



# The Alan Turing Institute



# ADVANCING DATA JUSTICE RESEARCH AND PRACTICE

Dr. Jean Louis Fendji Kedieng Ebongue Charlie Martial Ngounou

<u>AfroLeadership</u>

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# 1 Introduction

#### 1.1 Context in Africa

The advent of digital and information technologies has seen a significant increase in the role that data plays in the shaping of our political, economic, social and cultural life. In the 21st Century, data has especially become central in decision-making. This datafication – the growing presence, use, and impact of data in social processes – is not only present on the African Continent but is a worldwide phenomenon. In Africa, state agencies, civil society organizations, international organizations, private and multinational companies, all collect data which they use either in decision-making or data-powered projects. Africa is thus, part of a world where the developments in 'smart' technologies, machine learning, and Artificial Intelligence are now an integral part of how societies are organized and decisions made, both in theory and in practice. Nevertheless, while underlying the importance of data in critical spheres of African life like development, it is important to note that there are several challenges and opportunities that are currently being faced by the Continent. This report by AfroLeadership aims to outline some of those challenges and opportunities.

# 1.2 Afroleadership and work around data

AfroLeadership is a pan-Africa civil society organization which works on issues related to Al Ethics, Data Ethics, Algorithmic Bias, Data Rights, Data for Good, Tech for Good, Human Rights Online, Child Rights Online, Internet Rights, Digital Rights, Broadband Access, Open Governance, Participatory Democracy, Participatory Budgeting, Fiscal Transparency, Accountability, Etc. Founded in 2010 and headquartered in Cameroon/Central Africa, it has representatives in regions and countries in Africa. The team is made up of consultants, engineers, researchers, practitioners, policymakers.

Over the years, AfroLeadership has worked with several partners on many projects: Some examples of such projects are as follows:

- AfroLeadership is part of the Committee that is responsible for writing the law of access to information in Cameroon;
- With the finance of the French embassy in Cameroon, we realized the Cameroon open participatory budget to make available the main summary reports like budgets of municipalities in a machine-readable format, statistics, and graphics on web site. The bureau Afrique francophone of International Budget Partnership is financing the second part of this project;
- Afroleadership is a founding member of MyData Global and member aNewGovernance to advocate on data awareness and data literacy;
- Afroleadership supports BEL'S AI Initiative, which is an academy that provides the necessary foundations for understanding and using artificial intelligence (AI). Our goal is to contribute to the positive insertion of AI solutions in Africa;
- With Place, we work to create and steward hyperlocal mapping data for a membership community that is open to all and serves the public interest;
- Afroleadership promote participatory tools like Decidim to make sure that marginalized people and/or people living with disabilities are also considered.

The main aim of AfroLeadership's work is to contribute to data justice in Africa. It is also important to acknowledge that the concept of data justice is yet to find complete incorporation into

the organisation. Thus, the ADJRP (Advancing Data Justice Research and Practice) project is critical to AfroLeadership, especially as Africa is at a turning point with AI.

# 1.3 ADJRP project and objective

ADJRP project expands upon a research programme on Data Governance, managed by the Global Partnership on AI ("GPAI"). The concept of data justice promotes a broader view than data protection. It has been defined as "fairness in the way people are made visible, represented and treated as a result of their production of digital data". For the purposes of this study, data justice also extends beyond notions of political rights and justice to social and economic rights and regulation that is necessary to redress inequities and enable people to exercise their rights. There are also issues of intellectual property and ownership that impact on fair trade, competition, and consumer rights. The opening up of data markets or data flows, for example, without enabling the fair and equitable participation of individuals, communities and countries disadvantages Low- and Middle-Income Countries and globally marginalised groups. Furthermore, not governing the economics of data perpetuates the status quo.

The objective of this project is to fill a gap in data justice research and practice, providing a frame to help practitioners and users to move beyond understanding data governance narrowly, as a compliance matter of individualised privacy or ethical design, to include considerations of equity and justice in terms of access to, and visibility and representation in, data used in the development of AI/ML systems.

# 2 Methodology

To achieve the abovementioned objective, the work has been organised around five main actions: Collection of acts related to the regulation around data, Identification of potential stakeholders, Preparation of material, Organization of interviews, and Organization of the workshop. Thus, in a very significant way, the project was grounded in consultations with impacted stakeholders on what matters to them and in their areas of greatest concern and hope. By so doing, the project drew inspiration from the values, ethics and views of fellow Africans – a methodology and approach that has been especially recommended by the African Commission on Human and Peoples' Rights in its 2021 Resolution 473 on Artificial Intelligence and human rights on the African Continent. The project specifically targeted three types of audience: Policymakers, Individuals and communities marginalised by Al/ML systems, and developers.

# 2.1 Collection of acts related to the regulation around data

To better understand what has been done regarding regulation around data, several Acts of Parliament (legislation) were reviewed.

#### 2.2 Identification of potential stakeholders

Several stakeholders – drafted in consideration of region, background, language etc. – were interviewed. Further, stakeholders participated in workshop organised by AfroLeadership.

# 2.3 Preparation of material

A concept note of the project (in French and English) was designed and shared in several groups social networks and directly sent to potential interviewees and participants to the workshop, to present the project and to raise the awareness around data justice.

Semi structured interviews (adapted from the received material) were designed and translated into French and English. A program and a content for the workshop (adapted from the received material) was also designed.

# 2.4 Organization of interviews

As indicated above, interviewees were selected from different regions, languages, and cultural backgrounds, from the northern part to the southern parts of the country. Several developers inside and abroad the country were also interviewed.

# 2.5 Organization of the workshop

We held a workshop in Cameroon were stakeholders from different backgrounds participated. During preparation for the workshop, we noted that exclusion from participation on issues of data justice may also be on account of venues that one chooses for a meeting. In our case, to accommodate all invited stakeholders and encourage their effective participation where they feel safe and comfortable to contribute, we held the Workshop at Hotel Djeuga Palace which is in the political capital of Cameroon. This was particularly, to accommodate policymakers who find it difficult to travel outside the capital. Invitations to this workshop were sent 2 weeks before the date of the workshop.

# 3 Results

This section will briefly introduce the current landscape about data regulation in Cameroon. Then the report presents the results of interviews and workshop from three perspectives: marginalised communities, developers, and policymakers.

# 3.1 Legal/governance framework on data in Cameroon

There are a number of laws that regulate data in Cameroon. Article 4 (41) of the Cyber Security Act of 2010¹ defines data as "a representation of facts, information or concepts in a form that can be processed by terminal equipment, including a program that enables the terminal equipment to perform a function". A critical review of such laws reveals that regulation of data is indeed a strategic issue for the State, clearly showing that data has an administrative/political, economic, social and religious function that define relationships between the state versus the individual, the individual versus the individual and the individual versus non-state entities like companies. The other relevant legal texts on issues relating to data include the law No. 2011/011 of 6 May 2011² amending and supplementing certain provisions of Ordinance No. 81-002 of 29 June 1981³ on the organisation of civil status in Cameroon, the law of 2000/010 of 19 December 2000⁴ governing archives, and the law No. 2010/012 on Cyber Security in Cameroon, among others. It is important to not that the relevance of these laws to governance of data is implied since some of the referred laws do not have specific provisions on data. To some extent, this leads to gaps in the law that it is necessary for Cameroon to adopt more robust laws on data, especially as it relates to legal persons.

<sup>&</sup>lt;sup>1</sup> https://www.minpostel.gov.cm/index.php/en/les-textes/telecoms-tic/lois-telecoms-tic/179-law-no-2010-012-of-21-december-2010-on-cybersecurity-and-cybercrime-in-cameroon

<sup>&</sup>lt;sup>2</sup> https://www.refworld.org/docid/54c224d14.html

<sup>&</sup>lt;sup>3</sup> https://www.cvuc-uccc.com/minat/textes/34.pdf

<sup>&</sup>lt;sup>4</sup> https://www.archivage.cm/french/legislations/cameroon/archiving/Loi-2000-010 18 DEC 2000.html

# 3.2 Data justice from marginalised communities

From the discussion with more than 15 marginalised communities, major social justice issues that impact their life and their wellbeing include gender inequalities in all spheres of life, insecurity especially in war zones (that is usually linked to a limited freedom of speech), lack of healthcare due to low incomes, unevenly distributions of resources, racial injustice or tribalism, lack of child protection and education.

Data driven technologies can be seen as a double-edge sword. On one side, it might exacerbate social justice issues, since very often, advancement in technology does not favour a large part of the population, especially in developing countries. The availability of data is only favourable to those with access to resources like the internet, deepening inequality, with part of the population left behind and experiencing poor-quality healthcare and even education. Moreover, political powers tend to influence the editorial lines of most media, especially in the treatment of information related to war zones.

On the other side, Data driven technologies might be used to overcome social justice issues through media for advocacy, campaigns, awareness, and sensitization mechanisms. But they all require access to data services that are most of the time lacking in marginalised communities.

Data is collected in various ways in communities, depending on the penetration rate of ICT. Some community members mentioned that their recordings (mainly voice), saved information in their phones, documents, and pictures are collected by telecom operators and giants from social network companies to direct their services. Other members also think that their location and internet traces are also collected. In regions experiencing a low ICT penetration rate, data is directly collected on the field through survey, interview, focus group discussion.

#### 3.2.1 Power in marginalised communities

Most of the members of identified marginalised communities have very little or even no awareness of power dynamics surrounding data collection and use. One of the main contributing factors is lack of transparency in how data is collected, used and stored. Further, limited access to the internet and the low internet literacy, the limited knowledge on technological advancement and data collection process, and the level of education and lack of sensitization all contribute to the lack of appreciation of power-dynamics in data collection. Nevertheless, AfroLeadership notes the lack of awareness on the power dynamics that characterise data collection does not mean the absence of power imbalance or oppression. In fact, the lack of awareness itself is a form of power imbalance.

Indeed, a critical review of those who are unaware of the power dynamics in data collection show that most of them are either uneducated or have limited education. Consequently, among those who are disproportionately impacted by data collection practices, there is very little knowledge about how unjust exercises of power by those who have control or influence over their data might harm or marginalise them. Even for those who may be aware of the harmful practices against them, there have either limited ability or no ability to seek redress against data actors who are politically and economically powerful.

Now that many members from marginalised communities, have not found remedies in the past when they raise concerns about violations of their rights, there is a general sentiment of hopelessness when it comes to data justice. For those who still have interest to mobilise against unequal power dynamics that are prevalent in data practices, they do not have pathways or resources. A current crisis in Cameroon is one involving conflicts and disagreements in the Northwest and Southwest regions. Marginalised communities in these regions felt (and continue to

feel) discriminated against and have extensively complained about this since 2016. There is a general sentiment that the government has not listened to them but rather sought to stifle them. The situation escalated into an armed conflict in the area, with a group of people demanding separation from the rest of the country. For example, communities in conflict-stricken regions reported that the data collected so far in their communities for the past 4 years might not be reliable because some areas are not accessible and may reflect longer term patterns of insecurity. In addition, the government has been accused of trying to skew the data, as stated by a member from this part of the country: "Denizens have come to understand how power can help control information and even formulate information which are not true to suit their narrative. However, many do not know how far it can go and the consequences it will bring in the long run".

In this context of armed conflict, Afroleadership exchanged notes with the assigned consultant where there is a consideration of what data justice means in the context of war. The discussions concluded that this is, indeed, an area that needs further investigation. What is apparent, however, is that in the context of armed conflict, data justice may mean or be interpreted in a different manner as data is impacted differently from the way it is impacted in peacetime.

Finally, AfroLeadership notes that for several marginalised communities, empowerment against unequal power dynamics in data include capacity building, radio sensitization, focus group discussions, advocacy and lobbying mainly through civil society organisations.

#### **3.2.2** Equity

In its interaction with the stakeholders, Afroleadership found out that the concept of equity is critical when dealing with data practices. Communities that participated in interviews, or the workshop emphasised the importance of equity. As a pillar of data justice, the concept equity is capable of creating an enormous consciousness within African communities and help to reduce social and economic injustice that often manifest itself in exclusion from the means of production, corruption, and economic -related violence. Given the historical exclusion of Africans from the means of production, equity strikes right at the core of what is considered by many Africans to be important when dealing with collection, use and storage of data.

#### 3.2.3 Access

During the interviews and the workshop, AfroLeadership noted that many participants emphasised the importance of access as a pillar of data justice. Many considered access to be very important because it not only enhances transparency but also promotes accountability. There was, however, a realisation that access is severely limited in some cases where communities or concerned individuals do not have access or requisite awareness of what they need to have access to when discussing the notion of data justice. As such, communities noted of the link between access and knowledge of the concept of data justice in the first place. Logically, one may not seek to access that whose existence they do not know in the first place. Thus, access as a pillar of data justice should equally demand access to knowledge and education on data justice.

Equally important when discussing access as a pillar of data justice is transparency because transparency is central to knowledge. Where there is no transparency about data practices, there cannot be access and consequently communities cannot know which data systems or practice are prejudicial or harmful to them. Transparency is also critical because it helps individuals make informed decisions. In addition, it will help open the minds of people and educate them on what better ways they can develop themselves and their communities. Moreover, transparency encourages authorities or those involved in data practices to make sure that they do not abuse

process or engage in harmful policies because they will know that the risk of being found out is certain.

#### 3.2.4 Identity

AfroLeadership found out that for many stakeholders, particularly, those coming from marginalised communities, it is hard for most members of communities to interrogate and contest how they are represented in data. The ability to challenge adverse or unwanted representation in data can only happen where there is adequate access, transparency, and if impacted communities receive adequate training in digital literacy with a focus on digital visibility that is community centred. This requires identifying data that impacts the way people are seen and treated. Other communities noted that availability of financial resources remain a major issue since an engagement that seeks to promote correct identification and representation of communities in data will not come cheap.

People living with disability are usually left behind in the design process of systems and even buildings. If some efforts are currently done for buildings, there is a lot to do concerning information systems. During the workshop, a participant reported the case of his community being reified with a neighbouring one. The Cameroonian Government is currently engaged in a digitalization process of important services such as passport production platform. On that platform, some communities like "Oki" are not present. Thus, if a person's place of birth is Oki, he or she may end up having to select a neighbouring community as their place of birth – something that strikes at their very identity. This is a clear case of reification or complete erasure. This situation is not without consequences on the dignity an autonomy of that community. Therefore, more accurate representation in data would be, to a great extent, an appropriate way to restore the equal dignity and autonomy of such communities.

#### 3.2.5 Participation

When interrogating the participation as a pillar of data justice, AfroLeadership found out that community members think that it would be beneficial for members of impacted communities to be involved in data innovation practices and their governance. According to communities who are impacted by data practices, their participation can help to improve the governance system and encourage innovation among impacted communities. These impacted communities also noted that their participation is negatively impacted when those involved in data collection, use and storage adopt top-down approaches. Further, other factors that negatively impact participation include lack of trust, lack of financial resources, limited access to internet and other communications technologies, and the lack of knowledge and required skills to participate. Several suggestions have been made by members of marginalised communities to developers in order to address the issue of community participation. The first is to carry out in-depth investigations at the earlier stage of the development processe, in addition to allowing community members to be key decision makers in development processes. Wherever possible, developers should go into involved communities and get qualified representatives who will represent the communities properly and check the correctness of data.

In discussing community participation AfroLeadership noted that participation is more productive if communities are involved at all levels of data-cycle – i.e., during design, development and deployment of data driven technologies. It is that comprehensive form of participation that can give impacted communities a sense of general belonging, the idea that they are meaningfully involved in decision-making. In addition, this approach makes it easier for problems of a particular community to be identified early and to propose solutions that are inclusive.

Some community members noted during discussions that through the project, they gained a better understanding of the rationale behind meaningful participation and how it improves power-plays between involved parties and how such understanding will be helpful in the future. For example, some gained a better understanding of important terms such as "power-preserving inclusion" and how it functions as a strategy in data justice. Stakeholders have begun to ask critical questions on data practices, questions such as: How will this particular data practice benefit the community? How can community data push forward and impact decision making processes?

#### 3.2.6 Knowledge

As already has been indicated above, interviews and the workshop pointed to the importance of knowledge when dealing with data justice. The integration of the cultural understandings and lived experiences of members of marginalised communities into the knowledge which informs current data practices is critical for most communities. However, it was clear that for most members of marginalised communities, it is difficult for them to meaningfully engage or criticise individuals who have expert knowledge about data innovation practices and their governance. Such experts are usually the developers and policymakers who, by virtue of working in the industry claim superior knowledge. Thus, the idea of who has the knowledge also create some power-imbalances that negatively impact the marginalised communities. The situation is exacerbated by the fact that most of the above-referred knowledge is often written in a language that is not accessible to the impacted communities. It is in this sense that AfroLeadership realised the extreme importance and necessity to customise expert knowledge in a way that is accessible to local communities. Creation of knowledge around data justice must pay attention to local languages, cultural practices, and educational systems. It is only this approach that will tilt power dynamics in favour of impacted communities.

# 3.2.7 Sustainable Development Goals

The level of awareness of community members varies from a community to another one. In some communities, there is limited awareness due to the lack of access to information, where there is a limited understanding of SDGs mean at the international, national and community level. When discussing the issue of SDGs, AfroLeadership realised that some of the terminologies that are often used create an impression that certain communities are uninformed when in fact, most of the community members are already working on SDGs but without necessarily using that terminology.

Unsurprisingly, the most relevant SDGs and/or urgent for the life and wellbeing of marginalised communities are SDG 1 relating to elimination of poverty; SDG 4 relating to access to education and SDG 16 relating to peace, justice, and strong institutions. SDG 16 was particularly emphasised by communities living in areas currently facing armed conflict where communities noted that the lack or biased reporting in areas of armed conflict impact their ability to receive global support. It is also understandable why, in the context of data justice, marginalised communities relate to SDG1 on elimination of poverty. There is no doubt that among other things, data injustice has caused the lack of equal opportunities which directly increases poverty.

# 3.3 Data justice from developers' perspective

#### 3.3.1 Power

During the interviews and workshop, AfroLeadership discovered that most of the developers who participated are either unaware of power dynamics surrounding data or are indifferent about it. It was clear in most cases, however, that several developers collect data in an arbitrary manner – and in that way, almost exercised unchecked power. Some developers also indicated that in their understanding, power operates in data innovation ecosystems at the level of data collection. Thus,

according to the perspectives of this group, data is collected by the big companies and is not made available to developers. In this regard, AfroLeadership is of the view that mapping power relations and imbalances between stakeholders in data innovation ecosystems will be very valuable for developers because it will help to make practices more equitable. Moreover, as developers, they implement systems that must consider the aspects mentioned by the decision-makers. In this sense, developers need to collaborate with policymakers working on data policy where for example, policy makers participate in the development of the tools needed for data collection while developers participate in the making of policy that govern such tools.

#### **3.3.2** Equity

The developers who participated in the study were not familiar with the concept of "equity". All agreed that "equity" is very useful in the development process. However, due to lack of resources and time, most developers acknowledge using available data without questioning its impact. They therefore do not engage in data practices by presenting decisions to collect and use data as acts that have implications for data justice. This sufficiently demonstrates the lack of communication between developers and impacted communities. And yet the Equity pillar also emphasises the possibility for affected communities to review these decisions and influence the choices of data practices.

#### 3.3.3 Access

The developers that were interviewed by AfroLeadership believe that the approach access is an important pillar of data justice as it is relevant to their development work. In the case of developers, access is understood in two ways: first, the ability of developers to have access to a variety of data-sets — an access that ensures the reliability of their inventions. Second, access of stakeholders to inventions or technologies developed is important as it provides the platform for impacted communities to review developed products.

Developers also think that transparency surrounding the development of data systems is important to advancing data justice. From their sense, the quality of developed products can only improve if there is transparency. Nevertheless, depending on the nature of the invention, some developers are concerned that access to their inventions – particularly, in nations where there are no strong intellectual property laws – may result in their ideas being stolen. In this sense, access as a pillar of data justice present itself to developers as a double-edged sword.

#### 3.3.4 Identity

All the developers who were interviewed by AfroLeadership agree that communities impacted by their work may be represented in data in discriminatory ways. They also indicated that it is possible for developers to include the perspectives of those represented in data in order to verify that they are accurately represented in ways that they self-identify. This task can be performed during design and the test phase using a wide range of datasets, including minority data.

AfroLeadership observes that several developers require training on data and/or AI ethics in order to fully engage with the question of identity as a pillar of data justice. Organization of workshops, forums, conferences, and/or production of multimedia contents might be useful to raise the awareness around Identity pillar and some dangers like the risk of erasure and reification.

#### 3.3.5 Participation

According to developers it would be beneficial for members of impacted communities to be involved in data innovation practices and their governance. Developers who participated in this project noted that the current development practices and governance structures limit effective community involvement in data innovation practices due to the limited budget of projects. Habitually, developers use only available data to train their algorithms due to financial limitation

that prevents them to create new and relevant dataset from certain communities, particularly, the marginalised communities who need more financial resources to be able to meaningfully participate.

While making discussions with developers, it became clearer to Afroleadership that the term "power-preserving inclusion" as it relates to the area of data innovation for developers, would perhaps be interpreted as a way of using technology to maintain a status quo, to perpetuate and even accentuate existing inequalities.

#### 3.3.6 Knowledge

Developers believe that it is important for the cultural understandings and lived experiences of members of impacted communities to be integrated into the knowledge which informs current data practices.

It is feasible to ask the developer communities to integrate feedback emanating from impacted communities who scrutinise and challenge professional knowledge about data innovation practices and their governance. One way to integrate such feedback is, before using an algorithm in production, to have it tested by different communities and to integrate the different amendments as much as possible before any public release.

Existing internal and external obstacles for developer communities to value the knowledge emerging from these communities and meaningfully integrate it within the design, development, and deployment of data driven systems, include data unavailability, restricted timelines, and limited budget.

#### 3.3.7 Sustainable goals

Some developers working in AI are aware of SDGs while others are not, even though they make them progress by their works. One of the most relevant SDG is SDG 10 and 16 relating to reduction of inequality and relating to peace, justice and effective institutions respectively. Developers are of the view that they can play a very critical role in the achievement of SDGs.

# 3.4 Data justice from policymakers

During the interviews and workshop that involved policymakers, there are a number of ideas that prominently featured in their responses and they include the following: representation, contribution to the national economy, and highlighting achievements in data justice.

For policymakers, factors that influence data collection and use are the size and the type of data, the availability of the data, the achievement of the objectives defined for their sub-sector and their roadmap.

#### 3.4.1 Power

It was interesting for AfroLeadership to find out from the policymakers who were interviewed or were involved in the workshop discussion that many declared having limited or no awareness of the power dynamics that characterise data collection and use. According to them, beside geopolitical, infrastructural, cultural and political powers, the economic power should also be considered.

Within their policymaking remit, some feel to have the knowledge and pathways they need to question power at its sources and to raise critical awareness of its presence and influence. However, they can be held back in such an action due to financial limitation. Some reported that they can facilitate collective empowerment related to the right to access public data.

# 3.4.2 **Equity**

According to policymakers, awareness of the concept "Equity" could be useful to the extent that it might help them by improving data governance. In fact, data governance implies availability, usability, integrity, and security of data. Being aware of the important of "Equity", policymakers can improve mechanism to make data available and usable. Reflection on the decision-making process behind the choice to collect and use data seems feasible and practical for some of the policymakers.

#### 3.4.3 Access

There was a general agreement among policymakers who participated that access is a very important pillar of data justice. They indicated that accessing data justice is relevant for policymaking because in making policy or rules, policymakers need to know how members of the community, including marginalized communities are impacted by certain data practice. Now, the only way that policymakers may know with certainty how the community is impacted by data practices is if the impacted communities have access to data, how it is collected, used and stored in order to know how their interests are implicated therein. It is along these lines that many policymakers are of the opinion that transparency in data practice is critical if they are to make any meaningful policies on data justice.

#### 3.4.4 Identity

Now that most policymakers indicated that a good policy or regulation is that which caters for all communities and the identities of such communities, many policymakers who participated indicated the importance of identity as part of the pillars of data justice.

AfroLeadership found out that for policymakers to do justice to the concept of identity as a pillar of data justice, it is critical for policymakers to understand the various identities that are implicated in data practices and data justice. For this reason, one of the critical questions that should be considered is: what are the resources, access to information, upskilling, and training, is needed by policymakers in order for them to fully understand how identity, as a pillar of data justice, is implicated in data practices? A related question is what are the resources and knowledge is needed by policymakers to recognise and tackle some of the most harmful categorisation and identity erasure which occur in data practices including the design, development, deployment of data driven technologies and after they have been used?

#### 3.4.5 Participation

policymakers who participated in this study think that it would be beneficial for members of impacted communities to be involved in data innovation practices and their governance. However, some factors might impede impacted communities from participating in data governance such as the lack of means of communication and awareness, and in some places the lack of freedom of speech that can be due to the cultural background or past experiences.

#### 3.4.6 Knowledge

One of the main reasons for the Anglophone crisis in Cameroon was that the region felt marginalised (linguistically and even culturally) and felt that the government had a tendency to reify it with the Francophone part. One of the resolutions taken to alleviate the problem was the setting up of a national commission for the promotion of bilingualism and multiculturalism in Cameroon<sup>5</sup>. The main task was to resolve this uncomfortable situation of linguistic and cultural marginalisation.

<sup>&</sup>lt;sup>5</sup> <u>https://www.ncpbm.cm/fr/</u>

But the expected results were not forthcoming<sup>6</sup>. The "failure" of this commission, about which we hear less and less while the conflict continues in the Anglophone zone, provides an insight on how difficult it would be to integrate into the knowledge which informs current data practices the cultural understandings and lived experiences of members of impacted communities.

The prioritisation of interdisciplinarity is of paramount importance, especially in a context with a large diversity. It can speed the work of policymakers according to the participants while ensuring that policies that are generated will really help to develop useful data-driven systems.

#### 3.4.7 Sustainable Development Goals

A few of the policymakers are aware of the Sustainable Development Goals. Others have heard about them without really involving themselves. Since the government is working towards the development of the country, policymakers would be sympathetic to the SDGs.

The most important SDG is: Industry, Innovation, and Infrastructure has been selected as the most relevant and/or urgent one. But this SDG may be impeded by current data injustices.

# 4 General Discussion

#### 4.1 Data justice and rural sub-Saharan Africa

In rural Cameroon and Sub-Saharan Africa in general, communities would define data justice as first the access to means to produce and to control data. We cannot speak about data justice when there is almost no data, in fact digital data. This definition is mainly for unconnected communities in rural regions.

Now given the diversity in Africa, the concept of data justice can be significantly different from one community to another one, depending on the ICT penetration rate, the awareness of the local population on their rights over their data, and the cultural particularities of each community. Because what is considered as an injustice in one community may not be seen as such in another. Another important point to consider is the stability of the area. They way data is processed in war zones is not the same with peace areas.

#### 4.2 Challenges from Data justice

The main challenge of rural communities compared to other parts of the world is to get means to first produce, then to access and to possibly control their data. There is a need for basic infrastructure such as electricity and connectivity. This need is even extended to other parts that are supposed to be urban regions in certain sub-Saharan countries such as Cameroon, Guinea and Burkina with whom we are working to connect the unconnected.

Some efforts are underway in Cameroon, through the help of the German cooperation, to connect the unconnected so they can produce data and address the visibility issue. But it is a double-edged sword. Not being connected is a danger but being connected also exposes to other dangers such as social engineering including phishing, smishing or vishing. So there is a need of education, at least basic principles in digital literacy.

#### 4.3 Al turning point in Africa and the need to pay attention

Africa is at a turning point on the issue of AI. With all the hype we observe around AI, we need to pay attention in order to avoid the dangers Western countries have experienced regarding

<sup>&</sup>lt;sup>6</sup> https://www.revues.scienceafrique.org/mashamba/texte/piebop2020/

Al. In fact, a lot of people are speaking about Al and focus and the technological aspect of Al. Let us consider the story of "the goat that eats paper" that I am used to narrate to help people better understand the importance of data justice.

"The scene took place in a correction room of a national exam in Cameroon. A corrector read a student's paper and laughed out loud in the room, saying that the student had written that goats eat paper. And the other colleagues laughed, but there was one colleague who was irritated, saying that indeed the goat eats paper in his village. There was a sudden silence in the room. And everyone looked at each other astonished. "

This is only one case of a phenomenon that is normal in one part of the country and abnormal in another part. But the question to ask is this: If it was an Al-based system that did the grading, and it did not take into account this reality that the goat eats paper, can you imagine the injustice that students in one part of the same country would suffer?

# 5 Recommendations

# 5.1 Ease the production and the access to data

We cannot speak about data justice without data. So, the first and the most important recommendation is to setup favourable environment to ease the production of data. That means providing basic infrastructure and regulatory framework to foster the process of connecting the unconnected.

# 5.2 Educate, Educate, Educate

Educate communities as they are the main data producers. They should understand the necessity to produce data and the importance to fight for their representativity and the legal use of their data.

Educate researchers and developers as they are the main technology providers. They should be aware about ethics in AI and the impact of the solutions they develop. A focus should be done on the quality of data and the involvement of impacted communities.

Educate policymakers and governments as they are the ones who regulate the use of data and define strategies to collect data.

#### 5.3 Design national and local strategies

The government should design national and local strategies to produce useful data and to get sovereignty over those data. Regarding that point sub-Saharan Africa is not on the right track since almost all infrastructure is owned by foreign companies. If nothing is done, data colonialism will have greater effects than colonialism in sub-Saharan Africa.

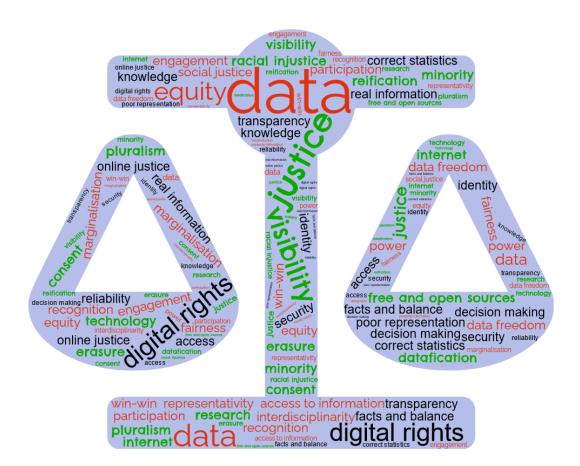
# 6 Conclusion and Perspectives

The topic is relatively new to all the three types of audience. It has been a real challenge to all the workshop participants and interviewees to understand basic points of data justice pillars and to contribute. This report just showed the tip of the iceberg because data justice is a more difficult issue to handle especially in sub-Saharan Africa with a large number of communities and a rich diversity. How to be inclusive in such a case? New approaches need to be investigated and discussions need to be extended. This was even a wish from the participants, given the extend of the issues in Cameroonian context and sub-Saharan Africa in general. For the sake of better

organisation, and given the local challenges for data justice, it would be interesting to have specialised themes. The data justice series for sub-Saharan African context may include:

- Data justice for children;
- Data justice for women;
- Data justice for unconnected;
- Data justice for developers and researchers;
- Data justice for policymakers and governments.

#### Words that came to mind of participants during the workshop.





Family photo of the workshop