INCLUSIONS, VISIBILITIES AND OPPORTUNITIES

Gender and ICT: Are we making progress in CyberFeministisation?

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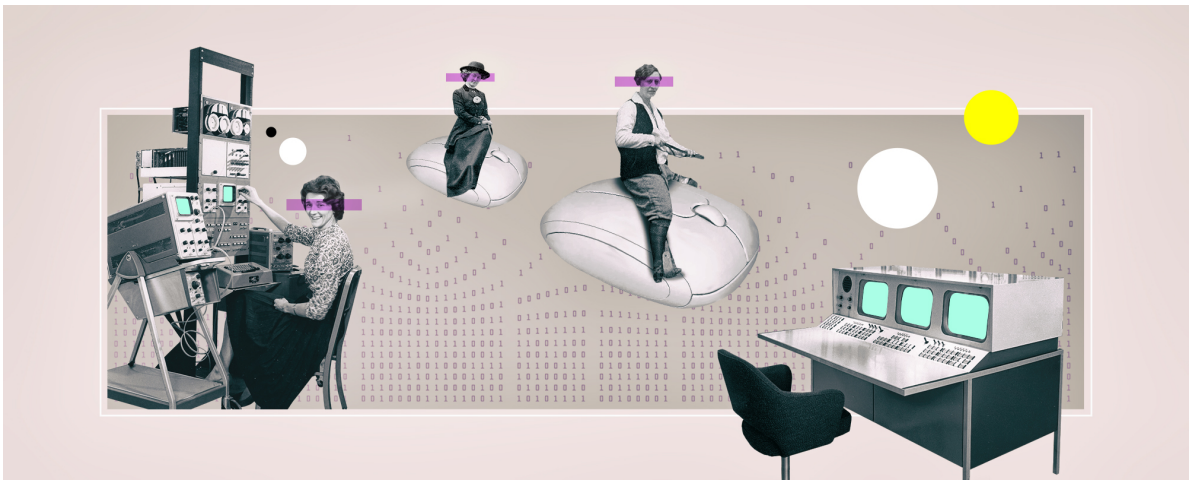

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In this article I examine the relationship between gender and technology from a feminist standpoint in Catalonia. This standpoint is influenced by previous work done by and with the Donestech women and technology group and the shared history of cyberfeminist research conducted since 2006. But it is also based on the successive research efforts and theorisations undertaken by inspirational feminist technology academics, from here and elsewhere, since the 1970s. Above all, I am writing from a standpoint of privilege and modesty from which I can remember and appreciate the countless words and actions shared over the years by hundreds of technologists and feminists of all stripes to our benefit.

From technofeminims feminismes

Both gender and technology have been central to explaining the main changes in the last decades and the future of modern society. Accordingly, the development of feminist theories of technology runs parallel to the various feminist currents, but also to the succession of technological innovations. Practically all feminist theories have covered feminism's relationship with technology in one way or another. However, cyborg feminists, cyberfeminists, technofeminists, TransHackFeminists, technoqueers and xenofeminists are the groups that specifically focus on it.

Feminist theories of technology are constituted as the reflection and expression of a complex and extensive process of theoretical creation and feminist action in relation to the concepts, content, study, research, politics and practice of technological development and its relationship with gender. In this process they become plural. With greater or lesser degrees of intensity they question sexism, inequality and gender discrimination, androcentrism, the patriarchy and heteronormativity in relation to technology. At the same time, they share the aim of contributing to technological development and reflection in conjunction with inclusion, empowerment, particularities, emancipation and gender liberation in this relationship between gender and technology.

The evolution of feminist theories of technology has proposed a series of strategies to make progress in gender transformations in technology, first with the inclusion of more women in technology and then with changes to the definitions and culture of the technological world. They have now moved on to understanding that gender and technology are mutually shaped in a process that is continually done and undone (Wajcman, 2010).

Today, it is impossible to understand modern social changes without ICT and vice versa. We know that technology is not neutral. ICT is impregnated with gender in its creation and development. Advances become technosocial and there are always places where they are produced and used. For modern feminists these places are still marked by a strong alliance between capitalism, colonialism and sexism. Accordingly, a relationship with technology is a privilege for certain countries, communities, ideologies and people, while others are excluded. For this reason, we still need feminist politics and we still need to contribute to breaking down what our practice means.

In this sense, then, and in relation to this article in the area of visibilities and inclusions, I argue that it is necessary to divert our attention from exclusion and place it once again on the importance of the presence of diverse women and LGBTIQ* groups in ICT. It is necessary to make them visible, in addition to feminist experiences, the desires behind them and their impacts. This will help us on the path to feminising ICT. But, more importantly and definitively, it is necessary to feministise technology from the roots to the trunk, leaves and fruit of current cybersocial development.

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From the exclusion of women…

Traditionally, gender and ICT research and action have mostly focused on showing and explaining the absence and exclusion of women in ICT. Men still account for the vast majority of students, employees and executives in ICT. The results of these studies have been a crucial part of highlighting the male and sexist domination of technology. They have also been central to showing the gender discrimination and violence situation faced by women in ICT. All this has allowed us to identify public action problems and needs and also to generate indicators and data for their analysis (Cohoon & Aspray, 2006; Castaño Collado, 2008; Gil-Juárez et al., 2011).

However, in relation to the exclusion paradigm, our narratives and actions tend to focus on the world of (cis) men. Accordingly, they only foster a change in women and other excluded groups, instead of proposing changes on the sectoral, structural and general societal levels. The exclusion perspective tends to highlight only the problem of quantity, which is observed in a binary manner, comparing just two sexes. This vision has fostered a technophobic and pessimistic perception of the relationship between women and technology, given that it has focussed exclusively on negative aspects, absences and the obstacles to be overcome by women to “do what men do”. It has contributed, therefore, to sending a pessimistic and revictimising message to people in charge of public policy, academic institutions, women and the rest of society. Beyond this, within this paradigm we move away from the analysis of feminist proposals that are more modern and open to critical and transformative optimism.

However, progress still has to be made towards a more inclusive paradigm that focuses on the presence, experiences, contributions and desires of diverse women and LGBTIQ* groups in ICT. This allows us to abandon a discourse anchored in quantity and make progress towards quality. This makes it possible to visualise the multiple implications of these presences in ICT and their contingencies, in addition to the paths, opportunities and potential for the full participation of these groups in today’s technological advances (Faulkner & Lie, 2007; Vergés Bosch, 2012). So why is it necessary to include gender in relation to ICT?

… to the inclusion of gender in relation to ICT

First, technology is obviously just one of many scopes in which it is necessary to achieve gender justice. It is only fair that the majority of the population should be able to participate in ICT on an equal footing. Women and other groups have traditionally been excluded and discriminated against in ICT. In fact, for some time it has been a legal imperative to work towards non-discrimination and equality. This enables the inclusion of diverse women and their perspectives, interests and needs. This equality would make it possible to abandon the idea that technology is man’s business, and more specifically the business of a certain type of man: white, western, heterosexual, with resources, without functional diversity… It would also erode gender binarisms and other inequalities.

Second, the ICT sector plays a key role in the development of future societies. Moreover, it has become a prestigious line of work with very good pay and conditions. Even in times of crisis it is always one of the few sectors where there is work, even here (González Ramos & Vergés Bosch, 2017). Moreover, ICT has become transversal and is now developed in and for all scopes of human activity. In recent decades women have been accumulating talent and now we are the majority in terms of highly qualified people in both Catalonia and Europe. The talent acquired in all these scopes, including technology, needs to be recognised. For this reason it is important for us to be truly welcome in the ICT world and for us to be willing to invest our knowledge, work methods and lifestyles in it.

Third, it is important due to the positive impacts of diversity. Research shows that committing to diversity is extremely beneficial to communities, companies and projects (Ruiz-Jiménez & Fuentes-Fuentes, 2016; Nielsen et al., 2018). The impacts of gender diversity on teams and management are especially significant. Better work environments are generated and people want to work with diverse people. This also erodes gender binarisms and inequalities and reduces fatal risks. Diverse opinions improve decision-making and project results and also contribute to creativity and innovation. This makes it possible to find new solutions to old problems and help previously underprivileged groups and scopes.

Fourth, then, we need technology that focuses on social transformation and the redistribution of resources, on care, on the sustainability of life and of our environment and all the scopes traditionally assigned to women and undervalued in ICT development. Turning our attention to all these needs and interests that had been ignored in the past also expands our scope of action and impact. The positive effects reach beyond the usual privileged few and are useful for a larger number of people, fulfilling their needs and desires. Not to mention the redistributive effects on families and communities of equipping women with more resources and technological knowledge (McQuillan, 2010).

Finally, if we make these people and their contributions visible, we can generate role models and self-inclusions. The more we show ourselves, the more we will hear “I want to be like her” and “I know a woman who is very good at that”. Even today not many of us are familiar with the names of people like Ada Lovelace, Alan Turing, Hedy Lamarr, Ursula Burns, Radia Perlman, Radhika Gupta, Shirley Ann Jackson, Núria Salán or Alba G. Corral, to cite just a few examples. By doing so we also challenge the existing power dynamics and we show that we are here with innovative and transformative alternatives to benefit the development and expression of ICT that is more in line with society as a whole.

From feminising ICT…

Having seen the importance of including gender in relation to ICT, it may be useful to clarify some of the strategies and tactics that have been proposed and implemented by feminist theories of technology. What would feminising ICT mean?

The data initially showed a clear digital gender divide. That is, women used ICT to a lesser

extent than men and they also studied and worked in ICT much less than men. This made it necessary to denounce inequality in this scope, and it also meant that the number of women in ICT had to be increased. Multiple actions have been carried out over the last few decades. The reporting of discrimination has multiplied and there has been an increase in actions to increase women's digital literacy and visibilise leading women in ICT like Ada Lovelace, in addition to actions like Catalonia's Dona TIC awards for women in ICT and the holding of "girls' days" at universities to encourage women to study engineering. But, is it enough to increase the number of women in ICT?

For the moment, even though having more women is beneficial, efforts that focus exclusively on quantity have not borne the hoped-for fruit. First, there is a tendency to hold women solely responsible for all the work to be done and the changes to be made. In any case, it will be difficult to increase the number of women and other traditionally marginalised groups if they are expected to enter, adapt to and develop in highly masculinised environments that are pre-established and immutable. Moreover, increasing the number of women in ICT will not necessarily mean that the ICT world will be qualitatively more feminised. Without changing structures and content it will be difficult to make gender transformations of any kind. For this reason, later efforts focussed on feminising the tools, content and objectives behind ICT (Natansohn, 2013).

Feminist theories have criticised a lack of visibilisation and of content that responds to the interests of women in ICT, in addition to a lack of gender perspective in the design of digital applications and tools. For example, in the design of the Apple HealthKit initially they "forgot" to include the option of monitoring menstruation. Also in the programming of Siri they "forgot" to include the option of asking for help in the case of sexual assault. For this reason it is necessary to encourage the development of tools and content related to the people they affect. One example would be filling Wikipedia with articles about women. Projects like WikiWomen and actions like WikiFem also fall into this category. Filling the internet with content related to more feminised interests, like those related to reproductive and care work, is also proposed. In this sense, the sexist language and communication style that still dominates the ICT world is questioned. Non-sexist language in a communication style that is respectful and inclusive in relation to women is proposed for online use.

In any case, emphasising this feminisation of content, although it is also necessary, runs the risk of returning to stereotypes, essentialisms and gender dichotomies and, therefore, as the TransHackFeminists and technoqueers have warned, to heteropatriarchal binarisms. Additionally, taking into account any intersectionalities that may be produced by multiple discriminations/privileges, work needs to be done on our situated needs and interests within our conditions and specific situation while, as ethnic, post and decolonial feminists remind us, considering others.

… to feministising us with ICT

It is, then, essential to consider the most recent feminist theories of technology, which affirm that gender and technology mutually shape each other in a fluid and dynamic

manner, and to understand that liberation will not be possible without a feminist policy behind it. For today's feminists it is clear that technology is not neutral. It is not that ICT is developed in a vacuum or not used everywhere. It is necessary, then, to directly propose plural feminist technologies, networks and virtual spaces, technologically repoliticising ourselves with these feminist theories. What would feministising ICT mean then?

Some types of feminist ICT must be designed, administered, led and inhabited by and with diverse feminist persons, with our perspective, but plural and open to the perspectives of others. Syster Servers, feminist websites and encounters like FemHack parties are examples of how this could work. Moreover, there are many technosocial fights that converge with feminist fights, which means that alliances could be formed. To start we can technologically cooperate more with community radio, technological sovereignty, free software and fair trade networks. It is important to create sorority spaces and networks, alliances and collaborations with each other and with others. Further, it is worth developing ICT to create new bridges from where we are now to where we are going, committing to the trans concept in all senses: trangenderise, transexualise, transdisciplinarise, transculturalise, transversalise, transform…

It is also crucial to depatriarchalise ICT. Tools, discourse, spaces, institutions, policies, companies, organisations, technology networks, etc., however, need to be submitted to a comprehensive review of the rules of the game from a feminist perspective. For example, feminist persons must be in positions of responsibility and decision-making with a view to exercising power that is more distributed, horizontal, collective, careful, shared, transformative, liberating… and less patriarchal. It is a question of power to, rather than power over (De la Fuente Vázquez, 2015). For example, (cis) men or white women, if we want to be feminists and allies, can start by reflecting, acting and recognising our privileges. And this also means, for example, stopping cyberharassment, mansplaining, whitesplaining and bropropiating or looking the other way when this happens. For this reason it is necessary to form friendly, safe and truly free online and offline ICT environments. That is to say, also free of sexist violence online and offline. In this aspect we have learnt a lot from our Latin American sisters. The materials, guide and kits provided by groups like Ciberseguras, APC and Donestech are useful in this regard.

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With ICT we (both ourselves and the machines) can decode and recode identities and learnt behaviours. For example, due to the sexist inertia we all have within us, we have learnt

computer imaging from Playboy photographs. But feminist criticism also propitiated working with alternative images. As shown in various recent experiments, there are still significant gender biases in Google's search algorithms, for example, and in Amazon's staff selection algorithms (Dastin, 2018). For this reason, machines still learn and exhibit binary identities and gender stereotypes and discriminate. However, for this very reason and taking into account feminist theories, they can also be examined and recoded. Wellner and Rothman (2019) state that both users and developers must be aware of the possibility of gender bias. Only this way can we prevent, overcome, subvert or exterminate it.

Feminist theories remind us that it is necessary to continue questioning and even eradicating social and gender inequalities. For this reason, ICT can still be used to raise awareness about discrimination and to mobilise more people to defend feminist demands. There are multiples examples, such as 8 March actions, all women strikes and participating in online campaigns like #MeToo. ICT is also useful to raise awareness about the need to commit to open-source, non-exclusive and fair technology that generates autonomy. It makes us aware of the terrible situation of women in the Congo, mainly due to cobalt mining, and how and by whom our electronic waste is managed. And at the same time, it is useful to establish solidarities, organise ourselves and act globally in these directions.

With ICT we can document and visibilise the important role played by women and LGBTIQ* persons in technosocial change, as borne out by the various gender and technology "herstories" available online. In this sense, it is also useful for education and training, given that the major formal educational institutions are still showing too much resistance to feminist content and forms. Specifically, they must reverse androcentrism and heteronormativity and, above all, become the expression of diversity, care, recognition, accessibility and freedom for many more women. For this reason we need to continue generating information, tools and content in favour of equality and gender freedom. Digital magazines like *Mujeres en Red* and *Pikara Magazine* are good examples of this.

Finally, we cannot forget about what is yet to come. We have to continue regenerating our capacity to engender potential feminists. ICT warns use of possible dangers, but above all informs us of possible alternatives and new techno/cyberfeminist conceptions that could become gender liberators. In the same way that feminist theorists and technoartists, particularly Sci-Fi creators, like Mary Shelley, Joanna Russ, Nnedi Okorafor, Lola Robles, Elia Barceló and Blanca Mart have done for us so many times in the past. In short, it is necessary for this technology to pursue and serve feminist causes and agendas and enable transformations in all these senses. It is necessary to mutually repoliticise feminist theories and technology. I have just proposed a small step forward and now I ask you the reader what feminist proposals you propose to continue with the CyberFeministisation process?

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