

01 — Sociol 232: Visualizing Social Data

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January 23, 2024

**What we'll
be doing**

The **mechanics** of it

**Learning some software;
understanding how to tell it what to
do.**

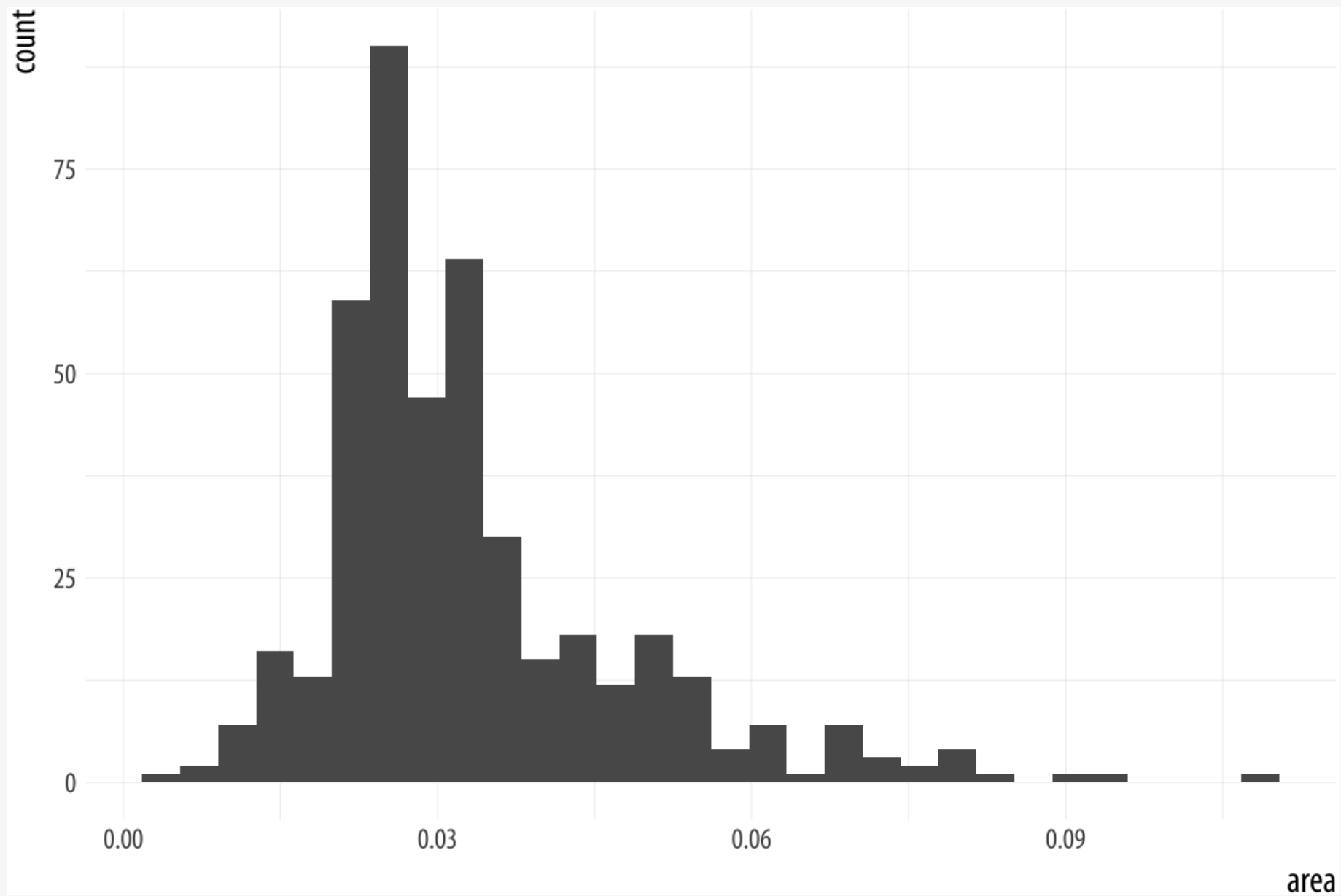
**Useful, practical, powerful.
(At times annoying, because
computers are stupid.)**

The **reasons** for it

**Thinking about how to picture
social data.**

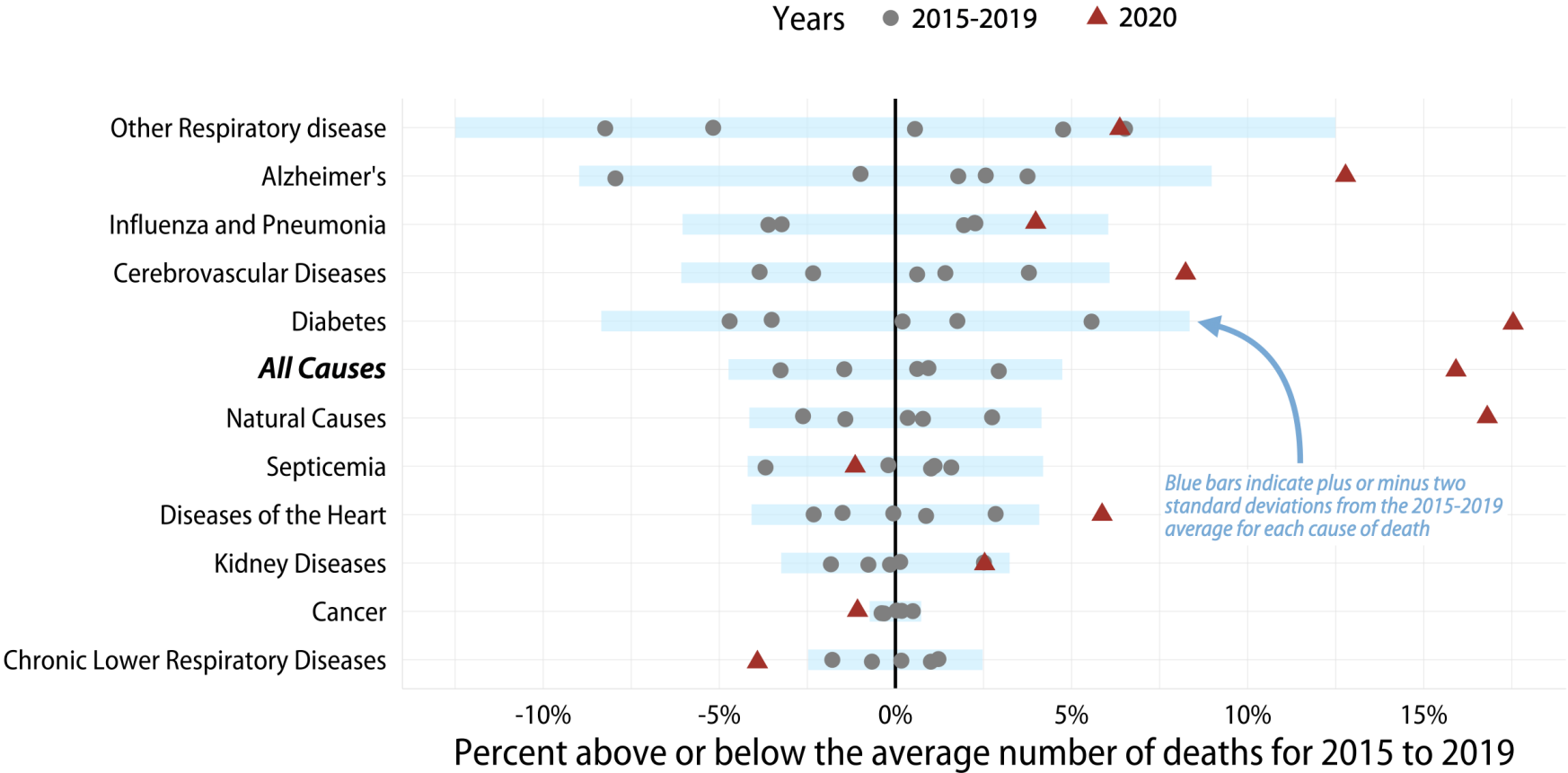
**Thinking about where social data
comes from.**

**Thinking about its scope, limits, and
meaning.**



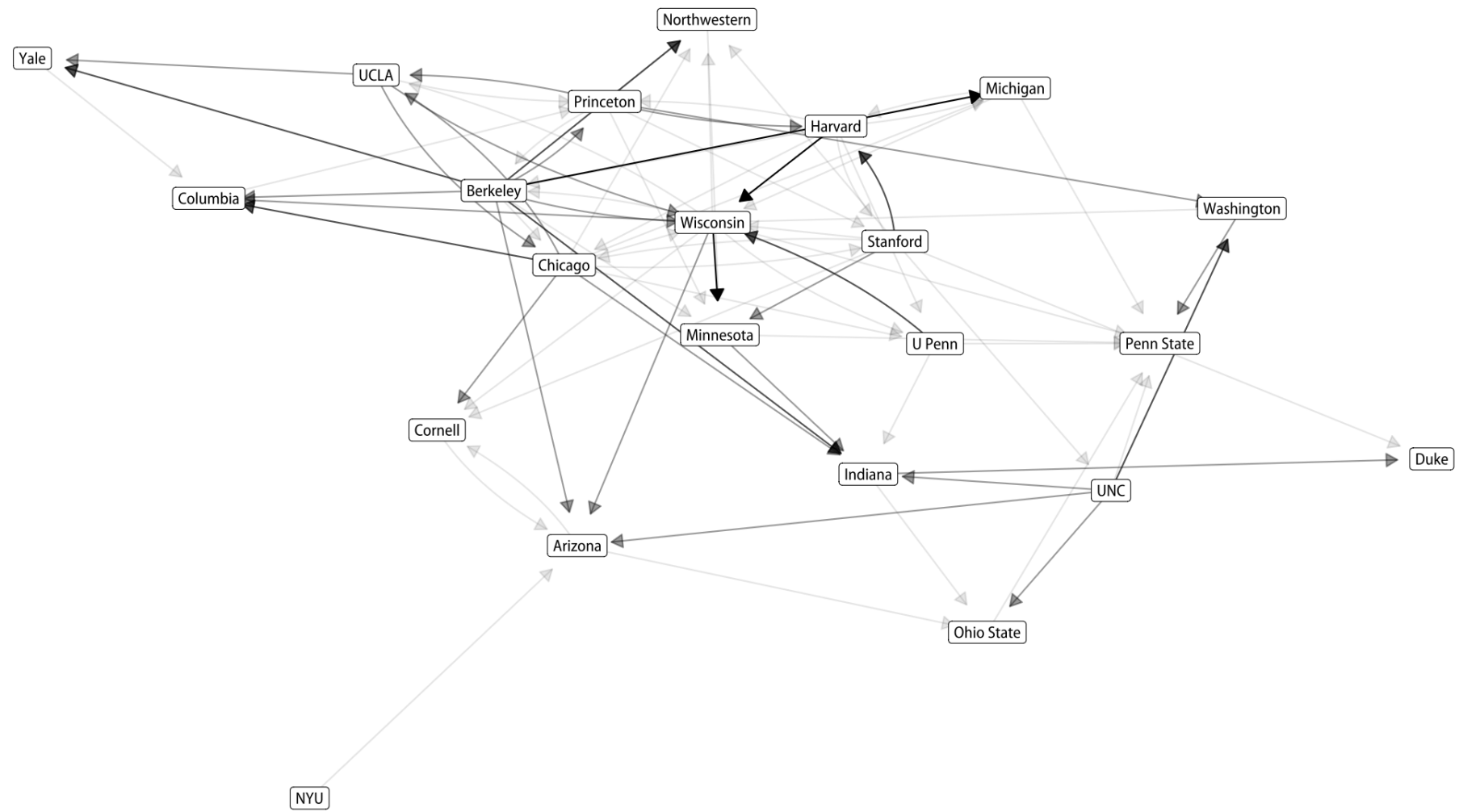
Excess Deaths in the U.S. from March 1st to November 7th

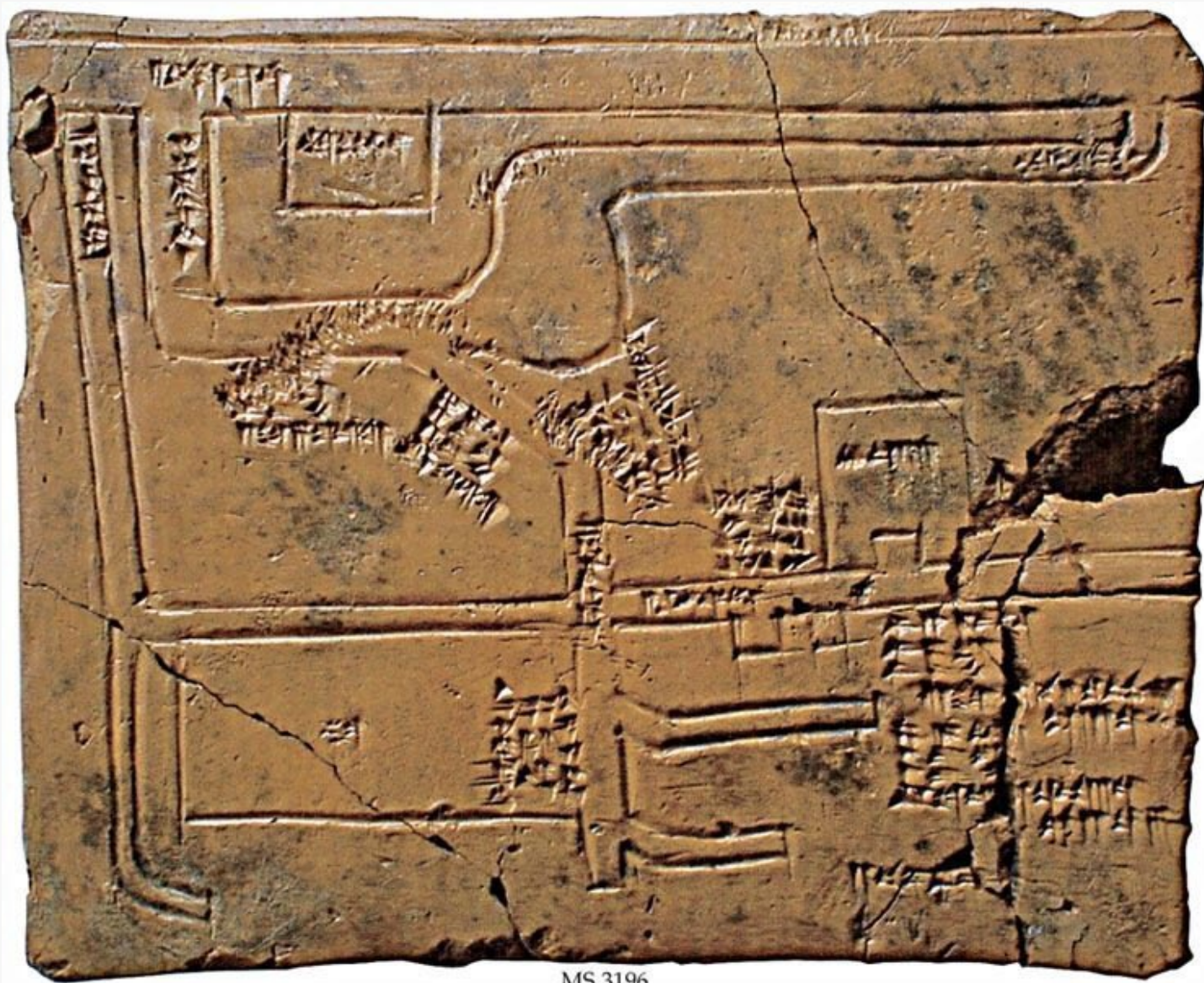
Selected Causes. Individual deaths may be due to more than one cause.



Data: CDC. Calculations and Graph: @kjhealy

N Hires → 2 → 3 → 4 → 5

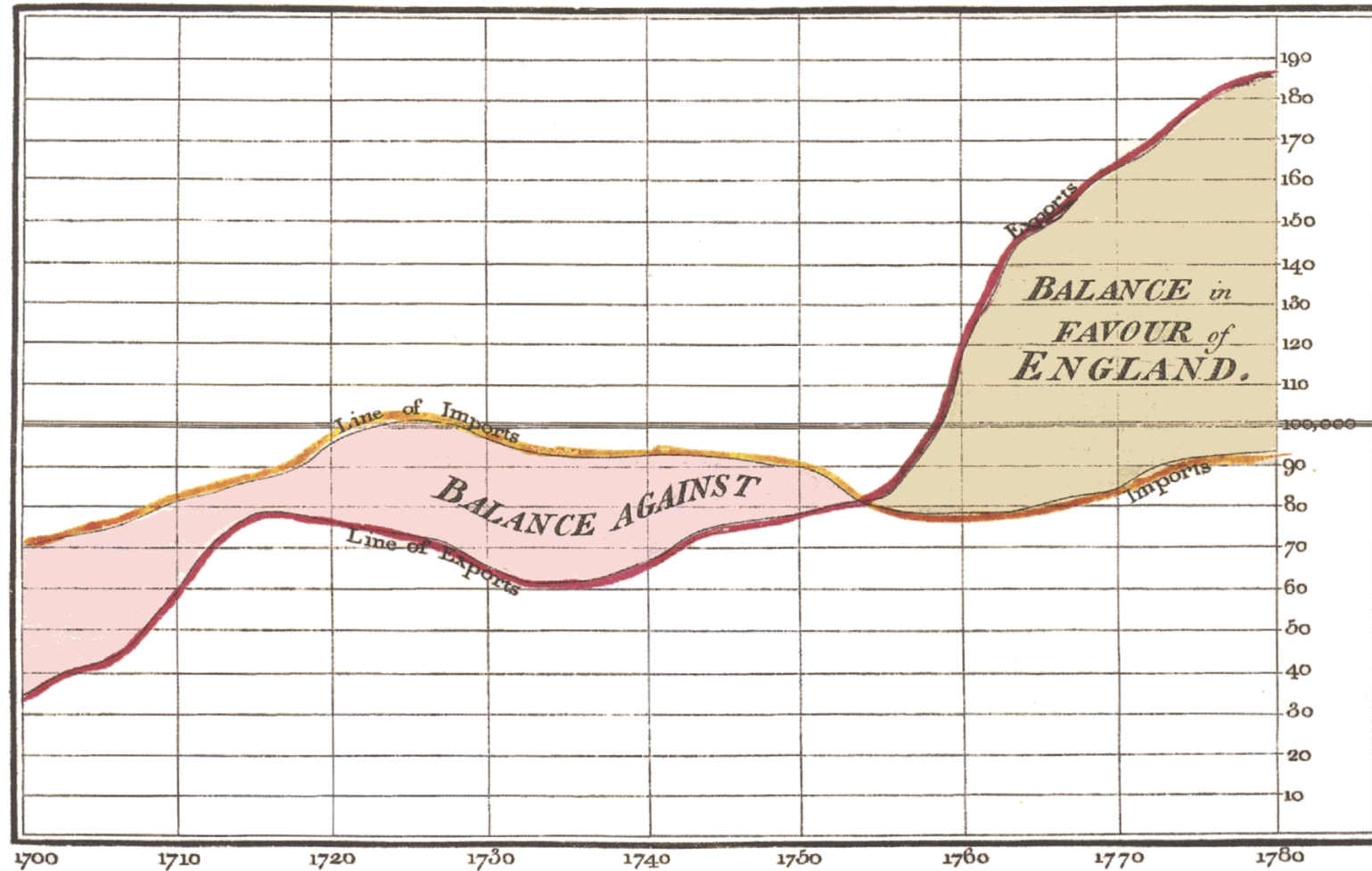




MS 3196

Map of canals and irrigation systems to the west of Euphrates. Babylonia, 1684-1647 BC

Exports and Imports to and from DENMARK & NORWAY from 1700 to 1780.



The Bottom line is divided into Years, the Right hand line into £10,000 each.

Published as the Act directs, 14th May 1786. by W^m Playfair

Neele sculpt 352, Strand, London.

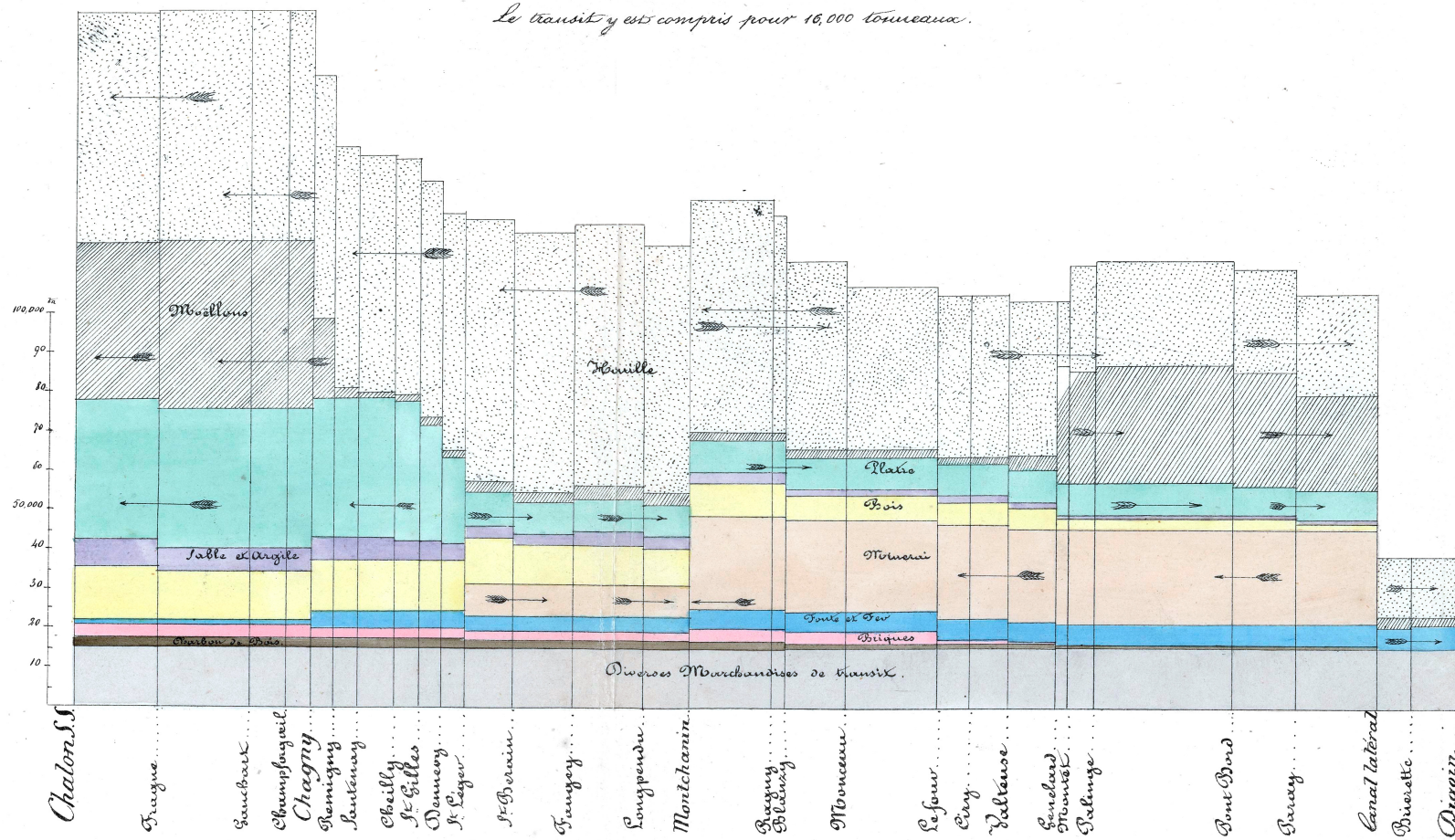
Tableau figuratif du mouvement commercial du Canal du Centre en 1844

Pl. III.

dressé par M. Minard sur les renseignements de M. Comoy

Le mouvement total équivaut à 131,000 tonnes parcourant la longueur du Canal ou 117 kilomètres

Le transit y est compris pour 10,000 tonnes.



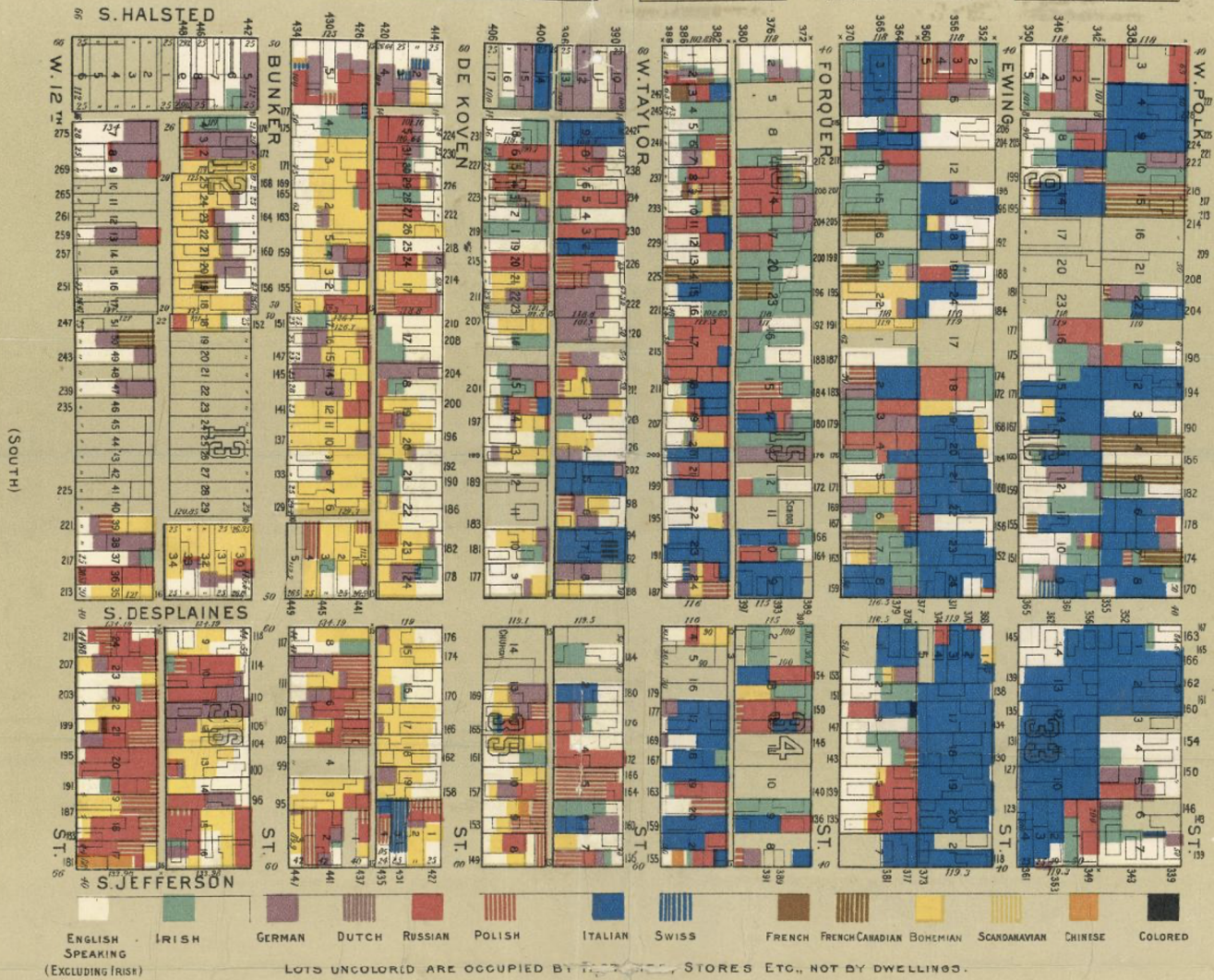
On a compris dans le transit les marchandises allant de Chalon au canal latéral et la Loire et réciproquement.

Un millimètre pour mille tonnes - Trois millimètres pour un kilomètre.

Auget, Régier et Dourdet, à St-Martin, Paris. - (Fac-simile).



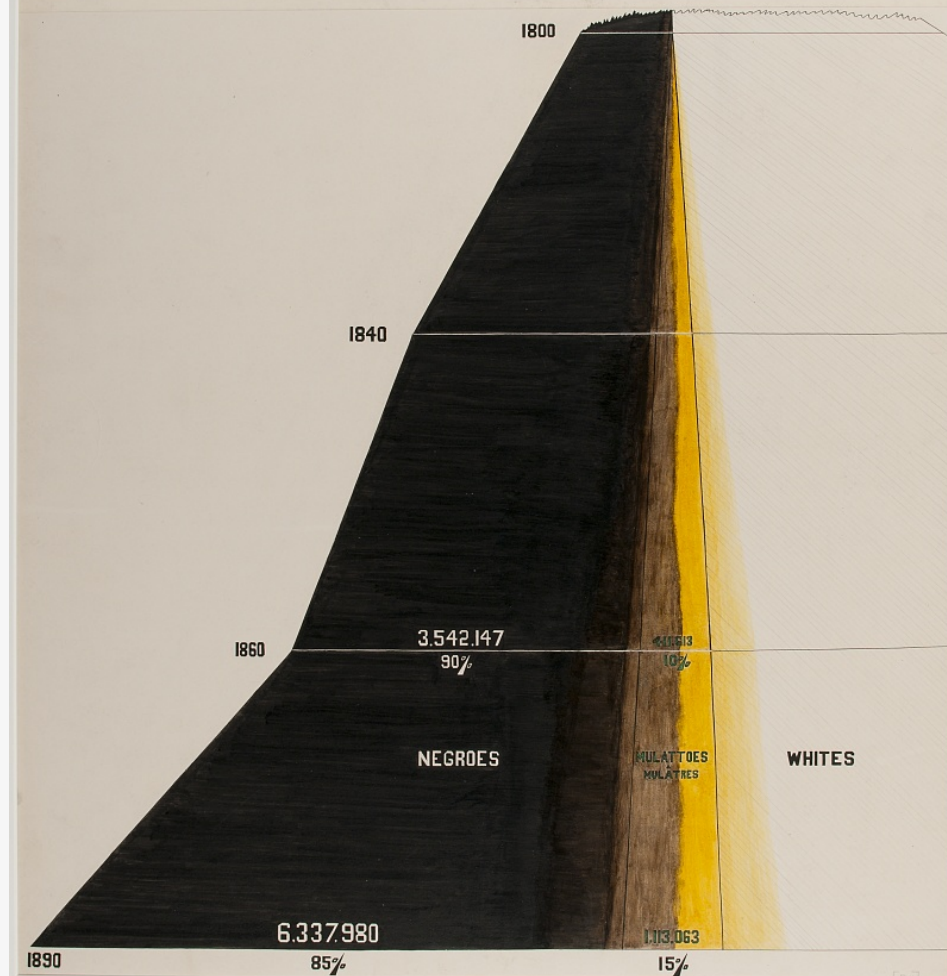
(NORTH)
NATIONALITIES MAP NO. 1.-POLK STREET TO TWELFTH,
HALSTED STREET TO JEFFERSON, CHICAGO.



The Amalgamation of the White and Black elements of the population
in the United States.

Amalgamation des elements blancs et noirs parmi la population Americaine.

Done by Atlanta University.

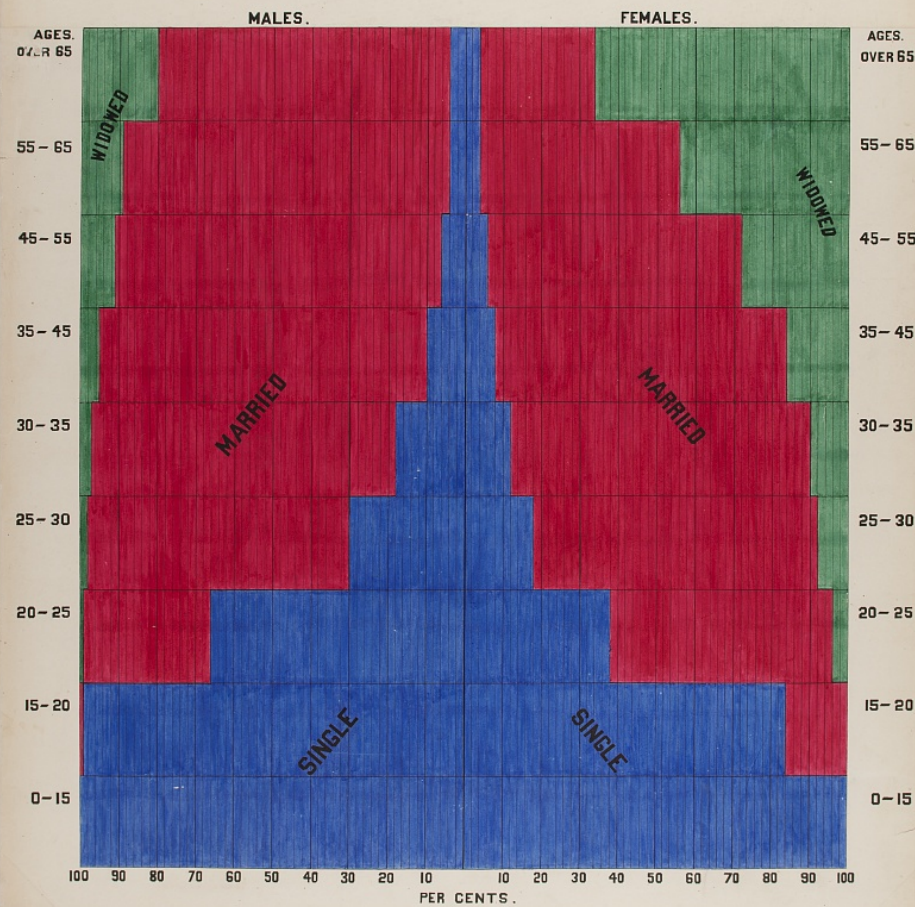


91124

Conjugal condition of American Negroes according to age periods.

Condition conjugale des Nègres Américains au point de vue de l'âge.

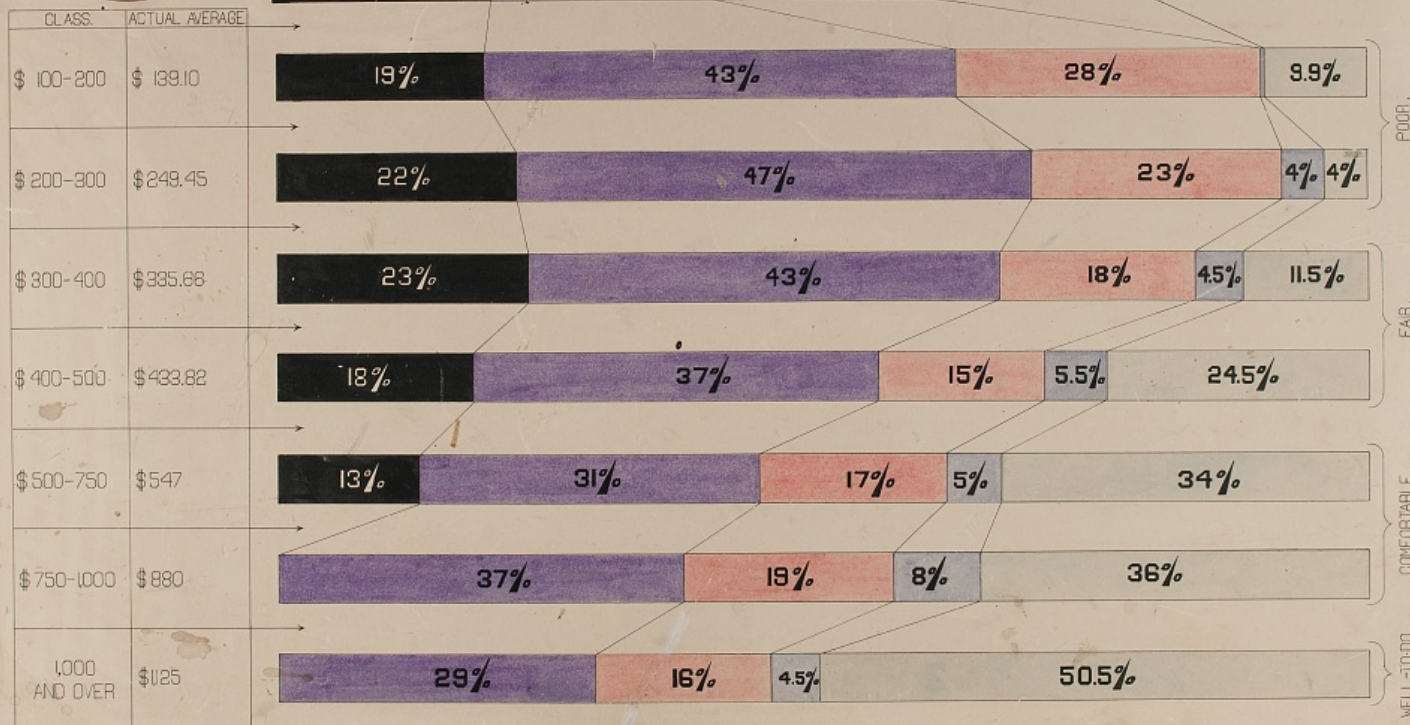
Done by Atlanta University.



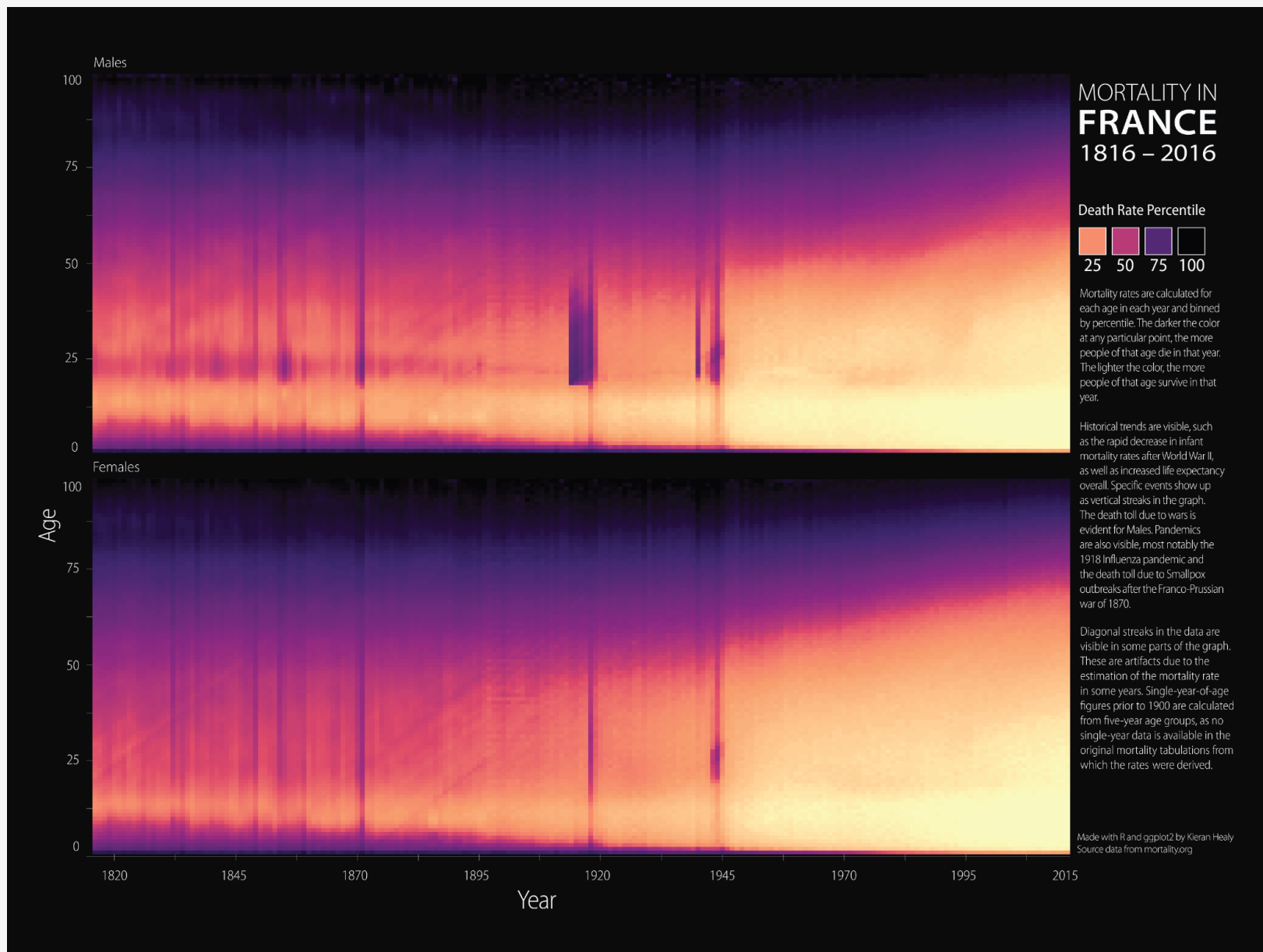
INCOME AND EXPENDITURE OF 150 NEGRO FAMILIES IN ATLANTA, GA., U.S.A.



ANNUAL EXPENDITURE FOR				
RENT.	FOOD.	CLOTHES.	DIRECT TAXES.	OTHER EXPENSES AND SAVINGS.
	DEPT. OF AGRICULTURE BULLETIN NO. 71.		THE STATE TAX RATE IS: 1880-\$3.50 PER \$1,000 1885-\$3.50 1890-\$3.96 1895-\$4.56 1899-\$5.36 STATE AND COUNTY TAXES RAISE THIS TO \$21 PER \$1,000 IN ATLANTA.	THE HIGHER LIFE. RELIGION. ART. EDUCATION. SICKNESS. SAVINGS. AMUSEMENTS. BOOKS AND PAPERS. TRAVEL.



FOR FURTHER STATISTICS RAISE THIS FRAME.

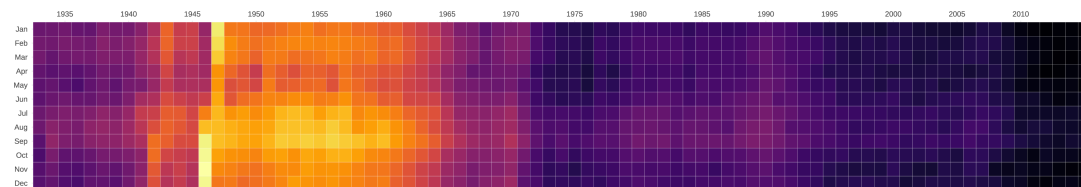




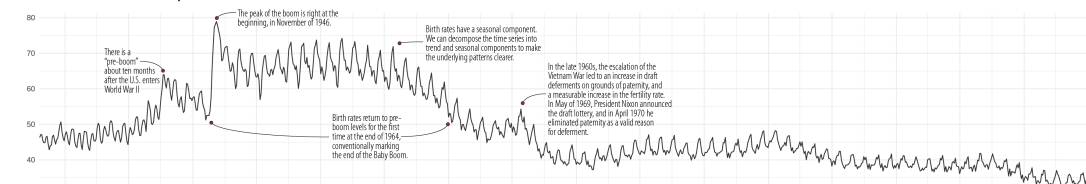
Visualizing the Baby Boom

Average Daily Births per Million Population in the United States, 1933–2015

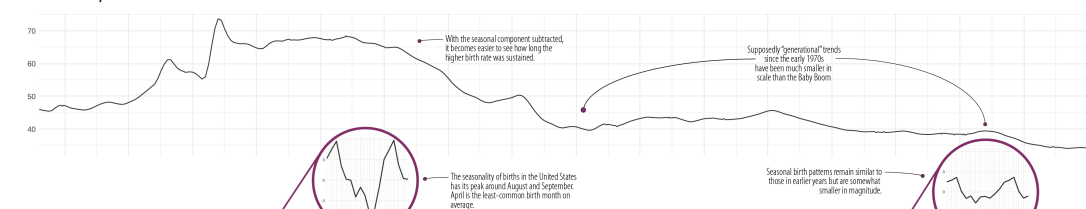
The Time Series as a Heatmap



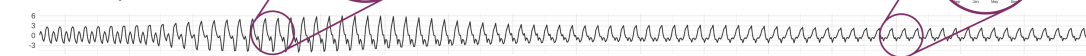
The Time Series as a Line Graph



The Trend Component of the Time Series

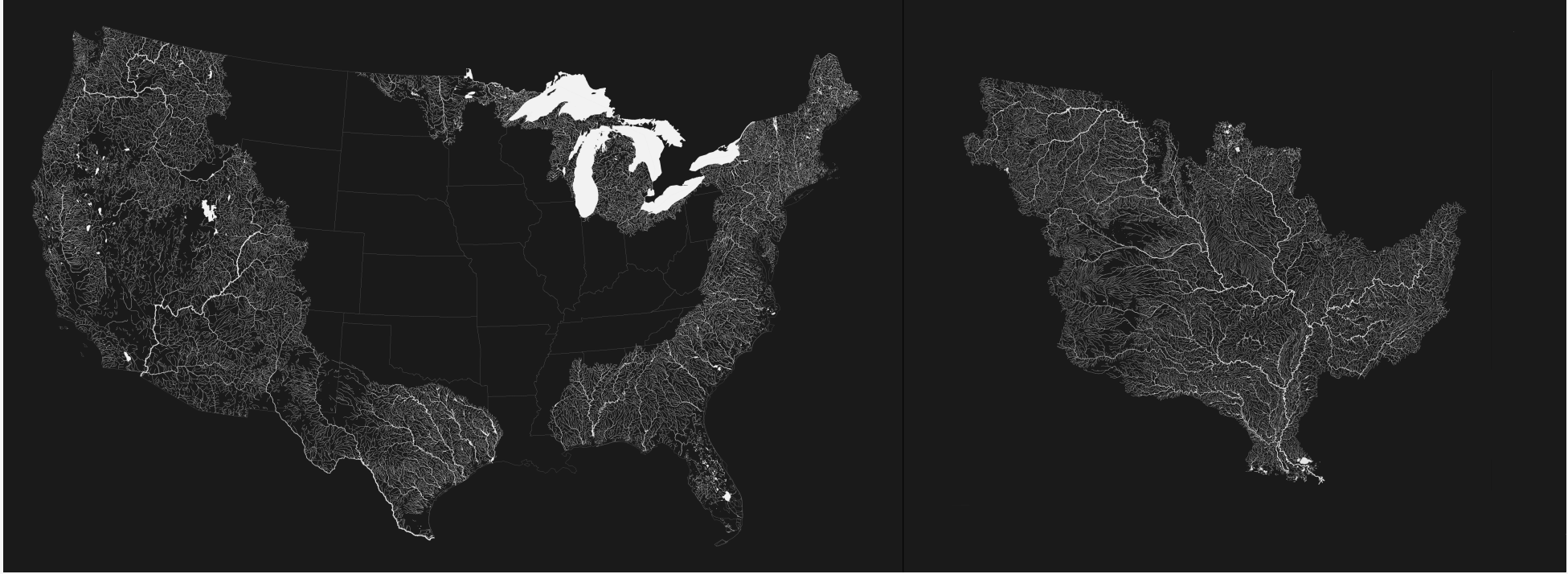


The Seasonal Component of the Time Series



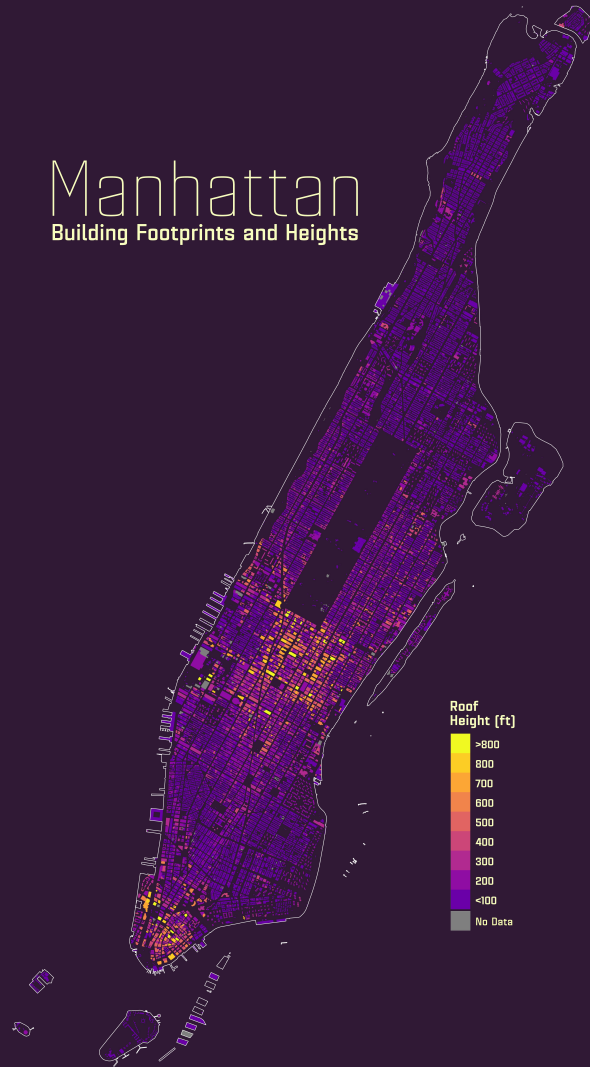
The Remainder after Identifying the Trend and Seasonal Components





Manhattan

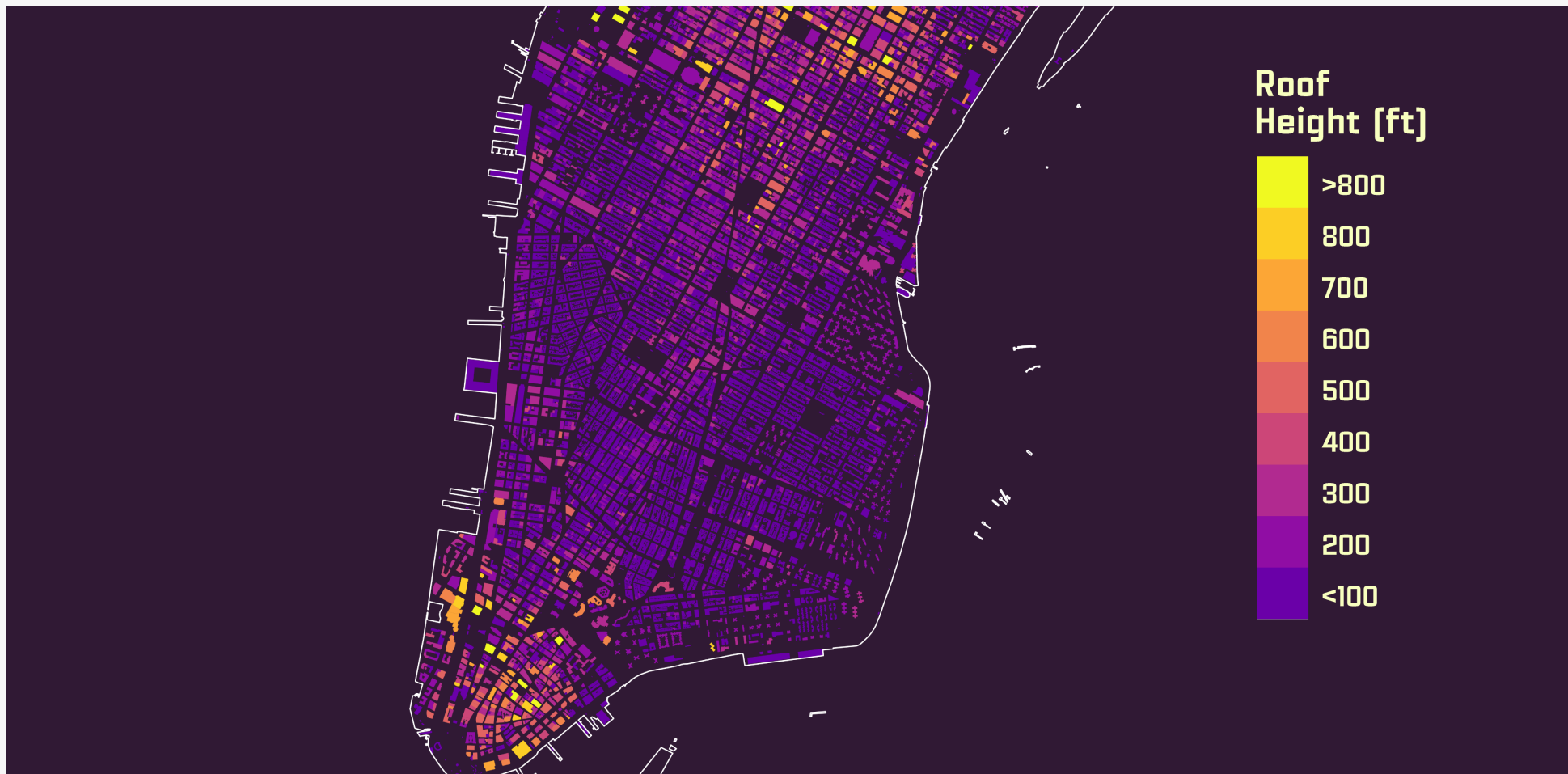
Building Footprints and Heights



Roof
Height (ft)

>800
800
700
600
500
400
300
200
<100
No Data

Data: New York OpenData
Map: Kieran Healy
Software: R, sf, and ggplot2



Housekeeping

Course Website

[**https://visualizingsociety.com**](https://visualizingsociety.com)

Syllabus, schedule, slides, assignments, examples, contact information, policies.

There's also a Canvas site where you'll submit assignments and where some readings will be made available.

How to think about the course

There's a fair deal on offer

The skills we'll learn are *cumulative*

Come to class and keep up with the work and you should be fine

Get up and Running: Install R



The R Project Website

<https://www.r-project.org>

Install RStudio



The RStudio / Posit Website

<https://www.posit.co>

Download Problem Set 01

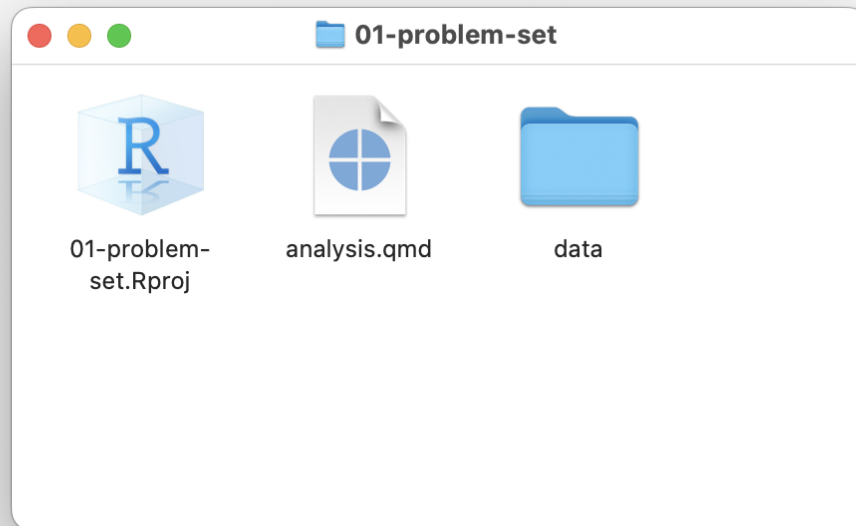
<https://www.visualizingsociety.com/>

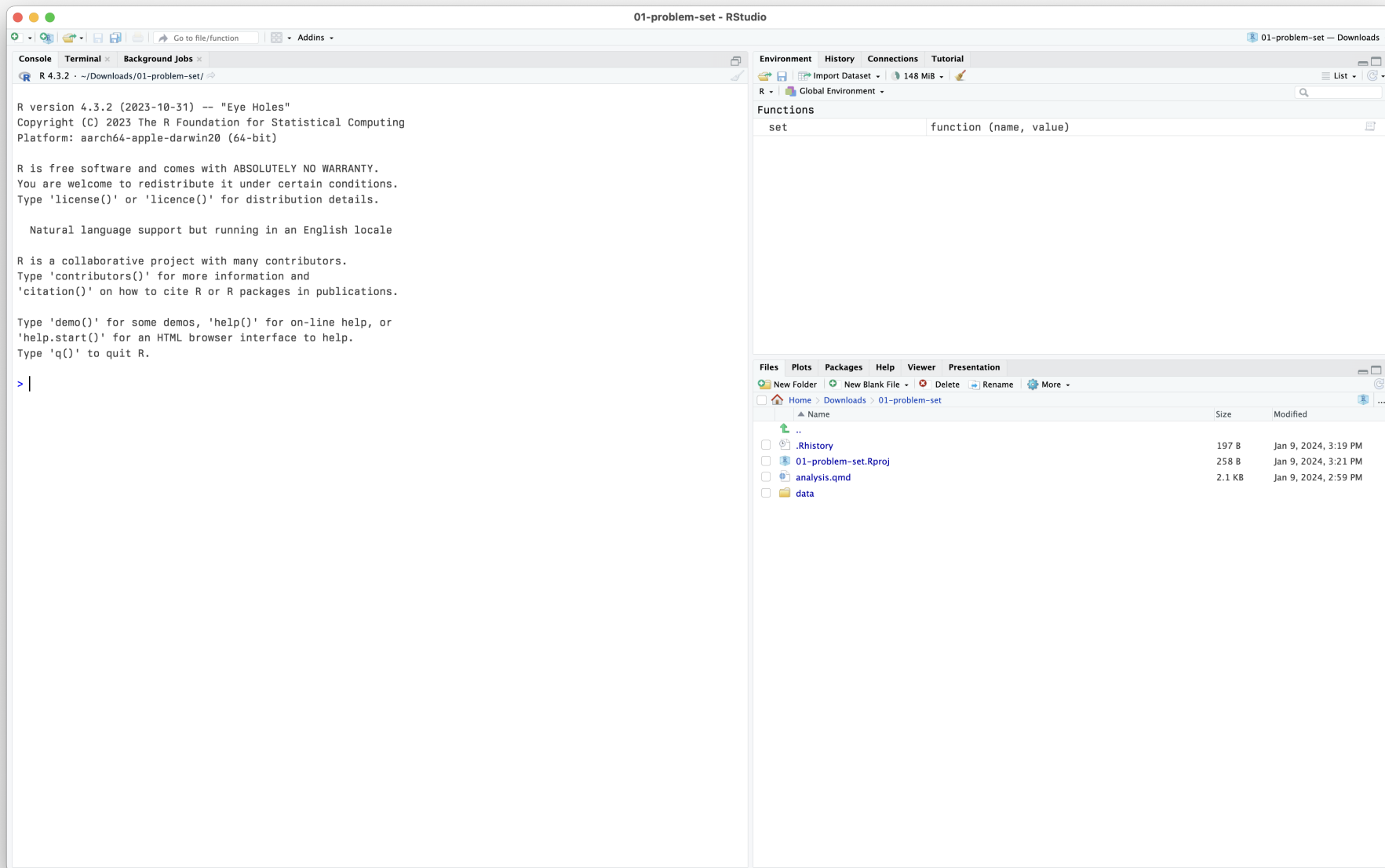
Open it

Uncompress the Zip file if that doesn't happen automatically

Double-click the `01-problem-set.Rproj` file.

RStudio should launch





01-problem-set - RStudio

analysis.qmd

Render on Save

Render

Go to file/function

Addins

Source

Visual

Outline

```
1 - ---
2 title: "Problem Set 01"
3 author: "<YOUR NAME HERE>"
4 date: "`r Sys.Date()`"
5 output: html_document
6 - ---
7
8 ```{r}
9 #| label = "setup",
10 #| include = FALSE
11 knitr::opts_chunk$set(echo = TRUE)
12 - ```
13
14 ## Quarto and R Markdown
15
16 This is an Quarto document. It is a structured plain-text format that allows you to mix text and pieces
17 (also called "chunks" or "cells") of code in a way that can be turned into HTML, PDF, and MS Word documents.
18 For more details on using Quarto see <https://quarto.org/docs/get-started/hello/rstudio.html>.
19
20 When you click the **Render** button in RStudio a document will be generated that includes both content as
21 well as the output of any embedded R code chunks within the document. You can embed an R code chunk like
22 this:
23
24 ```{r}
25 #| label = "addition"
26 1 + 1
27 - ```
28
29 82:1 A very first plot
```

Console

Terminal

Background Jobs

```
R 4.3.2 - ~/Downloads/01-problem-set/

R version 4.3.2 (2023-10-31) -- "Eye Holes"
Copyright (C) 2023 The R Foundation for Statistical Computing
Platform: aarch64-apple-darwin20 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```

Environment

History

Connections

Tutorial

R

Global Environment

Functions

set

function (name, value)

Files

Plots

Packages

Help

Viewer

Presentation

New Folder

New Blank File

Delete

Rename

More

Home

Downloads

01-problem-set

Name

Size

Modified

..

197 B

Jan 9, 2024, 3:19 PM

.Rhistory

258 B

Jan 9, 2024, 3:21 PM

01-problem-set.Rproj

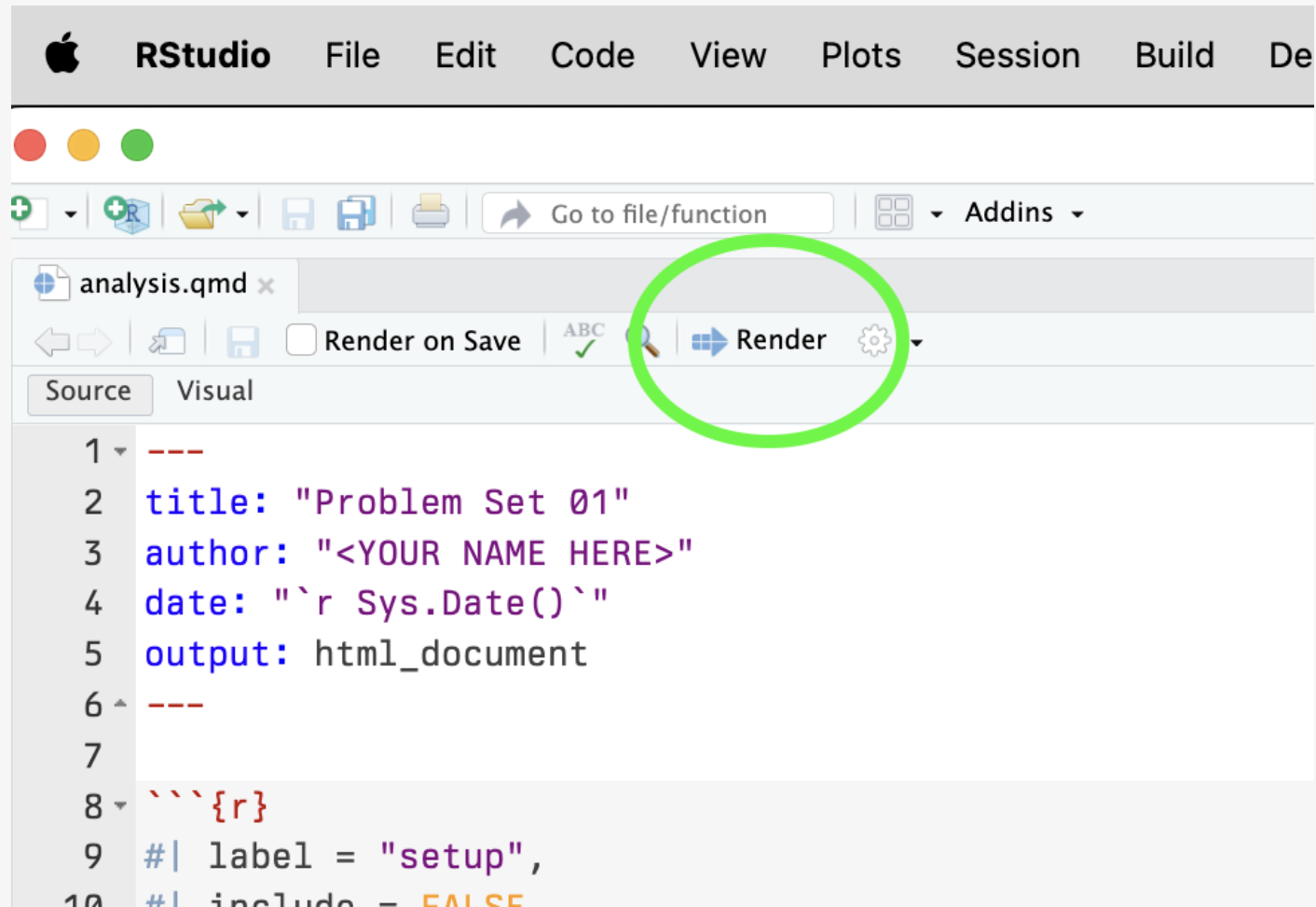
2.1 KB

Jan 9, 2024, 2:59 PM

analysis.qmd

data

Try **rendering** the problem set



And render your document

Write this out inside the “code chunk” in your notes.

```
library(tidyverse)
library(gapminder)

p ← ggplot(data = gapminder,
           mapping = aes(x = gdpPercap,
                         y = lifeExp))

p + geom_point()
```

