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POLICY BRIEF W20 ARGENTINA

Artificial Intelligence: open questions about gender inclusion

DIGITAL INCLUSION CO-CHAIR:

WORLD WIDE WEB FOUNDATION

AUTHORS

Renata Avila | renata.avila@webfoundation.org
Ana Brandusescu | ana.brandusescu@webfoundation.org
Juan Ortiz Freuler | juan.ortiz@webfoundation.org
Dhanaraj Thakur | dhanaraj.thakur@webfoundation.org

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Abstract

+ Artificial intelligence (AI) is shaping gender relations, creating new challenges and opportunities for women. For their personal development and professional growth to be fully integrated, more women need to participate in the design, implementation, evaluation and debate on ethics and norms of the next generation of machine learning and AI-powered technologies. Only the meaningful inclusion of women at all stages will result in policies and technologies that make digital equality a reality. The AI world is almost entirely dominated by men. We need them to be allies and proactively act to make AI better for all.

CHALLENGE

The challenges of artificial intelligence (hereinafter, AI) related to gender are multi-layered.

+ The first layer is its design. Women need to have an active role in shaping the next generation of technologies, so stereotypes are not reproduced and diversity is considered.

+ The second layer is related to the deployment of such technologies and the direct social economic and political impact AI will have to reduce or exacerbate gender equality.

+ The third layer relates to collateral effects of the digitisation strategies on the future of work and advancement opportunities for women.

Machine learning and AI systems offer opportunities options to fix the bias and build more gender inclusive societies. Countries lacking key quality data will be unable to make evidence-based policies and, in turn, will fail to adopt measures not only to mitigate potentially harmful effects, but also to enhance and take advantage of these corrective opportunities.

PROPOSAL 1
Countries need to take proactive steps towards the inclusion of women in the coding and the design of machine learning and AI technologies

The low involvement and marginal inclusion of women in the coding and design of AI and machine learning technologies is leading to a variety of problems, including the replication of stereotypes, such as the submissive role of voice-powered virtual assistants, overwhelmingly represented by women. As experts Saran and Mishra point out, AI is replicating the same conceptions of gender roles that are being removed from the real world.

WE RECOMMEND THAT:

+ G20 governments, in close collaboration with the Education Ministries, Universities and the private sector, take proactive steps towards the inclusion of more women in the workforce that design AI systems.

+ G20 governments require companies to proactively disclose the gender balance of their design teams.

+ G20 governments require recipients of research grants to disclose the gender balance of the applying research teams.

+ G20 governments engage in better, more inclusive data collection processes that focus not only on quantity but also on the quality of datasets, which are not being collected at the expense of marginalised groups (e.g. sometimes data deserts are better off as data deserts -- data collected by governments could end up being used against marginalised groups)

+ G20 government's engaged in policy making around AI should ensure that these decision-making spaces are adequately gender balanced and/or these groups are aware of the reasons behind the significant gender inequalities facing the sector.

+ G20 governments should collaborate with industry and other partners to fund women-owned technology firms working in AI, and to incentivize other firms to have more diverse staff at all levels.

PROPOSAL 2
States need to implement industry guidelines to protect women from discriminatory algorithms and embrace openness and transparency for AI

AI systems are only as good as the data they rely on during the training phase. Structural inequality (including gender inequality) means that the world is full of biased datasets that reinforce such inequality. Building AI on these biased datasets encourages the systems to learn the values embedded in them, and further cement the patterns of exclusion and discrimination, including racial discrimination currently present in the world. The closed nature of AI systems impedes its comprehensive audit.

From recruitment systems, powered by machine learning, that might exclude the profile of women who the system predicts will become mothers soon, to systems that will advertise jobs with a lower payment to women , AI poses unprecedented threats to the progress towards gender equality if no corrective measures are adopted. A study from the University of Washington showed how machine learning amplified gender bias by associating, for example, women with kitchen appliances.

How can society fight misogyny, sexism and discrimination if the systems are fed with sexist data, and their algorithms are impossible to audit? Proactive steps can lead to the reduction of gender gaps assisted by machine learning and AI, for instance embracing algorithm affirmative actions that will ensure that the barriers that generally exclude women are removed from recruitment systems. Governments need to start auditing the systems to verify that women are not deliberately excluded from jobs or other opportunities for reasons related to their age, marital status, or motherhood plans.

WE RECOMMEND:

+ G20 countries to embrace regulation promoting transparency in machine learning and AI-powered systems that can meaningfully affect people's lives. This should include reliance on open data and open AI whenever government relies on these technologies for service provision. These requirements can be included in government procurement guidelines for AI systems that support the delivery of public services.

+ G20 countries to actively produce needed government open gender disaggregated datasets, so the machine learning systems can improve their performance. Open data can help us to better understand sources of bias in AI systems.

+ G20 countries explore the adoption of algorithmic equitable actions to correct real life biases and barriers that prevent women from achieving full participation and equal enjoyment of rights.

PROPOSAL 3
Countries must assess the economic, political and social effects of AI and machine learning technologies on the lives of women

The impact of AI and machine learning technologies is still uncertain. Yet, if its potential for social benefit is to be harnessed, solutions need to be designed to actively reduce gender inequality and increase the opportunities for women and girls.

There is a lack of research in G20 economies on the impact of AI and machine learning on precarious jobs, especially those of women. The interim measures regarding AI enhanced technologies to avoid severe disruptions in the economy and the societal effects on women are yet to be determined, and they will vary from country to country.

Better data and more debate is urgently needed to understand the potential disruptions for the economy in general and women in particular if protections are to be set into motion.

WE THEREFORE RECOMMEND THAT:

+ G20 countries carry out country level assessments to understand the economic, social and political impacts of algorithmic decisions and AI on women.

+ G20 countries create a common research fund to explore the impacts of AI and machine learning on women and women.

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