

The **Human  
Rights, Big Data  
and Technology  
Project**



Sex, gender, binaries and categories:  
frictions in data about humans

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Alan Turing Institute, 17 June 2022

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Human  
Rights  
Centre



University of Essex

**HRBDT**



# Introduction

- PhD candidate at the University of Essex Human Rights Centre
- Part of the [Human Rights, Big Data and Technology Project](#) funded by the UK's ESRC
- Former enrichment student at the Alan Turing Institute in London (Jan-Sep 2020)
- Open Life Science Fellow (Sep-Dec 2020)
- Former Researcher/advisor on Sexual Orientation and Gender Identity at Amnesty International (2013-19)
- Background in gender studies and mathematics

# Structured information

Data analysis requires data: “the raw material produced by **abstracting** the world into categories, measures and other representational forms”

What is recorded, and how, is **a choice.**



# What is recorded?

NAME AND SURNAME	REL to
<p>of every Person, whether Member of Family, Visitor, Boarder or Servant, who</p> <p>(1) passed the night of Sunday, April 2nd, 1911, in this dwelling and was alive at midnight, or</p> <p>(2) arrived in this dwelling on the morning of Monday, April 3rd, not having been enumerated elsewhere.</p> <p>No one else must be included.</p> <p>(For order of entering names see Examples on back of Schedule.)</p>	<p>Sta</p> <p>" Wi</p> <p>" Du</p> <p>oths</p> <p>" B</p> <p>"</p>
1	

		of Persons aged t
oman the	Personal Occupation.	Ind whic
e to e. orn s" in	<p>The reply should show the precise branch of Profession, Trade, Manufacture, &amp;c.</p> <p>If engaged in any Trade or Manufacture, the particular kind of work done, and the Article made or Material worked or dealt in should be clearly indicated.</p> <p>(See Instructions 1 to 8 and Examples on back of Schedule.)</p>	<p>This q be a busin empl show need</p>
children who have Died.		<p>No and vants</p> <p>If emp (Gov state</p> <p>(See I ples</p>
9.	10.	
	<i>P. A. M. /</i>	<i>60/1</i>

# What is recorded?

BIRTHPLACE of every Person.		N of F
(1) If born in the United Kingdom, write the name of the County, and Town, or Parish.	(1)	St
(2) If born in any other part of the British Empire, write the name of the Dependency, Colony, etc., and of the Province or State.	(2)	St
(3) If born in a Foreign Country, write the name of the Country.	(3)	Or
(4) If born at sea, write "At Sea."		
NOTE.—In the case of persons born elsewhere than in England or Wales, state whether "Resident" or "Visitor" in this Country.		

LANGUAGE SPOKEN.	
(1) If able to speak English only, write " <i>English</i> ."	
(2) If able to speak Welsh only, write " <i>Welsh</i> ."	
(3) If able to speak English and Welsh, write " <i>Both</i> ."	
No entry to be made in this column for children under three years of age.	
17.	

# Feeling the friction

Who doesn't fit into the categories?

"I think you can actually do interesting work with these tools, but I want to hear them making noise, I want to **feel the friction**, I do not want to increase the transparency"  
- Donna Haraway

Haraway, Donna Jeanne. 'Cyborgs, Coyotes and Dogs: A Kinship of Feminist Figurations and There Are Always More Things Going On Than You Thought! Methodologies as Thinking Technologies'. In *The Haraway Reader*. New York: Routledge, 2004.

# Friction in the 1911 census

Not designed to include:

- Cantonese speakers
- Female-headed households
- Gay/lesbian couples
- Unmarried women with children
- People who don't know how old they are
- Stateless people
- People with disabilities (outside of the four listed)

CENSUS OF ENGLAND AND WALES, 1911.

Number of Schedule (To be filled up by the Enumerator after the census)

The contents of the Schedule will be treated as confidential. Strict care will be taken that no information is disclosed with regard to individual persons. The returns are not to be used for proof of age, as in connection with Old Age Pensions, or for any other purpose.

NAME AND SURNAME	RELATIONSHIP to Head of Family.	AGE (last Birthday) and SEX.	PARTICULARS as to MARRIAGE.	PROFESSION or OCCUPATION of Persons aged ten years and upwards.		BIRTHPLACE of every Person.	NATIONALITY of every Person born in a Foreign Country.	INFIRMITY.	LANGUAGE SPOKEN.
				Personal Occupation.	Industry or Service with which worker is connected.				
1. <i>Ernest...</i>			<i>None</i>	<i>Sail Maker</i>	<i>686</i>	<i>Sail Room Wicket</i>	<i>Holyhead, Anglesea</i>		<i>Both</i>
2. <i>Mary...</i>							<i>Wylly, Flintshire</i>		<i>Both</i>
3. <i>William John Evans</i>	<i>Boarder</i>	<i>35</i>	<i>Single</i>	<i>Ticket Collector</i>	<i>511</i>	<i>Railway Company</i>	<i>Carmarthen, Carmarthen</i>		<i>Both</i>
4. <i>William...</i>							<i>Wales, Monmouth</i>		<i>Both</i>
5. <i>Richard...</i>	<i>Boarder</i>	<i>33</i>	<i>Married</i>				<i>Wales, Monmouth</i>		<i>English</i>
6. <i>Mary Elizabeth Richard</i>	<i>Boarder</i>	<i>30</i>	<i>30</i>	<i>Married</i>			<i>St. Auston, Cornwall</i>		<i>English</i>
7. <i>...</i>									
8. <i>...</i>									
9. <i>...</i>									



# Data on sex

Collected in the UK Census since 1801

Two possible answers: 'Male' or 'Female'

**2** What is your sex?

Male

Female

2011

1911

AGE (last Birthday) and SEX.	
For Infants under one year state the age in months as "under one month," "one month," etc.	
Ages of Males.	Ages of Females.
2.	4.
48	9
	45 9/10
25	2
4 25	5
33	m
30	30 h

# ‘Sex’ and ‘gender’

Often conflated

May refer to:

- Legal markers on documents
- Physiological characteristics (at birth, or later)
- Expression, presentation, or behaviour
- Gender identity

Rarely consistently defined in research or law

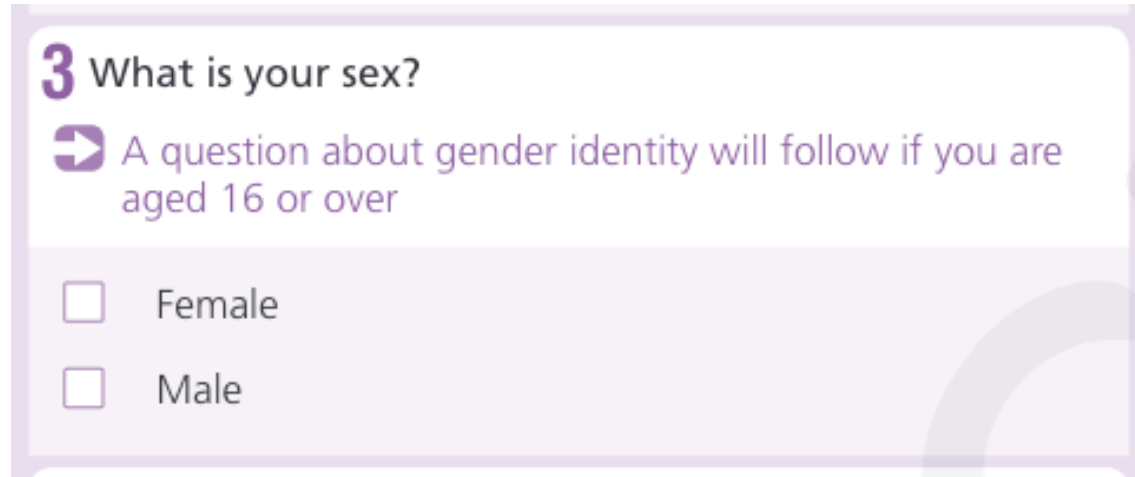
Anna Lindqvist, Marie Gustafsson Sendén and Emma A Renström, ‘What Is Gender, Anyway: A Review of the Options for Operationalising Gender’ (2020) 0 *Psychology & Sexuality* 1 <<https://doi.org/10.1080/19419899.2020.1729844>> accessed 24 May 2021.

Sharon Cowan and others, ‘Sex and Gender Equality Law and Policy: A Response to Murray, Hunter Blackburn and Mackenzie’ (2020) 30 *Scottish Affairs* 74 <<https://eupublishing.com/doi/full/10.3366/scot.2020.0347>> accessed 25 February 2021.

# Data on sex

Still asked in 2021

‘Target concept’ is ‘sex as recorded on legal/official documents’



3 What is your sex?

➔ A question about gender identity will follow if you are aged 16 or over

Female

Male

Census 2021: Final guidance for the question “What is your sex?”—Office for National Statistics. (n.d.). Retrieved 16 June 2022, from <https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/genderidentity/census2021finalguidanceforthequestionwhatyoursex>



# Rigid categories

Sex is often assumed to be:

- The same as gender
- Fixed
- Binary
- Linked to physiological features
- Determinable by a third party

What happens when sex and/or gender is a category in:

- Fraud detection algorithms?
- Healthcare records?

# Rigid categories

UK only issues passports with 'F' or 'M' markers

Other countries also issue 'X' markers (including Malta, Denmark, Canada, Nepal, Australia, New Zealand, Pakistan and India)

## Gender-neutral passports: Campaigner Christie Elan-Cane loses Supreme Court case

By Joseph Lee  
BBC News

15 December 2021



**A campaigner has lost a Supreme Court case challenging the government's refusal to issue gender-neutral passports.**

Christie Elan-Cane said the application process breaches human rights laws by not allowing an "X" option.

But **the court said** applicants' gender was "a biographical detail which can be used to confirm their identity".

Christie Elan-Cane said the case will now go to the European Court of Human Rights.

# Choice of variables

MIMI  
ONUOHA

recent work

news

about

writing

A Quiet Violence

On Classification

The Point of Collection

Us, Aggregated

Missing Data

"What is Missing Is Still  
There"

The Library of Missing  
Datasets

The Library of Missing  
Datasets v2.0

Zines, Prints, Events

*The Library of Missing Datasets 2.0* (2018)

Installation piece

The second installment in *The Library of Missing Datasets* series focuses on blackness. Black folks are both over-collected and under-represented in American datasets, featuring strongly as objects of collection but rarely as subjects with agency over collection, ownership, and power. Version 2.0 of *The Library of Missing Datasets* speaks to this reality.

Larger project here.



Onuoha, Mimi. *The Library of Missing Datasets, v 2.0*. 2018. <http://mimionuoha.com/the-library-of-missing-datasets-v-20>.

# “Other”

Native Americans in the US may have their race recorded as ‘other’ – including in COVID-19 case data

Where they are recorded as Native explicitly, they are disproportionately likely to be affected

- Arizona: 6% of population but 16% of deaths
- New Mexico: <10% of population but 1/3 of cases



# Missing data

HANDBOOK FOR REGISTRATION  
Part 2: How To – Registration Interview

Chapter 17  
Interview Persons of Concern

If the exact date of birth is not known, then provide the closest estimate possible, and always use 01 for the “day” field.

***Example:***

***If the refugee was born in March 1961, then record: 01-Mar-1961***

If the month of birth is not known, but only the year, then always use 01 for the “day” and Jan for the month.

***Example:***

***If it can only be confirmed that the refugee was born in 1961, type:01-Jan-1961***

# What's (not) in the data frame

**Impossible answers** – Speakers of other languages in 1911 census

**Too-large categories** - Binary sex in 2011 census

**Hidden in 'other'** - Native American COVID-19 deaths

**Missing data** - Refugee birthdays

...what else could go wrong?

# Feminist research

- Challenge the concept of the 'objective' observer
- Centre minoritized and marginalized people (hooks)
- Recognise the ways in which multiple axes of oppression intersect (Crenshaw)
- Collaboration and coalition building (D'Ignazio & Klein)
- Transformative approach to law, human rights, justice and order (Charlesworth)

hooks, bell. (1984). *Feminist Theory from margin to center*. South End Press.

Crenshaw, K. (1989). *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics*. University of Chicago Legal Forum. <https://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8>

D'Ignazio, C., & Klein, L. F. (2020). *Data Feminism*. The MIT Press. <https://mitpress.mit.edu/books/data-feminism>

Charlesworth, H., & Chinkin, C. (2000). *The boundaries of international law: A feminist analysis*. Manchester University Press.

# Queer research

- Interrogate – and resist - the “normal”
- Make space for the messiness of real life (Brim & Ghaziani)
- Unpack categories (Haber)
- “Feel the friction” (Haraway)
- Challenge the binary of ‘big’ and ‘small’ data (Giesecking)
- Space for experimentation and play

Brim, M., & Ghaziani, A. (2016). Introduction: Queer Methods. *Women’s Studies Quarterly*, 44(3/4), 14–27. JSTOR.

<https://www.jstor.org/stable/44474060>

Haber, B. (2016). The Queer Ontology of Digital Method. *Women’s Studies Quarterly*, 44(3/4), 150–169. JSTOR. <https://www.jstor.org/stable/44474067>

Haraway, D. J. (2004). Cyborgs, Coyotes and Dogs: A Kinship of Feminist Figurations and There Are Always More Things Going On Than You Thought! *Methodologies as Thinking Technologies*. In *The Haraway reader*. Routledge.

Giesecking, J. J. (2017). Size Matters to Lesbians Too: Queer Feminist Interventions into the Scale of Big Data [pre-print]. *Professional Geographer*, 70(1), 150–156. <https://doi.org/10.1080/00330124.2017.1326084>.

# Futural human rights

- Protest scholar: recognize that law can be co-opted and bureaucratized (Dembour)
- Human rights as a constant unfinished project (McNeilly)
- Co-liberation (D'Ignazio and Klein)
- Shared liberatory ideology: participatory theory and action (hooks)

Dembour, M.-B. (2010). What Are Human Rights? Four Schools of Thought. *Human Rights Quarterly*, 32(1), 1–20. JSTOR.

<https://www.jstor.org/stable/40390000>

McNeilly, K. (2016). After the Critique of Rights: For a Radical Democratic Theory and Practice of Human Rights. *Law and Critique*, 27(3), 269.

<https://doi.org/10.1007/s10978-016-9189-9>

D'Ignazio, C., & Klein, L. F. (2020). *Data Feminism*. The MIT Press. <https://mitpress.mit.edu/books/data-feminism>

hooks, bell. (2000). *Feminism is for everybody: Passionate politics*. Routledge.

# Article 5(a) of CEDAW

“States Parties shall take all appropriate measures:

To modify the social and cultural patterns of conduct of men and women, with a view to achieving the elimination of prejudices and customary and all other practices which are based on the idea of the inferiority or the superiority of either of the sexes or on **stereotyped roles** for men and women;”

# Are categories stereotypes?

The questions that are asked

- Variables that are included, or not

And the possible answers

- Limited options
- Recorded by a third party
- Missing data

**3** What is your sex?

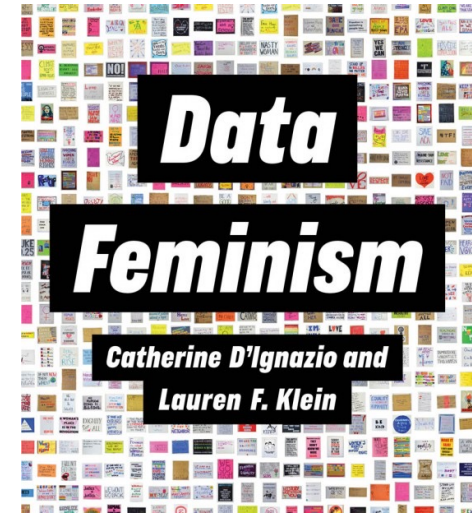
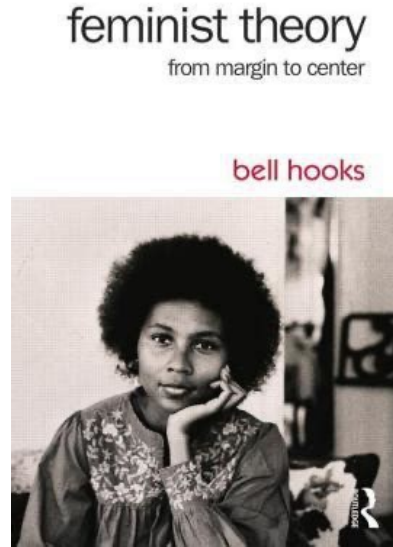
➔ A question about gender identity will follow if you are aged 16 or over

Female

Male

# A human rights approach to data

- Feminist collaboration both in theory and in practice
- Resist the 'normal,' make space for play
- Building a co-liberated future that we want to live in







# The Human Rights, Big Data and Technology Project

Advancing Human Rights in the Era of Big Data

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