

Data Week Online 2020

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Data Science, Covid-19 and social change

Professor Kate Robson Brown

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Fellow of the Alan Turing Institute

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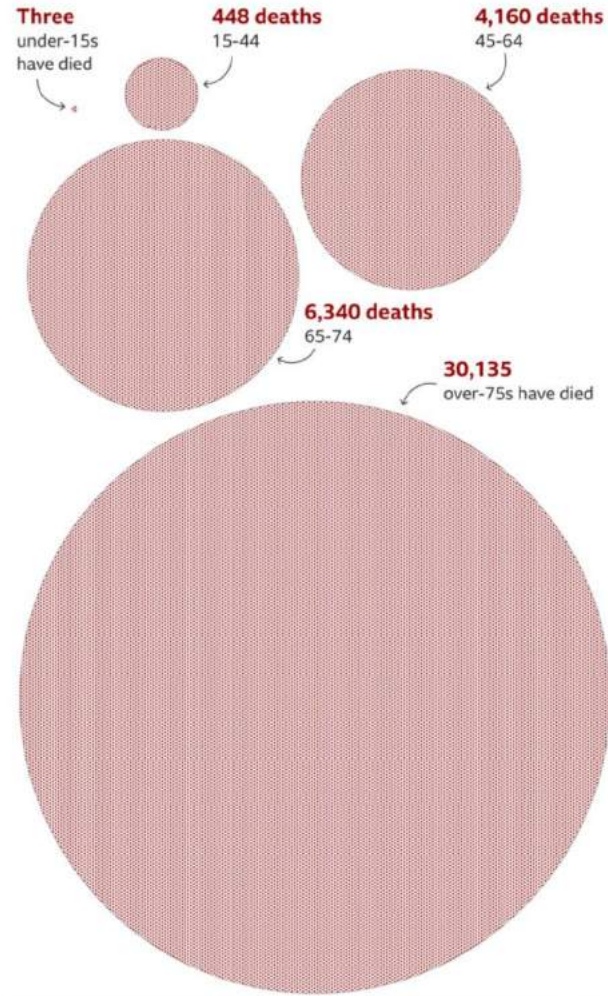
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imprimer avec les taux de décès cumulés par million d'habitants, plus bas dans cette page.



Deaths from coronavirus vary hugely by age

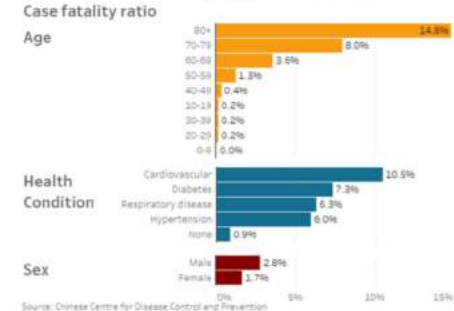
Covid-19 deaths registered by 8 May



Source: ONS, NISRA, NRS

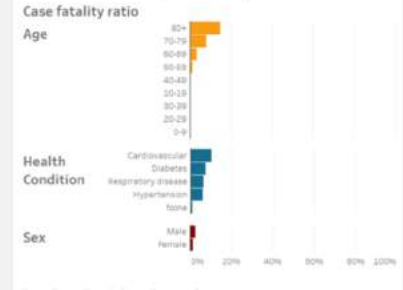
In the UK, three children under 15 have died with coronavirus

Death rate varies by age, health and sex



NOTE: this is a redesign of a BBC graphic by Andy Cotgreave, exploring axis lengths. The redesign is in response to a tweet from Alice Casey (@icasad)

What percent of people who contract coronavirus die (estimated)?

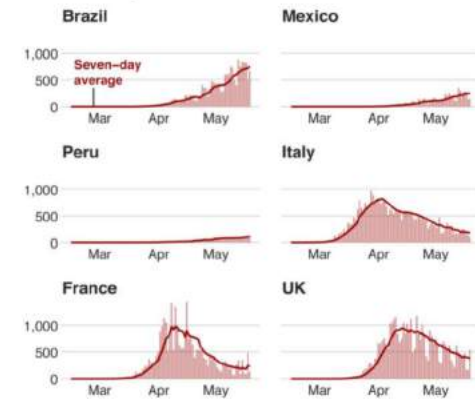


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Covid-19: How Latin American and European countries compare

Number of daily coronavirus deaths in selected countries



Notes: UK data includes deaths outside hospitals. From early April, France data includes deaths from care homes.

Source: ECDC, data up to 19 May

BBC

Home Programs Conference Events Action

Data for Black Lives Matter

Data as protest. Data as accountability. Data as

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<http://d4bl.org/>

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Princeton University Library / LibGuides / African-American Studies Portal / Black Lives Matter: Policing and Incarceration

Black Lives Matter: Policing and Incarceration

A guide to resources about the Black Lives Matter movement

- Home
- Primary Documents
- Statistics and Data
- In Depth Reading
- Report Bias or Harassment

Statistics and Data

- Bureau of Justice Statistics
- Excessive or reasonable force by police? Research on law enforcement and racial conflict
Many links to raw data and how to think about using statistics in reporting
- Mapping Police Violence
- List of Americans killed by police officers
- Center for Policing Equity
See "Research" tab for reports on police interactions with civilians, broken down by race
- National Criminal Justice Reference Service
Federally funded resource offering justice and substance abuse information to



#BlackLivesMatter

Widgets

Number of People Involved
blm_data__sheet1_csv

35.0k

People Involved by Location
blm_data__sheet1_csv

399,021 (Sum)

loc	num_appr
Los Angeles, CA	55,800 (14.0%)
London, England	32,600 (8.2%)
Minneapolis, MN	13,700 (3.4%)
New York, NY	13,600 (3.4%)
Philadelphia, PA	12,550 (3.1%)
Chicago, IL	10,870 (2.7%)
Bristol, England	10,000 (2.5%)
Brussels, Belgium	10,000 (2.5%)
Honolulu, HI	9,450 (2.4%)

Search Location

Number of People Involved

1.8k 3.5k 5.3k 7.1k 8.9k 10.6k 12.4k 14.2k 15.9k 17.7k 19.5k 21.3k 23.0k 24.8k 26.6k 28.4k 30.1k 31.9k



<https://libguides.princeton.edu/c.php?g=598338&p=4142165>

<https://www.aisp.upenn.edu/equity-toolkit/>

Data for social change – persuading monarchs and ministers

The ‘Polar Area’ or “Rose’ Chart

Florence Nightingale and William Farr, 1858

Crimean War army mortality rates

“..to affect thro’ the Eyes what we fail to convey to the public through their word-proof ears”

The Rose Chart is a variant of the pie chart, where each slice shows deaths for one month of the war, growing larger if deaths increased, colour coded according to cause of death.

Presented to Queen Victoria and Parliament, after which a sanitary commission was set up to improve conditions.

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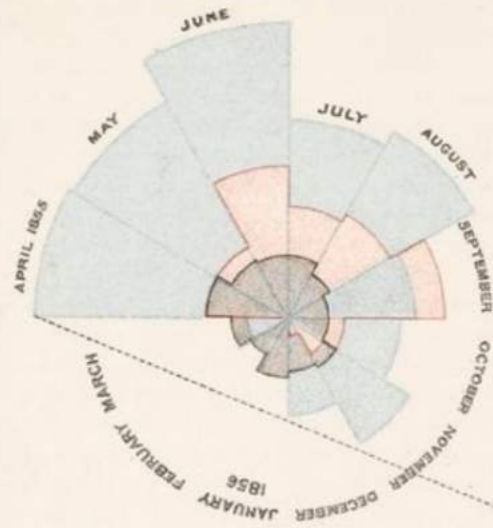


Wellcome Collection

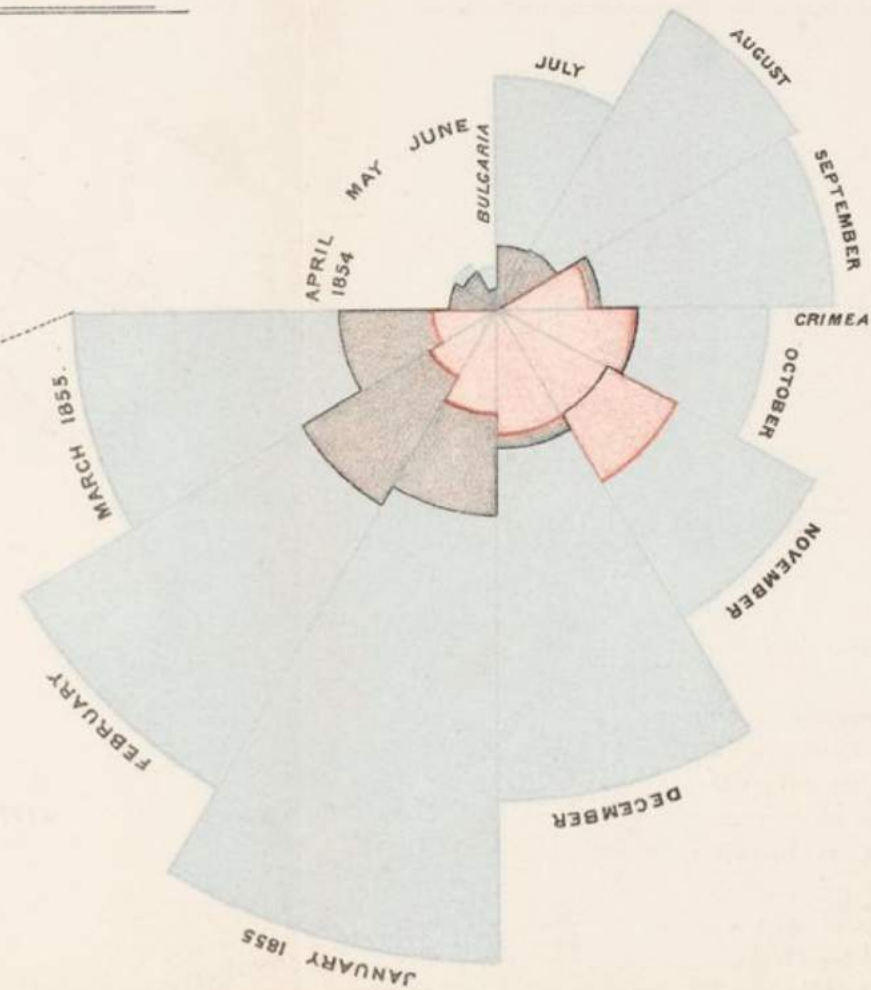
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DIAGRAM OF THE CAUSES OF MORTALITY IN THE ARMY IN THE EAST.

2.
APRIL 1855 to MARCH 1856.



1.
APRIL 1854 to MARCH 1855.



The Areas of the blue, red, & black wedges are each measured from the centre as the common vertex.
The blue wedges measured from the centre of the circle represent area for area the deaths from Preventable or Mitigable Zymotic diseases, the red wedges measured from the centre the deaths from wounds, & the black wedges measured from the centre the deaths from all other causes.
The black line across the red triangle in Nov^r 1854 marks the boundary of the deaths from all other causes during the month.
In October 1854, & April 1855, the black area coincides with the red, in January & February 1855, the blue coincides with the black.
The entire areas may be compared by following the blue, the red & the black lines enclosing them.

Harrison & Sons, St. Martin's Lane.

Florence Nightingale's "rose diagrams" showed deaths from disease (blue), war wounds (red) and other causes (black). (Wellcome Library, London)

Data for social change –persuading the public

Prof William E B Du Bois, 1900

The first African American to be awarded a doctorate at the Harvard University, educated also at Fisk University, and Professor of history, sociology and economics at Atlanta University, and a founder of the NAACP in 1909.

Organised *The Exhibit of American Negroes* at the Paris Exposition Universelle, 1900.

363 photographs, and hand made charts, maps and graphs aiming to commemorate and illustrate the changing lives of African Americans since emancipation and challenge racist stereotypes.

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1904, US Library of Congress

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Close up on Atlanta University's "City and Rural Population, 1890" data visualization (Public Domain)

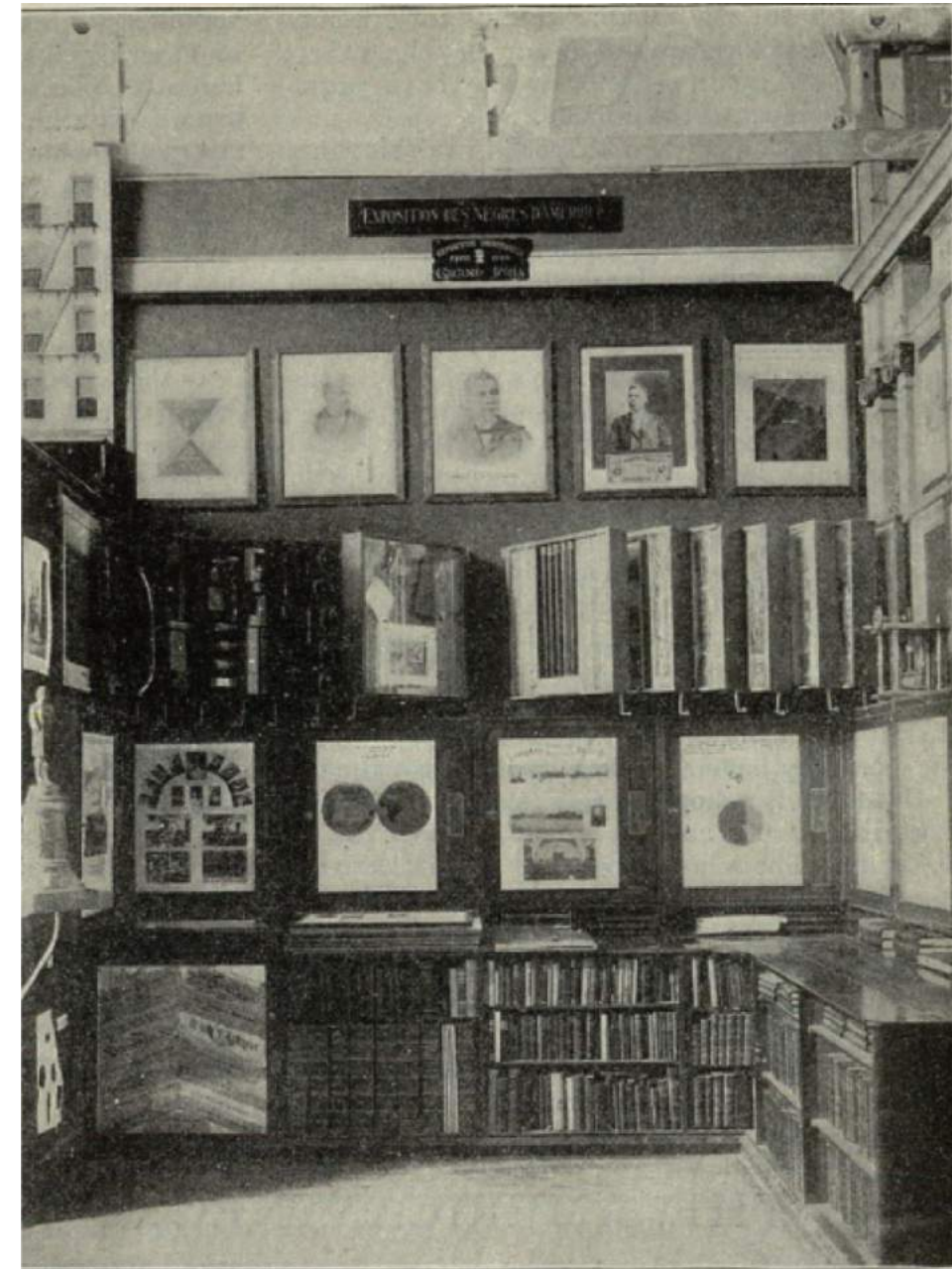


EXHIBIT OF AMERICAN NEGROES AT THE PARIS EXPOSITION.

A photograph from the exhibit on African-American progress, on view inside the Palace of Social Economy at the 1900 World's Fair in Paris. (Library of Congress)

VALUATION OF TOWN AND CITY PROPERTY OWNED BY GEORGIA NEGROES.



A graph, by Du Bois, shows fluctuations in the property owned by African-Americans in Georgia between 1870 and 1900. Illustration by W. E. B. Du Bois / Courtesy Library of Congress

INCOME AND EXPENDITURE OF 150 NEGRO FAMILIES IN ATLANTA, GA., U.S.A.



"Black Lives 1900: W. E. B. Du Bois at the Paris Exposition" reprints some of the striking photographs and graphics that Du Bois and his curators commissioned for the World's Fair. Illustration by W. E. B. Du Bois / Courtesy Library of Congress

Data Curation, Open Data

Centre for Humanitarian Data, The Hague (UN Office for the Coordination of Humanitarian Affairs)

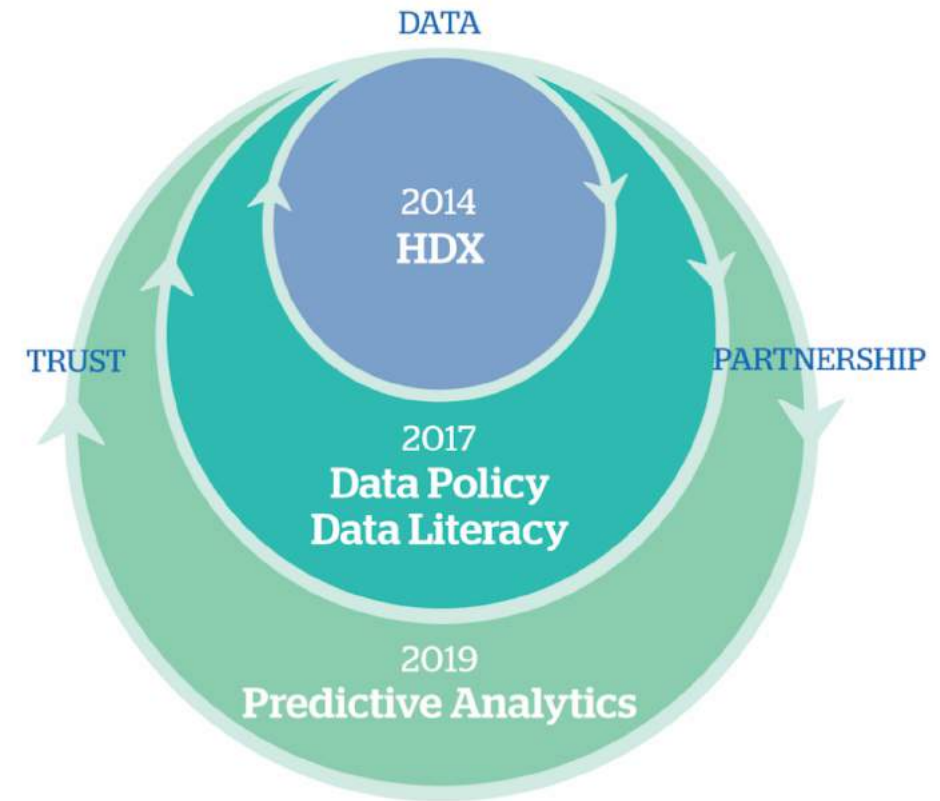
Established in 2014 with the aim to create a future where all people involved in a humanitarian situation have access to the data they need, when and how they need it, to make responsible and informed decisions.

Humanitarian Data Exchange (HDX) and the Humanitarian Exchange Language (HXL) data standard;
Open source through GitHub

Users from more than 200 countries

<https://centre.humdata.org>

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COVID-19 Pandemic in Locations with a Humanitarian Response Plan

Last updated: Jun 13, 2020 | [DATA](#)

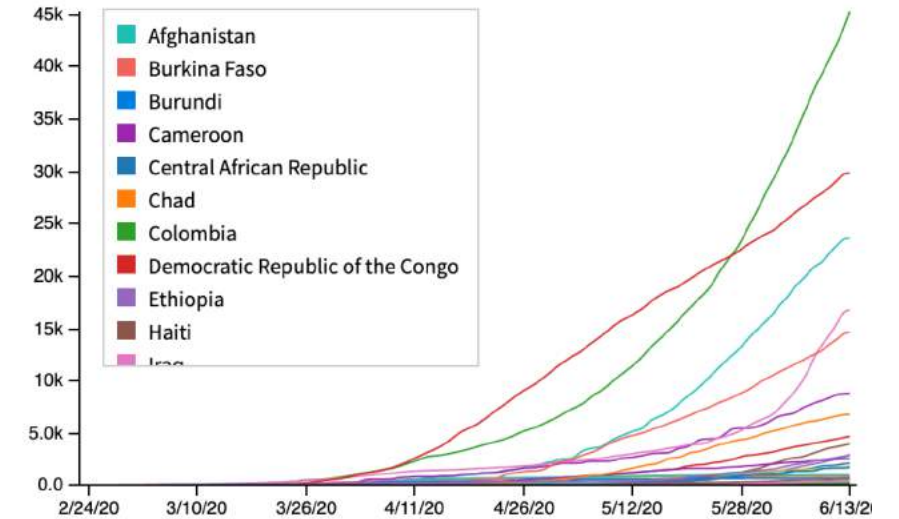
[See COVID-19 Pandemic page](#)



This visual shows the number of confirmed cases and deaths from the coronavirus disease (COVID-19) in locations with Humanitarian Response Plans (HRPs). The COVID-19 data is sourced from the World Health Organization (WHO). The countries include Afghanistan, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Colombia, Democratic Republic of the Congo, Ethiopia, Haiti, Iraq, Libya, Mali, Myanmar, Niger, Nigeria, occupied Palestinian territory, Somalia, South Sudan, Sudan, Syria, Ukraine, Venezuela, Yemen and Zimbabwe. More countries will be added as needed.

Number of Confirmed Cases Over Time

[Reset](#)



Total Confirmed Cases

172,746

Jun 13, 2020

Total Confirmed Deaths

5,134

Jun 13, 2020

Total Locations

25

Jun 13, 2020

Global Figures: 7,495,164 total confirmed cases, 421,976 total confirmed deaths

Mapping data

Ushahidi – “*Helping people raise their voice and those who serve them to listen and respond better*”

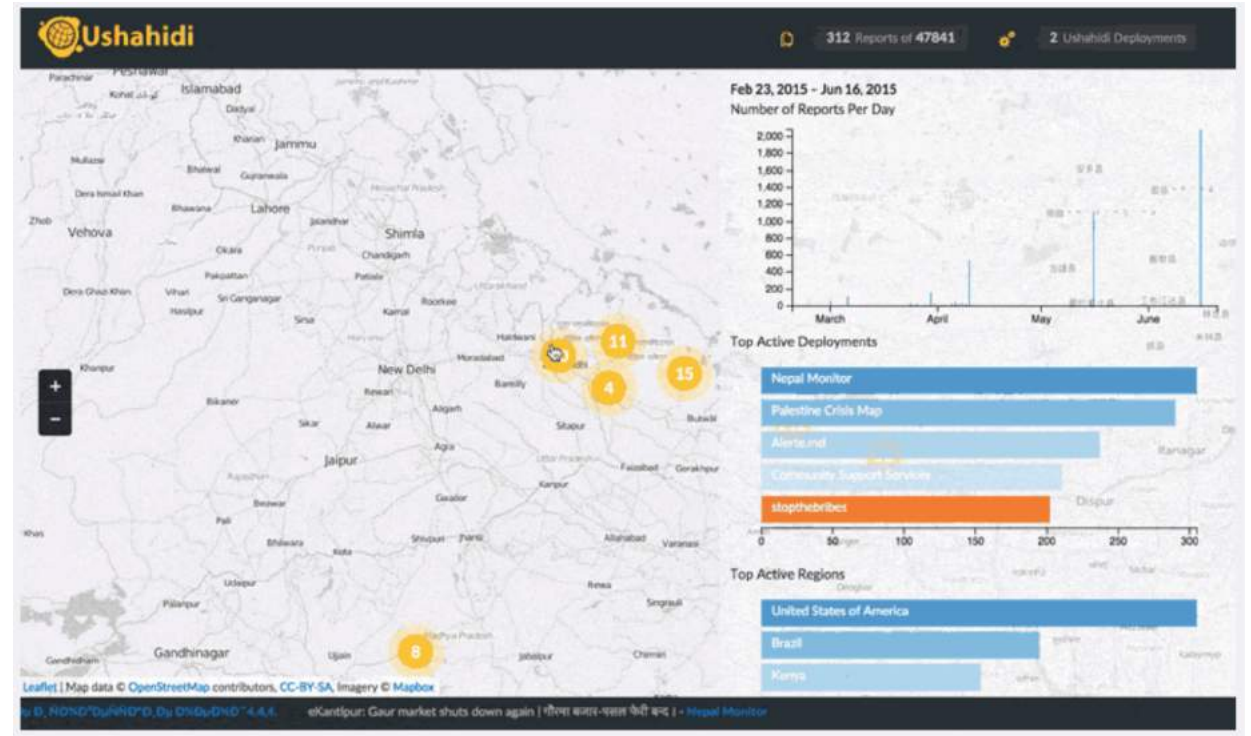
Established in 2008 to map reports of violence following the election in Kenya

Now a strong tech leader, based in Nairobi, providing software and services

Develops open source software – crowdsourcing for social activism and public accountability

Use cases include UN Haiti Earthquake response, Nigerian elections, Obama 2012 campaign, Deepwater Horizon

<https://www.usahidi.com/>



CrisisNET Tracker

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Information art – Collaborative work between data analysts, artists and graphic designers

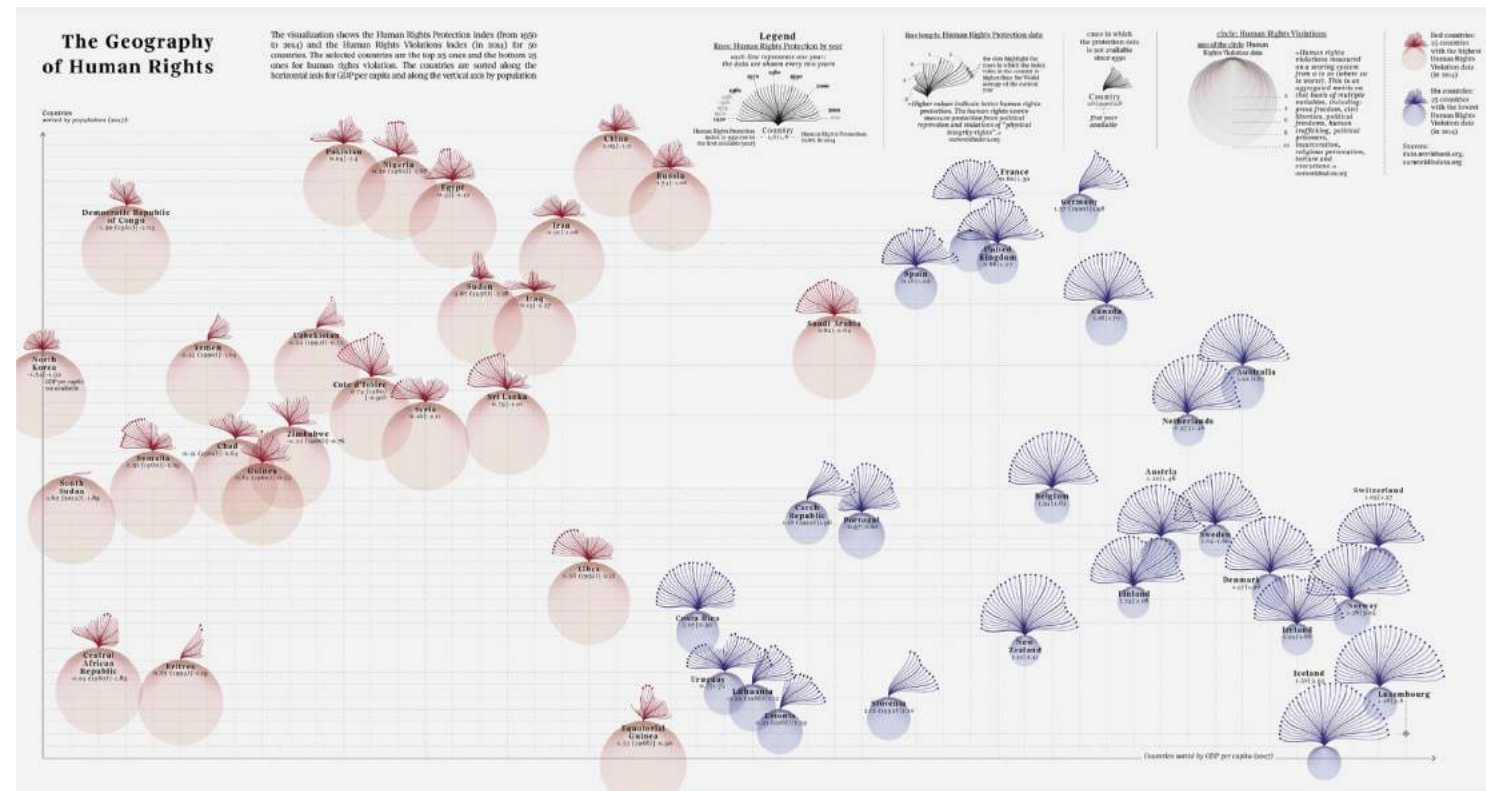
The Geography of Human Rights

Frederica Fragapane 2019, *Corriere della Sera, La Lettura*

The Human Rights Protection index from 1950-2014 for 50 countries, 'top' 25 and 'bottom' 25 for Human Rights Violations

<https://www.behance.net/gallery/76461997/The-Geography-of-Human-Rights>

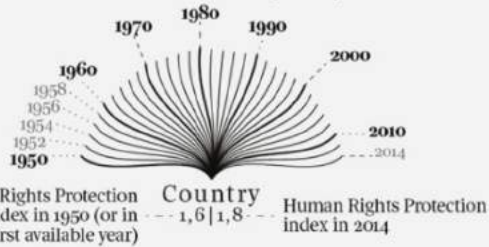
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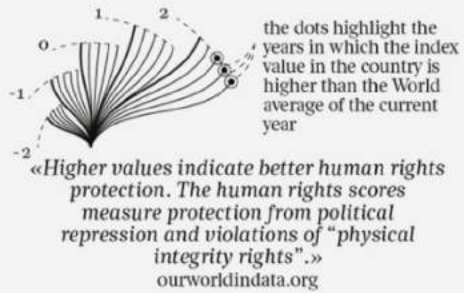
Legend

lines: Human Rights Protection by year

each line represents one year:
the data are shown every two years



line length: Human Rights Protection data



cases in which the protection data is not available since 1950



circle: Human Rights Violations

area of the circle: Human Rights Violation data



«Human rights violations measured on a scoring system from 0 to 10 (where 10 is worst). This is an aggregated metric on that basis of multiple variables, including: press freedom, civil liberties, political freedoms, human trafficking, political prisoners, incarceration, religious persecution, torture and executions.»
ourworldindata.org



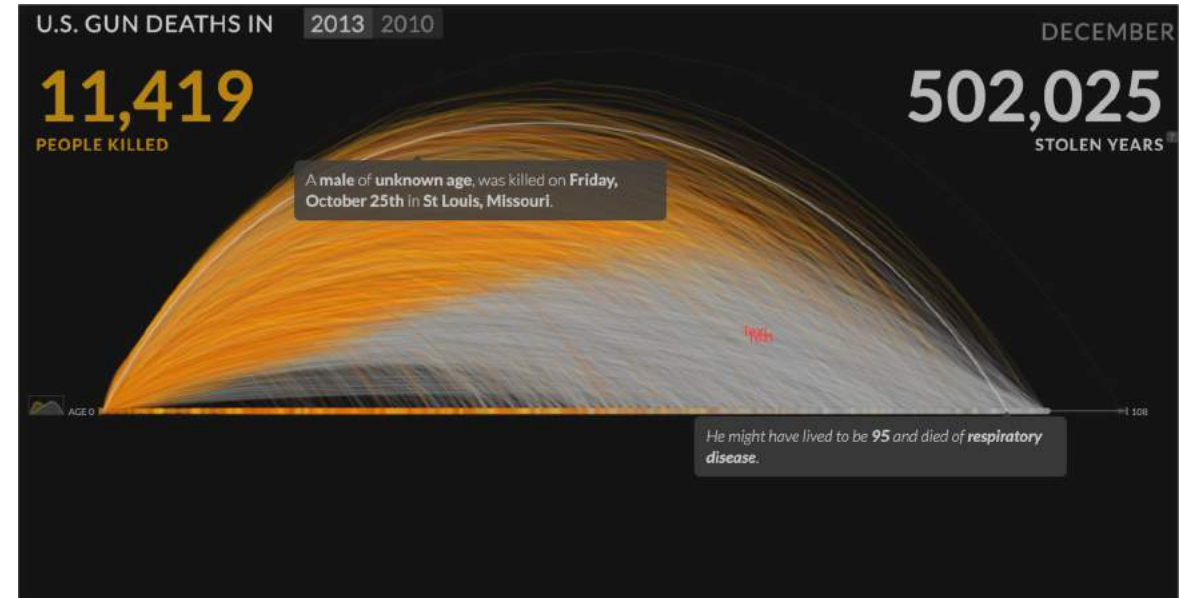
Sources:
data.worldbank.org,
ourworldindata.org

Dynamic data visualization – the animated infographic

Periscope: U.S. Gun deaths in 2013 and 2010

Dino Citraro and Kim Rees

Where data visualization meets information art, this shows the number of gun deaths in the United States by month in terms of years of life potentially lost. The graphic is both dynamic and interactive.



<http://guns.periscopic.com/>

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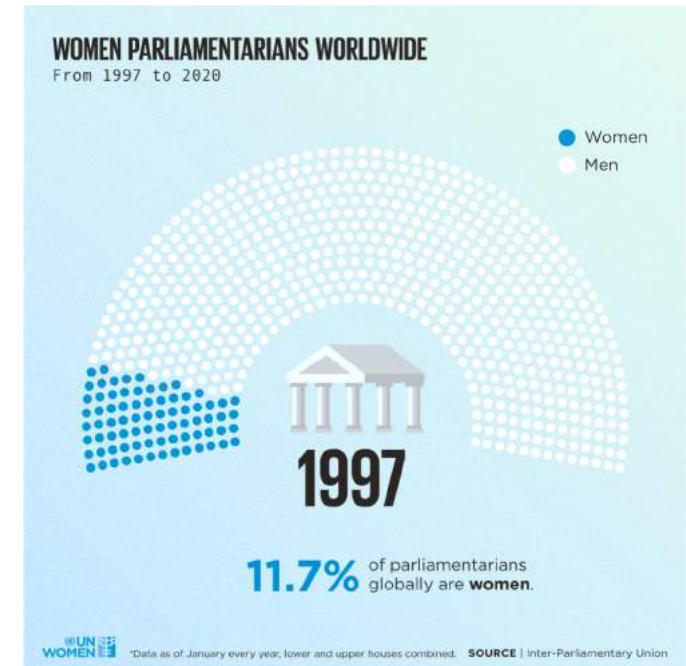
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Dynamic data visualization – the animated infographic

UN Women: Visualizing the data: Women's representation in society, 2020

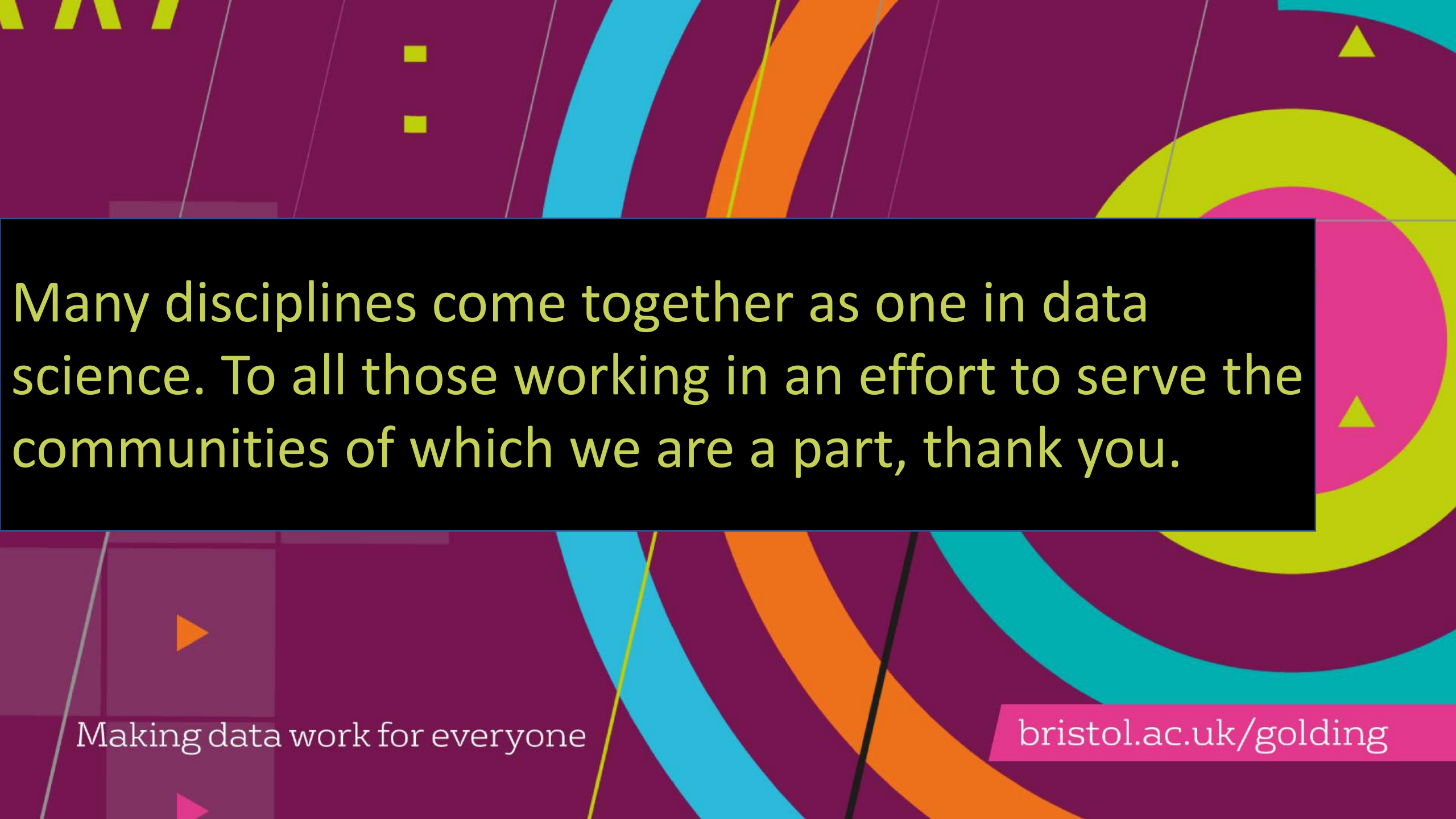
Glimpses of seven examples of gender imbalance across society: Politics, work, culture and sciences, journalism, entertainment, sport, culinary arts

<https://www.unwomen.org/en/digital-library/multimedia/2020/2/infographic-visualizing-the-data-womens-representation>



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Many disciplines come together as one in data science. To all those working in an effort to serve the communities of which we are a part, thank you.

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Share your participation

#Dataweekonline2020



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