

What can you  
learn from a  
data  
journalist?



# Hello!

**My name is Sophie Warnes**

Senior data journalist

You can find me at @sophiewarnes on Twitter

**Slide deck: [bit.ly/SWPorto](https://bit.ly/SWPorto)**

# My goals for today



- ⦿ Convince you that there is a problem
- ⦿ Give you some ideas for how to solve it
- ⦿ ...And show great examples of current work!

# The problem: Data literacy

# One in four


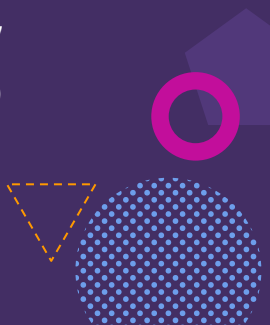
do not feel confident using maths

- National Numeracy  
(YouGov survey)



# One in six

could answer **3 basic maths questions**

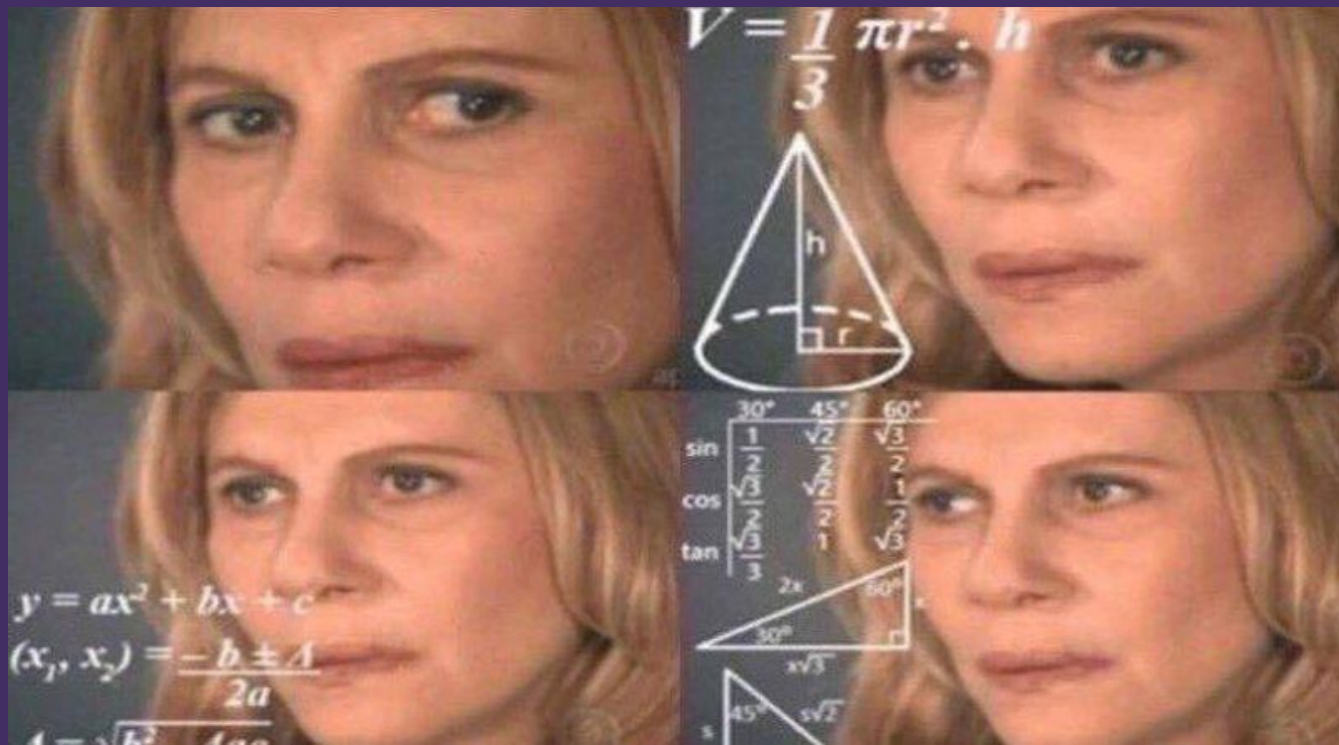
- National Numeracy  
(YouGov survey)
- 
- 



# One in four

do not understand their payslip

- Chartered Institute of Payroll Professionals
- 
- 





The slide features a dark blue background with various geometric shapes in the corners. Top-left: a pink circle, a dashed yellow circle, a grey pentagon, a blue dotted circle, and a pink pentagon. Top-right: a blue triangle, a grey circle, a dashed yellow circle, a pink striped circle, and a blue pentagon. Bottom-left: a blue pentagon, a pink triangle, a yellow striped triangle, and a dashed white circle. Bottom-right: a pink circle, a dashed yellow triangle, and a blue dotted circle.

Think of your data as a starting  
point for **telling stories**

“

It is in the combination of words  
and visuals that the magic of  
understanding often happens

- Alberto Cairo, author  
and Knight Chair in  
Visual Journalism

# Why tell stories?



- ⊙ Humans have been telling each other stories for centuries. It's how we connect to each other!
- ⊙ It is much easier to understand a narrative
- ⊙ It's also easier to remember and to tell others about a story as opposed to just numbers

Finding the right angle. Ask yourself...



- ① What is the most surprising thing about your research or your data?
- ① Can you imagine people talking about it in the pub? What words would they use? (Not technical!)
- ① Can you add a human perspective to it?

# Doing data vis right for a mass audience



# Data vis for mass audiences



1. Pick the most important stories and relationship/s in your data
2. Pick the right chart to show it
3. Don't be afraid to editorialise charts
4. Annotation is VERY helpful for complex charts!

# Some relationships and chart types...



## Deviation

Diverging bars  
Surplus/deficit lines

## Correlation

Scatterplots  
Bar and line charts

## Distribution

Histogram  
Dot plot  
Beeswarm

## Change over time

Line chart  
Column chart  
Slope chart

## Part-to-whole

Pie charts (ARGH)  
Marimekko  
Tree map

## Spatial

Choropleth maps  
Cartograms

# Which chart?

## The FT Visual Vocabulary = awesome





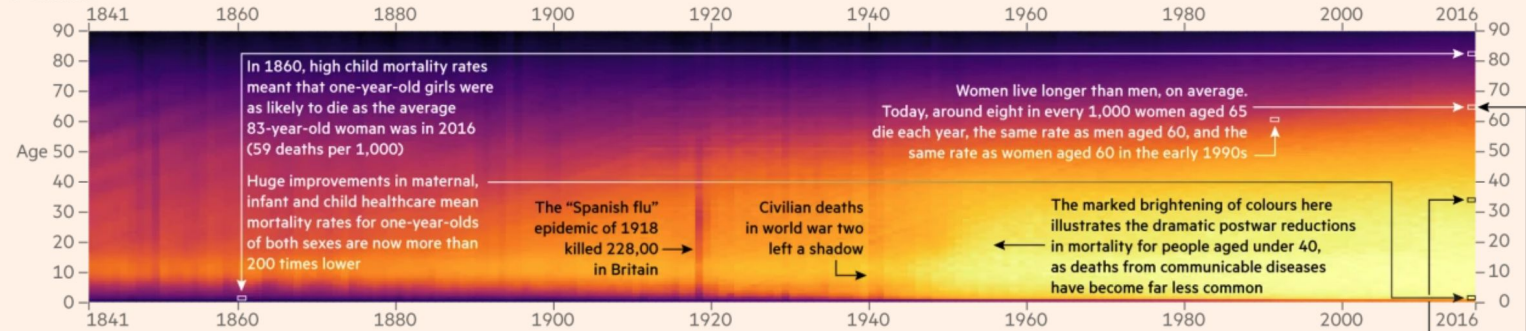
Now, for  
some examples...



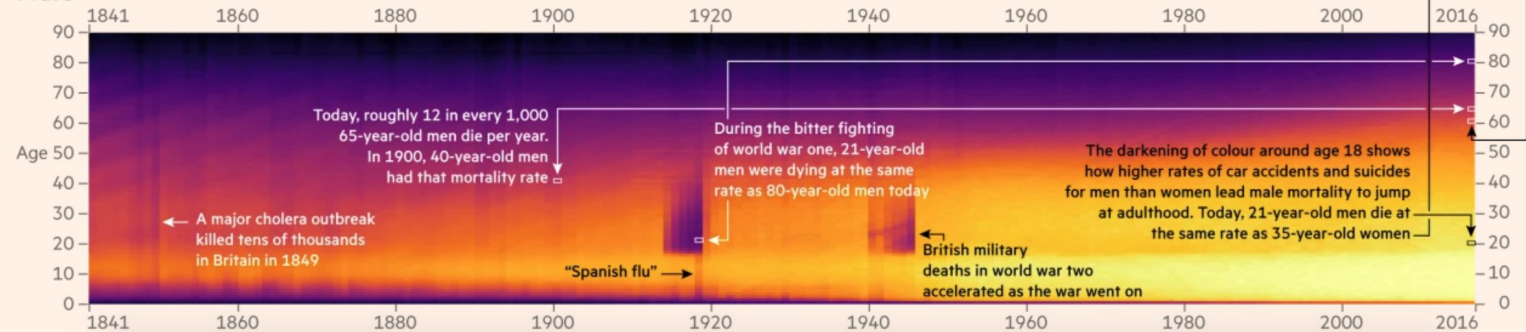
# 175 years of changing mortality in England & Wales

Mortality rates in England and Wales since 1841, by age and sex

## Female



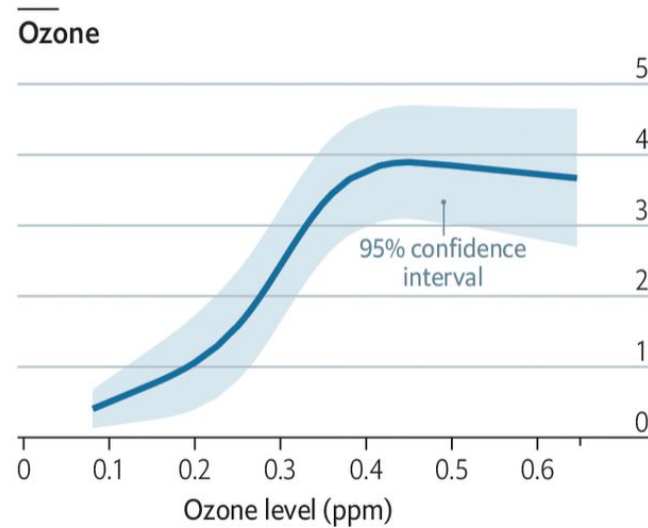
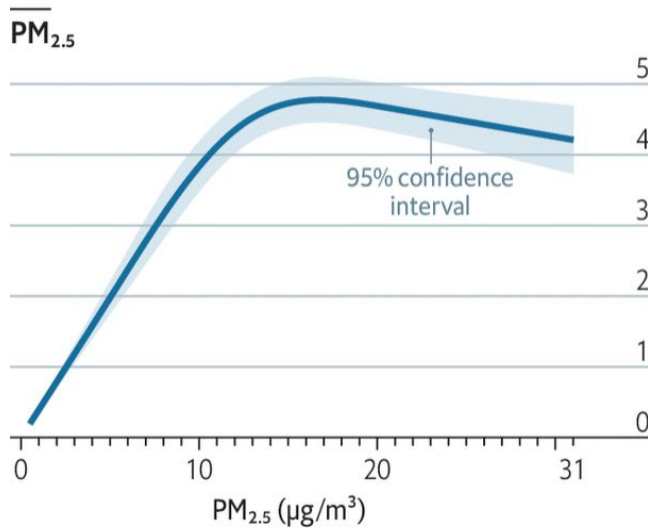
## Male



“What’s killing us now?” – The Financial Times

## Soot to kill

United States, air pollution and associated increase\* in violent crime†, %



Source: "The effect of pollution on crime: Evidence from data on particulate matter and ozone" by J. Burkhardt et al., *Journal of Environmental Economics and Management* (2019)

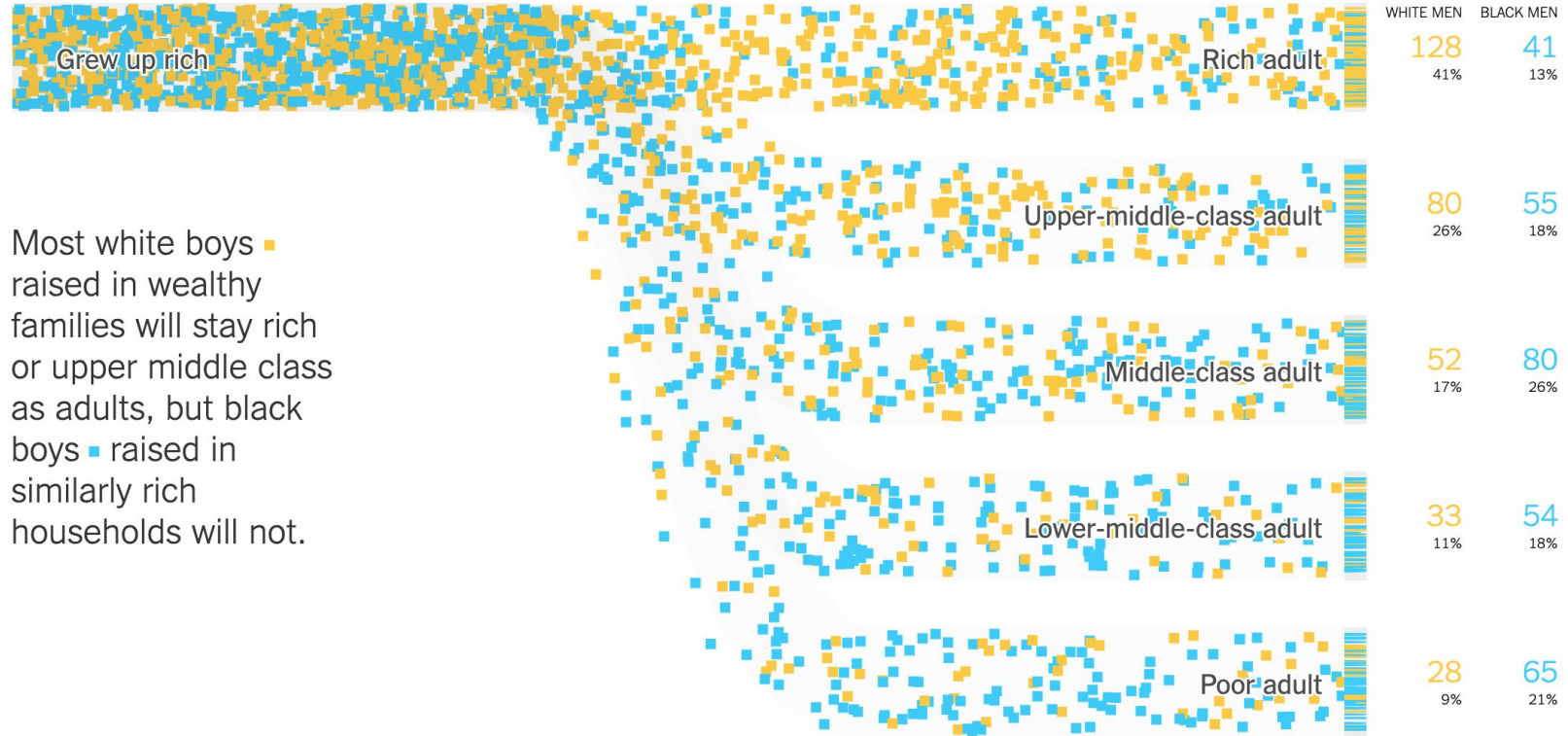
\*Relative to no pollution †Murders, rapes and sexual assaults, robberies and assaults

The Economist

"Exposure to air pollution is linked to an increase in violent crime" - The Economist

Follow the lives of 3,072 boys who grew up in rich families ...

...and see where they end up as adults:



Adult outcomes reflect household incomes in 2014 and 2015.

“Extensive Data Shows Punishing Reach of Racism for Black Boys” – NYT

More good examples of presenting  
complex data to the public



“Those Hurricane Maps Don’t Mean What You Think  
They Mean” – NYT (Alberto Cairo)

“The Birthday Paradox” – The Pudding

“Google rewards reputable reporting, not  
left-wing politics” – The Economist

“Quiz: Let Us Predict Whether You’re a Democrat  
or a Republican” – NYT

I write a newsletter about this stuff!



## Fair Warning

By Sophie Warnes

A weekly newsletter with anywhere between 10 and 20 links about data journalism, data visualisation, and storytelling, curated by a British data journalist and nerd. Expect politics, statistics, society and culture - all through the frame of data... With a dash of whimsy.

Read more about the author at [www.sophiewarnes.com](http://www.sophiewarnes.com).

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# Thanks!

Any questions?

You can find me at @sophiewarnes  
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