Why do we need gender-sensitive data and statistics in transportation?

¿Por qué necesitamos datos y estadísticas con perspectiva de género en el transporte?

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Abstract

The study of mobility with a gender perspective contributes to the creation of public policies in the field of transportation that guarantee the safety of all people, are sensitive to social problems and do not reproduce inequalities. This paper provides keys to answering the question: what is gender-sensitive data?   Data-driven solutions and analyses have real implications for people's daily lives. So if gender biases are reproduced in data, cisgender women and LGBTTINB+ people will continue to be disadvantaged relative to cisgender men.

Resumen

El estudio de la movilidad con perspectiva de género contribuye a crear políticas públicas en el ámbito del transporte que garanticen la seguridad de todas las personas, tengan sensibilidad hacia las problemáticas sociales y no reproduzcan desigualdades. En este trabajo se aportan claves para responder a la siguiente pregunta: ¿qué son los datos con perspectiva de género? Las soluciones y los análisis basados en datos tienen implicancias reales en la vida diaria de las personas. De modo que, si se reproducen sesgos de género en ellos, las mujeres cisgénero y personas LGBTTINB+ continuarán en situación de desventaja en relación con los varones cisgénero.

GENDER

Nowadays, large amounts of data are produced, and more and more organizations and governments are using them to analyze historical data and make strategic decisions as well as to project their growth and development. But little is said about data with a gender perspective. Thus, the question arises: "What is data with a gender perspective?"

To respond to this query, we could remark that data are conceptually developed as tools using a specific technical methodology, but it does not actually have any intrinsic gender perspective. So, when we discuss data from a gender perspective, we are referring to the procedures used to plan, gather, analyze, and communicate data as well as the individuals who carry out these procedures. The mainstreaming of the gender perspective is necessary at this point. When discussing statistics from a gender perspective, it is important to consider whether data is accurate and whether factors like gender, identity, and biological sex have been taken into account.

Data-driven analytics and solutions have real implications in our daily lives. For instance, algorithms that can detect human faces are created today using data, which can aid in making decisions about the economy (e.g., whether a certain person should receive a loan or not, depending on certain variables). So, cisgender women and LGBTQ+[1] people will continue to be at a disadvantage, compared to cisgender men, if gender biases are perpetuated throughout.

1. This acronym correspond to Lesbians, Gays, Bisexual, Trans, Transvestite, Intersex, Non-Binaries, and more.

The information we have and the things we do with it matter a lot when we focus on the public sector. And for this reason, it is crucial to teach government employees and give them the resources they need to develop data systems that are considerate of social issues and do not reinforce disparities.

This is why it is crucial to address the mainstreaming of the gender perspective in public policies. To implement a gender-sensitive strategy that takes into account gender as an exclusionary factor in all state public policies, not just those that pertain to women and those who identify as LGBTQ+ (ECOSOC, 1997).[2]

Gender perspective can be used in all contexts, even in the less obvious ones, like whick sidewalks to clear after a snowstorm. Caroline Criado-Perez, in her book The Invisible Woman[3], relates some cases where the gender perspective was not taken into consideration in governmental decisions, product design, or space definitions. According to the author, Sweden launched an audit of all its existing policies in 2011, to see if they took the gender viewpoint into consideration. "At least the audit isn't going to meddle with the work of removing snow from roads and sidewalks," said a little drained government representative, supposing this activity had nothing to do with any gender-related issues.

Data demonstrate that women generally use public transportation or walk more than men, even when the available worldwide transportation data are still insufficient. Women make up about 63 % of public transportation users in the USA compared to 2/3 of users in France. Men are typically the ones who drive cars because they are the "heads of household".

This instance highlights the significance of travelers' motivations in addition to their modes of transportation. Males typically follow a set travel schedule, travelling daily to work and returning home almost always through the same route. But women provide 75 % of the world's unpaid domestic duties, hence their travel habits are typically more complex. Dropping off children at schools or daycares, heading to work, driving elderly patients under their care to doctor appointments, and then going grocery shopping at a supermarket or convenience store are typical travel patterns for women. As multiple trips are chained together, this pattern is known as trip chaining. Women all over the world use this travel scheme.

In Europe, women who have children under the age of five are 54 % more likely than men to make these linked journeys (vs. 19 %). As women must be able to move safely, walkways and roadways are given high priority when clearing snow, transforming what started out as a lighthearted remark by a government employee.

According to Prachi Shukla, in a review she posted on the *London School of Economics and Political Science* blog: Catherine D'Ignazio and Lauren Klein (2020)[4] in their book Data Feminism4 apply an intersectional feminist lens to examine the unequal power structures governing the realm of data and highlight some attempts that are being made to rectify them. The authors demonstrate with numerous examples how the data we gather is indicative of our unequal society. They also provide numerous examples of activists and non-governmental organizations fighting against this and highlight the negative effects of unfair practices.

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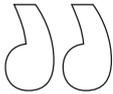
2. Source: Economic and Social Council, United Nations (1997). Agreed conclusions 1997/2 on "Mainstreaming gender perspective into all policies and programmes in the United Nations system." Geneva: ECOSOC.
3. Source: https://carolinecriadoperez.com/book/invisible-women/
4. Source: https://data-feminism.mitpress.mit.edu/

They present a paradigmatic case in particular that took place in the United States:

> In 1971, the Detroit Geographic Expedition and Institute (DGEI) released a provocative map, *Where Commuters Run Over Black Children on the Pointes-Downtown Track*. The map (figure 1) uses sharp black dots to illustrate the places in the community where the children were killed. On one single street corner, there were six Black children killed by white drivers over the course of six months. On the map, the dots blot out that entire block.
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> The people who lived along the deadly route had long recognized the magnitude of the problem, as well as its profound impact on the lives of their friends and neighbors. But gathering data in support of this truth turned out to be a major challenge. No one was keeping detailed records of these deaths, nor was anyone making even more basic information about what had happened publicly available. "We couldn't get that information," explains Gwendolyn Warren, the Detroit-based organizer who headed the unlikely collaboration: an alliance between Black young adults from the surrounding neighborhoods and a group led by white male academic geographers from nearby universities.[5]
>
> Through this collaboration, the young people learned cutting-edge mapping techniques, and guided by Warren, leveraged their on-site knowledge to produce a series of comprehensive reports; covering topics such as social and economic inequalities among neighborhood children. They also made proposals for new school district boundaries that would be more racially equitable. (Data Feminism. MIT Press, 2020)

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Both in this and the Sweden case, it is obvious that we need to pay attention to data since, behind it, we can get a glimpse of our society's inequalities and power conflicts. The duty of working with population data, or data that impacts individuals in some way, is a huge responsibility. And part of that responsibility is to gather data in a sensitive manner, conduct studies that take into consideration the various forms of oppression that exist in our society, and can effectively communicate the findings.

When it comes to data gathering, it's crucial to understand that more data isn't necessarily the solution. At DataGénero's Observatory of Data with Gender Perspective, we always insist on asking what is the data we are collecting going to be used for. Reflecting on the "what for" incorporates the ethical dimension to the analysis. We often listen to programmer groups excited by the level of detail of the information obtained —or crave for higher levels of capillarity in the information— so, here we want to make a call for attention. First, regarding the current regulations, and the duty of protecting personal data provided by Law 253267[6]; and second, on the ethical considerations. People may be at risk when data is used to "individualize" them, especially when it comes to minoritized groups. Although it is a nice illusion to think we will solve all the problems with highly detailed data, we can never be certain who will ultimately have access to this data. It's clear that this wasn't our initial objective, but such information could be used to track, harass, or even harm someone.

As a result, we offer the following suggestions to help the gender perspective become more widely accepted in the statistics world:

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5. *About the Work in Detroit, Gwendolyn Warren, Field Notes No. 3: The Geography of Children, Part II (East Lansing, MI: Detroit Geographical Expedition and Institute, 1971), 12. The report also includes data that Warren and his team collected, and quantified, on factors as specific as the amount of broken glass found in white children's playgrounds as compared to that found in neighborhoods of Black children, as well as rehearsals of other members of the DGEI.*
6. *Source: http://servicios.infoleg.gob.ar/infolegInternet/anexos/60000-64999/64790/norma.htm.*

Figure 1. Image from a report documenting racial inequalities in Detroit's childhoods. The map was created by and administrative director of the Detroit Geographic Expedition and Institute (DGEI), Gwendolyn Warren, in a collaboration between black youth in Detroit and white academic geographers.
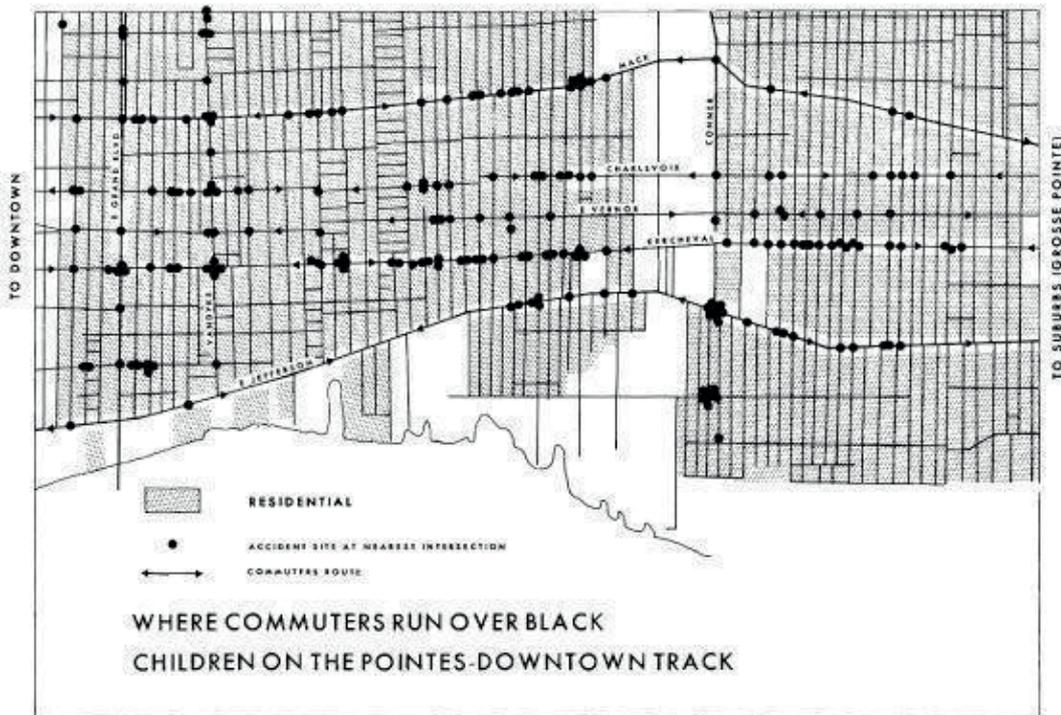
Source: Gwendolyn Warren, "About the Work in Detroit", Field Notes No. 3: The Geography of Children, Part II (East Lansing, MI: Detroit Geographical Expedition and Institute, 1971). Credit: Courtesy of Gwendolyn Warren and the Detroit Geographical Expedition and Institute.

1. Mainstream gender perspective at all stages

We refer to integrating the gender perspective across all data-related activities. From the design of the data collection process to the analysis, visualization, and presentation of the results. This process must be gender-sensitive and mindful of racial, class, and ableist prejudices, and it should not restrict inquiries into whether this perspective is present solely under certain circumstances, such as algorithm training. The method must be built around the gender perspective.

2. Permanent training in gender and social problems

Unavoidably, work groups with ongoing training in gender issues are much more aware of the injustices and marginalization experienced by cisgender women and LGBTQ+ people, and they are typically able to produce tools, analysis, and policies that are more inclusive and devoted to creating a better world.

3. Interdisciplinary teams

Multidisciplinary teams are the best for handling data that has an impact on society since they will thoroughly handle the issues at hand while taking into account a wider range of issues.

4. Contextualize the data

The context of the data is necessary, thus it must include metadata about the sources, definitions, and other specific factors that help to understand who, what, when, and why the data we are dealing with was created.

"The original data's production process and formula are described in the metadata, which also warns us about important factors to be taken into account when analyzing data."
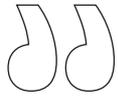
"Metadata is context information: as to where it comes from, who collected it, with what tools, and for what reasons," according to DataGénero; "why is it crucial to acquire this knowledge? because without the context of the data, we are missing important information."[7]

The original data's production process and formula are described in the metadata, which also warns us about important factors to be taken into account when analyzing the data.

5. Responsibility, accountability and ethical considerations

In addition to other ethical considerations when working with data, it is crucial to consider the funding and finance used to produce such data. For whom and for what purposes are these surveys being funded? This information may provide us with a hint as to the motivations behind the generation or collecting of such data and may alert us to potential biases or anticipated outcomes that may skew the data's interpretation.

While they are necessary to ensure adherence to individuals' rights and the availability of high-quality data, privacy of information, protection of databases and sources, as well as their anonymization, must always take precedence.

7. Source: https://datagenero.medium.com/el-contexto-de-nuestros-datos-una-herramienta-Illuminator-3CBD5FBF6766