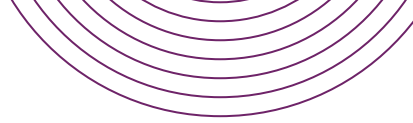# AFROFEMINIST DATA FUTURES

AUTHOR

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Research conducted by

POLLICY

Authors **Neema Iyer, Chenai Chair, and Garnett Achieng**
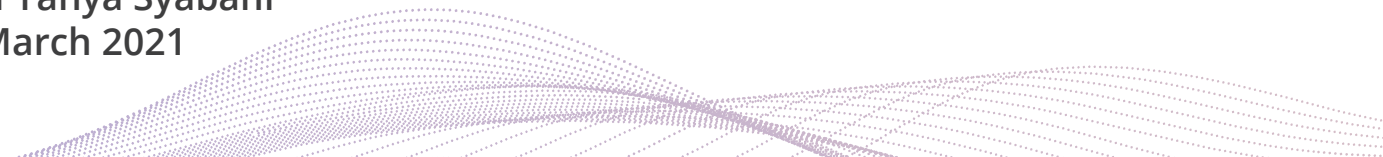Illustrator **Neema Iyer**
Design **Yahya Syabani**
Date **March 2021**

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SUMMARY

In the quest for gender equality and societal change, the transformative role of data, when applied accordingly, can be used to challenge dominant power imbalances and create social impact in communities. This research focuses specifically on African feminist movements working towards social justice. It explores the collection, sharing and use of digital data for social transformation. In this research project, we defined data as distinct pieces of information, stored as values of quantitative and qualitative variables, which can be machine-readable, human-readable or both. Through a mixed-methods approach that centres these movements, we determine the extent of data use, the opportunities and the challenges of working with data, as well as present recommendations for social media companies to better contribute to the data ecosystems in the African context.

BACKGROUND

Introduction

In May 2013, the United Nations (UN) coined the term "data revolution" to usher in a new era where international agencies, governments, civil society organisations (CSOs), and the private sector would commit to the improvement of the quality and availability of data. Better data and statistics would enhance progress tracking and accountability, and promote evidence-based decision making (UN Data Revolution, 2013). A true data revolution includes transformative steps such as "improvements in how data is produced and used; closing data gaps to prevent discrimination; building capacity and data literacy in "small data" and Big Data analytics; modernising systems of data collection; liberating data to promote transparency and accountability; and developing new targets and indicators" (UN Data Revolution, 2016).

" ...a is defined as extremely large and complex data sets - structured and ...... - that grow at ever-increasing rates. Big data may be analysed ....lly to reveal patterns, trends, and associations, especially relating ....haviour and interactions.

The Data Conversation in the African Region

Data is seen as a powerful tool to address global challenges as it can offer new insights into areas as diverse as health research, education, and climate change (boyd & Crawford, 2012, p. 674). In addition, what is counted often becomes the basis for policymaking and resource allocation (D'Ignazio & F. Klein, 2020). While analysed data is not a panacea to solve all problems, it is a way to know the depth of a phenomenon (qualitative) as well as breadth (quantitative) (Crehan, 2020). When collected and analysed with quality and integrity, data can guide what we know and how we operate, and is the basis of knowledge.

For example, basic population estimates often do not exist for LGBTQIA+ (Lesbian, Gay, Bisexual, Transgender, Queer (or Questioning), Intersex, and Asexual) persons and some forced migrants, allowing some governments to deny their very existence – i.e. rendering them invisible (Crehan, 2020). Data collected on marginalised groups makes them visible and puts forth a case to provide for their needs.

On the other hand, data can also pose significant disadvantages and challenges. Through the manifestation of surveillance, it enables invasions of privacy, decreases civil freedoms, and increases state and corporate control (boyd & Crawford, 2012, p. 674). This theory can be seen on the continent as some African governments that have managed to digitise their data collection have focused more on "siphoning citizen data while keeping the state opaque and making civilians toe the line than in improving the services that states provide to citizens" (Nyabola, 2018, pp. 70). In this case, these governments may have improved in the collection of citizen data but not necessarily at managing it or harnessing it for positive potential.

Our desk review highlights the data infrastructures on the continent, the context of data practices, and the availability of data to understand the extent of the gaps and opportunities across Africa. We nuance this exploration with a gender perspective grounded in data feminism, data justice and African feminist movements.
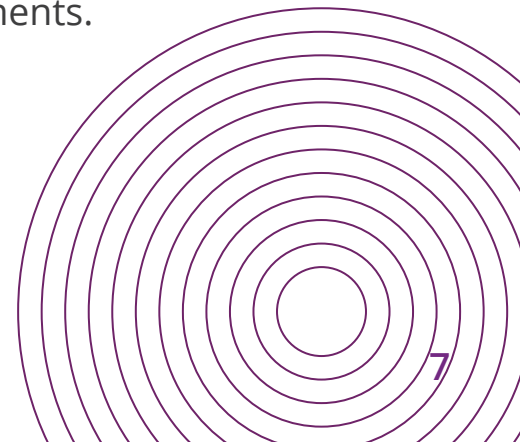
Data Infrastructures on the Continent

In response to the UN's call for a data revolution, governments, CSOs, and the private sector have turned to digitisation as a way of collecting and storing data. The premise is that digitisation translates to better services and products. Despite this shift, many African countries are still lagging. They lack well-functioning civil registration and vital statistics systems that often act as the foundations that digital data infrastructures are built on (Data 2x, 2019 b). Statisticians have found it difficult to track how well African countries are moving towards their 2030 UN sustainable development goals because of this absence of data. On average, African governments collect statistics covering only about a third of the relevant data needed to track this progress (Pilling, 2019).

Gray, Gerlitz, & Bounegru
2018, p. 1

"*Data infrastructures are large scale technical systems used in the creation, storage, processing, analysis and distribution of information*

Gender data has also remained under-collected, as large gender data gaps exist in both national and international databases. A 2019 Data 2X study of national databases in 15 African countries, including leading economic and digital hubs such as Kenya, Nigeria and South Africa, found that sex-disaggregated data were available for only 52 percent of the gender-relevant indicators. Large gender data gaps existed in all 15 countries, with these gaps unevenly distributed across the indicators. For instance, no indicator in the environmental domain had gender-disaggregated data at the international database level (Data 2x, 2019 b).

The importance of gender data and sex-disaggregated data has largely been ignored because of the lesser value that some societies place on women and girls (Temin & Roca, 2016, p. 268). Moreover, where gender data may be available, its interpretation and analysis may be biased because the production of gender data is not a simple exercise in counting women and men (Ladysmith, 2020). Gender data demands that researchers firmly comprehend how bias and power dynamics are embedded in the study design, sampling methodologies, data collection, and raw data itself. All researchers are interpreters of data and ideally must account for the biases in their understanding of the data (boyd & Crawford, 2012, p. 663). As a result of these gaps and biases, many issues unique or predominantly related to African women remain poorly understood (Temin & Roca, 2016, p. 268).

Social Media Platforms, Data Collection and Non-Commercial Social Media Data

With a lack of functional data infrastructures and the availability of gender-disaggregated data, another potential source of data to be explored is social media companies. Social networking sites collect and produce a vast amount of data regularly on a number of subjects. For example, under Facebook's Data for Good initiative, publicly available datasets and methodology can be downloaded for free on:

1 *High Resolution Population Density Maps for nearly every country in the world*
(Facebook, 2019)

2 *Demographic Data for nearly every country in the world*
(Facebook, 2020a)

3 *Future of Business Survey Data for 97 countries*
(Facebook, 2020b)

4 *Electrical Distribution Grid Maps for 6 countries in Africa*
(Facebook, 2021)

This data can be accessed on the Humanitarian Data Exchange and Amazon Web Services. Facebook has also conducted surveys on topics such as gender equality at home, COVID-19 symptoms and the knowledge, attitudes and practices of users about COVID-19. Thus, social media platforms can serve as a central source of data for those looking to research society and culture in the 21st century (Persily & Tucker, 2020). This research will further explore the needs and challenges of utilising social media data for research, policymaking, and advocacy.

Ultimately, while different social media platforms have focused different levels of effort to make data available for external research, data from these platforms is still not widely available and accessible for many reasons (Persily & Tucker, 2020).

Firstly, the usage conditions of public APIs (application program interfaces) that enable researchers to access social media data are continuously changing hence presenting a serious barrier to research (Data 2X, 2019a). These APIs also provide access only to a small percentage of global data, and many provide access only to real-time data collection, making posthoc analysis difficult.

Second, many researchers, particularly those embedded in grassroots movements or small organisations, lack the expertise to extract valuable

information from large social media datasets. The ability to collect, store, maintain, analyse, and mobilise large datasets still remains with large corporations, wealthy governments, and elite universities (D'Ignazio & Klein, 2020, pp. 1–3). Data scientists are expensive to hire, and feminist organisations are chronically underfunded (Ladysmith, 2020).
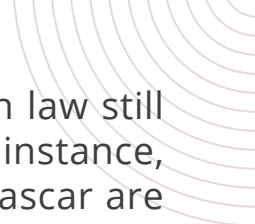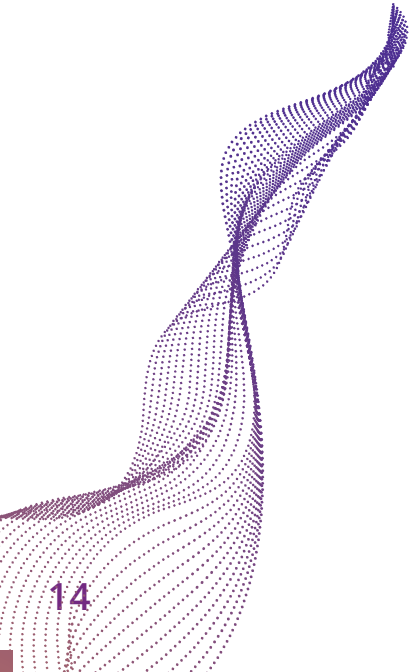
Third, in many cases, data from social media companies may be collected in unethical ways and used for unethical purposes. The social media data available for research may raise concerns about social media users' privacy and safety and expose companies to legal risk. This was the case when employees of the political firm, Cambridge Analytica, misused data from millions of unsuspecting Facebook users and used this information to target voters and manipulate elections in the US, Nigeria, Kenya, and other countries (Confessore, 2018).

Data protection across the continent

Data protection in Africa can still be described as in its nascent stage, as many African states still do not have a data protection law or have not fully implemented such laws yet (Ilori, 2020). Out of the 55 states on the continent, 28 countries have a data protection law, of which 15 have set up data protection authorities (DPAs) to enforce the law. DPAs are independent public authorities that monitor and supervise, through investigative and corrective powers, the application of the data protection law. They provide expert advice on data protection issues and handle complaints that may have breached the law.

Yet, even African countries that have enacted a data protection law still fall short of protecting citizens' data for a number of reasons. For instance, Kenya, Uganda, Botswana, Equatorial Guinea, Seychelles and Madagascar are examples of countries that have passed data protection laws and are yet to set up their DPAs (Ilori, 2020). The absence of the regulator to enforce the law creates a unidirectional data system, where citizens can not hold governments and private institutions accountable for the mismanagement of citizen data (Nyabola, 2018, pp. 71). Another issue is the lack of standard structures that ensure the independence of DPAs in Africa (Ilori,2020). Senegal, however, set the stage for other countries by initiating legal reform to address the gaps identified in their data protection laws (Robertson, 2020). These reforms will address the need for more independence for the Commission on Personal Data, amongst other issues. In addition, gendered issues of data protection are often ignored, but as Chair (2020) argues, there is a need to nuance gendered data protection issues, especially for vulnerable groups.

Data practices rooted in colonialism

The practices of data extraction and use must be explored within the context of power dynamics and historical events that are rooted in colonialism. While African governments have lagged in setting up data infrastructures and passing data protection laws, the private sector has found welcoming soil in this void. Africa has been touted as a treasure trove of untapped data, and large technology companies are rushing to set up digital infrastructures for their profit-making. This move has been described as imperialist, with scholars likening it to the Scramble and Partition of Africa and referring to it as "digital colonialism." Digital colonialism is the decentralised extraction and control of data from citizens with or without their explicit consent through communication networks that are predominantly developed and owned by Western tech companies (Coleman, 2019). While Western companies are not the only ones using extractive means to obtain data, a significant proportion of Africa's digital infrastructure is controlled by Western technology powers such as Amazon, Google, Facebook, and Uber (Abebe et al, 2021).

Furthermore, companies extract, mine and profit from data from Africans without their explicit consent and knowledge of what the data is used for. One such case was when Guinness Transporters, which operates in Uganda as SafeBoda, sold unsuspecting clients' data to Clever Tap, a third-party US company (Kasemiire, 2021). An investigation by the National Information Technology Authority – Uganda (NITA-U) found that SafeBoda disclosed users' email addresses, telephone numbers, first and last names, mobile device operating system, application version and type as well as user login status (Kasemiire, 2021). Ultimately, while the data mined by corporations could be repurposed to benefit other entities, the links between science, state, and corporations on data sharing are relatively weak on the continent.

Kasemiire
2021

" *An investigation by the National Information Technology Authority – Uganda (NITA-U) found that SafeBoda disclosed users' email addresses, telephone numbers, first and last names, mobile device operating system, application version and type as well as user login status*

In cases where the private sector has collaborated with governments, the partnerships have not been entirely beneficial to citizens. For instance, while Huawei Technologies is responsible for up to 70% of Africa's telecommunications network, it has also laid the ground for the surveillance of citizens by authoritarian governments under their Safe City projects (Kidera, 2020;). In Uganda and Zambia, allegations against Huawei Technologies claim that they aided government surveillance of political opponents by intercepting their encrypted communications and social media, and using cell data to track their whereabouts (Parkinson, Bariyo, & Chin, 2019). In both cases, this surveillance led to the arrest of politicians and bloggers (Parkinson, Bariyo, & Chin, 2019).

Nuancing gender in data: *Women, Datafication and Dataveillance*

Nonetheless, the use of digital data like Big Data can add nuance to our understanding of women and girls' lives by providing information that is highly granular in both space and time and offering insights on aspects of life that are often difficult to quantify and capture in standard types of data collection (Data 2x, 2019 a). For instance, national socioeconomic surveys typically offer information about the status of the family as an entirety, ignoring inequalities within the household and different family structures. Information gathered from mobile phone use, meanwhile, can help us learn more about the well-being of millions of individual women and girls.

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However, datafication (the transformation of soci... quantified data, thus allowing for real-time tracking an...

simultaneously poses a particular risk to women and girls' privacy (Data 2x, 2019 a; Van Dijck, 2014, p. 200). When existing social relationships are already patriarchal, then surveillance (and other) technologies tend to amplify those tensions and inequalities (Monahan, 2009). In addition, the power of data to sort, categorize and intervene has not been deliberately connected to social justice and feminist agendas (Taylor, 2017). Data use has largely remained technical, with research focusing more on promoting corporations and states' ability to use data for profit and surveillance (Taylor, 2017).

Additionally, societal norms restrict women and girls' ability to voice their opinions over their rights, such as privacy standards, a concern arising from data collection (Data 2x, 2019 a; World Wide Web Foundation, 2020). They may also have poor access to legal services to protect their consumer rights to privacy and may be excluded from participating in the public debate around issues like ethical private sector use of individual data. In a recent study by Pollicy involving 3306 women from five African countries, 95% of the Ugandan respondents and 86% of the Senegalese respondents reported not knowing of any laws and policies existing to protect them online.

Data Science Central

2018

" Datafication is the transformation of social action into online quantified data, thus allowing for real-time tracking and predictive analysis. Simply said, it is about taking previously invisible processes/activity and turning it into data that can be monitored, tracked, analysed and optimised

20

Additionally, societal norms restrict women and girls' ability to voice their opinions over their rights, such as privacy standards, a concern arising from data collection (Data 2x, 2019 a; World Wide Web Foundation, 2020). They may also have poor access to legal services to protect their consumer rights to privacy and may be excluded from participating in the public debate around issues like ethical private sector use of individual data. In a recent study by Pollicy involving 3306 women from five African countries, 95% of the Ugandan respondents and 86% of the Senegalese respondents reported not knowing of any laws and policies existing to protect them online.

Data Feminism // Data and the myths surrounding data neutrality

Data created, processed, and interpreted under unequal power relations by humans and/or human-made algorithms potentially reproduce the same exclusions, discriminations, and normative expectations present in societies (Shephard, 2019). Since data practices have been rooted in patriarchy and colonialism, power and gender relations manifest in data practices, especially regarding how data is generated, analysed, and interpreted (Tamale, 2020). In light of this, it is important to identify gaps, bias, and how factors such as racism,

sexism, classism, homophobia and transphobia intersect to discriminate and further marginalise those underrepresented and otherwise othered in data (Shephard, 2019).

In response to this need, Catherine D'Ignazio and Lauren Klein coined the term "data feminism" to refer to "a way of thinking about data, both their uses and their limits, that is informed by direct experience, by a commitment to action, and by intersectional feminist thought" (D'Ignazio & Klein, 2020). Data feminism is anchored in seven principles on challenging power and privilege using data science. The principles are as follows: examine power, challenge power, elevate emotion and embodiment, rethink binaries and hierarchies, embrace pluralism, consider context, and make labour visible.

Framing data within the feminist movement requires thinking around justice - data justice in particular. For the purpose of this research, data justice framing is drawn from the work of Linnet Taylor, who frames it as "fairness in the way people are made visible, represented and treated as a result of their production of digital data" (Taylor, 2017). Data justice is posited as a way of determining ethical paths in a datafied world. It is anchored in three pillars as follows: (in)visibility, (dis)engagement with technology, and anti-discrimination.

Lastly, Afrofeminism is an important lens to tap into when talking about digital colonisation and unjust data practices, specifically in the African continent. Afrofeminism is a branch of feminism that distinctly seeks to create its own theories and discourses linked to the diversity of African experiences (Tamale, 2020). It works to reclaim the rich histories of Black women in challenging all forms of domination (Tamale, 2020). African feminists' understanding of feminism places systems embedded in exploitative and oppressive structures such as patriarchy, colonialism, and imperialism at the centre of their analysis (AWDF, 2007; Tamale, 2020).
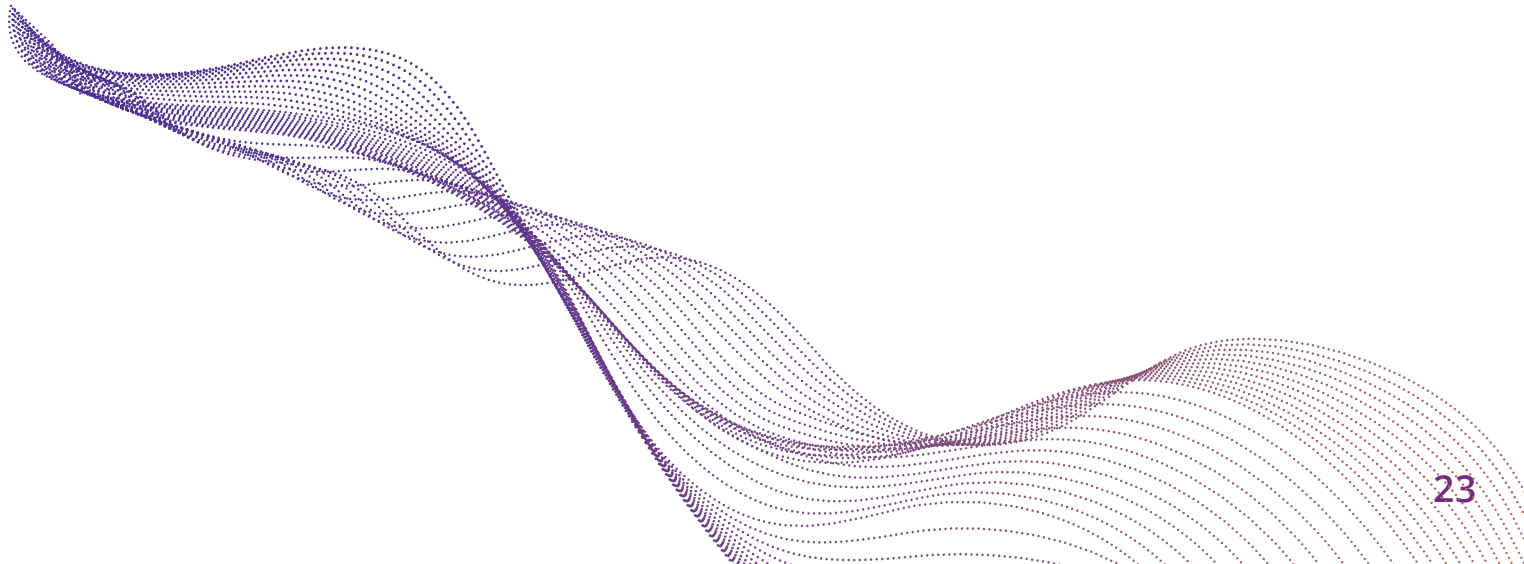
African Women and Afrofeminist Data Futures

Globally, women in sub-Saharan Africa are the least likely to be online, with only 28% of them being connected and as a result, have a minimal digital footprint (Iglesias, 2020). This leads to an exclusion from the positive aspects of our ongoing digital revolution. African women are marginalised from the technology industry and lack funds and technical expertise to utilise data for feminist causes. Yet, when it comes to conversations about datafication and the digital revolution, they are often instrumentalised as a vulnerable target group rather than a stakeholder group with a crucial say in the kind of internet access that guarantees rights rather than restricts them (Feministinternet.org, n.d.). Additionally, the shift to digital data has ushered in an era where the emphasis on computational analysis and machine learning as core (and qualitatively superior) ways of understanding the social world moulds the way people relate to information and knowledge (Milan & Velden, 2016, p. 58). As a result, alternative sources of data that African feminists use in their work, such as personal accounts and indigenous knowledge systems, are seen as inferior.

Dataveillance is defined as a form of continuous surveillance of people or groups through the use of personal data systems in order to regulate, govern or predict their behaviour

Degli Esposti
2014, p. 217

Fortunately, data feminism offers a framework for African women to imagine and build afrofeminist data futures. Data feminism insists that the most complete knowledge comes from synthesising multiple perspectives, with priority given to local, Indigenous, and experiential ways of knowing (D'Ignazio & F. Klein, 2020, p. 205395172094254). African women are experts on their lives and experiences with data and datafication in their context and need to be brought on board for envisioning alternatives to the algorithmic order and totality (Tamale, 2020). Africa sits at the tip of the geopolitical margins, which means that its worldview is like no other; marginalised groups within Africa, such as women, have an even more unique worldview (Tamale, 2020). Therefore, in building alliances with anguished netizens worldwide, African women should provide useful insights into the affected landscape.

An Afrofeminist data future would be one where African women have the right to privacy and full control over personal data and information online at all levels - a form of data justice. African women, just like grassroots data activists, understand the need for engagement with data but resist the massive data collection done by individuals, non-state actors, corporations, and states (Milan & Velden, 2016, p. 58). They also acknowledge the "paradox of exposure" —that datafication carries with it its own risks and potential for harm because of the increased visibility that collecting data on these populations might bring them (D'Ignazio & F. Klein, 2020, p. 205395172094254). Historically, surveillance has been employed as a patriarchal tool used to control and restrict women's bodies, speech, and activism (FeministInternet.org, n.d.). African women and LGBTQIA+ identifying people are especially vulnerable to violations of privacy as they must resist cultural and family practices of surveillance as well.

Finally, African women have to be included in charting paths to a data feminist future, as traditionally, they are the most marginalized in this field (Tamale, 2020). They also have to be empowered with effective legal and technical tools and a clear language to talk about data rights (Ada Lovelace Institute, 2020).

OBJECTIVES

Through a mixed-methods approach that centres feminist movements, this research sought to determine the extent of data use, the opportunities and the challenges of working with data, with a focus on non-commercial social media data. We also present recommendations for social media companies to better contribute to the data ecosystems in the African context.

METHODOLOGY

This research study used four key approaches which combined secondary and primary data. The combined approach allowed for an understanding of existent feminist movements and their practices. In addition, it builds on the data feminism framework of embracing pluralism - that uses multiple perspectives and focusing more on those with local and experiential knowledge (D'Ignazio & F. Klein, 2020).

Mapping of Feminist Movements

Through the researchers' networks and with support from the Advisory Board, feminist movements across the continent were mapped out. More information on this exercise is presented in the following sections.

Desk Review

To further understand and acknowledge prior and existing research efforts on the intersection of feminism and data ecosystems, an analysis of literary and academic text from critical theory on feminism, decoloniality, science and technology studies were analysed.

Key Stakeholder Interviews (KIIs)

Interviews with 20 key stakeholders from across the continent were conducted in English, French and Portuguese to understand the current gaps, challenges, successes and demands of different groups of feminist organizers.

Ideation Focus Group Discussions (FGDs)

Using the data from the key stakeholder interviews, four virtual FGDs were convened to re-imagine the future of data collection and sharing that could work for a wide spectrum of feminist movements. Two focus group discussions (FGDs) were conducted in English, and one each in French and Portuguese. Two FGDs

were conducted in English to encompass individuals working in both English and other local languages, particularly Western Africa, and East/Southern Africa.

The qualitative approach takes participatory methods into account, with a key focus on focus group discussions (FGDs) for participants to relate, share stories and openly be able to discuss issues from the project. All of these methods used were guided by ethics and a Do No Harm approach, focusing on people-centred language and prioritising accessibility for respondents.

# of IDIs: 20
# of FGDs: 4
# of countries: 20

Senegal
Gambia
Guinea
Sierra Leone
Cote d'Ivoire
Togo
Nigeria
Cameroon
Congo
Angola
Namibia

Horn of Africa
Ethiopia
Uganda
Kenya
Tanzania
Malawi
Zimbabwe
Mozambique
South Africa

Data Collection Methods

Two data collection tools were created, with the addition of a consent form for use in the KIIs and FGDs. The in-depth interview questionnaire covered thematic questions on data access and use, types of data used for feminist organising and privacy concerns related to data use. Each question was accompanied by potential probing questions to investigate further into specific topics as they arose, giving weight to the respondents' thoughts and direction of their answers. The FGD questions covered thematic areas of policy deterrents to effective data use, potential contributions by technology companies and the impact of platform design/user interfaces on a culture of data use amongst feminist organizations. The format of the FGDs enabled collaborative answers with more opportunities for probing by both the researchers and the respondents' peers.

Data Management and Analysis

Transcribed interviews and audio files were kept in a secure digital location and cleaned after transcription and uploading.

Advisory Board

In honoring the work of feminist movements who have been organising, holding space and making strides across the continent to fight the patriarchy and promote gender equity; our research team formed an advisory board of five feminist organisations. The Advisory Board provided timely advice on the design of the research project from inception until completion. The research team took these steps to acknowledge the expertise of these activists and organisations across different spheres of women's rights. These organizations also provided guidance on key stakeholders to reach out to for in-depth interviews (IDIs) and focus group discussions (FGDs), and were key to gaining buy-in to different regions of the continent.
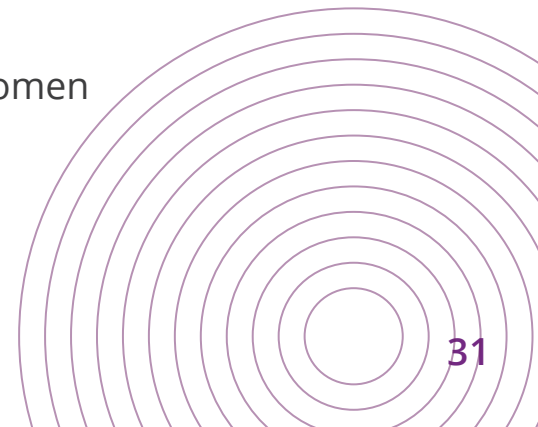
Advisory Board Members

Aji Sainey - Equals2020
Anwulika Ngozi Okonjo -Through the Eyes of African Women
Eunice Musiime - Akina Mama wa Afrika
Tiffany Mugo - HOLAA!
Nashilongo Gervasius - NamTshuwe

THE FEMINIST JOURNEY

Mapping Feminist Movements in sub-Saharan Africa

Using a combination of the researchers' networks, the advisory board and online searches, over 120 feminist organizations were identified across sub-Saharan Africa. This list is not comprehensive and does not include all feminist organizations. The researchers aim to make this list publicly available and regularly updated.

Types of Organizers

In order to reach a broad array of feminist organizers, four main groups of organizers were selected:

1. Individual activists
2. Grassroots movements or collectives
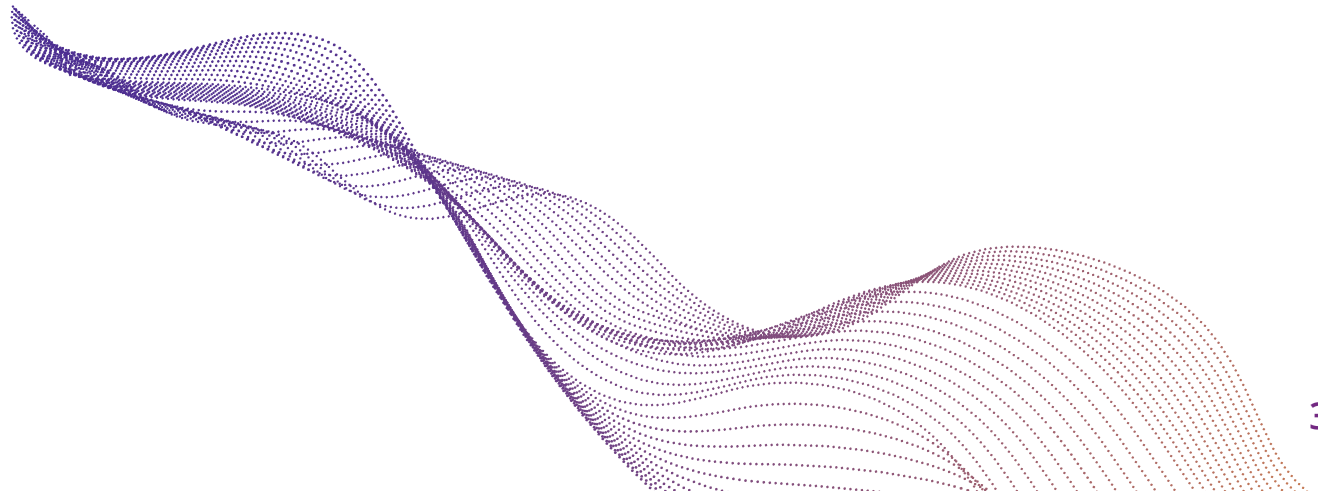3. Small-to-medium sized civil society organizations (>5 and <20 staff)
4. Regional/large-scale organizations (>20 staff).

Key Sectors for Feminist Organizing
Furthermore, seven key sectors were identified:

1. Sexuality and Sexual/Reproductive Health
2. Socio-economic rights focus particularly employment, subsistence, unpaid care and work
3. Education, with an emphasis on STEM pipelines
4. Civic and Political rights - political participation and Representation of Women
5. Cultural rights - Championing against Traditional Norms and Culture, eg. land rights, Female Genital Mutilation
6. Environmental Issues

Feminist Movements in Africa

140+
FEMINIST ORGANIZATIONS

Sectors

- Civic & Political Rights
- Sexuality & Reproductive Health
- Socio-economic Rights
- Education
- Cultural Rights
- Environmental Rights
- Other Sectors

Map labels:

Mali, Burkina Faso, South Sudan, Senegal, Chad, Ethiopia, The Gambia, Somalia, Guinea, Uganda, Sierra Leone, Kenya, Liberia, Côte d'Ivoire, Ghana, Rwanda, Togo, Cameroon, Tanzania, Nigeria, DRC, Malawi, Angola, Madagascar, Namibia, Mozambique, Zimbabwe, Swaziland, Lesotho, South Africa, Zambia

Legend: 0 | 1-4 | 5-10 | 11-14 | 15+

Sub-maps:

Horn Of Africa, East African Community, West Africa, SADC Region

Continental

WHAT IS DATA?

Data is understood broadly as pieces of information. In this research project, we defined data as distinct pieces of information, stored as values of quantitative and qualitative variables, which can be machine-readable, human-readable or both. We go on to further distinguish between sex-disaggregated data, gender data and feminist data. These distinctions assist in framing the variances in existing data and how the collection and processing may or may not support feminist movements work for social transformation and justice as part of the thinking of Afrofeminist futures.

Data	For this project, data is defined as distinct pieces of information, stored as values of quantitative and qualitative variables, which can be machine-readable, human-readable or both. For the purposes of the project, data is not bundles provided by internet service providers.
Sex-disaggregated data	Sex-disaggregated data are data that are collected and presented separately on men and women to inform gender analysis, by asking "who" questions. However, sex only refers to the biological differences between males and females, whereas gender encompasses the continuum of psychosocial attitudes and expectations, especially related to self-perception or identity. Each culture has different norms or standards about how a person must behave based on their gender. It is moulded by both what a community dictates and one's personal conception of self, expressed through clothing, physical appearances, and behaviour. As such, the terms male and female, and man and woman, are not interchangeable.
Gender data	Gender data takes sex-disaggregated data one step further by considering the stereotypes and socio-cultural factors that introduce gender bias into data. Gender data demands that researchers firmly comprehend how bias is embedded in study design, sampling, data collection, and raw data itself.
Feminist data	Feminist data makes use of feminist praxis as a lens to collect and analyse gender data. Feminist research methodologies centre identifying, exposing and challenging the root causes of inequality and discrimination evident in biased power relations. These methodologies embrace intersectionality, value participants as co-producers of knowledge and experts in their own domains, and brings to the foreground the work of and voices of women and traditionally marginalised groups .

In our interviews, data was predominantly conceptualized as statistical information, i.e. quantitative data. This is data mainly drawn from secondary data sources and thus relies on data collected for other purposes. Secondary data is especially valuable to feminist movements when it is sex-disaggregated and may then be used in advocacy work. However, as our participants indicated the important part is actually ensuring that the disaggregated data is available. Some of the feminist organisations that have done primary data collection have collected qualitative experiential data. This data may be defined as gender data, as the focus of research has been specific to unpacking gender challenges. However, qualitative data faces criticism in that it cannot be generalised and does not provide readily consumable statistics that policymakers may prefer.

For some respondents in the interviews, data was not just limited to statistical information but served as a source of legitimacy and acceptance of their lived experiences. Despite repressive policies within the countries that they live in, data on their experiences made them visible in a society that has historically ignored or mistreated them.

Interview Respondent

"But to us, as a trans movement, we believe that for our existence to be enumerated or counted or be accepted in society, we need this data

The Role of Social Media Platforms for Organizing

Social media has become an integral part of organizing feminist movements across the continent. Every movement we spoke to as part of this research makes use of social media in their work. Social media has become a space for organising, and is particularly crucial in oppressive regimes where the right to assemble is hindered.

In a country like Angola, where getting together to discuss certain social and political issues, it is often not an act well regarded by the authorities, social networks allow us not only to meet, but also to have access to our target audience **Interview Respondent**

Social media is now a place of learning and exchange. Women who previously had no access or exposure to feminist thinking are now able to learn from one another and question patriarchal norms.

Interview Respondent *Currently, it has been advantageous because, for me at least, I have started to have more insight into feminism and how feminist perspectives are, through the internet*

Most importantly, social media serves as a space for sisterhood, despite geographical, class, patriarchal or other barriers.

One of the advantages is also the possibility to know feminist women. When outside the social networks, we can think that we are few or we are the only ones, but with the social networks, the possibility to know others and make interactions and crossing of information is possible

Interview Respondent

How are feminist movements currently utilising data?

Types of Data Collected

1
Incidence and prevalence rates)

2
Provision of services and clinic in-take

3
Social media metrics and reach

4
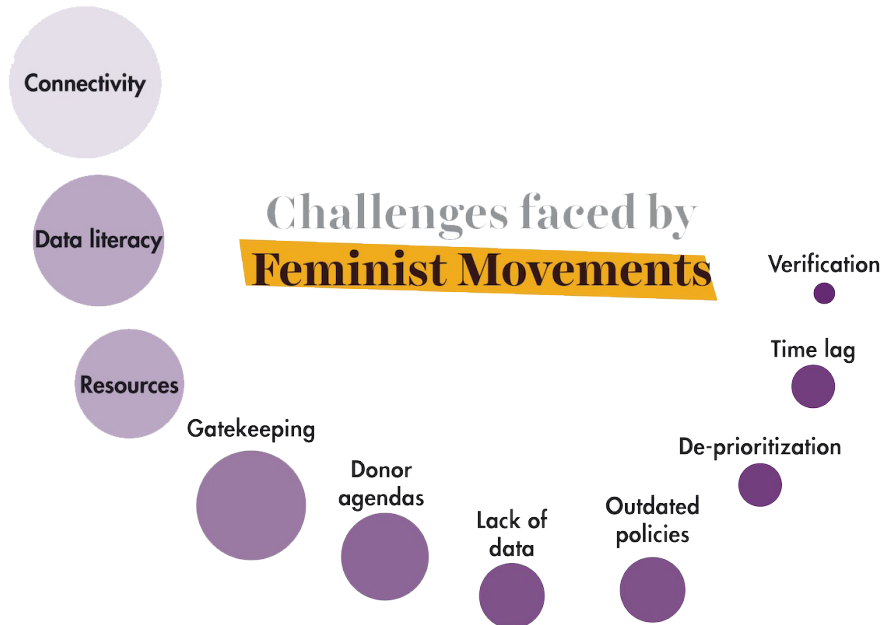*Knowledge, perceptions and behaviours*

Types of Tools Used

1. Facebook products (Facebook, Whatsapp, Instagram)
2. Microsoft Suite products (Excel, Word)
3. Google products (Forms, Sheets, Hangouts)
4. Data analysis platforms (SPSS, STATA, NVIVO)
5. Productivity platforms (Slack, Trello, Notion, Airtable)
6. Data collection platforms (SurveyMonkey, ODK, KoboToolbox, SurveyCTO)
7. Other communication platforms (Twitter, Zoom, Telegram, Youtube)

Purpose for Data Collection

1
Advocacy and Awareness Raising

2
Policy influence

3
Program and Impact Measurement

4
Fundraising and Needs Assessments

CHALLENGES IN DATA USE

Through our interviews, focus group discussions and personal experiences, ten major challenges to the full utilization of data by feminist movements in Africa were identified. These challenges represent the immediate impediments in the conceptualization, collection, analysis and dissemination of data.

Challenges faced by **Feminist Movements**

- Connectivity
- Data literacy
- Resources
- Gatekeeping
- Donor agendas
- Lack of data
- Outdated policies
- De-prioritization
- Time lag
- Verification

1. Data Literacy

A major challenge amongst the movements we interviewed in effectively utilising data for advancing feminist causes is a lack of technical skills in developing survey tools, collecting data and analysing the data. While some movements are able to collect data, either using paper-based methods or through mobile devices, they may be unable to move on to the next steps of cleaning, organising, analysis and visualisation.

Interview Respondent

"*Yes, we did collect our own data but its raw data and we have not managed to process it properly because we don't have any research expertise within the organisation*

Additionally, digital tools for data collection and analysis are often only available in English and other Western languages. Furthermore, secondary datasets, when available openly, whether from international institutions or from national bodies, are in dominant Western languages and are not translated into local languages.

" *When you come across data from the World Health Organization or UN Women in Tanzania, it is never in Swahili. They all post data in English, but it is never translated to Swahili. This information could be useful to many Tanzanians, but then, they don't speak English*

Our research also showed that amongst regions within Africa, interviewees from Anglophone African countries were better prepared in terms of data literacy and knowledge of the challenges and implications that digital data poses to their work and movements compared to their counterparts in Francophone and Lusophone countries.

2. Connectivity and Access

According to the latest GSMA report, in 2019, the digital gender gap in mobile internet use for sub-Saharan Africa was 37% (GSMA, 2020). These figures range from a digital gender divide as low as 13% in South Africa to as high as 48% in Uganda. Many women remain disconnected from the internet due to high costs of internet bundles, high costs of devices, lack of service in their communities, lack of digital literacy, fear of online violence, and due to patriarchal norms that prohibit women from owning mobile phones.

Interview Respondent

"There's difficulty in accessing the internet. Very few people still have access to the internet. It seems not, but internet access is a bit bourgeois. So we are, in a way, privileged to be able to be here on an online platform

The feminist movements that we spoke to understand that in order to reach women, non-digital approaches must be embedded in their work. Without taking into account these differences in mobile ownership and internet access and solely relying on digital engagement, feminist movements in Africa would be exclusionary. Furthermore, any data sourced from digital platforms will be biased and will not account for the true reality of the situation.

Interview Respondent

"I think the divide is with rural communities, which are untouched, unresearched, who don't have access to telecommunications like WhatsApp, Facebook

3. Lack of Enabling Policies

Many policies, especially gender policies, on the continent have failed to keep up with the changing times and a rapidly advancing digital ecosystem. This is especially evident when it comes to cases of online violence, gendered disinformation and hate speech, and how these issues disproportionately affect women. Furthermore, archaic morality laws, and newer computer misuse laws, have disproportionately punished women for incidents in online spaces.

We have a gender policy that was developed ten years ago. It is expiring this year and there has not been a review of that policy yet to show how much we have achieved, how much we need to do so that we can start up another target for another policy and these are the goals that we are trying to achieve in the next five or ten years but that has not been done

Interview Respondent

Furthermore, there is a need for policy that supports development of evidence to ensure access to locally relevant data. This is particularly an issue for feminists in non-Anglophone African countries, who struggle to source appropriate data and content for their movements.

We go to Google and search for any subject and there are always Brazilian sites. We find very few resources. It is rare that you find anything about Angola. This is not only not on the gender issue, but it is a generalized thing here in Angola. There is no interest. There are no policies that encourage research. This is the issue

Interview Respondent

4. Lack of gender-disaggregated data

Data, when available, are not disaggregated by gender. According to a report by Open Data Watch (Data 2x, 2019 b), the health sector tends to have a higher proportion of gender-disaggregated data, compared to environmental indicators which have the least. Yet, women often bear the brunt of the negative impacts of climate change.

Interview Respondent

In our advocacy work, we regularly encounter opposition to our information, because we have no evidence based on data. We want to have access to disaggregated data on the impact of social policies on women and men

Similar to a lack of enabling policies and practices by governments, private sector companies do not prioritize the use of gender-disaggregated data. This is evidenced by mobile network companies, which are one of the prominent parties amassing large volumes of data across Africa.

Focus Group Participant

5. Time lag between large-scale national surveys

The availability of timely data is a challenge that was brought up by multiple interviewees. Large-scale representative surveys are conducted every 4-5 years, often funded by international agencies and donors.

Interview Respondent

Data that is relevant to our work is not available. We are relying on the Multiple Indicator Cluster Survey. It is done periodically by UNICEF together with the statistics agency to measure progress towards the SDGs. They are done periodically, I think every 4 years, so you just have to wait for 4 years. Then, we have the Demographic Health Surveys which happen every 5 years. We don't have quarterly surveys. We wait for those donor-funded surveys. Our government is in no position to have any national periodic surveys, so they wait, as well

"This data might be available but it is not accessible to us"

6. Gatekeeping

Access to data from gatekeepers is an ongoing challenge for feminist movements. Gatekeepers can include civil society organizations, government agencies or international institutions. Researchers must deal with extensive bureaucracy to access data from government bodies. Due to competing ecosystems created by donors, civil society organizations often withhold data from one another. Similarly, private sector companies hold on to their data based on their initial investments made to procure it, or sell the data at exorbitant costs, which can only be afforded by other large private sector organizations.

Interview Respondent

"*This data might be available but it is not accessible to us. It is possible that the government collects some of this information. It is not accessible and when you attempt to reach out to specific government organizations to receive data, it is this long journey of bureaucratic processes. So, we have realized that collecting data on our own is much quicker than requesting from the government*

Worth noting is also the gatekeeping in access to information and engaging in spaces of knowledge. There are high costs of accessing publications such as academic journals. Some Universities across Africa and research institutions can't afford the high fees associated with these journals, even though oftentimes the data has been sourced from Africa, with the support of African researchers. This is a form of epistemic violence that must be further explored. Similarly, prior to COVID19, many academic spaces were also off-limits for African researchers who could not procure visas to Western countries or afford the expensive airfare. Now, with almost all activities moving to online spaces, these researchers can finally enter these previously inaccessible spaces.

Interview Respondent

"In the academic world, we have to publish. It's a competition to publish. How can we publish without access to sources of information, including books or if we don't have money to buy it. I have occasionally used illegal sites to download data that I needed. We use Russian sites a lot. They are our Robin Hood. They allow distribution of material that is otherwise kept inaccessible somewhere else. But some of these sites are now being banned or locked as part of the fight against piracy. I think academic data should be made public and accessible to everybody

7. Resources

Collecting, analysing and disseminating data is a labour and resource-intensive process, especially for grassroots organizations. It is often difficult to receive funding for the sole purpose of conducting research. For many feminist movements, the resources that would go towards research might be better spent on providing vital services to the women they work with, such as healthcare, shelter or counselling.

When we think of the impact on our feminist organizations, we see that it drains our resources that could be spent on other key issues. Because, these are issues that government should be responsible for, not the feminist organizations, when it comes to the data

Interview Respondent

Furthermore, as previously mentioned, it can be quite costly to hire data scientists to support feminist movements with data analysis. There is also a shortage of data scientists across the continent, and more so, feminist data scientists.

8. De-prioritization of feminist causes

Socially, culturally and economically, the collection of data related to women's issues is often not considered a priority. Government support and interest in collecting representative data on feminist causes remains low across Africa.

Interview Respondent

> *For example, on the impact of COVID-19 on women, there is no information available. There may even be some information in a government member's office, but it is not digitized. It is not available online*

According to one respondent, governments might allocate funds for research in sectors that are associated with masculine pursuits or directly related to economic growth such as agriculture, business or infrastructure. "Socially, this might not be looked at as a priority, especially when you are framing it as feminism as opposed to women empowerment" - Interview Respondent.

Additionally, many funders, non-governmental bodies and similar stakeholders tend to focus on short-term impact and projects that provide measurable outcomes. However, these initiatives have an adverse effect on feminist movement building which seeks to bring about systemic change that can impact the lives of women in the long run (Girard, 2019).

9. Verification and replicability of available data sources

Due to challenges related to data availability and accessibility, the verification of the data provided by both governments and international bodies is a challenge. In cases where governments do produce statistics concerning feminist causes, for example, low levels of gender-based violence or workplace harassment, they do not produce the methodologies or datasets from which they pull these statistics. This reduces the trustworthiness and credibility of the data produced.

This issue was highlighted after conducting literature reviews of existent and open data, which found a lack of rigour in the research methodology. "We found a lot of these studies were not robust. These studies did not have significant outcomes, did not apply methods that were appropriate for the target population or for the specific aims of the study. So, it was difficult to find any empirical evidence that supported the notion that sexual assault was a problem in the workplace and is a problem that needs to be addressed." - Interview Respondent.

Additionally, feminist movements using data from social media sources also had difficulties in verifying the veracity of the information sourced.

10. Donor agendas

One of the core issues discussed during the interviews was the NGO-ization of feminist movements. In order to receive funding, many grassroots movements must formally register and acquire office spaces and assets. This bogs them down with administrative formalities and takes away from the energy that would fuel their movements. Thus starts a cycle of sourcing funding and catering to the needs of donor agendas, which may often not align with the initial mission of the movement. There are fundamental differences between Western ideals of feminism and that of difference African feminisms. The ability to stay true to the causes becomes increasingly difficult.

An interesting point raised, for example, is a demand for volumes of evidence from donors. Given the difficulties that feminist movements face in collecting primary data, accessing or verifying secondary data, garnering resources to analyse data and backlash faced against qualitative data, producing this evidence can be difficult. In feminist movements, if even one woman has to deal with an issue, then it becomes an issue for all women to address.

If one woman dies from unsafe abortion, for a feminist that is already an issue. We are not waiting to say how many women, has this been verified, is there evidence for your advocacy. Feminism comes from a place of passion. Facts and figures are not very relatable in that kind of context. But, as the movement has gone out to seek resources from donors and as we engage policymakers to say, 'Let's make a change around these areas', we are constantly being asked but what evidence do you have

Interview Respondent

Furthermore, as previously mentioned, philanthropy bodies fund women's groups in ways that undermine the entire movement by focusing on short-term outcomes, burdening them with administrative work, and promoting divisiveness and competition within the movement through the grant/funding structures, rather than focusing on building coalitions (Girard, 2019). Despite good intentions, research has shown that time-bound, project-based funding has fractured grassroots movements and stalled the progress of feminist groups in developing countries. In the long run, these women's groups become unattractive for future funding because of restrictive budgets and projects that eventually may fail to show long-term progress, thus de-legitimizing the entire movement.

Interview
Respondent

"

I just feel like we as a feminist movement, we know what to do. But, the problem is we are restricted by the donor funds. In most cases, you write a proposal to a donor and it's on data collection methods for the betterment of the trans community, and the donor tells you that it's not their priority
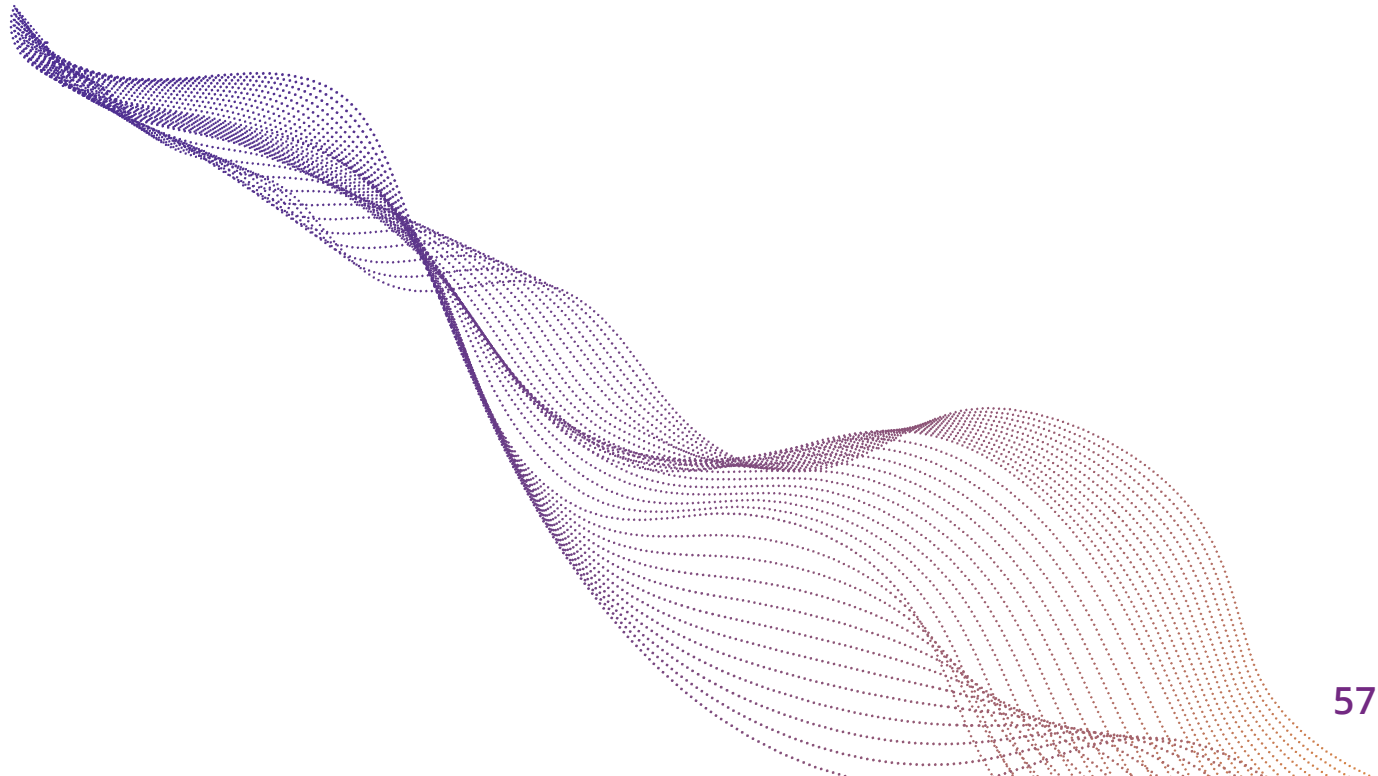
"I want to really give that a place in the discussion about how we as Africans share information, which goes back to our traditions as well"

CONCERNS ABOUT DATA USE

In addition to challenges impeding data use, a number of critical concerns were identified over the course of the interviews and focus group discussions. These concerns do not directly prohibit the collection, analysis, dissemination and use of data by feminist movements, but they represent the anxieties in applying feminist principles to research and question whether true social justice and transformation can be achieved without taking these matters into account.

1. Ethics of data collected from secondary sources

For many of the women interviewed for this research, the ethics of the data collected, whether from national bodies, international institutions or technology platforms, was a significant concern. It is important to consider the research methodology and frequently, the lack of feminist principles utilised in data collection exercises. This would include ongoing consent, addressing power imbalances between researcher and subject, valuing of the knowledge held by the participants, understanding situatedness etc.

Furthermore, the discussions explored whether institutions or companies grounded in geopolitical or profit-making motives could inherently produce ethical data, and whether feminist movements should engage with this kind of data.

2. Political manipulation and motives within available data

As previously discussed, the verification and replicability of secondary sources of data remain a concern. Few interviewees also raised concerns and described feelings of distrust towards secondary sources of data. These interviewees explained that data from secondary sources could be manipulated to reflect situations that are different from the reality on the ground, for a number of political, funding or patriarchal reasons. For example, national statistics could inflate their successes or deflate their failures to improve the image of the current ruling political party. In some cases, the data may not be altered but systems of reporting may be manipulated.

For example, the police might report a reduction in sexual assault. However, they may simply make reporting more difficult for women, such as not having victim support units in place or dismissing women's reports of domestic

violence and sending them back to their homes. Similarly, international bodies and development cooperation partners may manipulate data to further their own political agendas in the regions.

Interview Respondent

"We do use national data as much as we can. The problem is we feel that it is manipulated. It's problematic. If you took a single example of access to education, the national data reflects massive access to education but there is no tracking of dropout and this is complex

3. Re-traumatization of respondents

In the case of collecting certain types of data, especially related to negative experiences, feminist researchers expressed concern about the re-traumatization of respondents. One of the foremost ethical concerns for researchers and ethics committees is to ensure the benefit derived from research outweighs any potential harm to participants. As human subject protections strengthen over time, concern about potential harm in research on emotionally distressing topics has become increasingly important, especially in the context of no benefit for participants. These concerns include psychological risk, anxiety, trust issues, shame, fear, frustration, inconvenience, but more so a feeling of a lack of support.

" At times, it's difficult to navigate, particularly online, where the boundary is. Where actually you need the data to be able to record a case versus the wellbeing of this person is important to me, and I don't want them to recount trauma details to me. So, there are a lot of negotiations and nothing is in black and white because this work is difficult in the first place. There are a lot of ethical lines that we have to consider even though what we are doing is just collecting information. It is still traumatic work to do

4. Secure storage of data and data privacy

For many feminist movements, whether activists, grassroots movements or civil society organisations, data privacy and protection was a significant concern mentioned. These organisations often lack the technical skills to protect their organisational information effectively. This can also affect sensitive data collected from their members or beneficiaries.

Interview Respondent

We have lock cabinets that we use to store client documents and in these, we store the documents that have the names and contact details of the participants

Feminist movements have often been a target of violent acts, as most recently evidenced by a disproportionate number Zoombombings during feminist gatherings. One respondent mentioned that organisations working on governance issues often have budget line items for digital security training or audits, but these same needs are often rejected by funders working with feminist movements. One interviewee explained that they have the resources to hire a firm with the technical capabilities to support their digital privacy needs, but this is often not the reality for their partners, which in turn, jeopardises the entire movement.

Interview Respondent

Right now we use WhatsApp and Facebook a lot because of COVID19. We know that they are not very safe especially when we are working on sensitive issues like monitoring the state budget or public debt. Our phones are listening, and social networks are monitored. In addition, on these platforms, we engage with partners who may not have the same security level as ours

5. Focus on quantitative data as rigorous

According to the women interviewed, external bodies place a higher value and priority on quantitative data compared to other forms of research such as digital ethnographies, critical discourse analysis and oral histories or storytelling. Within feminist movements and amongst stakeholders such as government and funders, there is a need to decolonize research and re-consider alternate forms of data, grounded in African feminist values.

Interview Respondent

" *I think that's a very African way of collecting data that we also need to amplify because it's not just relying on big mainstream sources for us to gather data but it's returning to our own African ways of collecting and voicing together. I want to really give that a place in the discussion about how we as Africans share information, which goes back to our traditions as well*

6. Shadowbanning on digital platforms

Shadowbanning is the act of blocking a user's content on social media sites in such a way that the user doesn't know it's happening until they see its impact on their account metrics (Taylor, 2019). It is often observed on pages run by sex workers, queer people, and anyone whose content is deemed "unacceptable" under obscure platform policies.

Examples of shadowbanning on Instagram include rendering a user's hashtags undiscoverable, restricting account visibility to followers only (as opposed to the broader Instagram community), preventing the account handle from auto-populating in the search bar, or filtering posts out of the feeds of followers (Middlebrook, 2020). Specific hashtags are also targeted; using hashtags that have been banned or are flagged as Not Safe For Work (NSFW), for example, #lesbian is flagged as NSFW. Using these hashtags can also get an account flagged for shadowbanning (Taylor, 2019). From an account administrator's perspective, shadowbanning might not be apparent, especially if you are unaware of these platform practices.

We talk about machismo, racism, sometimes people are blocked because of that because they don't look at our reality. We, as Africans, suffer that in the skin so they are just blocking people from their freedom because they are in a social network that is not made for the African reality

Interview Respondent

Ultimately, shadowbanning creates an environment that makes it difficult to build community around feminist causes on social media platforms, and more so for LGBTQIA+ people and sex workers, and especially for queer sex-working people. For example, recently, a virtual discussion by our partners on online violence was flagged and blocked from live streaming on YouTube. Posts that

mention female pleasure, sexual violence and even simply content on queer or plus-size bodies can be shadowbanned. The marginalisation of communities online also continues into the offline life. For instance, when members of these communities are not able to see information about community gatherings online, they are locked out of opportunities to connect with one another.

7. Consent from minors

Social media sites include data of children below the age of consent. Different countries have a different 'Digital Age of Consent', which refers to the age at which one can sign up for an online service such as social media without the consent of a parent or guardian. This age can range from 13 to 18 years, depending on the country and the online platform. Given that consent is an important feminist principle, interviewees expressed concern in dealing with the consent of minors in data that would be curated for use. For example, on the one hand, young girls need to access vital services, such as contraceptives. On the other hand, they would need consent from a guardian in order to do so. However, the prevailing culture would forbid young girls from engaging in sexual activities before marriage. As such, feminist organisations and researchers find themselves in a situation where they must decide how best to curate online data on particular issues that would affect minors.

8. Trust and cultural or patriarchal barriers

Feminist movements often have to collect data that is sensitive in nature. This means building a trusting relationship with the participants. When men serve as data collectors, this can often bias the data. For example, a young girl may not want to reveal her sexual experiences to an adult man.

Furthermore, patriarchal and cultural norms can impact the quality of data. In some instances, women require the consent of their male guardians or partners to participate in research studies. If the research topic is deemed to be sensitive in nature, women may be barred from participation.

Focus Group Participant

I remember when we did a project on female genital mutilation, one of the things we had to be aware of in rural communities was as we asked women to come for a focus group discussion, they had to get permission from men. Those cultural barriers are some of the reasons why it can probably be hard getting gender-disaggregated data. It is very difficult for you to reach women when you are actually collecting data and that's why most of the time, it is not representative

Similarly, this trust applies to social media platforms, and building trust between users and the technology platforms.

Interview Respondent

"I have seen social media platforms and Google trying to do surveys, but I'm always sceptical. I never pay attention. I always just press skip

9. Treatment of Women of Colour by technology platforms

For several years, women of colour have been expressing their discontent and maltreatment at the hand of technology platforms. This has drawn into question whether these very platforms can serve as a source of data, given that they perpetuate systems of oppression that disproportionately impact black and brown women.

Focus Group Participant

I am very aware of the ways that these companies are part of the systems of oppression, especially for black women and brown women. Therefore, I don't know if it's for them to collect data (for us)

10. Women's Safety on digital platforms

According to research conducted by Pollicy across five countries in sub-Saharan Africa, 28% of women interviewed had experienced some form of gender-based violence online. A significant proportion (29.2%) of respondents did not know where to turn for information on online safety and security. Of those who reported experiencing this violence, 14.5% deleted or deactivated their online accounts whereas 12.3% stopped using the online service altogether. Rates of reporting perpetrators to technology platforms remain low and responses to these reports have not been encouraging. This is a worrying trend, given that these forms of violence silence women in online spaces and impacts their ability to access services, participate in discourse and contribute to the knowledge-base in the digital ecosystem. Furthermore, increasing evidence from studies shows that offline violence and online harassment are closely interlinked.

"It is often the men there who speak about women, and many times when space is given for women to speak, it is only during the month of March or to fulfil some political agenda"

A ROADMAP FOR STRENGTHENING THE FEMINIST DATA ECOSYSTEM

A number of recommendations were suggested by the feminist activists and movements that the researchers engaged with. These recommendations have been grouped into potential short-term and long-term actions to be taken by key stakeholders in the data ecosystem.

SHORT TERM

1. Independent and intersectional data centres

Challenges and concerns for feminist movements surrounding the effective use of data include political manipulation, lack of an ethics-based approach in research methodologies, and issues of trust and consent. Furthermore, feminist causes are often not prioritised by governmental bodies.

Challenges and concerns for feminist movements surrounding the effective use of data include political manipulation, lack of an ethics-based approach in research methodologies, and issues of trust and consent. Furthermore, feminist causes are often not prioritised by governmental bodies.

A decentralised approach to data collection could address these concerns. Governments should consider setting up a number of non-partisan and independent data centres that are accountable to the citizens, whereby data is 1) open, 2) shared in accessible formats, 3) verifiable, and 4) replicable.

Additionally, it is important to consider an intersectional approach to these data centres. We must ensure that these data centres question power dynamics arising from patriarchy, classism, sexism, racism, ableism etc. This may be through inclusive participation of women in the process of developing data centres and taking into account societal power dimensions that may close off marginalised groups from accessing these centres.

For example, one respondent shared how there is an extreme dearth of information, not just within women's issues but even more so on persons with disabilities.

2. Effective Data Collaboratives

Many feminist movements focus on similar thematic areas and provide similar services, within the same region or within other regions in a country, or even across the continent. These movements could learn from each other but also contribute their data to larger feminist datasets. Such knowledge-sharing benefits other organisations — especially grassroots movements without the resources to conduct their own research. Feminist movements can self-govern to ensure that the data is collected ethically, is standardized across indicators and is based on feminist principles that prioritises the needs of women.

3. Building trust with feminist movements

Trust is vital between social networks and feminist movements to ensure that data may be used and feminist organisations may work with social networks in improving their publicly available data. The issue of trust is significant, given the practices of data collection and process contextualised in the data colonialism context and experiences of dataveillance for women. Recommendations for building trust between feminist movements and social networks include listening to feminists; hiring feminists; looking at diverse business models that allow for co-ownership of knowledge; and being accessible to assist movements to understand practices on the platform that may stifle the engagement of movements. Trust is vital for engagement with movements so that the engagement is mutually beneficial.

Interview Respondent

I think beyond listening and thinking through why they need to support this feminist movement, we should ask why they don't listen to feminists when we tell them what we want

# 4. Funding for data training initiatives and feminist technologists

Funders, partners and technology companies should focus their efforts and funds on supporting and developing data training initiatives on the continent. By focusing training only on individual organisations, the learnings often end there or are lost when those staff members move on from that organisation. There is a shortage of such initiatives across the continent, and especially those that take into account feminist research methodologies. However, programs such as Code for Africa's WanaData and Data Science Nigeria have made significant progress in training data scientists and journalists.

Similarly, more efforts should be focused on improving the pipeline of women in STEM fields. It is rare to come across female developers, and even rarer are feminist female developers. There is a need to continue to examine the intersection of technology, gender and ethics.

5. Funding for Feminist Research

Feminist research seeks to explore ontological and epistemological concerns about traditional research methods by examining underlying assumptions regarding the power dynamics of who is considered the "knower" versus the "known". Epistemological violence happens when social science research subjects are "othered" and data on the Other is interpreted to highlight their problems and inferiority. For example, consider how Western NGOs promote visuals of poverty porn in their fundraising advertisements. Furthermore, this epistemological violence impacts the agency of marginalised subjects, often women, to produce knowledge and goes one step further in de-legitimising the knowledge that does not fit the western normative ideals (Tandon, 2018). The same concerns are seen in the big data space in terms of how data is collected, processed and interpreted that may subsequently be used to advocate for change.
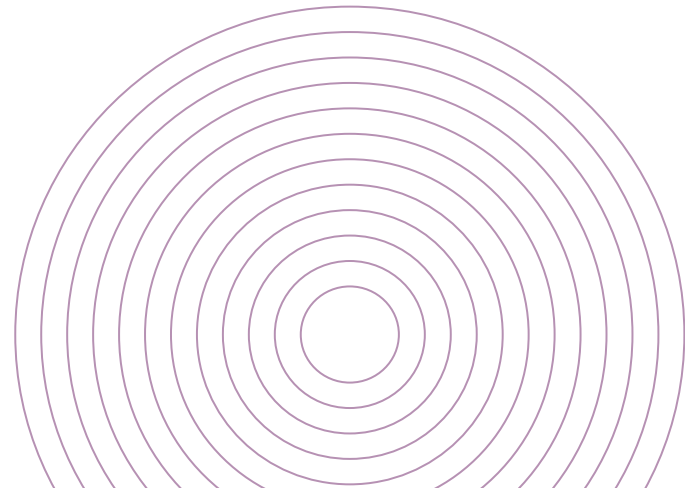
Feminist movements must be funded to conduct research from a decolonial, feminist lens. This aligns with data feminism in valuing multiple means of knowledge. It also would support the achievement of data justice as funding support would ensure feminists are able to look at the opportunities and challenges for marginalised groups and seek social change. Several new fields have emerged that are grounded in feminist approaches such as cyberfeminism, feminist technology studies and to some extent, African futurism.

Interview Respondent

We have very few women scholars, very few scholars that specialize solely and exclusively on women's issues, on gender issues. It is often the men there who speak about women, and many times when space is given for women to speak, it is only during the month of March or to fulfil some political agenda

LONG TERM

6. Build appreciation for different forms of data

Decolonial research would entail processes that value, reclaim and foreground Indigenous voices and ways of knowing and utilise indigenous methods of transferring knowledge like storytelling, participatory, hands-on learning, community-based learning and collaborative enquiry (Tamale, 2020). Data feminism also teaches us to value multiple forms of knowledge, including the knowledge that comes from people as living, feeling bodies in the world (D'Ignazio & Klein, 2020). African feminists and feminist organisations are already participating in this form of research as they are creating platforms where they share stories and profiles of women and gender diverse persons to make visible their impact and the complexities of their experiences. African feminists also urge the deployment of innovative and subversive critical tools in African research and training. South African scholar Dr Pumla Dineo, for instance, recommends the use of visual arts in articulating topics like sexuality (Tamale, 2020).

A significant challenge to feminist movements is around quantitative data, yet qualitative data is often collected proficiently by movements, such as storytelling and case studies. There is a need to combine different forms of data - qualitative, quantitative and big data - to influence policy change. For this to happen, in thinking of public big data repositories, social networks with this data must invest in highlighting how this data may be complementary to different forms of data - in particular qualitative data and archived data. Digital archiving of feminist movements pages that organise on social media platforms and then making this data available for research would ensure the availability of historical data and public records of actions taken by the movement. In addition, the archival would need to be an option available for movements to curate their pages in ways that they will continue to live on beyond a time in a movement.

I think one thing we are trying to think around is digital archives and the reason as to why we need to start talking about digital archives within the social media spaces and that's because it is also around the shape of our histories, specifically of a feminist movements from Africa. How do we make sure that these movements are being archived, and how do we work out that?

Interview Respondent

7. Strengthen women's safety online

Technology platforms, government institutions, and civil organizations have been steadily providing more educational resources on digital hygiene and security tools over the past few years, however, use and access to these resources remain limited. Many women do not know where to access information related to digital security. Digital security resources must be adapted to local contexts and languages, as well as mainstreamed into educational curricula.

Social media platforms must place more emphasis on protecting women on their platforms. They must engage with indigenous content moderators who understand the nuance and context of local cultures and linguistics. Furthermore, they must improve the effectiveness of reporting mechanisms on their platforms.

Policy advocacy, legal approaches and law enforcement could strengthen laws against online harassment and are a viable pathway to preventing perpetrators from committing online gender-based violence. However, precaution must be taken to ensure that regulation does not lead to the stifling of freedom of expression. Law enforcement personnel must be trained on a gender-sensitive digital safety curriculum to address complaints of online gender-based violence and to provide timely

technical assistance, counselling and support to women. Along with the engagement of safety personnel, there is a need for countries to adopt data protection and privacy laws and put committees and mechanisms in place to implement these laws.

Lastly, many digital hygiene solutions put the onus of security upon the shoulders of victims. Research shows that few interventions are aimed at preventing primary and secondary perpetrators from acting violently in the first place. It would be worthwhile to teach new (and established) users of the internet how to conduct themselves in digital environments in a way that is grounded in empathy and kindness.

Lewis
2020

" Digital hygiene is the catch-all term for the practices and behaviours related to cleaning up and maintaining your digital world

8. Future of Feminist Data Governance

Feminist data governance must take into account the power imbalances that exist between who provides and who collects data. Data has the potential to lead to positive outcomes such as tailoring services or resource allocation. However, data may also lead to certain harmful

outcomes such as discrimination, which can further exacerbate the inequalities existent in society.

Feminist STS (science and technology studies) often grapple with undoing hegemonic narratives. It seeks to explore the social, cultural and political factors that shape the technology around us and is committed to understanding technology through the lens of situatedness, embodiment and care. There are multiple aspects of care worth considering including an understanding of the invisible labour involved in producing data, whether that means an individual's content and knowledge, or the burden placed upon citizens and civil society to collect data for the betterment of society. Even the landscape of social services is rapidly becoming dependent on data systems where technological determinism, i.e. placing the burden on the apps, algorithms or devices, is practised rather than a nuanced analysis of contexts and power dynamics at play (Fotopoulou, 2019).

As Nissenbaum stated in an interview in 2018, technologists must move beyond providing illegible Terms and Conditions or tweaking consent mechanisms on digital platforms to think more holistically about how data flows could work in a way that distributes costs and benefits fairly across society and upholds the values of social domains such as health, democracy, balance lifestyles etc (Berinato, 2018).
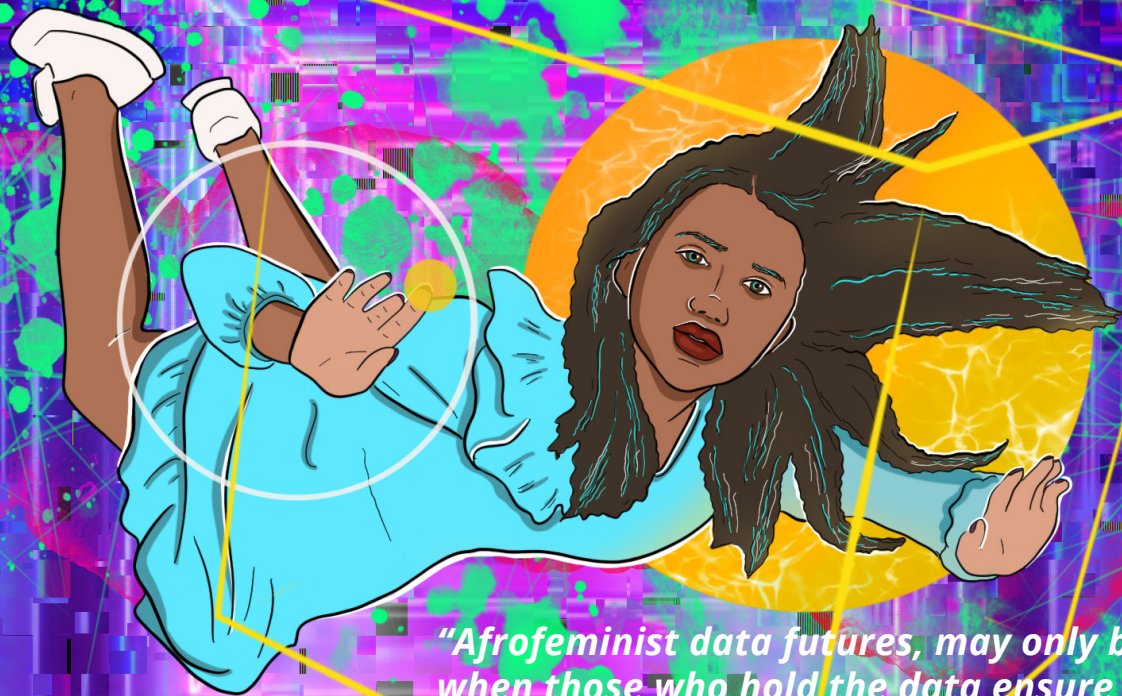
"Afrofeminist data futures, may only be possible when those who hold the data ensure that data is shared in a transparent and accountable manner and aligned with feminist principles."

CONCLUSION

Data, in its various forms, can play a vital role in feminist movements achieving the ideal transformative and just society. The mapping of current data practices highlights the opportunities and gaps that exist from publicly available and social media data, and in particular, data that takes on a feminist perspective. In imagining Afrofeminist data futures, the context of colonial practices, power imbalances and lack of feminist data indicate a need to address challenges within the data ecosystem.

Afrofeminist data futures, may only be possible when those who hold the data ensure that data is shared in a transparent and accountable manner and aligned with feminist principles. It also requires supporting solutions to the challenges and concerns highlighted in this research. This research is a first step in understanding the role of data in feminist movements. More research and significant investment are needed to explore best practices to support data use and developing data practices that work to ensure data justice across Africa.

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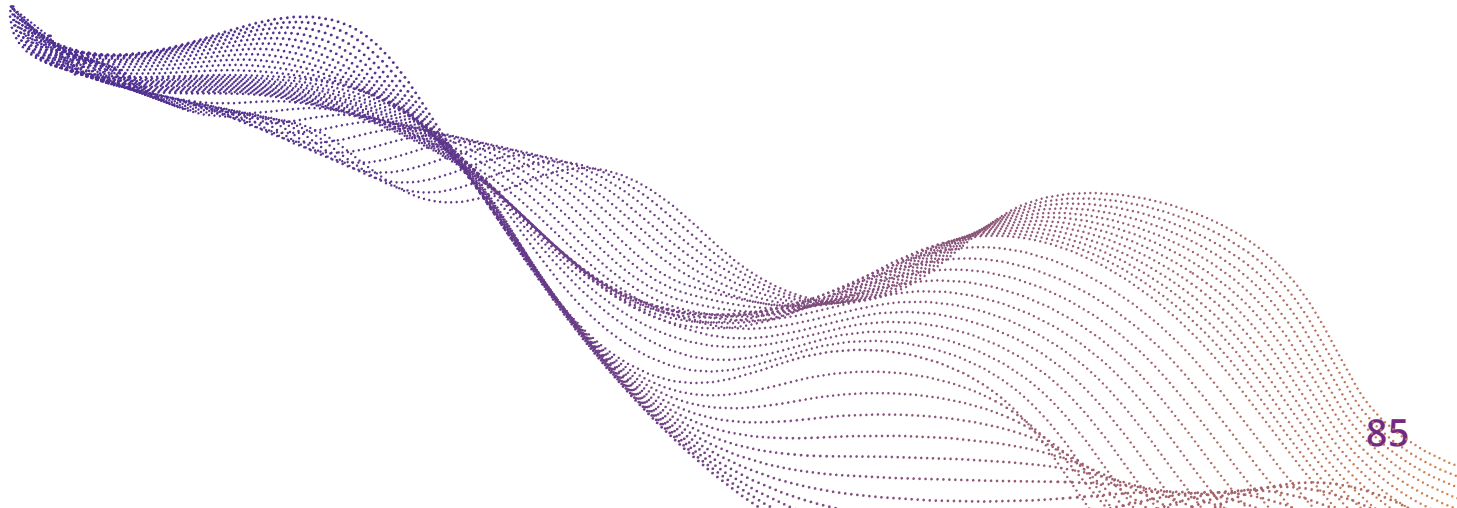
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