

## Written Statement

### CSW 67

#### **Innovation and technological change, and education in the digital age for achieving gender equality and the empowerment of all women and girls**

We are in the middle of a digital revolution which will irrevocably shape the world in a new way. As technology is immersed in social, political, economic, and cultural life, it becomes ever more important to scrutinize what this means for our lives.

Artificial intelligence is expected to fundamentally change our lives in the near future. Vital decisions are being made right now in boardrooms and by developers who are almost exclusively men. The power over our common future is in the hands of a male dominated tech industry.

Men ideate, design, and produce new technology while women are made invisible. This continues the historical practice of erasing women's experiences and economic activities in institutional frameworks as well as in the history books. There is a gender bias in understanding the user, in data collection, and in the design of the product (Vorvoreanu et al., 2019). This male norm has historically led to medical services arising from men's needs, cars designed for men's bodies and public spaces constructed based on men's experiences.

Women make up only a fifth of scientists and engineers in high-technology sectors in the EU (EIGE, 2020). In important specializations such as machine learning, women make up only 12 percent of the leading researchers (Simonite, 2018). It is well known that one of the reasons for this gender imbalance is the prevalence of sexual harassment and gender-based discrimination in the industry. Women with relevant educational backgrounds choose to work in other industries.

Thus, it is male coders who feed the machines with data from which to learn. This data is collected from a patriarchal society and a male-dominated internet where women are consistently harassed and abused. As a consequence, technology that is already embedded in vital functions of society and in our daily lives reproduces sexist attitudes from its makers. Various types of machine learning technologies are already being used in everything from recruitment to health care. Stereotypes, bias, and discrimination have been extensively documented in these, for example generative language models that return the word "prostitute" when being prompted with the word "woman". Once the data has been entered, it cannot be extracted. The machine cannot be rewired to learn something different.

Search algorithms govern what we learn, what we think and what we know. Therefore, it is crucial that these are monitored and accountable. This is not the case today. As an example, it has been revealed that Facebook's algorithms for jobs promote lower qualified jobs to women (Hao, 2021). Another example is the male gaze built into Google's search engine. If you search for the female lead actress in a blockbuster movie you will get suggestions to finish your search with "body". Searching for the male lead will suggest "Academy award". The same type of algorithms in social media exacerbate harmful stereotypes through the promotion of sexualized images of women and girls. We are currently witnessing the negative impact this has on girls' mental health on a global scale.

New technologies create new avenues for online harassment and abuse and for breaches of personal integrity. This risk is substantially higher for women. Recently a woman was gang raped within 60 seconds of entering Facebook's new metaverse (Das, 2022). With virtual or artificial reality glasses, it is possible to record one's surroundings in secret. This in combination with other technologies such as face recognition software provides a powder keg for virtual spaces in which women are particularly vulnerable (Bertazzo, 2021). There exists an unacceptable lack of accountability and responsibility in technologically created spaces.



The weapons and the sex industry have been leading the technological development due to their enormous resources. This has had consequences for women and girls. Prostitution is thriving in the digital world. Children in developing countries such as the Philippines are being ruthlessly exploited through online sexual abuse (Caña, 2022).

New research suggests that even though there is an increasing awareness of the implicit gender bias in technology and efforts are being made to counteract it, it is not enough to take a mechanistic approach to these issues (Kong, 2022). Ethical guidelines and self-regulation cannot rein in the irreversible harm caused by technology (Rainey et. al, 2020). Experts in the field instead support strategies to pause or shut down machine learning projects that manifest harmful stereotypes. (Hundt et. al, 2022).

As a gender equality perspective implies taking a critical view on established practices, gender mainstreaming in innovation and technological development can strengthen non-normative thinking and so expand the scope of possibilities imagined. By underfunding, undervaluing and undermining women's experiences and ideas, we are hindering human and economic development and precluding women from getting their needs met. This is on open display in the numbers showing the minuscule share of funding for innovation and development women receive worldwide.

Women are generally more active within the field of social innovation, an area that has enormous potential to improve societal services such as health care. Social innovation has long been underfunded while the male coded technological areas have experienced quite the opposite. Still today, most policies regarding innovation support male dominated industries. Both policy making and funding in innovation is based on a male norm of value creation.

It is of crucial importance to make structural changes to society to appropriately value women's needs, experiences, creativity and capabilities. This particularly holds true for the areas of innovation and technological development.

Despite the detrimental path technological evolution has taken, new technology also has the power to support gender equality by making nonbiased decisions where people cannot. If we want to prompt such a development, we need to act now.

We need to redo the technological development currently underway and ensure gender equality is at the core of our common future. Women's experiences and perspectives must weigh just as heavily as men's. We need to ensure that women are equally represented in all parts of society, in particular within innovation and technological development as ideators, executives, and end users.

We urge the UN member states to take strong, systemic measures to regulate the businesses that are now shaping our future to ensure women and girls are not set back even further in achieving gender equality.

We demand measurable objectives in all policy areas for all states to be held accountable.

All policies regarding innovation and technological change should be gender mainstreamed, the perceived outcome of any measures taken should contribute to gender equality.

Allocate funds for Interpol and other joint police efforts to end online sexual exploitation worldwide.

Impose laws that protect women and girls from harassment and sexual abuse in virtual and online spaces.

Pause or shut down all machine learning projects that manifest harmful stereotypes and abuse of women.

Increase funding for social innovation and funding for female dominated industries.



In collaboration with UN agencies, set up a gender equality fund for research. Within this fund, earmark grants for research on how technological development can strengthen gender equality instead of undermining it.

Develop and disclose sex disaggregated data for the allocation of public and private funding, including seed funding and other early-stage funding. Set time limited targets for when gender equal resource allocation is to be achieved.

Make gender equality audits a condition to approve for public funding and in public procurement.

Introduce a license to practice in the industry, to ensure ethical standards and awareness of women's rights and gender equality within the field.

Regulate social media platforms and eliminate harmful algorithms.

Establish a human oversight infrastructure which includes gender equality and women's rights experts before implementation of new machine learning technologies.

All data used for machine learning must be sex disaggregated and scrutinized from a gender equality and women's rights perspective, to make visible women's experiences.

Ensure sex disaggregated data collection in relation to regulation and research into innovation and technological change.

Take all necessary actions needed to ensure women's meaningful and equal participation in the design and implementation of new technology and in leading positions in the field.

Prioritize work-life balance and eliminate gender bias and discrimination in all workplaces.

Strengthen the gender equality and women's rights perspective in all education and support girls' technological interests all throughout school.

Make sure technical education programs are gender equal both in terms of teachers and students, with a minimum of 40 percent women and girls.

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