EXECUTIVE SUMMARY

MAPPING RESEARCH
IN GENDER AND
DIGITAL TECHNOLOGY

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MAPPING RESEARCH IN GENDER AND DIGITAL TECHNOLOGY: EXECUTIVE SUMMARY

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ACRONYMS AND ABBREVIATIONS

Al Artificial intelligence

APC Association for Progressive Communications
APC WRP Association for Progressive Communications

Women's Rights Programme

CEDAW Convention on the Elimination of All Forms of

Discrimination against Women

EROTICS Exploratory Research on Sexuality and the Internet

FAI Feminist autonomous infrastructure
FPI Feminist principles of the internet
FLOSS Free/libre and open source software

GBV Gender-based violence

GEM Gender evaluation methodology

ICT Information and communications technology

Information and communications technology for development

IDRC International Development Research Centre
IGF BPF Internet Governance Forum Best Practice Forum

IGO Intergovernmental organisation

LGBTIQ Lesbian, gay, bisexual, trans, intersex and queer
NCII Non-consensual sharing of intimate images

NGO Non-governmental organisation
SDGs Sustainable Development Goals (UN)

STEM Science, technology, engineering and mathematics

UN United Nations

VAW Violence against women

WSIS World Summit on the Information Society

INTRODUCTION AND METHODOLOGY

Technology, by the wider internet rights and research community, is assumed to be a neutral tool, especially of development. The emerging sub-field of research around gender and digital technology is united in its understanding that gender biases and stereotypes are embedded in technology, and that this reproduces the existing problems around gender parity, gender-based violence, discrimination and exclusion on the internet. It is largely because of this that the notion of a feminist internet¹ has wide resonance with a range of groups and people – activists working around gender, feminist individuals and collectives, content creators, researchers and academics, policy advocates and reformers.

METHOD AND LIMITATIONS

The mapping study of research in gender and digital technology covers research that has taken place in the last decade (since 2006), and the effort was to do this through *an open and consultative process*. This included:

- Scoping interviews and a survey (distributed using the snowball technique) to get a sense from the existing network of partners and organisations of emerging trends, gaps, projects and literature they would recommend (170 usable responses).
- A literature review that points to trends, issues, concerns for civil society and academic research located in middle- and low-income countries.
- Interviews with key actors in middle- and low-income countries to map gaps and emerging areas (17 interviews + 6 in-depth articles).
- A meeting with experts, academics and researchers in this field to review the report (20 participants).

The survey and literature review are limited to the interlocutors from civil society and academia within the known networks of partners and organisations linked to the Association for Progressive Communications Women's Rights Programme (APC WRP), APC and the International Development Research Centre (IDRC), and also constrained to literature that is available in the public domain and in English. The research mapped is located in or connected to disparate realities in middle- and low-income countries (referred to here as the global South), and it aims to be meaningfully representative of the available material. Interviews with key actors and the expert review meeting (academics, researchers and activists) were meant to address these limitations.

CONCEPTUAL FRAMEWORK FOR THE MAPPING STUDY

In the research over the decade from 2006 onwards, a marked tension is observed around analysis that is gender-based but does not describe itself as feminist. What is the difference between gender-based analysis and a feminist approach? While many research projects that are grounded in gender politics and local contextual research could surface relations of power in a given context, a feminist approach to research looks more comprehensively at what the structures of power and inequity are, especially around gender, and how these determine the lives and choices of people, their agency and autonomy. Feminism is invested in the politics of change,² and it is this in particular that drives the need for evidence-based and data-driven research, and advocacy and policy efforts based on this research.

^{1.} feministinternet.org. Versions of ideas around a feminist internet can also be found in other resources, for example, ualfutures.studio

^{2.} Gallagher, M. (2003). Feminist Media Perspectives. In A. N. Valdivia (Ed.), *A Companion to Media Studies*. Malden (USA): Blackwell Publishing Ltd.

Policy-related efforts and spontaneous movements online have brought us to the point where working towards structural change around gender relations is urgent, necessary and open to exciting possibilities. In relation to the field of information and communications technology (ICT) policy, advocacy and research, APC WRP has been an active player and developed various methodologies including the Gender Evaluation Methodology (GEM). GEM works with the ground realities of how gender plays out at the local level in development projects, telecentres, local networks, etc. Along with this, APC WRP's work with online movements and campaigns has over the last five years led to the collective development of the Feminist Principles of the Internet (FPIs). The FPIs address the need for a framework that informs and guides activism and movements that take place online, and is also continuously challenged by them. The FPIs were put together through a series of online and "onground" consultations, including two large gatherings in the past four years and city-based conversations in different regions in the global South.³ The key principles are critical to the realisation of a feminist internet, and are clustered around access, movements and public participation, economy, agency, and expression.⁴ In relation to the FPIs, Jac sm Kee states:

The approach builds from both a feminist politics of collective ownership and distributed power, and the politics of openness and decentralized networked knowledge creation advocated by internet rights activists. Where every person is simultaneously an expert and a newbie in a cross-issue, cross-movement conversation. It understands that the online is always located in the materiality of the people who engage in a multiplicity of spaces, and the importance of building resilient networks that is both embodied as flesh, and as discursive informational flows. Each encounter and every person within that encounter is a node and a gardener.⁵

Intersectionality as a framework emerges from critical legal studies and black feminism,⁶ and there have been significant attempts to use it in the context of the global South, where complexity of social formations around class, ethnicity, religion, caste, sexual orientation, gender expression and able-bodiedness often overlap with gender. Intersecting axes of power and inequality operate to collective and individual disadvantage;⁷ research projects must address the ways in which these overlaps take place and determine the choices and lives of people. To map in particular those voices that tend to be ignored was a stated objective of the mapping study, which sought to address the gaps in research and literature in relation to transgender, gender-non-conforming, gender-queer people (hereinafter referred to as gender-diverse people), specificities of indigenous women, women in conflict regions and occupied territories, and in relation to race, caste, ethnicity, able-bodiedness and class. The essential questions we have to ask before embarking on feminist research are whom the research is for and whom it benefits, the ethics and practices of doing such research, and how we can dismantle the power relations in research. For instance, several interviewees and researchers in the global South stated

^{3.} Taderera. A. (2017, 26 September). Politics of a feminist internet in Zimbabwe: Resistance and silence. GenderlT.org. https://www.genderit.org/node/5009

^{4. &}lt;a href="https://feministinternet.org">https://feministinternet.org. A feminist internet works towards empowering more women and queer persons – in all our diversities – to fully enjoy our rights, engage in pleasure and play, and dismantle patriarchy. This integrates our different realities, contexts and specificities including age, disabilities, sexualities, gender identities and expressions, socioeconomic locations, political and religious beliefs, ethnic origins, and racial markers (Preamble to the FPIs).

^{5.} Kee, J. (2018, 30 January). Imagine a feminist internet. Development. https://doi.org/10.1057/s41301-017-0137-2

^{6.} Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis. *Signs: Journal of Women in Culture and Society*, 38(4), 785-810.

^{7.} Ibid.

in interviews that there continues to be a paucity of spaces within ICT for development (ICT4D) conferences to present gender-related research, an inability of institutions to take on feminist research openly and a lack of financial support to produce peer-reviewed journals and publications in this field.⁸ It is important for feminist research to bring recognition to the works of activists and researchers who are marginalised, women of colour,⁹ and scholars and researchers located in the global South, and to remain open to articulations that lie outside the realms of citation to allow us to tackle systemic inequality within research.

In relation to development projects located in Africa, Sara Hlupekile Longwe developed a women's empowerment framework that looks at the level at which women are addressed¹⁰ either by the state, civil society or other players. Are they beneficiaries, or active agents of their own change? This framework is important as it locates change and transformation in the shifts of power dynamics. Gender at Work (an international feminist knowledge network)¹¹ has proposed a framework of change that distinguishes between polarities of individual and systemic change, and formal (visible) and informal (hidden) experience.¹² This makes evident that there are different and overlapping sites of change – institutional formal norms, socio-cultural and invisible norms of exclusion around gender, concrete mechanisms of access to resources, and change in consciousness and behaviour for individuals and society.

The analysis in the mapping of research in gender and digital technology relies on the conceptual framework that takes into account feminist approaches in relation to digital technology and ICTs, intersectionality, and the politics of transformative change.¹³

9. Ahmed, S. (2017). *Living a feminist life*. Duke University Press: London.

11. genderatwork.org

^{8.} Aavriti, N., & van der Spuy, A. (2018). *Mapping study of gender and digital technology*. APC. https://www.apc.org/en/pubs/mapping-research-gender-and-digital-technology

^{10.} Hlupekile Longwe, S. (1998). Women's empowerment framework: A conceptual framework for gender analysis and planning. https://www.ilo.org/public/english/region/asro/mdtmanila/training/unit1/empowfw.htm

^{12.} Rao, A., Sandler, J., Kelleher, D., & Miller, C. (2016). Gender at work: Theory and practice for 21st century organisations. Routledge: New York.

^{13.} Aavriti, N., & van der Spuy, A. (2018). Op. cit.

CRITICAL THEMATIC CONCERNS

The mapping study on the themes of embodiment, agency, expression, movement building, access, economy and gendered labour in network economies indicates common trends, issues and areas for further research and emerging fields of study and intervention. Here we summarise the questions raised in the mapping study in relation to each of the five themes (or *research buckets*) and map the important research subtopics within.

I) ACCESS - USAGE AND INFRASTRUCTURE

In the global South, a large amount of research around access and connecting end-users is taking place, and an increasing number of reports, initiatives and efforts are focused on addressing women's ability to enjoy universal, acceptable, affordable, unconditional, open, meaningful and/or equal access to information, the internet and ICTs.¹⁴

Infrastructure

Infrastructure issues are one of the primary impediments to access for those who are marginalised. The inequitable distribution of infrastructure across regions and people includes affordability¹⁵ and network rollout, quality and availability¹⁶ which all contribute as well to what is now referred to as the "digital gender divide". Policy-related issues in the field of access include lack of competition, conservative spectrum allocation policies, poor universal service and access fund policies, the inability to use TV white space, onerous licensing requirements, high taxes and royalty stacking, and further the failure to acknowledge and take policy measures to address gender disparity effectively.¹⁷

Barriers to access

The available literature acknowledges that while men experience barriers similar to the ones women do, women tend to experience all barriers more acutely due to structural inequalities and entrenched prejudices in many societies.¹⁸ Women tend to have lesser

- 14. These include, but are not limited to, the recent work of civil society organisations (e.g. A4AI, Access Now, APC, CIPESA, Paradigm Initiative Nigeria); research institutions (e.g. LIRNEasia, Research ICT Africa); various private sector organisations (e.g. Facebook, Google, GSMA); and intergovernmental organisations (IGOs e.g. ITU, IGF Best Practice Forum on Gender, UN Broadband Commission for Sustainable Development, UNCTAD, UNESCO, UN Women, World Bank, World Economic Forum).
- 15. Alliance for Affordable Internet (A4AI). (2015). Women's Rights Online: Translating Access into Empowerment. Washington DC: Alliance for Affordable Internet. https://www.webfoundation.org/docs/2015/10/womens-rights-on-line21102015.pdf; GSMA. (2015). Bridging the gender gap: Mobile access and usage in low- and middle-income countries. London: GSMA. www.gsma.com/connectedwomen/wp-content/uploads/2015/02/GSM0001_02252015_GSMARe-port_FINAL-WEB-spreads.pdf; GSMA/LIRNEasia. (2015). Mobile phones, internet, and gender in Myanmar. London: GSMA. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/GSMA_Myanmar_Gender_Web_Singles.pdf; Broadband Commission. (2013). Doubling Digital Opportunities: Enhancing the Inclusion of Women and Girls in the Information Society. https://www.broadbandcommission.org/documents/working-groups/bb-doubling-digital-2013.pdf
- 16. Chair, C. (2017). Internet use barriers and user strategies: Perspectives from Kenya, Nigeria, South Africa and Rwanda. www.researchictafrica.net/docs/RIA 2016 Comparative FGD study_Final_Web version.pdf; A4AI. (2016). The 2015-2016 Affordability Report. www.1e8q3q16vyc81g8l3h3md6q5f5e.wpengine.netdna-cdn.com/wp-content/uploads/2016/04/A4AI-2015-16-Affordability-Report.pdf; APC. (2015). Unlocking broadband for all: Broadband infrastructure sharing policies and strategies in emerging markets. Johannesburg: APC. https://www.apc.org/en/system/files/Unlocking broadband for all Full report.pdf; A4AI. (2015). Op. cit.; GSMA/LIRNEasia. (2015). Op. cit.; Deen-Swarray, M., Gillwald, A., Morrell, A., & Khan, S. (2012). Lifting the veil on ICT gender indicators in Africa: Evidence for ICT policy action: Policy paper 13. Cape Town: Research ICT Africa. www.goo.gl/PmMqI5
- 17. UN Broadband Commission for Sustainable Development, Working Group on the Digital Gender Divide. (2017). Recommendations for Action: Bridging the gender gap in Internet and broadband access and use. Geneva: ITU. www.broadbandcommission.org/Documents/publications/WorkingGroupDigitalGenderDivide-report2017.pdf
- 18. Sylvester, G. (Ed.) (2016). *Use of Mobile Phones by the Rural Poor: Gender perspectives from selected Asian countries*. Bangkok: FAO/ LIRNEasia/IDRC. www.idrc.ca/en/book/use-mobile-phones-rural-poor-gender-perspectives-select-ed-asian-countries; GSMA. (2015). Op. cit.; IGF. (2015). *BPF on Online Abuse and Gender-Based Violence: final out-come document*. Geneva: IGF. www.intgovforum.org/cms/documents/best-practice-forums/623-bpf-online-abuse-and-gbv-against-women/file; UNCTAD. (2015). *Implementing WSIS Outcomes: A Ten-Year Review*. Geneva: UNCTAD. www.unctad.org/en/PublicationsLibrary/dtlstict2015d3_en.pdf; Deen-Swarray, M. et al. (2012). Op. cit.

disposable income, do a large portion of domestic and reproductive (unpaid) work, and are generally not given the same access to education, so their access to online content in unfamiliar languages like English is limited. What is also needed are alternative content platforms that are "owned and operated by women and marginalised groups in the global South." ¹⁹

Ruth Nyambura, African Ecofeminists Collective, asks why we want to get women to have access to a terrain where there are death threats and incidents of violence on a daily basis. She says, "I think it's important to change the structure of the internet."

What matters is meaningful access,²⁰ and the potential of ICT for development depends on how and to what extent people, especially women, use ICTs.²¹ In fact, as is becoming increasingly evident, if people do not have access (and if these are largely women and other vulnerable communities), then ICTs can aggravate conditions of inequality. A substantial amount of research also looks at how cultural perceptions and gendered stereotypes can lead to women being barred from using the internet because of potentially harmful content or unknown threats to them,²² including moral and sexual panic about what this exposure could do to women and girls.

These barriers to access broadly identified through various studies in middle- and low-income countries, which include affordability, infrastructure, local and relevant content, and social and cultural norms, are differently applicable in different countries and regions. As identified by Avri Doria, "one of the missing links" in internet governance is the "near absence of connections" between the international level and local need, and this points to a gap between local and key actors and those influencing policy advocacy and change. Gendered difference in access cannot be addressed by generalised action, and what is needed is a better understanding of barriers in local contexts. This is evident, for instance, in the provision of public access facilities either through public Wi-Fi or kiosks, and how many of these plans do not take into account whether women own devices, what kind of spaces such kiosks or Wi-Fi are available in, and whether these are safe or accessible for women. Yet there are under-utilised universal service and access funds to support public

- 19. Gurumurthy, A., & Chami, N. (2017). A feminist action framework on development and digital technologies. Johannesburg: APC. https://www.apc.org/en/pubs/feminist-action-framework-development-and-digital-technologies
- 20. Meaningful access is defined as freedom to choose and curate their experience online, which is for example curtailed by zero rating schemes. Source: IGF. (2016). *Policy Options for Connecting and Enabling the Next Billion(s) Phase II*. Geneva: IGF. www.intgovforum.org/multilingual/index.php?q=filedepot_download/3416/412
- 21. Chair, C., & Deen-Swarray, M. (2015). Determining user capabilities to ensure the achievement of ESCRs through internet use. In A. Finlay (Ed.), *Global Information Society Watch 2015*. Johannesburg: APC/IDRC. https://www.giswatch.org/sites/default/files/gw2016-southafrica.pdf
- 22. Ya'u, Y. Z, & Aliyu, M. A. (2017). Internet for Men? Overcoming Gender-based Digital Exclusion in Northern Nigeria: A Strategy Document. Kano State: Centre for Information Technology and Development. www.citad.org/download/overcoming-gender-based-digital-exclusion-in-northern-nigeria-a-strategy-document; Kovacs, A. (2017). 'Chupke, Chupke': Going Behind the Mobile Phone Bans in North India. Gendering Surveillance. genderingsurveillance.internetdemocracy.in/phone_ban
- 23. Doria, A. (2015). Women's rights, gender and Internet governance. Johannesburg: APC. https://www.genderit.org/sites/default/upload/issue_womenrights_digital.pdf
- 24. Sylvester, G. (Ed.) (2016). Op. cit.; Galperin, H., Mariscal, J., & Barrantes, R. (2014). *The Internet and Poverty: Opening the Black Box.* DIRSi. www.dirsi.net/web/files/files/Opening_the_Black_Box.pdf; Techatassanasoontorn, A. A. (2011). *Measuring Broadband Progress: A Quality of Life Approach*. Auckland: CPR South. www.cprsouth.org/wp-content/uploads/2011/08/20_Angsana-T_Policy-breif.pdf

access facilities.²⁵ It is also evident that contexts vary vastly across the global South – from conflict-ridden areas and remote and rural regions, to cities with connectivity but also high levels of urban poverty.

Incomplete data around access

National statistics offices often lack the resources to collect sex-disaggregated data, and telecommunications operators and network operators generally fail to publish customer data on grounds of data protection and other regulations. There is very limited sex-disaggregated data available — especially in low- and middle-income countries and between urban and rural contexts. It is then not surprising that many of the policy measures respond "symptomatically" to perceived problems around access and gender, rather than on the basis of evidence-based research on contextual and local barriers.

"The data we need might not be the data that we know is available with private corporations and governments, or rather more data will not necessarily give us a more fine-grained picture. Data too is a bigger box that needs to be unpacked and approached critically." – Elena Pavan, University of Trento, Italy.

Intersectional perspectives on access

Why access is important needs to be interrogated from a feminist and intersectional perspective, which entails not taking for granted that access to ICTs is necessarily a positive and empowering development. What is also relevant is to view the dynamics of race, caste, region (urban-rural), able-bodiedness, age and other factors, in relation to gender and access.²⁸ One of the important pushes from especially the Internet Governance Forum Best Practice Forum (IGF BPF) on Gender and Access is to place access not only in relation to economic empowerment but within a human rights framework – particularly as an enabler of human rights, i.e. civil, political but also economic, social and cultural rights.²⁹ How would access contribute to increasing women's participation in technical roles and community ownership over ICTs? How does it impact roles of women in the information/knowledge society – what impact does it have on opportunities for entrepreneurship and advancement,³⁰ but keeping in mind also how digital technology and access work with existing hierarchies of power and distribution of agency.

Community networks and other alternatives

Civil society organisations, collectives and others are also exploring alternative ways of looking at access, especially through local community networks. Community networks work when the community remains actively involved in building and maintaining their own

- 25. IREX and Beyond Access. (2016). Why young women need digital skills now to participate in Myanmar new information society. N/A: IREX. www.myanmarbookfoundation.org/wp-content/uploads/2016/04/IREX-Myanmar-Gender-Study.pdf; A4AI. (2016). Op. cit.
- 26. A4AI. (2016). Op. cit.; GSMA. (2015). Op. cit.; Broadband Commission. (2013). Op. cit.
- 27. Sylvester, G. (Ed.) (2016). Op. cit.; Galperin et al. (2014). Op. cit.
- 28. While ICTs offer radical new possibilities to people with disabilities, through text-to-speech programmes, global positioning systems, disability-friendly product design, virtual reality systems, e-governance and many other innovations, it remains to be seen whether there is universal and meaningful access that also takes into consideration the intersections between disability and other social and economic aspects.
- 29. IGF BPF. (2016). Best Practice Forum Gender: Gender and Access. (2016). Overcoming barriers to enable women's meaningful Internet access. Geneva: IGF. www.intgovforum.org/multilingual/index.php?q=filedepot_download/3406/437
- 30. Gurumurthy, A., Jha, M., & Mclaughlin, L. (2012). *Labouring Women, Enterprising States A Research Study on Women, Information Technology and Narratives of Entrepreneurship*. IT for Change. www.itforchange.net/labouring-women-enterprising-states-%E2%80%93-a-research-study-on-women-information-technology-and-0

infrastructure, and often women and their involvement are important to the functioning of these networks.³¹ There has also been increasing involvement by groups in Latin America in practices around feminist infrastructure and services.³² Feminist infrastructure would address several concerns about providing, using and learning about technology, building community, and dealing with violence and dynamics of power within and outside.³³ Could this form of infrastructure be a mode of providing access that would work against hegemonic state, institutional and patriarchal power, support movements on the ground, and empower through access?

RECOMMENDATIONS ON RESEARCH QUESTIONS ON ACCESS AND GENDER

- Measuring meaningful access in relation to the extent to which access to the internet can enable the exercise of agency and decision making by women and gender-diverse people towards the realisation of their rights.
- Research on access in a specific context is often used as a basis for global, national- and regional-level findings on how to ensure universal access, but there needs to be more local and situated research on access that looks at variance in local barriers to access (whether language, affordability of devices or data, location, class, ethnicity, race, caste, etc.).
- Advocating for availability of gender-disaggregated data owned by telecommunication companies, the state and civil society for research purposes.
- How to provide policy makers and gender equality activists alike with tangible evidence to support the prioritisation both of women's access in broadband plans and of ICTs and broadband in gender equality initiatives.
- Public access facilities (Wi-Fi, libraries, etc.) and experiences of using them for people of different genders and gender expressions, location, class, ethnicity, ability, etc.
- Discourse around access and inclusion, how it is deployed in different policy forums, corporate agendas and civil society discourse: how to frame access within human rights discourse rather than development discourse, specifically in relation to economic empowerment of women.
- Relationship between education and access, presence of women in STEM fields, and the potential of online learning.
- Disability and accessibility standards and what specific impact this has in relation to gender.
- Availability of relevant infrastructure in rural areas, difficult-to-connect remote areas, areas under conflict, occupied territories, refugee camps.
- Relations of gender and power in autonomous projects around local community networks and feminist infrastructure.

^{31.} Hussen, T. S., Bidwell, N. J., Rey-Moreno, C., & Tucker, W. D. (2016). Gender and Participation: Critical Reflection on Zenzeleni Networks in Mankosi, South Africa. *Proceedings of the First African Conference on Human Computer Interaction*, 12-23.

^{32.} Interview with Nadège from the organisation Kéfir. Aavriti, N., & van der Spuy, A. (2018). Op. cit.

^{33.} Radloff, J. (2017, 7 November). Interview with Lili_Anaz: The body that knows itself.... *GenderIT.org*. https://www.genderit.org/node/5030

II) ECONOMY AND LABOUR - OR THE DEVELOPMENT OF FEMINIST DIGITAL ECONOMICS

Gendered labour is labour that is traditionally considered suitable for women, men or other gender expressions based on prevailing stereotypes and prejudices – for example, transwomen doing sex work, women doing service jobs such as being waiters or call centre employees, women being nurses and doing care work, and so on. Feminist analysis of the economy brings to the surface how gendered labour for women is often in the private or domestic sphere, unpaid or poorly paid, and how this largely unacknowledged labour contributes to the functioning of the economy. What this also entails is a closer examination of division of labour and decision making within families and largely patriarchal societies. But how does gendered labour persist³⁴ in the digital and information age? Economic power on the internet is either through forms that fit into the globalised "free" market (often based on individualised models of entrepreneurship and rewards), and there are also alternatives that are posed to this such as cryptocurrency, blockchain, ³⁵ Creative Commons, etc.

Education and digital skills in particular connect questions of access to those around economy, and in this regard education also particularly refers to the presence of women in science, technology, engineering and mathematics (STEM), which is significantly less than that of men, especially in the global South.³⁶ Women are less able to develop required digital skills, and this along with income and age particularly impacts their use of ICTs³⁷ and their occupation of STEM-related fields, which in turn also relates to their presence and effectiveness in policy spaces in relation to technology.

Gendered labour in ICTs

"Cheap female labour is the engine that powers the internet," says Lisa Nakamura. At the expert review meeting, Ruth Nyambura (African Ecofeminists Collective) pointed to the possibility of researching and organising women along the ICT chain – from mines, laboratories, electronic assembly plants and business process outsourcing to the production of content online that drives social media. Existing research is around the question of how labour, and particularly labour by women and gender-diverse people, is used, extracted and exchanged in the information economy. This includes the experience of care workers/nurses in India enabled and trained in the use of smart phones, migrant domestic workers across Asia who often unionise and form networks through mobile phones, and the role of women in the manufacturing industry and mining and extractive industries in Southeast Asia and East Asia. In the current economy, the question is around the creation of

- 34. An interesting fact here is that historically it was women who performed several of the repetitive tasks of calculation and computing that later were taken over by computers. See Grier, D. A. (2007). When Computers were Human. New Jersey: Princeton University Press.; Margolis, J., & Fisher, A. (2003). Unlocking the Clubhouse: Women in Computing. Cambridge: The MIT Press.
- 35. Zambrano, R., Seward, R., & Sayo, P. (2017). Unpacking the disruptive potential of blockchain technology for human development. IDRC: Canada.
- 36. Microsoft, UNESCO, UN Women and ITU. (2014). *Girls in STEM and ICT Careers: The Path toward Gender Equality*. www2.tku.edu.tw/~tfstnet/upload/file/20130704153742d38d9.pdf
- 37. Galperin et al. (2014). Op. cit.; UNESCO. (2015). Mobile Phones and Literacy: Empowerment in Women's Hands A Cross-Case Analysis of Nine Experiences. Paris: UNESCO. www.unesdoc.unesco.org/imag-es/0023/002343/234325E.pdf; Kuga Thas, A. M. (2005). Paddling in circles while the waters rise: Gender issues in ICTs and poverty reduction. Johannesburg: APC. https://www.apc.org/en/system/files/paddling.pdf
- 38. Nakamura, L. (2017). *Racism, Sexism, and Gaming's Cruel Optimism*. https://lnakamur.files.wordpress.com/2015/02/racism-sexism-and-gamings-cruel-optimism.pdf
- 39. Gajjala, R. (2017, 23 February). Editorial: The problem of value for women's work. *GenderlT.org edition: Gender, labour, technology.* https://www.genderit.org/node/4907
- 40. Interview with Tony Roberts. Aavriti, N., & van der Spuy, A. (2018). Op.cit.
- 41. Verite. (2014). Forced labour in the production of electronic goods in Malaysia: A Comprehensive Study of Scope and Characteristics. www.verite.org/wp-content/uploads/2016/11/VeriteForcedLaborMalaysianElectronics2014.pdf

new digital resources and the ownership of these resources – is there gender parity in this distribution, does it differ substantially from hierarchies already in place around geography/ region and social location? Clearly the impact of ICTs can be both positive and detrimental for women and gender-diverse people.

"While opposition to globalisation has grown in many contexts, there have been critiques raised whether the anti-globalisation social movements across the globe are actually inclusive. Adivasi-Dalit-Bahujan communities in general and Adivasi-Dalit-Bahujan girls/women in particular have to reposition themselves within such global social movements through producing succinct alternatives that are critical as well as contemporary in nature." – Dr. Smita Patil, Indira Gandhi National Open University.

Emerging concerns and areas of research are in relation to the impact of artificial intelligence (AI) and automation on precarious forms of gendered labour, as digitisation will impact middle- and low-income countries with developing economies hardest, and have a particular impact on low-end repetitive labour.⁴² What has already been raised by critical feminist scholars is that affective and immaterial labour on social media, especially done by women, gender-diverse people and other vulnerable groups to raise and sustain political and radical projects of change, including the recent #metoo movement, is about addressing behaviour and widespread attitudes around gender and patriarchy. But this labour is in turn exploited and becomes shadow and unpaid work for social media corporations.⁴³

What is evident is that there is a gender disparity in fields of education, particularly in STEM, and that further leads to the gender digital divide in access, technology-related employment and entrepreneurship. Interviews revealed that there is persistent harassment and gender discrimination in these spaces. 44 In relation to sexual harassment specifically in academia, Jinni Chae, a member of Fembot Collective, spoke of how the collective attempted to function as a safe space, and that it functions "ultimately not only against inequality embedded in the formalised academic culture and but also works for the marginalised who do not have enough cultural, economic, and social capital in academia, such as the graduate students."

The logic of empowerment

ICT4D is largely responsible for the push for effective use of ICTs beyond the relatively richer and developed countries, extending their use to rural, remote areas and middle- and low-income countries. Following the World Summit on the Information Society (2003, 2005), several civil society organisations took on especially the task of ensuring the entry of women in the global South into the information economy with some degree of empowerment and agency, through the provision of basic digital literacy and training. Although they were partially successful in these endeavours, several point out that while

^{42.} Faith, B. (2017, 17 May). Automation and the future of work: bringing women into the debate. *Institute of Development Studies*. https://.ids.ac.uk/opinion/automation-and-the-future-of-work-bringing-women-into-the-debate

^{43.} Nakamura, L. (2015). The Unwanted Labour of Social Media: Women of Color Call Out Culture as Venture Community Management. *New Formations: A journal of culture, theory, politics,* 106-112. www.politeianet.gr/magazines/-xena-periodika-new-formations-issue-86-253800

^{44.} Interview with Taskeen Adam, 3 July 2017. Aavriti, N., & van der Spuy, A. (2018). Op. cit.; Aavriti, N. (2017, 23 February). A woman coder's journey: Interview with Judith Owigar. *GenderlT.org.* https://www.genderit.org/feminist-talk/entering-tech-spaces

promising women employment and economic independence, ICTs do not necessarily or directly lead to empowerment and enhanced agency. The reasons for this include the following:

- Ineffective and partial training in digital skills.⁴⁵
- Incomplete understanding of ICT4D the poor are framed as consumers and economic actors who need marketing strategies, not as citizens who will take democratic actions that ensure social equity.
- Empowerment is restricted to social and economic mobility but does not extend to change in hierarchies around gender, caste and other social formations.
- Empowerment, especially in the field of ICTs, is constructed around the figure of the individual entrepreneur and is not about groups, collectives and particularly not about movements.⁴⁶

To reiterate, it is important to ask where women and other vulnerable people are placed – are they beneficiaries of development and welfare schemes or do they have control and decision-making power?⁴⁷

"We noted that mainstream gender and development policies and practices use expressions such as 'unleashing individual women's entrepreneurial energies' and 'mainstreaming women into corporate-led public-private partnership initiatives' instead of confronting structural inequalities which establish women as the preferred labourers in the lowest ranks of occupations associated with new technologies." – Lisa McLaughlin, Miami University, Ohio.

Commons and feminist infrastructure

In the sphere of technology, the free/libre and open source software (FLOSS) movement has been integral to challenging the domination of corporations, and this includes the adoption of FLOSS philosophy in relation to content through Creative Commons and other licences. In relation to technologies of decentralisation such as community networks and blockchain technology, interviews and nascent research indicate the need to examine the impact on gender and whether these technologies can address concerns around gender parity. Blockchain technology is heralded as bringing with it positive and even radical change in relation to government services, anti-corruption, land records, aid and development, banking and so on.⁴⁸

The internet has also opened up the space for feminist libraries, archives and autonomous spaces. Further there is also the development of feminist autonomous infrastructure (FAI) where people have taken ownership and control over digital resources. Given the understanding that technology is not gender neutral, and that biases around gender, race, caste, ethnicity and broadly difference are built into infrastructure, the basis of articulations around FAI is for communities and feminists to build and manage their own digital resources and infrastructure. These articulations are emerging especially from groups such as Kéfir, Vedetas and others in Latin America. Their understanding is that FAI should be intimately linked to the experience of the woman's body (and the vulnerable body) both online and

^{45.} Gurumurthy, A., Jha, M., & McLaughlin, L. (2012). Op. cit.

^{46.} Interview with Lisa McLaughlin, 11 August 2017. Aavriti, N., & van der Spuy, A. (2018). Op.cit.

^{47.} Hlupekile Longwe, S. (1998). Op. cit.

^{48.} Zambrano, R., Seward, R., & Sayo, P. (2017). Op. cit.

onground – which mainstream platforms, services and networks do not give sufficient value and importance to.⁴⁹ What is important is our informed consent and intimacy, memory and connectedness, and autonomous decision making.⁵⁰ Articulations on feminist infrastructure are often around self-care, responsibility and ethics. In such visions of networks built by community, people are active users in the functioning of the network and this requires a deeper commitment to listening, learning and the infrastructuring of social relations.⁵¹

"We're using other languages to explain why it's important to shift from an idea of service towards the notion of common goods that people of trust are maintaining and managing." – Nadège, Kéfir.

RECOMMENDATIONS ON RESEARCH QUESTIONS ON ECONOMY AND GENDERED LABOUR

- How shadow work and unpaid work by women and others in the domestic sphere and outside, including reproductive and care work, forms of affective labour online and other gendered labour, are essential to the functioning of the information economy.
- In relation to the future of work, how labour is or will be transformed in the digital economy, especially gendered labour at the lowest rungs (contract workers, precarious labour, unsafe conditions, long working hours) and how this varies for people, particularly women, from heterogeneous locations. The internet is a high-cost space for marginalised people because of how gendered labour has historically operated and how it continues to operate in traditional industries of manufacturing and mining and also in new economic models such as crowdsourcing and the Al-driven, sharing and gig economies.
- Automation, the future of work and the impact that this will have on specific industries, including business process outsourcing in Asia and Africa, and manufacturing and electronics industries in Asia where women and other vulnerable groups/people have been employed.
- Work cultures, sexual harassment, sexual violence, sexism, "gaslighting" and the
 professional undermining of women and gender-diverse persons in technologyrelated spaces (companies, start-ups, content generators, freelance work for
 coders and designers) and allegedly progressive movement spaces around FLOSS
 and technology.

^{49. &}quot;We strive and understand technologies from the guts, seeking to return to the skin, ancestry, to what makes us feel, what moves us, what connects us, through meaningful and vital actions, through actions that sustain and interconnect, to whom doesn't contact with tech, digital tech." See Nanda & Nadege. (2017, 17 July). From steel to skin: A four-handed raw manifesto by Nanda from Vedetas, transhackfeminist brazilian server and Nadège from Kéfir, a feminist libre tech co-op. *Kéfir*. https://fermentos.kefir.red/english/aco-pele

^{50.} Kee, J., Nadege, Santos, G., & Fernanda. (2017, 29 March). Technomagical fires to warm your heart: feminist autonomous infrastructure at the Internet Freedom Festival. *GenderlT Podcasts*. https://www.genderit.org/podcast/feminist-autonomous-infrastructure-technomagical-fires-warm-your-hearts

^{51.} Forlano, L. (2016). Infrastructuring as critical feminist technoscientific practice. *Spheres # 3*. www.spheres-journal.org/infrastructuring-as-critical-feminist-technoscientific-practice/

III) EMBODIMENT AND AUTONOMY - FEMINIST QUESTIONS STILL RELEVANT IN THE DIGITAL AGE

In 1993 the essay "A rape in cyberspace" caused a stir because it very effectively argued that sexual violence and assault can take place online, and that it is non-consensual and violates the integrity and autonomy of the person. ⁵² In the contemporary world ICTs are part of the ordinary life of a person and even people without direct access to the internet are configured by digital technology through big data and schemes such as national identity programmes. Although progress has been made in establishing that online violence and harassment constitute offences in national jurisdictions and international law, ⁵³ it has taken time to convince the public about the gravity and also growing immensity of the phenomenon of online violence, ⁵⁴ bullying, harassment, trolling, misogyny and hate speech. Tackling online gender-based violence (GBV) requires an emphasis on the autonomy and agency of women and gender-diverse people; it requires taking into account and giving importance to their lived and embodied experiences of violence and coercion, and also fully acknowledging their personhood and stake in pleasure, sexuality and expression.

The mapping study shows that there have been shifts in the discourse around feminism, women's rights, gender, ICTs and related domains. The shift away from "violence against women" and towards "gender-based violence" mirrors a similar shift in national and global discourse that emphasises that violence is linked to the social construction of gender roles, 55 and GBV must cover violence done on the basis of gender — violence against women and transwomen, violence against transmen, gender queer and gender non-conforming persons.

Online GBV

As pointed out by the mapping of the research,⁵⁶ online GBV is one area of gender-related research that is being tackled and progress has been made especially due to the efforts of APC and others in international and national policy and law, global and local campaigns, and in-depth and comparative research.⁵⁷ The role of APC WRP in particular is to ensure that the women's movement and their concerns and feminist perspective are reflected in the formulations that are proposed in international law. What this research has established is that the distinction sought to be made between online and onground is problematic and serves to diminish the violence done and experienced. The United Nations (UN) states that rights that people have offline/onground are the same as those online and so are women's rights to privacy, safety, public voice, fullness of personality and self-determination. As pointed out by Gurumurthy and Chami, many of the violations that take place now tend to occur in "hybrid contexts of techno-mediated life, in the unfreedoms wrought by data, digitalisation and networks."⁵⁸

- 52. Dibbel, J. (1993, 23 December). A rape in cyberspace: How an Evil Clown, a Haitian Trickster Spirit, Two Wizards, and a Cast of Dozens Turned a Database Into a Society. *The Village Voice*.
- 53. APC. (2016). Exploring technology-related violence against women. Johannesburg: APC. https://www.apc.org/en/projects/end-violence-womens-rights-and-safety-online
- 54. Aziz, Z. A. (2017). Due diligence and accountability for online violence against women. APC. https://www.apc.org/sites/default/files/DueDiligenceAndAccountabilityForOnlineVAW.pdf; Gardiner, B., Mansfied, M., Anderson, I., Holder, J., Louter, D., & Ulmau, M. (2016, 12 April). The web we want: The dark side of Guardian comments. The Guardian. www.theguardian.com/technology/2016/apr/12/the-dark-side-of-guardian-comments
- 55. Butler, J. (2007). Gender Trouble: Feminism and the Subversion of Identity. Routledge.
- 56. Aavriti, N., & van der Spuy, A. (2018). Op.cit.
- 57. APC. (2015). From impunity to justice: Corporate and state remedies for dealing with technology related violence against women. https://genderit.org/onlinevaw/about/
- 58. Gurumurthy, A., & Chami., N. (2017). Op. cit.

Research questions in relation to online GBV that are emerging and need to be tackled include questions around:

- The human rights obligations of the business sector and effective application of principles of due diligence on states and corporations.
- The role of corporations, especially technological and artificial intelligencedependent solutions to online GBV.
- The implementation of laws and the existing biases against the prosecution of online GBV-related cases both in the judiciary⁵⁹ and the media.
- The persecution and silencing of women, feminists, LGBTIQ people and human rights defenders.
- The link between surveillance technologies and online GBV, for example, for human rights defenders and activists.
- Nationalism, masculinity, performativity and mimetic online cultures, including online trolling.
- The overlaps between online GBV, hate speech against vulnerable groups and minorities, and freedom of expression⁶⁰ for instance, the impact that online GBV has on access⁶¹ and as a deterrent to expression by women, LGBTIQ and vulnerable people (self-censorship) and to their ability to fully participate in public life and free expression.

What is important to note here is that ICTs have also played an effective role in addressing all forms of GBV as can be seen from Egypt Harassmap⁶² and the mapping of femicides by Ellas Tienen Nombre (They Have Names).⁶³

Masculinity (machismo) and hyper-nationalism are linked to online GBV including violence against public women such as journalists and celebrities, targeting of minority communities and religions in different parts of the world, including Egypt, India⁶⁴ and Brazil. In relation to this Horacio Sívori, Universidade do Estado do Rio de Janeiro/Sexuality Policy Watch Brazil, says: "There is a need to unpack violence, we tend to look at it as a black box. Violence is generative as well, it produces knowledge, it educates and it organises community."

Pleasure and sexuality – the link to expression

Sex, sexuality and sexual expression, especially in parts of the global South, are still not easy topics to negotiate, and it has increasingly become the agenda of the women's movements online and to some extent internet rights groups to take on these difficult topics, 65 as evidenced by the inclusion of freedom of expression, pornography, sex and

- 59. InternetLab. (2016, 16 July). InternetLab releases the book "the Body is the Code". *Internet Lab.* www.internetlab. org.br/en/news/internetlab-releases-the-book-the-body-is-the-code; World Wide Web Foundation. (2016). *Women's Rights Online: Digital Gender Gap Audit.* www.webfoundation.org/about/research/digital-gender-gap-audit
- 60. Pellizzer, V. (2016, 5 October). Feminist politics of freedom of speech: Reflections on session in AWID 2016. GenderIT edition: Fortitude and change in AWID. https://www.genderit.org/node/4814; Ganesh, M. I. (2017, 21 February). The architectures of online harassment. GenderIT.org. https://www.genderit.org/node/4899
- 61. Scott, S., Balasubramanian, S., & Ehrke, A. (2017). Ending the Gender Digital Divide in Myanmar: A Problem-Driven Political Economy Assessment. Washington DC: IREX. www.irex.org/sites/default/files/node/resource/gender-digital-divide-myanmar-assessment.pdf; World Wide Web Foundation. (2016). Op. cit; Ya'u, Y. Z, & Aliyu, M. A. (2017). Op. cit.; Chair, C. (2017). Op. cit.; IGF BPF. (2015). Op. cit.; IGF BPF. (2016). Op. cit.; GSMA. (2015). Op. cit.; World Wide Web Foundation. (2014). Web Index Report 2014. Washington DC: World Wide Web Foundation. www.thewebindex.org/report.
- 62. https://harassmap.org/en
- 63. https://www.ellastienennombre.org
- 64. Kovacs, A. (2017). Op.cit.
- 65. Kee, J. (Ed.) (2011). EROTICS: Sex, rights and the internet. Johannesburg: APC. https://www.apc.org/sites/default/files/EROTICS_0.pdf

sexuality in the articulations around the FPIs. This in particular was laid out in the multi-country research led by APC in the EROTICS: Exploratory Research on Sexuality and the Internet project, which suggests that regulation and criminalisation of online expression, content and interaction have actively targeted women who break taboos or transgress gender norms, and vulnerable groups and communities. LGBTIQ people, 66 female activists 67 and journalists 68 similarly face more pushback in the form of violence, surveillance and threats online. In severe situations, women's expression on social media has resulted in "honour" killings for "bringing families into disrepute", as the murder of Qandeel Baloch in Pakistan shows. 69 The human rights framework should replace the protectionist and moralistic approach and at the same time there is need for local, contextual and grounded research around sexuality, sexual orientation and gender expression in relation to the internet and digital technology, rather than only an imposition of international "progressive" norms. 70

"There are many misconceptions around sexuality for people with disability — that they are sexless or hypersexual... The premise of (our) project was that women with disabilities are also human beings and that the stigma around sexuality is a big myth." — Nidhi Goyal, Point of View. As indicated by interviews and literature emerging from the Sexuality and Disability blog, the concerns for people with disability are in relation to online violence, bullying, pleasure, sexuality, relationships and connections online, community and movement building.

Anonymity and encryption bolster the ability of women, gender-diverse and LGBTIQ people to express opinions and beliefs and to challenge taboos; an example is the use of security measures in online websites and groups around sexuality in the Middle East.⁷¹ But there is also awareness in the literature of how anonymity enables and fuels forms of online harassment and violence against women.⁷² There has been ongoing debate in the internet rights community about the clash between ensuring freedom of expression online and controlling online GBV, supported by in-depth research by ARTICLE 19, Citizen Lab and several commentators⁷³ to address the question. Recently the UN Special Rapporteur on

- 66. Briones, I., & Sulathireh, T. (2016). Security in Contentious Contexts: Exploring Digital Resilience for Organisations Serving Sexual and Gender Minorities (Monitoring Regional and Global Activities chapter). ARROW for Change: Sexuality, Sexual and Reproductive Health and Rights, and the Internet. Asian-Pacific Resource and Research Centre for Women. https://www.arrow.org.my/wp-content/uploads/2016/08/AFC22.1-2016.pdf
- 67. OSCE. (2016). New Challenges to Freedom of Expression: Countering Online Abuse of Female Journalists. Vienna: OSCE. https://www.osce.org/fom/220411?download=true
- 68. Digital Rights Foundation. (2016). Surveillance of Female Journalists of Pakistan. Pakistan: Digital Rights Foundation. https://digitalrightsfoundation.pk/wp-content/uploads/2017/02/Surveillance-of-Female-Journalists-in-Pakistan-1.pdf; Comninos, A. (2013). A Cyber Security Agenda for Civil Society: What is at Stake? Johannesburg: APC. https://www.apc.org/en/system/files/PRINT_ISSUE_Cyberseguridad_EN.pdf
- 69. Kamram, H. (2016, 14 October). After the Murder of Qandeel Baloch. *Digital Rights Foundation*. https://www.digitalrightsfoundation.pk/after-the-murder-of-qandeel-baloch.
- 70. Coalition of African Lesbians. (2016, 29 May). Coalition of African Lesbians says N0 to a Special Rapporteur on Sexual Orientation, Gender Identity. www.cal.org.za/2016/05/29/activists-brief-coalition-of-african-lesbians-says-no-to-a-special-rapporteur-on-sexual-orientation-gender-identity/; EROTICS research shows that in the study in Lebanon, the question was about what could be a "successful model of organising for LGBT rights" in the region, and here the authors state that the model they arrived at through the process of their research focused strongly on personal privacy, safety and providing relevant information, and not on coming out (which could be deadly in many Arab societies). Moawad, N., & Qiblawi, T. (2011). Who's afraid of the big bad internet? Internet regulation and queer movement in Lebanon. In J. Kee (Ed.), EROTICS: Exploratory research on sexuality and the internet. Executive summary. APC. https://www.apc.org/sites/default/files/Erotics_Exec_Summary_2.pdf
- 71. Interview with Esra'a al Shafei, 31 July 2017. Aavriti, N., & van der Spuy, A. (2018). Op. cit.
- 72. IGF BPF. (2015). Op. cit.
- 73. Chemaly, S. (2016, 15 April). Online Harassment Is a Social Problem That Requires a Social Response. *Huffington Post.* https://www.huffingtonpost.com/soraya-chemaly/online-harassment-is-abou_b_9702696.html

violence against women emphasised the rights of women by saying, "Ensuring an internet free from gender-based violence enhances freedom of expression, as it allows women to fully participate in all areas of life and is integral to women's empowerment."⁷⁴

"In Egypt, Grindr is used to prosecute gay men, in Iraq and other places ISIS will use these online platforms to track queer people and brutally kill them ... (in other places) there is a lot of blackmail and extortion based on intimate images that takes place. We started the online platform Ahwaa with the belief that this would reduce the isolation faced by queer youth in the MENA region and the Arab world. We post everywhere on the site that people should not share physical details of where they are and should use the shield of anonymity that the site provides." — Esra'a al Shafei, Majal

Privacy and datafication

Feminist research and analysis have to determine the particular impacts of dataveillance on women, transgender and gender-diverse persons, and also address how these and other vulnerable populations are affected when they are configured as datasets. Being counted in the data is of particular importance for those whose citizenship and access to resources (whether welfare or pension, or the simple need for identity documents) are already precarious, including women and other vulnerable groups and individuals, and this is what they have to accept in spite of the disempowering and non-consensual ways in which data can be and is being used. There are myriad ways in which personal information can be recorded, tracked and shared (including social media and pregnancy and menstruation apps where people voluntarily share information). Here algorithms can often deploy stereotypes leading to discrimination that may in turn reduce women's agency, impede women's sexual and reproductive health and rights, and exacerbate abuse and violence.

While the history of surveillance of women and sexuality in patriarchy is a given, the use of digital means of surveillance allows for mass surveillance, and evidence shows that this surveillance is more likely to affect women than men. The Data collection and dataveillance, if done responsibly and ethically by civil society and even the state, can be empowering. It can assist in the transfer of power from the state and corporations to the people, but this depends on, as Shephard points out, "how data is collected, by whom, and to what ends."

^{74.} United Nations Office of the Human Rights Commissioner Media Unit. (2017, 8 March). UN experts urge States and companies to address online gender-based abuse but warn against censorship. www.ohchr.org/EN/New-sEvents/Pages/DisplayNews.aspx?NewsID=21317&LangID=E

^{75.} Shephard, N. (2016). Big data and sexual surveillance. Johannesburg: APC. https://www.apc.org/en/system/files/BigDataSexualSurveillance_0.pdf

^{76.} Rizk, V., & Othman, D. (2016). Quantifying Fertility and Reproduction through Mobile Apps: A Critical Overview. *ARROW for Change: Sexuality, Sexual and Reproductive Health and Rights, and the Internet*. Asian-Pacific Resource and Research Centre for Women. https://www.arrow.org.my/wp-content/uploads/2016/08/AFC22.1-2016.pdf. See also: https://genderingsurveillance.internetdemocracy.in

^{77.} Penney, J. W. (2017). Internet surveillance, regulation, and chilling effects online: A comparative case study. *Internet Policy Review*, 6(2). https://policyreview.info/articles/analysis/internet-surveillance-regulation-and-chilling-effects-online-comparative-case

^{78.} The Engine Room. (2016). The Handbook of the Modern Development Specialist: Being a Complete Illustrated Guide to Responsible Data Usage, Manners and General Deportment. https://www.responsibledata.io/resources/handbook/assets/pdf/responsible-data-handbook.pdf

^{79.} Shephard, N. (2017). Op. cit. p.16.

RECOMMENDATIONS ON RESEARCH QUESTIONS IN RELATION TO EMBODIMENT AND AUTONOMY

- International resolutions around online GBV have gained momentum in the last five years, specifically the report of the UN Special Rapporteur on violence against women and the recently amended Committee on the Elimination of Discrimination against Women General Recommendation 19 (now called General Recommendation 35) that recognises technology-mediated VAW with recommendations to states to take action. Broad-based monitoring and evidence gathering on online GBV data has to take place to support these processes at national levels to feed into a global response, taking into account different factors around consent, dissemination of material and platforms involved, the category of women or gender-diverse people and the nature of the harm they face.
- Business and human rights: International norms under the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the Ruggie framework for business and human rights and due diligence principles are all global norms for how the state should respond to violations of the human rights of women, and how the human rights obligations of corporations require that they too must take steps to address violence. This raises questions such as, what does accountability for corporations and internet intermediaries look like, what policy changes can and should be made by states, and what impact will proposed technological solutions have?
- The context of gender-diverse people, i.e. trans*, gender non-conforming, gender queer, non-binary people, and the online violence and harassment faced by them; also the role of the internet here in providing resources, building relations, sexual exploration and expression, community and connections.
- How to better enable people, including women with fewer digital literacy skills, to
 use security measures like encryption and anonymity. Security makes you small,
 pleasure is expansive how do you think about security from the point of view
 of pleasure?
- Data bias and datafication impact unevenly on the autonomy, privacy and livelihoods of women and gender-diverse and LGBTIQ people. Research on gender stereotypes (and also stereotypes around community, race, caste, ethnicity, ability, etc.) that are embedded into technology and data-dependent processes and algorithms, resulting in people having decreasing individual control over decisions related to employability, insurance and credit cover, and their likely choices as consumers or voters. How much is safe to reveal and what must remain hidden is not equal for all.
- How are interactions, relationships, identity data-points and narratives used, analysed and reconfigured through various datafication processes, and how does machine learning-driven governance impact women and gender-diverse and LGBTIQ people in particular?

IV) EXPRESSION - BRIDGING THE GAP BETWEEN INTERNET RIGHTS AND SEXUALITY/GENDER-BASED RIGHTS

In relation to expression, what is needed is a mapping of the various players whose power and influence determine the extent of freedom of expression and speech online that can be exercised by individuals and communities. This includes corporations that own social media and other online spaces, the police, judiciary, legislature and others. Authors point out that states are promoting regulation and surveillance in an increasingly active and public manner, often on grounds as varied as the potential of surveillance to support development practices, cybersecurity, the need to protect human rights online, and child online protection.⁸⁰

The debates around free speech online and recognition of hate speech and violence based on gender, race, caste, political affiliations, etc. need to be looked at from a feminist perspective. 81 Criminalisation particularly impacts on vulnerable communities, and yet an internet free from GBV would ensure that women can fully participate online. However, the paradox is that the state project of censorship is often built around paternalist notions of protecting women and children but it is mostly women and gender-diverse people who face censorship, particularly around practices related to sexuality and sexual expression. 82 Sexuality, pornography, expression and agency are interlinked concerns especially for LGBTIQ people, and also for women whose experiences and expressions are circumscribed within a cisgender heterosexual patriarchal paradigm.

RECOMMENDATIONS ON RESEARCH QUESTIONS ON EXPRESSION AND DISCURSIVE POWER

- How online GBV and harassment limit forms of expression, for women and other
 marginalised groups. Contradictions, overlaps between communication rights,
 internet rights, the right of expression in relation to privacy and protection against
 online GBV.
- Undertake the mapping of who owns the data, similar to how media ownership and control have been mapped.
- How ICTs have been enabling and affirming spaces for people of marginalised identities empowerment, agency, identity politics, discourse as activism. Many communities and people including gender-diverse people, Dalit women, Muslim women speaking about sexuality and against tradition, women challenging nationalism, and lesbian, bisexual and queer women have stated how the internet has played a complicated role in relation to invisibility and hyper-visibility, targeted violence and harassment online and onground, and also has indisputably been a site for resistance and movements, celebration and pleasure. Policy changes must take into account how specific communities are targeted through online GBV and hate speech. Research is needed on the overlapping concerns and contradictions between hate speech, online GBV, sexual expression, communication rights and human rights.
- How ICTs (smart phones, internet, etc.) are/can be used to organise, unionise, in formal and informal ways; the efficacy of informal online mechanisms of justice, naming and shaming tactics and other such methods in changing discourse and creating change and movements; the risk of defamation, the right to privacy, the precarity of using corporate platforms and questions of ethics and accountability.

^{80.} Mazango, E. (2014). African Declaration on Internet Rights and Freedoms: APC Background Paper. Johannesburg: APC. https://www.apc.org/en/system/files/Background Paper Internet Rights and Freedoms_20140703.pdf; Liddicoat, J. (2011). Internet rights are human rights. Freedom of expression, freedom of association and democracy: New issues and threats. Johannesburg: APC. https://www.apc.org/en/system/files/APC_IRHR_FOEandFOAissuepaper_2012_web_EN.pdf

^{81.} Chemaly, S. (2016, 15 April). Op. cit.

^{82.} Malhotra, N. (2007). *The World Wide Web of Desire: Content regulation on the internet.* Johannesburg: APC. https://www.apc.org/en/pubs/issue/gender/all/world-wide-web-desire-content-regulation-internet

^{83.} Kee, J. (2017). Five layers of power on the internet. Paper presented at the Stockholm Internet Forum, 16-18

V) MOVEMENTS FOR BRINGING ABOUT CHANGE

Networked power of movements online

In relation to movements that seek to make the necessary and radical structural change to ensure gender equity and eradication of GBV, it is clearly evident from several social movements online (#MeToo, #MenAreTrash, #BringBackOurGirls, #RapeMustFall, #NiUnaMenos) that digital technology will play a hugely important role in movement building. Movements are a response to injustice, inequality and exclusion that are no longer acceptable, and here the question is how feminist groups and women's groups lean on and learn from technologies.

The ability to change discourse and shift culture is one of the powerful effects of the internet, and so is the power of creating and connecting networks, i.e. the discursive and networked power of the internet. To quote Jac sm Kee:

Most importantly, it (the internet) connects us. Allows us from becoming weird atomised individual to find others who are interested in, care about, concerned about the same things. Enables us to organise, have conversations, plan for collective action, take things to different spaces, make shifts across the different layers of power, occupy different spaces. Because the characteristic of the internet, is essentially one that is networked. It is about connections. And the freedom to make connections, towards the shift and change we collectively believe in, is an important one.⁸³

Communities and people who have been excluded from the mainstream are now using the internet, platforms like Twitter, YouTube, Facebook, and creating spaces and resources online. At the same time, considering that there is inequitable access to the internet, online activism cannot be and should not be the only basis for building movements. Other factors that complicate the use of the internet for movements and causes are surveillance and the hegemony of the state, particularly in conflict zones and occupied territories, and in the global South.

Women in conflict regions, Dalit women, young queer groups, Romani women use the internet to articulate their politics, build community and resistance, and yet often face violence and harassment on these platforms. About this contradiction, Kerieva McCormick, University of West Scotland says: "All point to the importance of recognising Roma women's activism; of our power and the possibilities opened up by the recognition of that power on the one hand, and the oppressions we face as raced, gendered, sexualised subjects on the other – in life, and online. Visibility is the answer as ultimately, we cannot be what we cannot see."

- May. Here the presenter identifies the five levels at which power operates and can be negotiated on the internet: structural, discursive, economic, embodied and networked power.
- 84. Patil, S. (2017, 6 September). Debrahminizing Online Sphere: On larger questions of caste, gender and patriarchy. "We cannot be what we cannot see": Mapping gaps in research in gender and information society. GenderIT edition. https://www.genderit.org/node/4998
- 85. Majama, K. (2017, 7 September) A feminist internet must be grounded offline: Interview with Maggie Mapondera. "We cannot be what we cannot see": Mapping gaps in research in gender and information society. GenderIT edition. https://www.genderit.org/node/4994
- 86. McCormick, K. (2017, 4 September). Observing our observers in the age of social media. "We cannot be what we cannot see": Mapping gaps in research in gender and information society. GenderIT edition. https://www.genderit.org/node/4989
- 87. Batliwala, S. (2012). Changing Their World: Concepts and Practices of Women's Movements (Second edition).

Movements are essential to the transformation of gender and power relations in a sustainable way,⁸⁷ to ensure the magnitude of social, behavioural, economic and cultural change that is required. Research around movements remains a complex field where it is important to analyse many nodes, including but not limited to: discourse as a field of activism, community building and a space for truth telling and storytelling, concerns around digital security and datafication, complexities of affiliations and coalitions at a large scale, and understanding the impact and/or disruption that they do achieve.

"Technologies are very frustrating for girls ... because they have access now to see the whole world and how it is, and how different their lives are," Nadera Shalhoub-Kevorkian says about the experience of teenage girls and women in the occupied territory of Palestine.⁸⁸

Gender parity in policy spaces and inclusion of key actors

A corollary question raised here, which also links with expression and representation, is that of ensuring women's participation in governance and processes of policy making but also of including feminism and gender as organising ideas and principles in multistakeholder forums. What is needed is to build links between international policy and discussions and local levels and needs.⁸⁹

Gender-based analysis in research often considers women as one homogenous category, and does not effectively provide nuanced and in-depth research on the multiple realities of violence, discrimination and inequality that different kinds of women face based on their socio-economic, political or cultural contexts. Decisions by the state, civil society, corporations or other actors based on research where such differences are flattened can in fact exacerbate inequalities. In APC's two decades of experience in women's rights and internet policy, the translation of emerging internet rights issues into women's rights and feminist frameworks has been key in advancing comprehensive policy responses. For example, engagement of queer rights activists in the EROTICS global survey was instrumental in recognising sexuality and gender as critical factors in understanding encryption and anonymity in relation to freedom of expression and the internet.

It is evident that key actors in the field of gender and digital technology are not being engaged in policy advocacy and reform and this includes women's rights, sexual rights and feminist advocates and activists who are most invested in these domains of change to set the agenda for policy.

91. APC. (2017). Op. cit.

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Toronto: AWID. https://www.awid.org/sites/default/files/atoms/files/changing_their_world_2ed_full_eng.pdf

^{88.} Interview with Nadera Shalhoub-Kevorkian by Yara Sallam, July 2017. Aavriti, N., & van der Spuy, A. (2018). Op. cit.

^{89.} Doria, A. (2015). Op. cit.

^{90.} Aavriti, N., & van der Spuy, A. (2018). Op. cit.; APC. (2017). *EROTICS South Asia exploratory research: Sex, rights and the internet*. APC. https://www.apc.org/en/pubs/erotics-south-asia-exploratory-research-sex-rights-and-internet

RECOMMENDATIONS ON RESEARCH QUESTIONS ON MOVEMENTS AND CHANGING THE PARADIGM FOR POLICY

- The relationship between technology, infrastructure and movements; how to contextualise research and online activism keeping in mind social and cultural dimensions, intersectionality and local histories.
- Research on formation of communities and networks that engage in online violence and hate speech towards women; groups formed around nationalist sentiments, state hegemony, masculinity and online GBV. For example, Hindu right-wing movements in India, actions against lesbian and gay festivals in Indonesia, anti-abortion campaigns in countries like the Philippines, etc.
- Strategies of communication, the constitutive role of platforms and technology and the materiality of movements and technology.
- What a feminist digital media governance approach looks like what are the priorities, strategies and focus of such governance?
- How feminists' involvement in a plethora of policy forums can be improved, strengthened and streamlined; how women and other marginalised and/or vulnerable groups can be better supported in participating in multistakeholder policy platforms.
- How digital technology is part of movement building and amplifying voices; histories of movement and the use of digital technology; the growth of platforms and forums for Dalit-Bahujan-Adivasi women in South Asia and the diaspora; Romani women and youth consciousness; the use of media, technology, new media, design and other tools/forums for resistance, recovering memory, and dealing with traumatic histories.
- The parallel growth of surveillance and other mechanisms and their effect on self-determination movements and other vulnerable populations at risk.

