? Il l'ignore."

Pascal

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