

DPG-AI FOCUSED ON WOMEN (DATA PROTECTION GENERATIVE AI)

To the European Parliament, the Council of the European Union, the European Commission, the Italian Data Protection Authority and the European Data Protection Supervisor

January the 26th, 2024

We, the signatories, are a group of women with diverse professional backgrounds. We are professionals, entrepreneurs, managers, researchers, teachers, academics, civil servants, united by study, activism, and work in the context of data protection. The letter we are writing is the result of a collective multicultural women's reflection arising from the realization that humanity is facing a crucial point in its future.

Since time immemorial, women have been one of the categories of vulnerable individuals who are impacted by societal transformations. We are aware of this and we demand attention from the entire community of stakeholders and lawmakers. In fact, the legislative activity of the legislature, although attentive to the issue, is not enough to curb the possible uses of AI technologies to the detriment of vulnerable individuals such as women, neither are interventions, enforcement and court interventions to protect injured rights, because they come after the injury has materialized and the vulnerable individual has become an injured subject.

We are watching the international debate, we followed the AI Summit (the Bletchley Park Declaration¹), the Biden Declaration, the G7 Hiroshima Process. A broader collective awareness seems necessary, and we want to offer our views to the international debate precisely on the occasion of European Data Protection Day.

The views of women appear important to take into account in relation to the following aspects:

- AI bias against women;
- impacts on equal opportunity;
- the discriminations contained in the Large Language Models;
- the impacts of automated decisions on women;
- AI systems designed with vulnerable individuals in mind;
- women and automated systems.

AI bias against women

Gender bias by AI systems is well known. Think about search engines such as Google associating the word "nurse" with a woman and the word "doctor" with a man. Similar problems have also occurred in ChatGPT in indicating a woman's profession when she goes to court. We think these issues need to be addressed regardless of the individual's gender.

These incidents of discrimination by AI tools are accompanied by the constant risk for women to be exposed to online violence, cyber-stalking or bullying. The consequence is to alienate

¹ UK Government, *The Bletchley Declaration by Countries Attending the AI Safety Summit*, Policy Paper, published on November the 1st 2023, available [here](#)

women from technologies, make them passive and thus diminish their ability to use them properly. Such eventualities, should they materialize, would end up penalizing women's position in an increasingly technological labor market by limiting employment opportunities or access to better paid positions and eventually impacting women's role in society, increasing their vulnerability.

Women are already struggling for equal opportunity recognition in many male-dominated sectors of the labor market, and they will also have to contend with the bias of Artificial Intelligence. This is a frightening scenario.

To understand the impact Artificial Intelligence has on women when it uses data from a purely male context, one need only quote Carmen Niethammer, who mentioned in Forbes that women who use vehicles designed using male body size as a benchmark are at greater risk of accidents and not even insurance companies are able to protect them sufficiently.

Impacts on gender equality

According to a report by the European Institute for Gender Equality (EIGE)², the fact that men have more clout in professions such as programming and software design in this technological age, shows that women will remain in the background in areas where technology is used.

Research in the EU³ reveals that four out of five women do not receive technology training and the fact that they work in industries that do not require coding skills is an indication that female unemployment rates are likely to rise in a future where the labor market will increasingly demand the possession of such skills.

In 2020, UNESCO research had also depicted the same risk in its report on Artificial Intelligence and Gender Equality⁴, saying that *"artificial intelligence algorithms and systems have the power to spread and reinforce gender stereotypes and biases, which risk marginalizing women on a global scale. Given the increasing presence of artificial intelligence in our societies, this could put women in the position of falling behind in the economic, political and social spheres."*

The discriminations contained in the Large Language Models

Large Language Models and generative Artificial Intelligence, if unattended, can also cause widespread discrimination. In fact, the language used by such systems tends to standardize social groups and narrow the multiple perspectives that exist on women, the variety of their expressions reducing them to a uniform pattern.

Language models that are not carefully constructed also can promote stereotypes, reinforce exclusionary behaviors, generate toxic language as well as display the discriminatory behaviors that are present in different social groups and have been embedded within it. In

² EIGE, *Artificial Intelligence, platform work and gender equality*, published on July 2022, available [here](#)

³ McKinsey Digital, *Women in tech: The best bet to solve Europe's talent shortage*, January 2023, available [here](#)

⁴ UNESCO, *New UNESCO report on Artificial Intelligence and Gender Equality*, published on August the 31st 2020, available [here](#)

fact, the presence of discriminatory, toxic expressions within the web and the natural language with which the algorithms are trained is likely to re-propose and reinforce such expressions even within the model once it is put into operation. The consequence is the perpetration of stereotypes and discrimination and this produces several harmful impacts on women and other vulnerable groups who are already subjected to unfair stereotyping and discrimination in current society. A number of female researchers and Data Analysts⁵ internationally have analyzed the data sets with which the algorithms that underline the most well-known language models are trained and have found labeling of images and data sets which are full of gender and ableist biases and discrimination. The construction of the data sets that are used to train the algorithms should be reviewed before they disseminate biases within other AI tools.

Accordingly, we call on the developers of these technologies and users to proactively promote adherence to the principles of fairness, transparency, and inclusiveness to all individuals, including the vulnerable.

The impacts on women of automated decisions

We also find gender discrimination in AI systems in algorithmic discrimination when it has an impact in the final decision of the system. Examples of discriminatory decision-making systems include those aimed at personnel selection that were trained on resumes of workers who were later found to be higher performers. The decision-making output of such systems ended up excluding women because the databases with which the algorithms were trained consisted mainly of resumes of male candidates. This circumstance solidified the algorithm's assumption that a woman could not be a high-performing employee and, therefore, she was excluded *a priori*.

In the decision-making system, when determining the logic of the algorithm, male or female gender membership should be consistent with the decision-making policies and democratic and non-discrimination principles that are adopted and followed by the organizations.

We recall UNESCO's recommendations on the ethics of Artificial Intelligence already adopted in 2021⁶ and in particular that the ethical evaluation of systems also include a cross-gender perspective.

AI systems designed with vulnerable individuals in mind

We welcome the Trilogue's acceptance of the impact assessment on the rights and freedoms of individuals in relation to the design of AI systems allows manufacturers and users of AI systems to incorporate safeguards for the rights and freedoms of individuals, including vulnerable individuals, from the design of high-risk AI systems.

The approach we are asking all manufacturers to take is to work on excluding the biases present in our society from being incorporated into the systems they are designing, regardless of the level of risk in the AI system.

⁵ A. BIRHANE, V. U. PRABHU, E. KAHEMBWE, *Multimodal datasets: misogyny, pornography, and malignant stereotypes*, published on October 2021, available [here](#)

⁶ UNESCO, *Recommendation on the Ethics of Artificial Intelligence*, published in 2022, available [here](#)

The Guardian newspaper published an investigation⁷ into the effects of AI algorithms regarding the content posted on social networks and it found out that women's bodies are objectified by the platforms' own control tools and they are more likely to be restricted in their dissemination for equal nudity and context than images depicting men.

Women and automated systems

What we have seen above in relation to the discriminatory effects present in algorithms, language models, and AI systems is that these technologies are not designed with women and vulnerable people in mind and they are destined to produce even greater impacts when producing automated decisions that affect the freedom of women and men who use them⁸.

One example occurred in the United Kingdom, where a female pediatrician was excluded from access to the locker room at her gymnasium. By analyzing the system that regulated access to locker rooms, it was discovered that the profession of pediatrician was recognized by the system only associated with the male gender and, as a result, women in that profession were excluded from the right to access their own locker room⁹.

The UNESCO report on the Impacts of AI in Women's Working Lives¹⁰ lists among the examples the reduction in African women's ability to access credit due to credit scoring systems' use of systems that assess an individual's digital footprint. Differences in African women's use and access to the Internet (the so-called digital divide) become a discriminating factor with respect to the possibility of obtaining financing. One cannot remain silent about the possible use of these technical solutions in illiberal contexts: we have seen how online content monitoring systems can be used to alert authorities to women seeking information about abortion practices in contexts where abortion is illegal.

As seen in many examples like this, us women are stuck in an automated system and, with sadness, we must point out that our vulnerability is increasing even more. Artificial Intelligence, rather than a tool to eliminate discrimination ends up making it sharper.

It is then necessary to recall Article 21 of the Charter of Fundamental Rights of the European Union, which prohibits "any discrimination based, in particular, on sex, race, color, ethnic or social origin, genetic characteristics, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation."

Article 8 of the Charter of Fundamental Rights of the European Union which stipulates the following:

"1. Everyone has the right to the protection of personal data concerning him or her.

⁷ G. MAURO and H. SCHELLMANN, *There is no standard': investigation finds AI algorithms objectify women's bodies*, The Guardian, published on February the 8th 2023, available [here](#)

⁸ M. HEIKKILA, *The viral AI avatar app Lensa undressed me—without my consent*, on MIT Technology Review, published on December the 12th 2022, available [here](#)

⁹ A. GUFRAN, *The Tech Industry's Sexism, Racism Is Making Artificial Intelligence Less Intelligent*, on The Swaddle, published on September the 12th 2019, available [here](#)

¹⁰ UNESCO, *The effects of AI on the working lives of women*, published in 2022, available [here](#)

2. Such data must be processed in accordance with the principle of fairness for specified purposes and on the basis of the consent of the person concerned or another legitimate basis provided by law. Every person shall have the right to access and obtain rectification of the data collected concerning him or her.
3. Compliance with these standards shall be subject to supervision by an independent authority."

The need to avoid discrimination was well present in Convention 108 on automated systems and profiling. The principles of the convention have influenced the older Directives and the very structure of the GDPR, which we cannot fail to mention, taking into account the European Data Protection Day, when we celebrate the importance of personal data protection and fair processing, a fundamental prerequisite in the fight against discrimination.

As women, we hope that the provision of safeguards for vulnerable individuals will also protect women. However, we are concerned about how Artificial Intelligence systems might exercise the right of rectification or objection to the woman's side of vulnerability. The recent Schufa ruling¹¹ illustrates us how algorithms can become a closed world that is difficult to access despite rights of data subjects that are also recognized.

In some artificial intelligence models, it may become increasingly complex to understand whether women have remained vulnerable, i.e., whether discrimination is being made against them. The issue of periodic checks of algorithms, including with regard to discrimination, needs to be addressed. There is not enough talk, in fact, about what happens after the system goes to market and becomes operational, how systems grow and change as a result of machine learning mechanisms. These are issues that the CEOs of large AI companies have represented, which, however, have also decreased investment in the teams that were tasked with verifying the ethics of decision-making systems. These are elements of concern that we cannot help but make our own.

Conclusions

Our request, as women signatories to this letter, is to ask legislators, regulators and industry not to underestimate the impacts that discrimination has on the vulnerable because such miscalculation could cause harm to our democracies and to the area of freedom and law that is the basis for the creation of the European Union and that every human being should enjoy.

The large-scale impacts of AI systems, in fact, are not limited to the territory or market of the European Union but produce effects on a global scale, as the worldwide debate on AI testifies.

We call on the European Union to take the lead in developing international standards that are ethical and guidelines that can protect the rights and freedoms of vulnerable people so that through them the whole of humanity is protected.

Thank you.

¹¹ Judgement of the Court (First Chamber), Case C-634/21, ECLI:EU:C:2023:957, December the 7th 2023, available [here](#)

The Signatories

Anna Cataleta, Lawyer, Senior Partner at Partners4Innovation - A Digital360 Company and Senior Advisor at Osservatorio Cybersecurity & Data Protection - School of Management Politecnico of Milan, President of Officine Dati

Sabire Sanem Yilmaz, Lawyer, Author, ResearchGroup Member Center for AI and Digital Policy, Tevetoglu Legal Director of AI Law Department

Alessandra Nisticò, Lawyer, Legal Consultant at Partners4Innovation - A Digital360 Company

Mariaconcetta Oddo, Senior Legal Consultant at Partners4Innovation - A Digital360 Company

Aurelia Losavio, Legal and Communication Consultant at Partners4Innovation – A Digital360 Company

Melissa Marchese, Lawyer, Privacy & Data Protection Consultant at Gianni & Origoni Law Firm

Francesca Gravili, Lawyer, Partner and Head of Privacy Law at SASPI- Fieldfisher Global

Anna Italiano, Lawyer, Partner at Partners4Innovation - A Digital360 Company, Senior Advisor at Osservatori Digital Innovation - School of Management Politecnico of Milan

Fernanda Faini, Researcher and lecturer in Legal Informatics - Faculty of Economics and Law at Pegaso Telematic University, Legislative-legal officer Digital PA and new technologies law at Tuscany Region

Silvia Stefanelli, Lawyer, Founder of Stefanelli&Stefanelli Law Firm

Marianna Vintiadis, Co-Founder and Chief Executive Officer di 36Brains, Advisory Board Member of Transparency International Italy

Laura Liguori, Lawyer, Partner at Portolano Cavallo Law Firm, Vice-President of Donne e Tecnologie - Women & Technologies ETS

Ada Fiaschi, Group Data Protection Officer at Italia Trasporto Aereo SPA

Anna Capoluongo, Lawyer Partner Capoluongo Law Firm, DPO UNI 11697/2017, Member of EDPB's Support Pool of Experts, Member of the Observatory on Civil Justice Court of Milan (Group on damage caused by unlawful processing of personal data), Member of the Research Centre B-ASC Univ. Milano-Bicocca, Lecturer a.c. (University of Padua, Sole24Ore Business School), Vice-president I.R.L.E.S.S. (Institut for Research for Law Economical and Social Studies)

Alessandra Luksch, Engineer, Director at Osservatori Startup Thinking, Digital Transformation Academy Osservatori Digital Innovation School of Management Politecnico of Milan

Selina Zipponi, Lawyer, Privacy and Data Protection Expert

Cecilia Colasanti, Privacy Expert

Valentina Zecchi, Lawyer, Docent at European Centre on Privacy and Cybersecurity (ECPC), Co-founder of Privacy She-Leaders

Anna Paola Lenzi, Lawyer, Group Data Protection Officer and Head of Compliance at TeamSystem

Patrizia Cardillo, Privacy Exepert, Former Data Protection Officer of Public Bodies

Raffaella Costantini, Lawyer, Privacy & Data Protection Freelance Consultant

Valentina Pagnanelli, Lawyer, Privacy Officer, PhD in Data Protection Law

Irene Pozzi, Lawyer, Group Data Protection Officer at Bending Spoons S.p.A., Co-founder of Privacy She-Leaders

Yağmur Şahin, Lawyer, Privacy & Data Protection Consultant

Margarita Fandino, Lawyer in Intellectual Property and Digital Law

Kübra İslamoğlu Bayer, Legal Consultant at Data Privacy Law & Technology

Anna Wyszzecka, Lawyer AI, Cloud, New Technologies

Zeynep Öğretmen Kotil, Lawyer, Data Privacy & AI Law

Yasemin Kuleyin, Sustainable Project Manager Turkish World Union of Engineers and Architects, Working Commissions -Research and Development Commission Chairman

Karolina Wilamowska, Lawyer, ELTA

Marta Fraioli, Senior Associate at PANETTA Studio Legale, PTP Privacy & Technology Professionals, Consultant