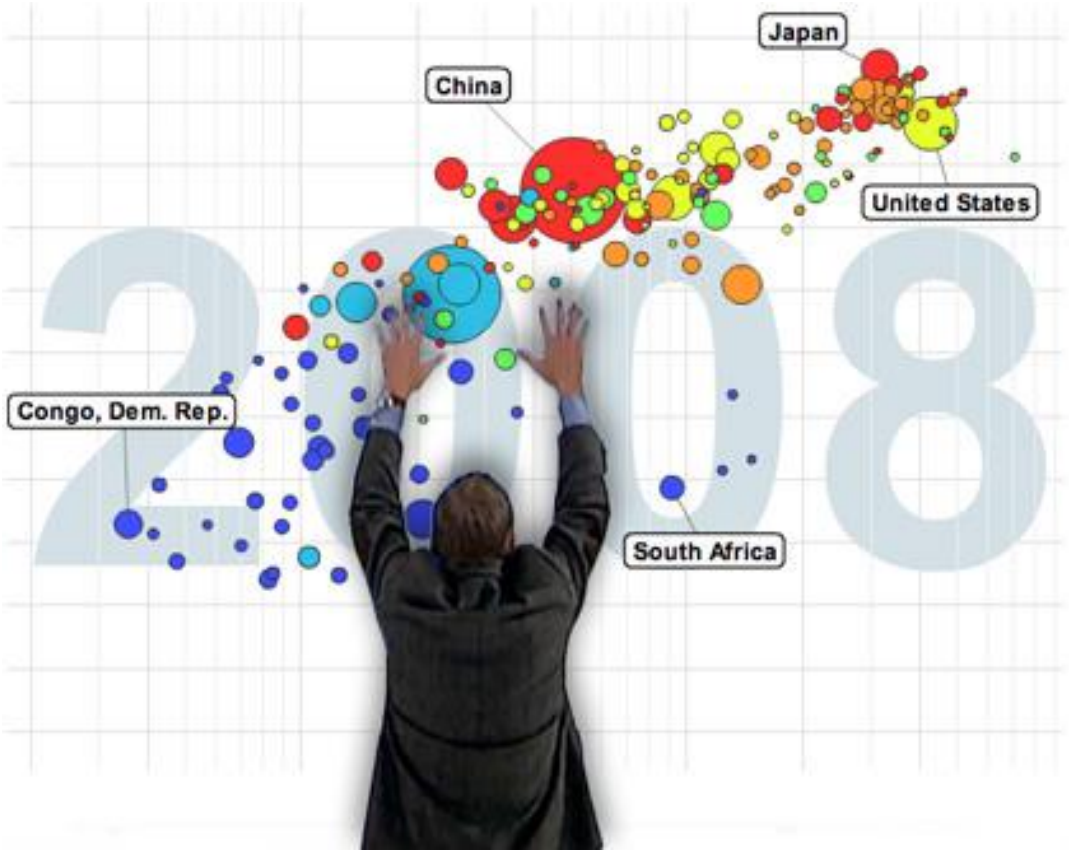
GAPMINDER

200 Countries & 200 Years

Hans Rosling's
200 Countries, 200 Years, 4 Minutes

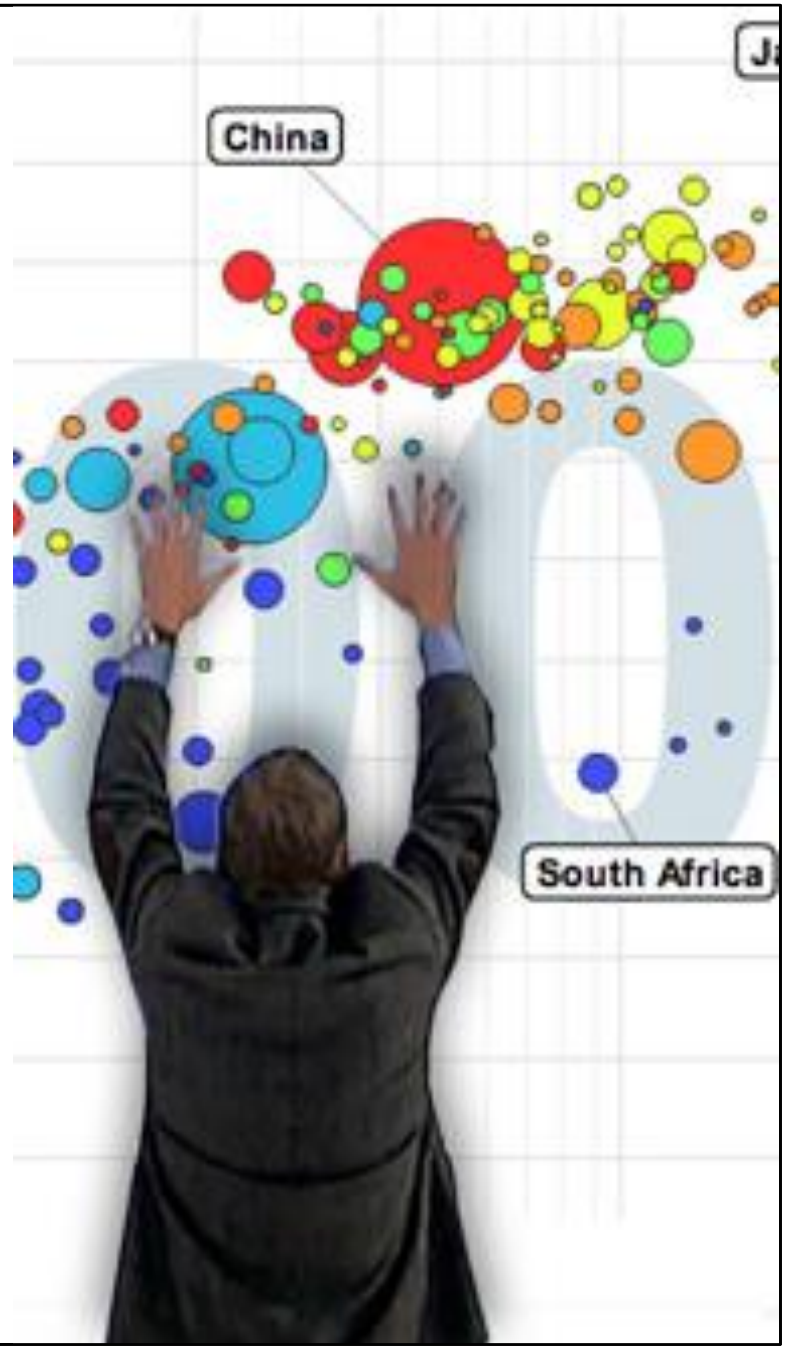


In this spectacular section of '*The Joy of Stats*' Hans tells the story of the world in 200 countries over 200 years using 120,000 numbers - in just four minutes.

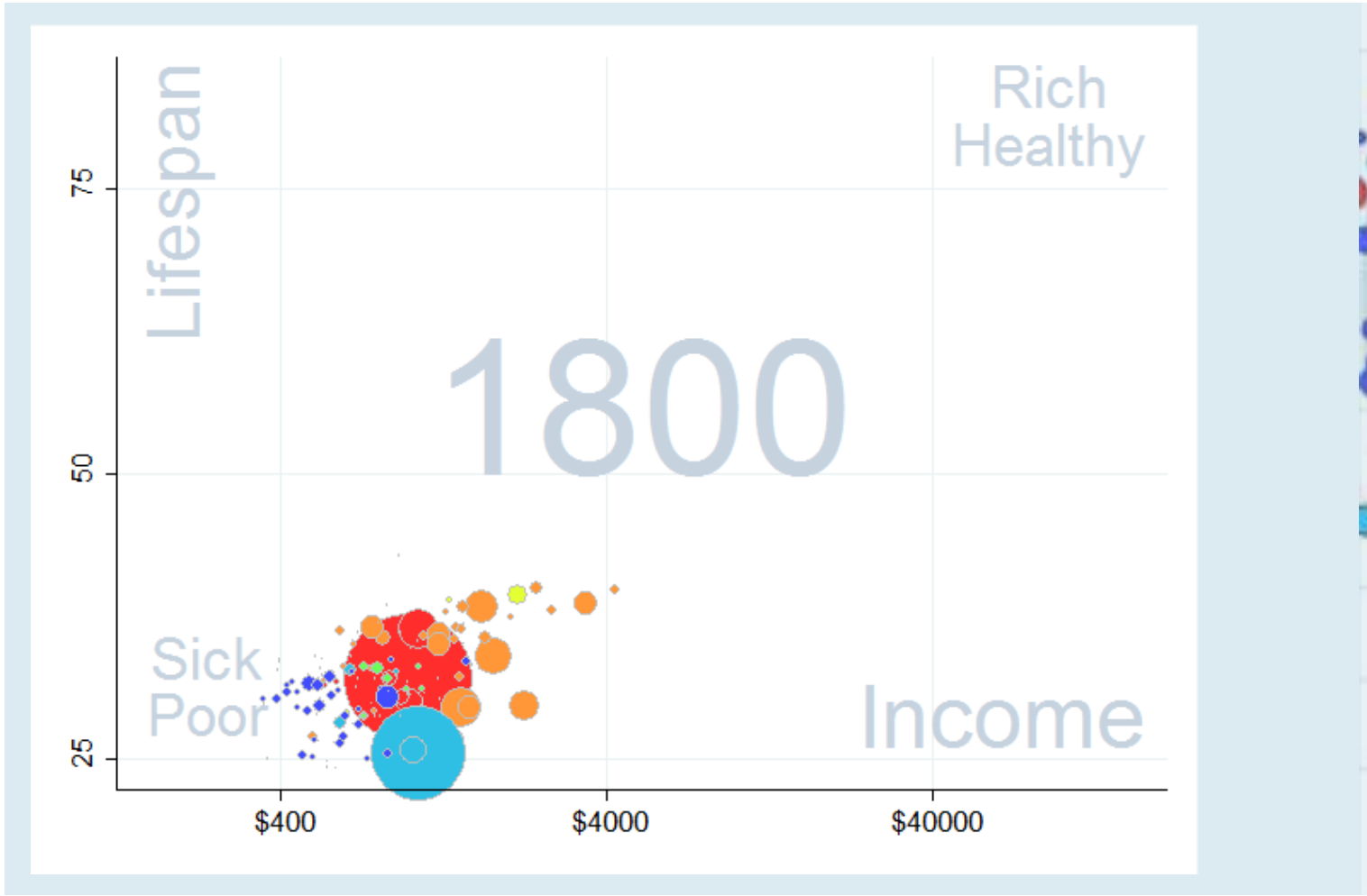
Plotting life expectancy against income for every country since 1810, Hans shows how the world we live in is radically different from the world most of us imagine

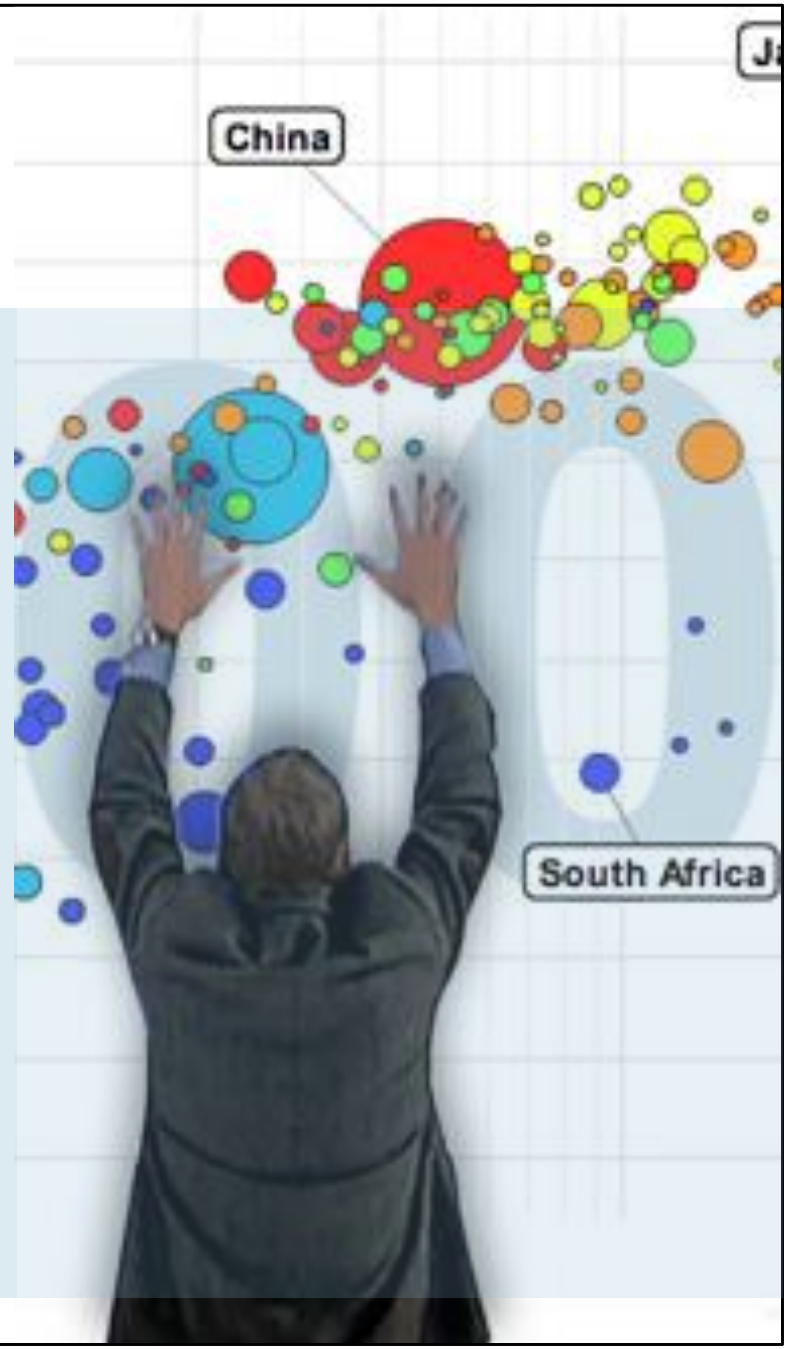
Project 1

Recreate Hans Rosling's 200 Countries, 200 Years ...

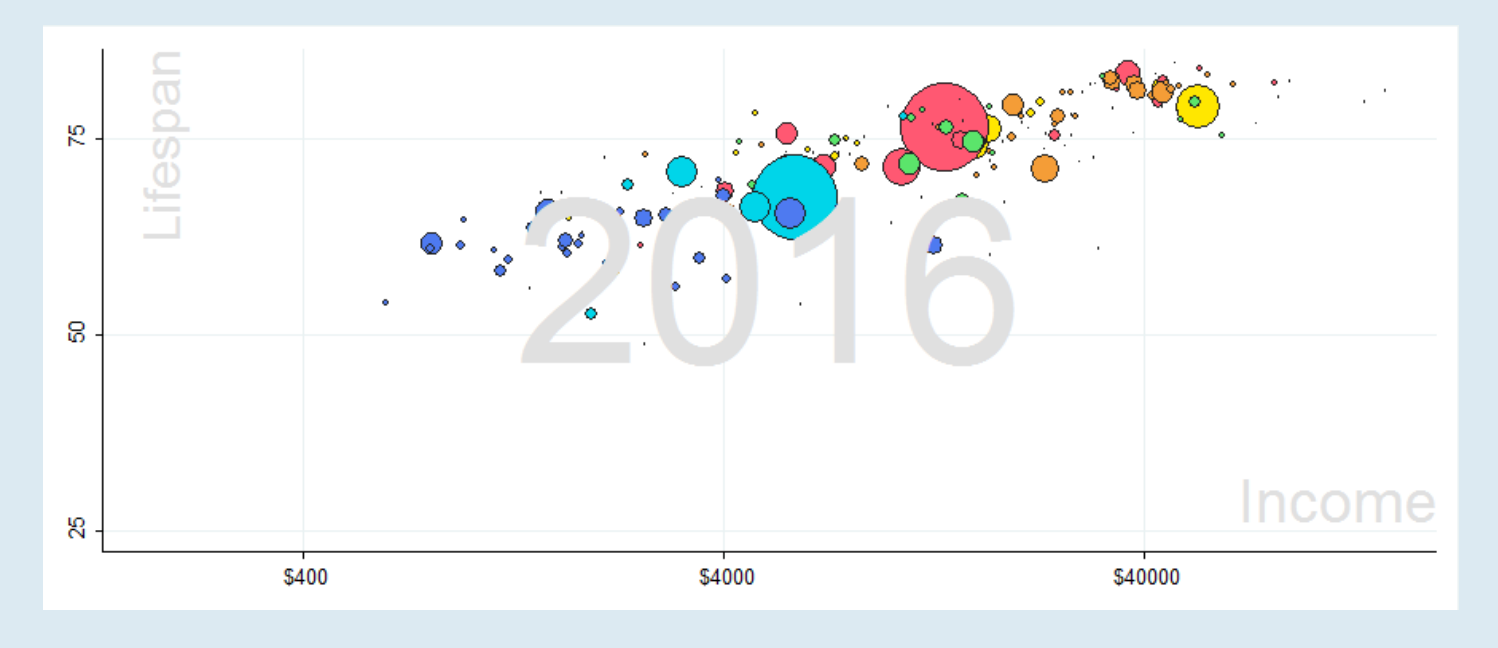


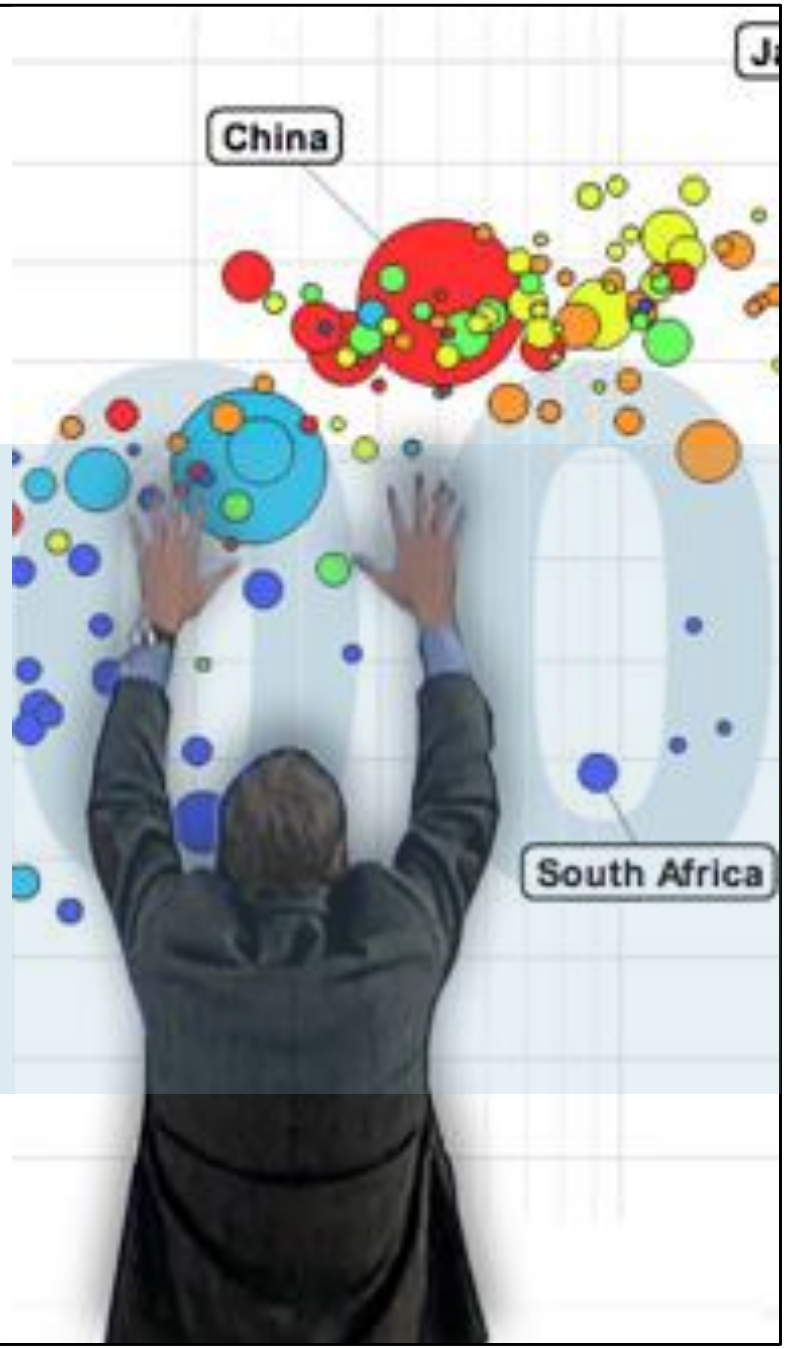
In Stata


Lifespan
Rich
Healthy
1800
Sick
Poor
Income
75
50
25
$400
$4000
$40000


China
South Africa

In Stata

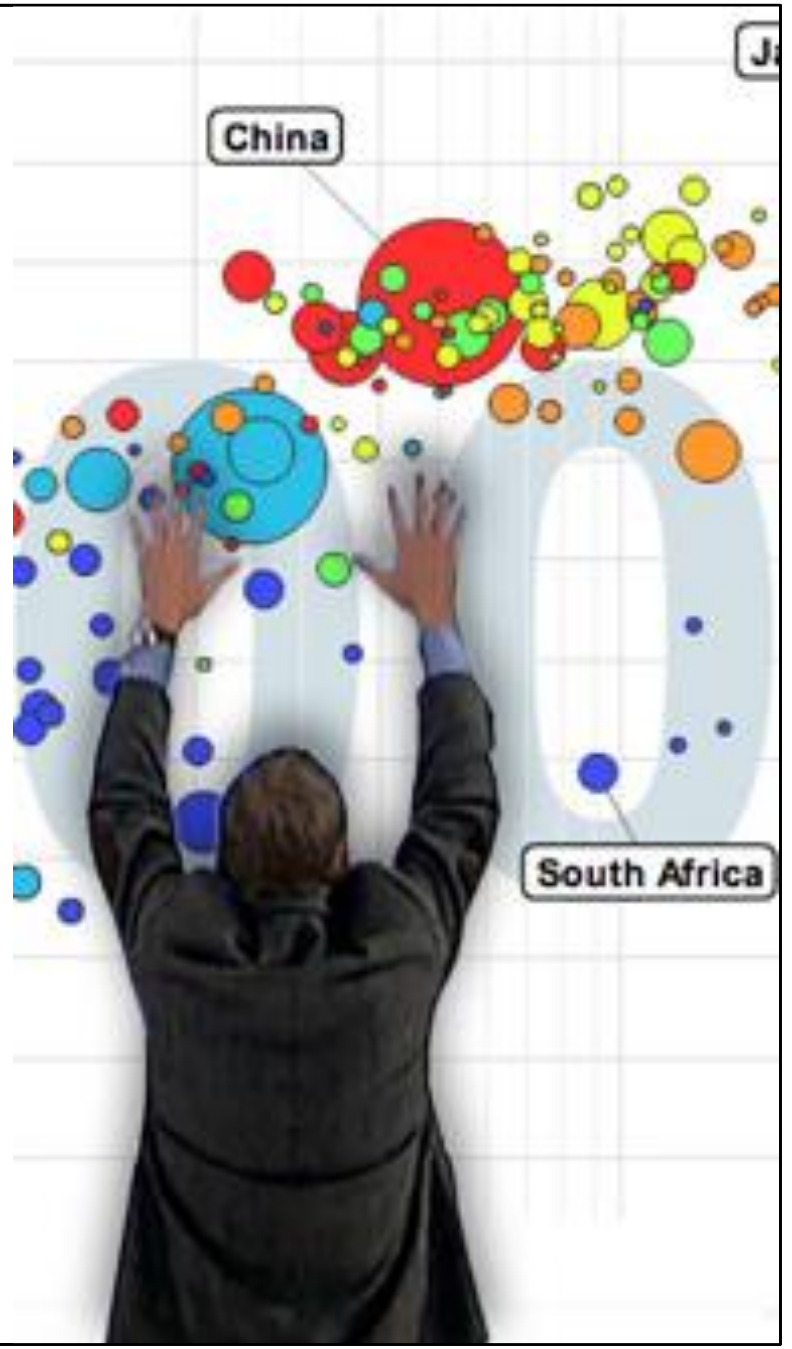

Lifespan
75
50
25
2016
Income
$400
$4000
$40000


China
South Africa

Outline

Project 1

1. Download *GapMinder* Data
2. Import into Stata
3. Clean, Reshape, Merge
4. Save Formatted Data
5. Graph & Export



Get Data

Project 1

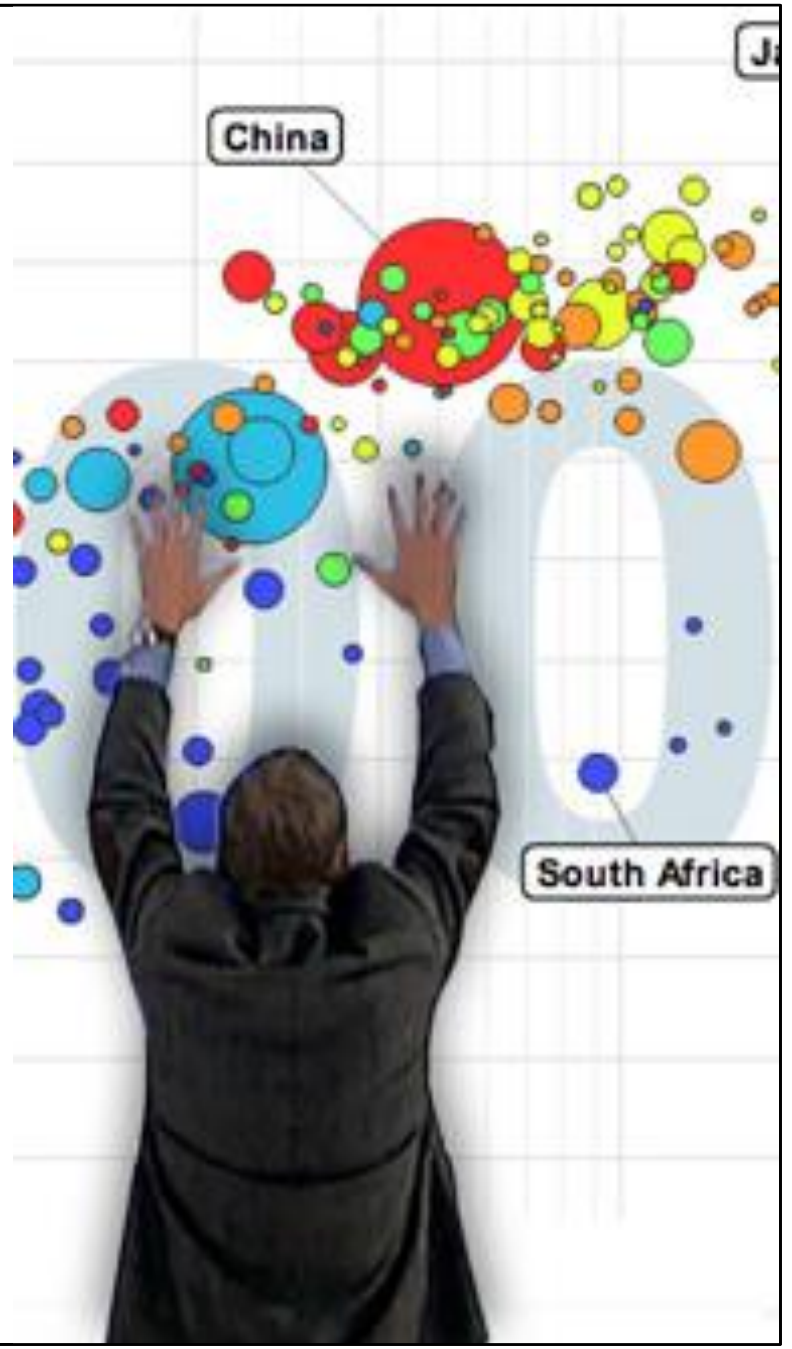
Source: www.gapminder.org

Data > Search >

- Life expectancy, Income per person, Total Population

Check Source, Availability, & Formatting >

- Find, Visualize, & Download Data



Find

List of indicators in Gapminder World

Show 25 ▾ indicators Search: life expectancy

Indicator name	Data provider	Category	Subcategory	Download	View	Visualize
Data quality - Life expectancy	Various sources	For advanced users	Data quality (use as color)			
Life expectancy (years)	Various sources					
Life expectancy at birth, temporary update	Various sources	For advanced users	Alternative demography indicators			
Life expectancy at birth, with projections	Various sources	For advanced users	Projections			

Showing 1 to 4 of 4 entries (filtered from 519 total entries) Previous First 1 Last Next

- Search for Life expectancy, Income per person, Total population, or Regions.

Find

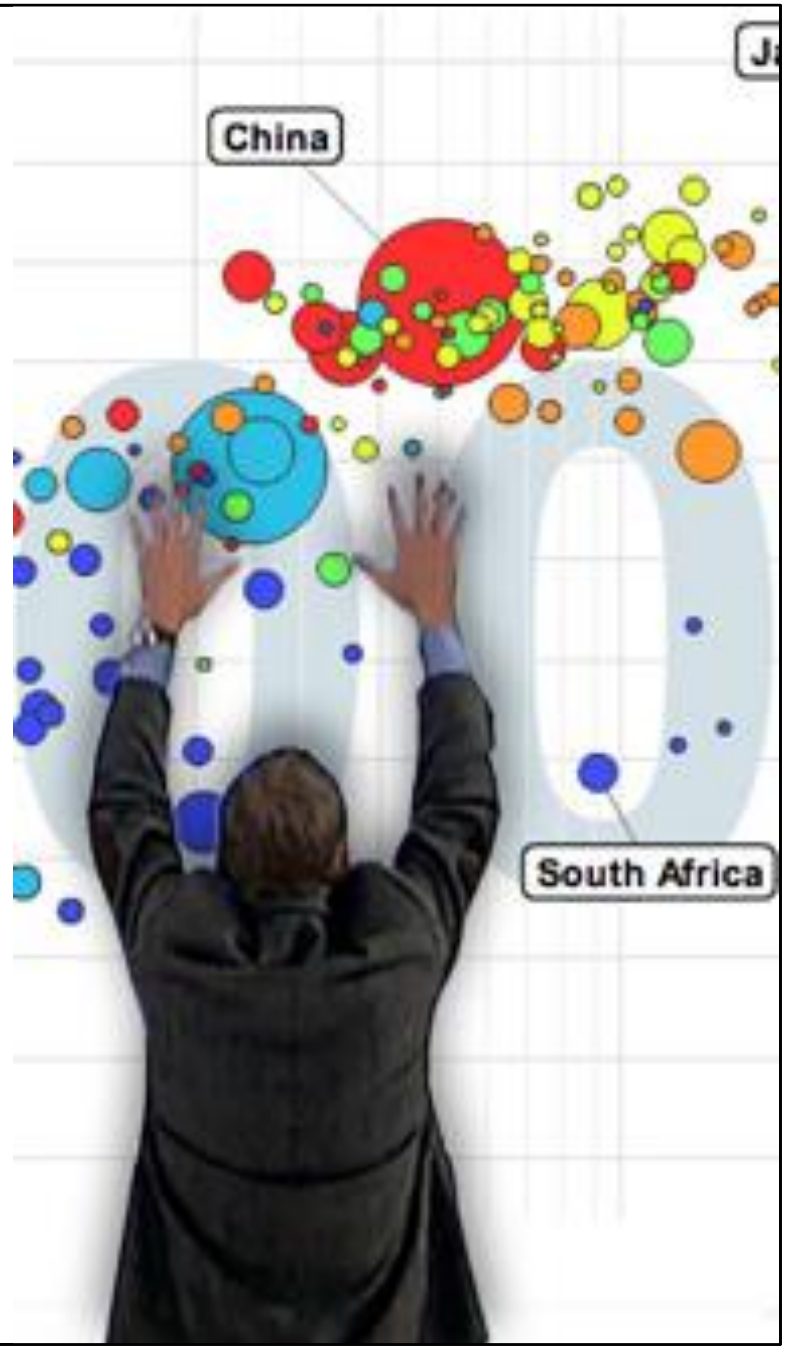
Project 1

Finding the ‘right’ data …

- Challenging, Time Consuming, Frustrating
- Requires Flexibility, Patience, & Attention to Detail

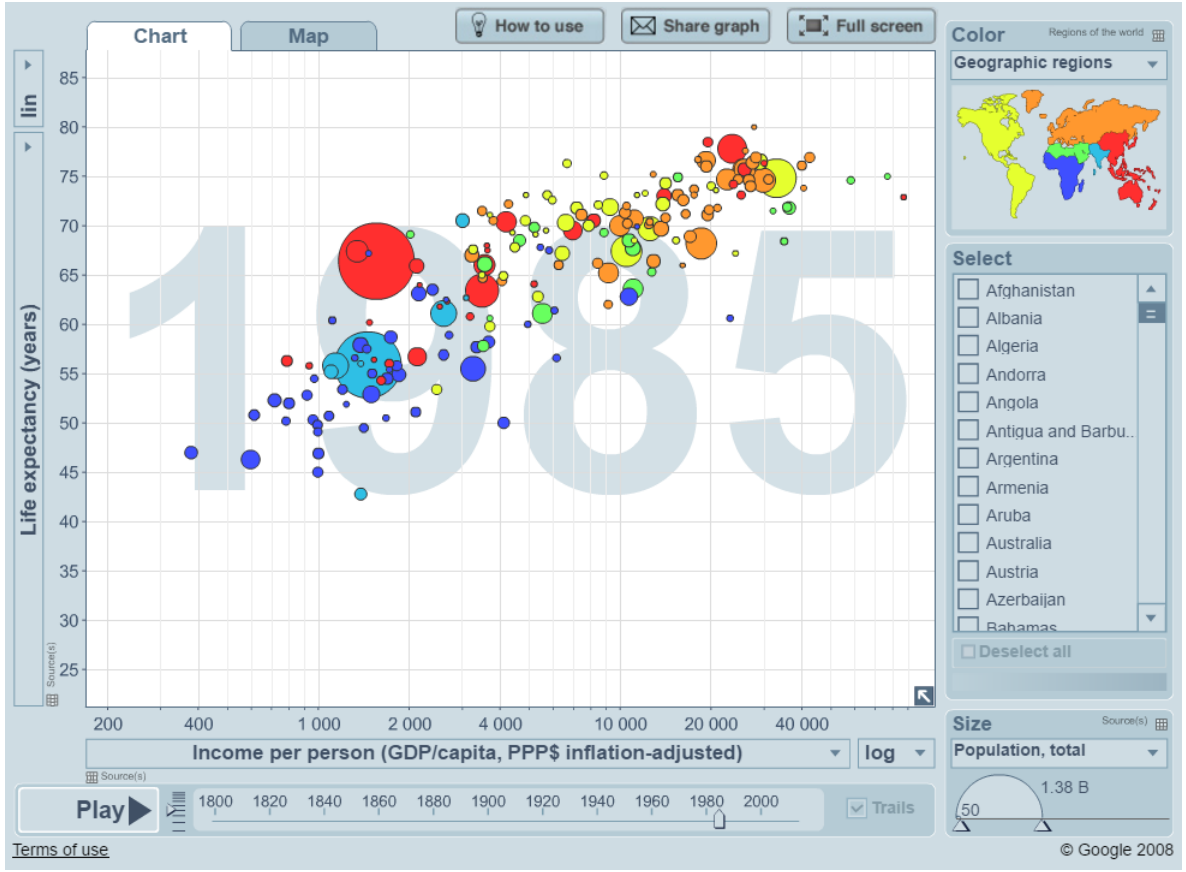
Hint: *“Begin at the beginning, and go on till you come to the end: then stop.”*

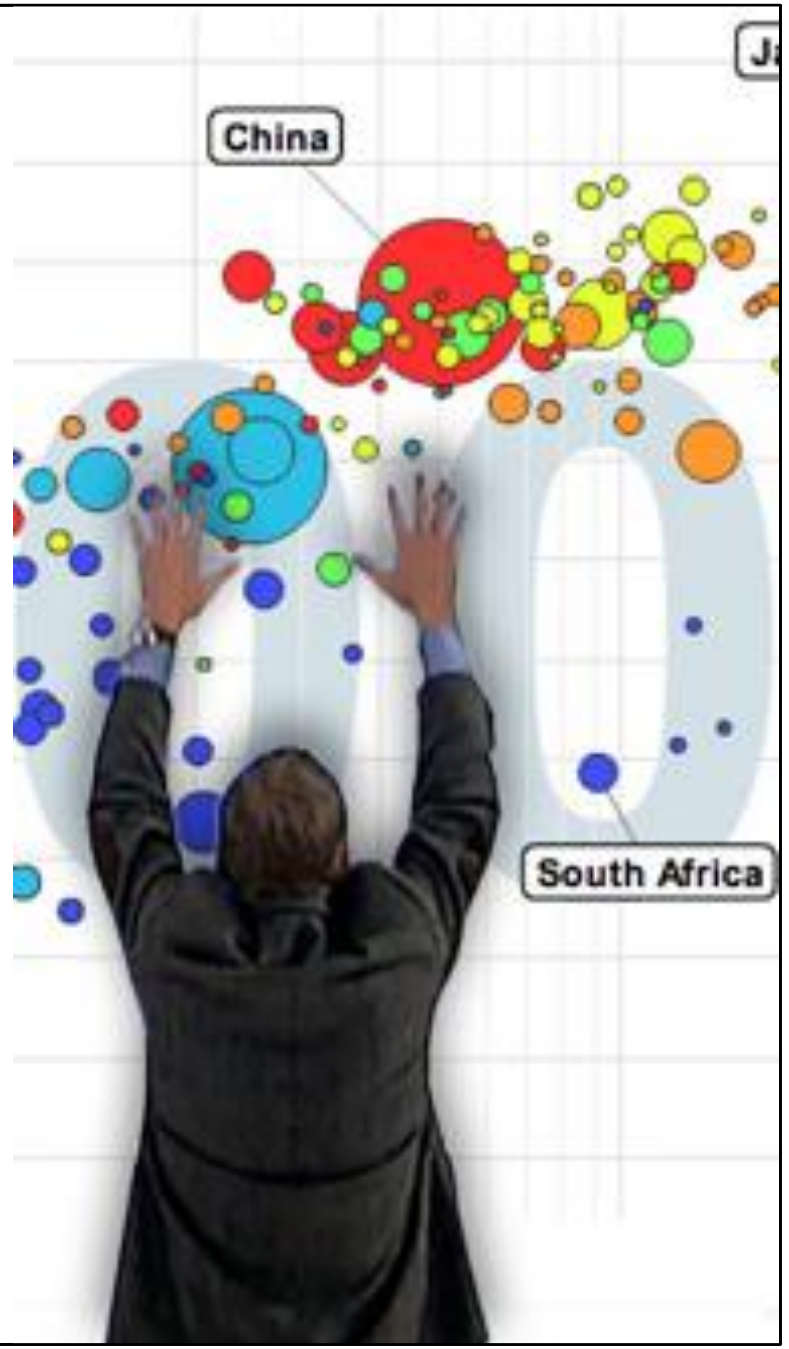
— Lewis Carroll, Alice in Wonderland



Visualize

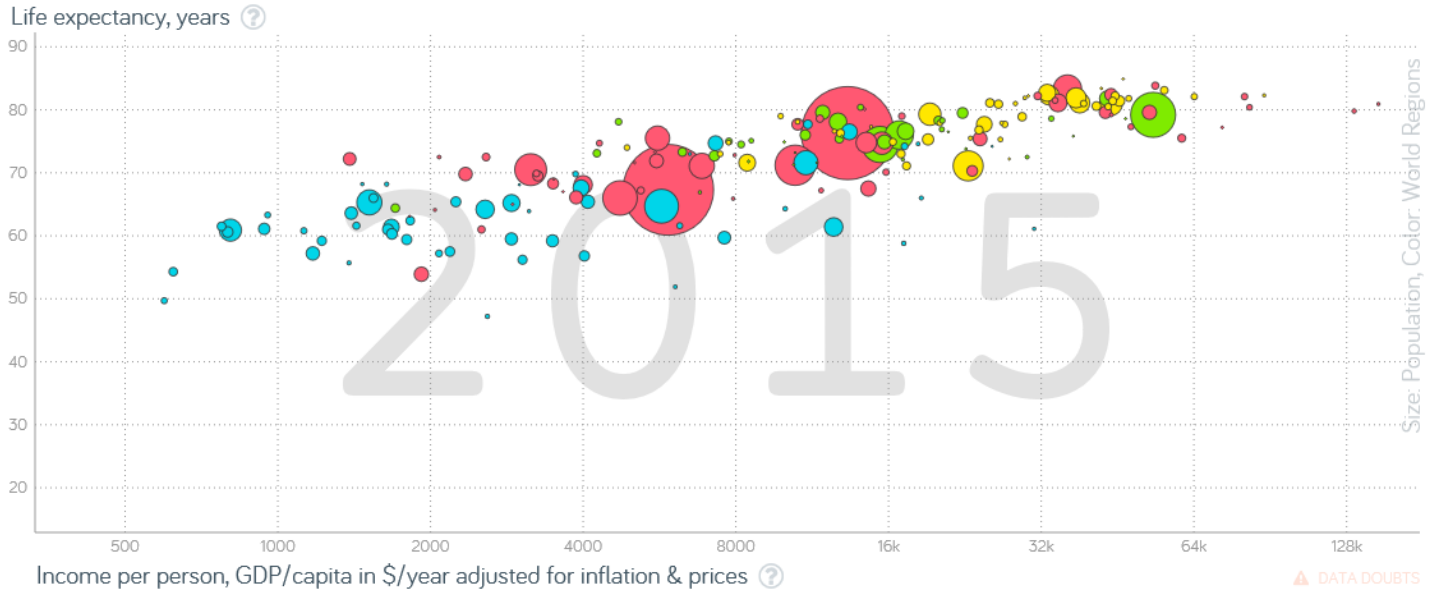
Old

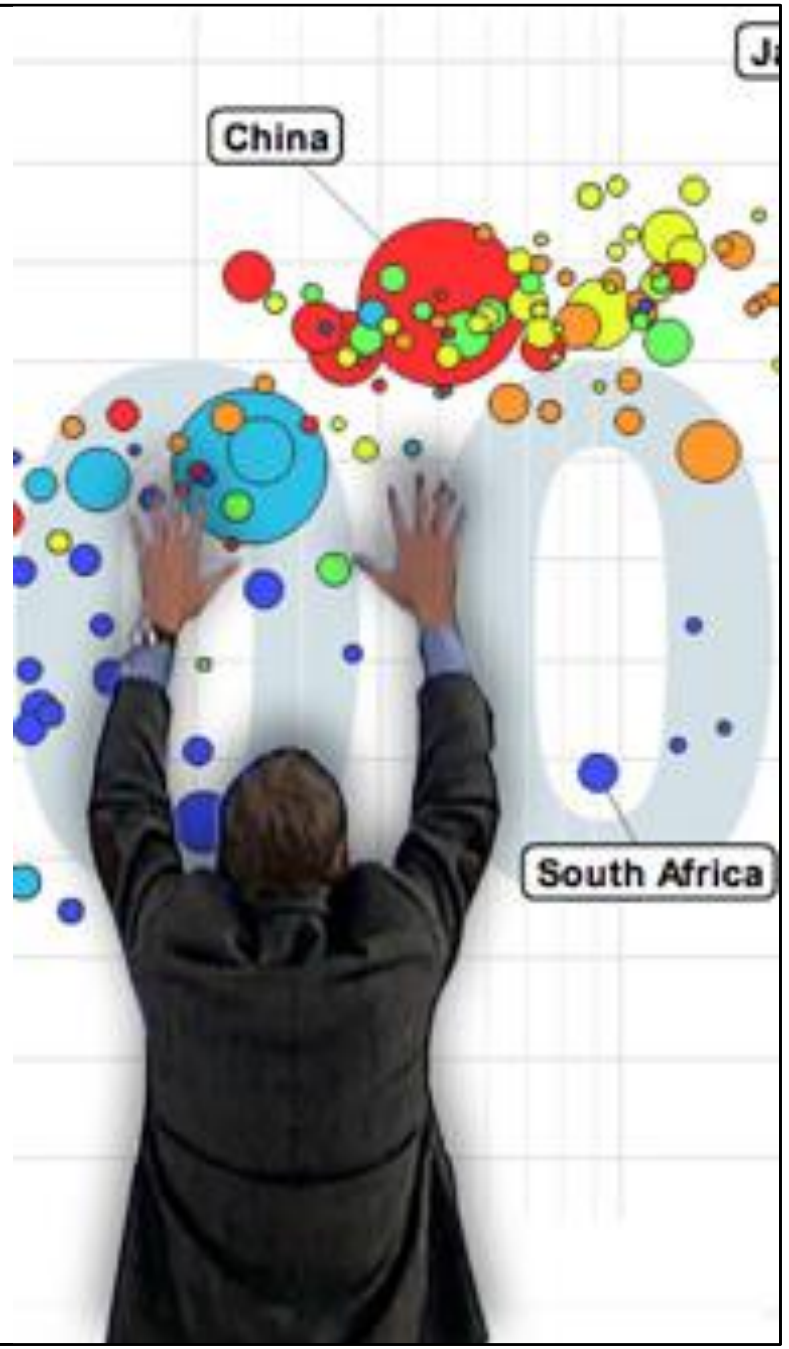




Visualize

New





- Think. The infographic displays the data! Start there.

Find

Project 1

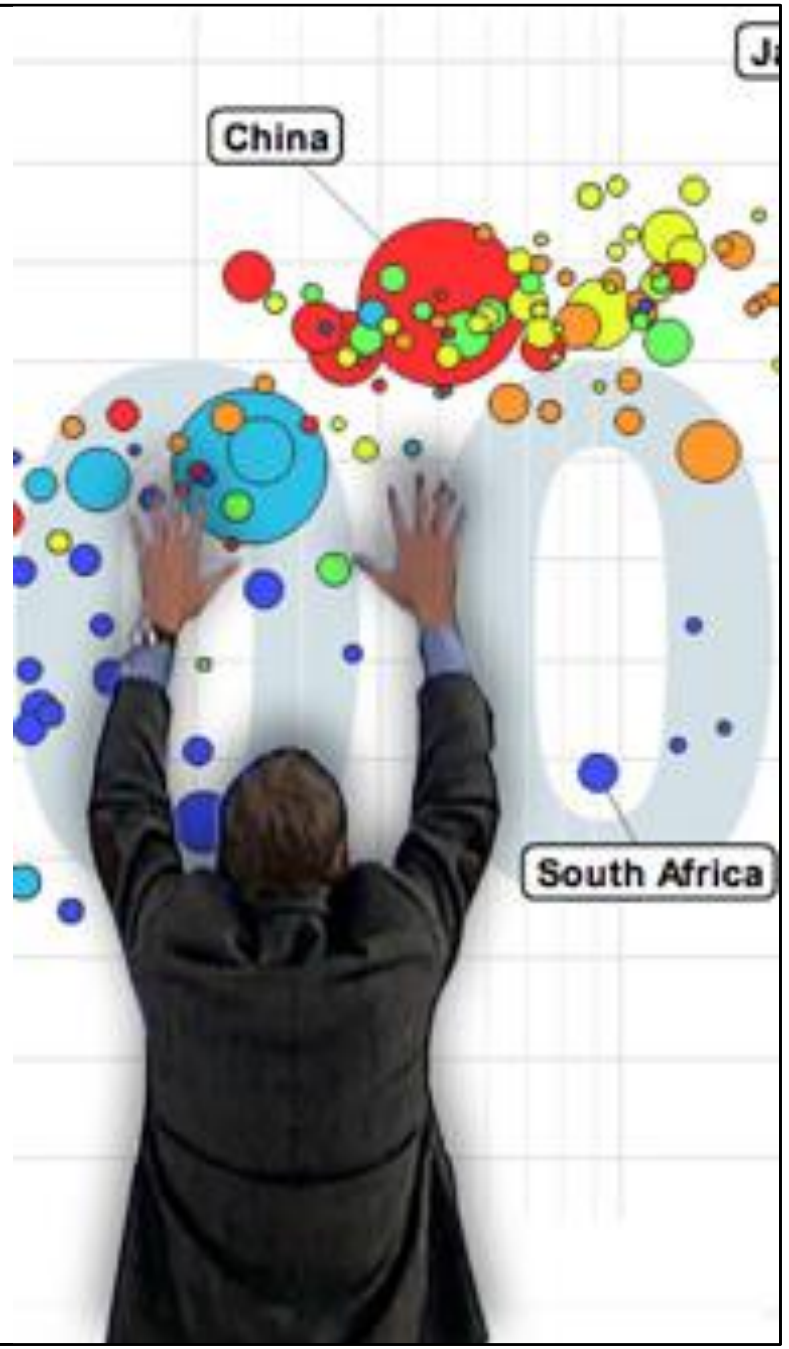
Y-Axis: Lifespan—*Life Expectancy at Birth (Years)*—Linear.

X-Axis: Income—*Income per person (GDP/capita, PPP$ inflation-adjusted)*—Log.

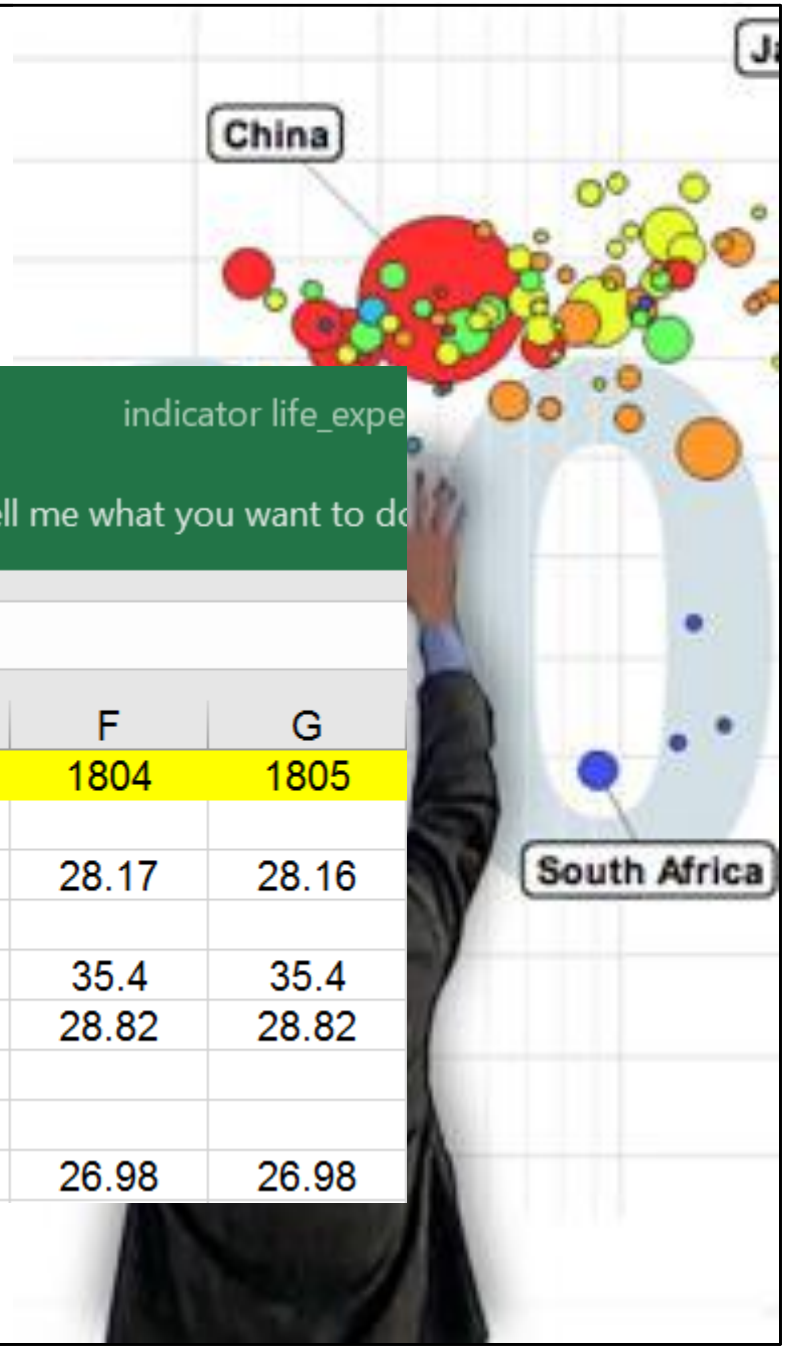
Bubble: *Population, total*—Normalized.

Color: Geographic Regions—Group 4 or 6.

Loop: Over Years.



Download



indicator life_expe

File Home Insert Page Layout Formulas Data Review View Tell me what you want to do

H17 | 29.17

	A	B	C	D	E	F	G
1	Life expectancy	1800	1801	1802	1803	1804	1805
2	Abkhazia						
3	Afghanistan	28.21	28.2	28.19	28.18	28.17	28.16
4	Akrotiri and Dhekelia						
5	Albania	35.4	35.4	35.4	35.4	35.4	35.4
6	Algeria	28.82	28.82	28.82	28.82	28.82	28.82
7	American Samoa						
8	Andorra						
9	Angola	26.98	26.98	26.98	26.98	26.98	26.98

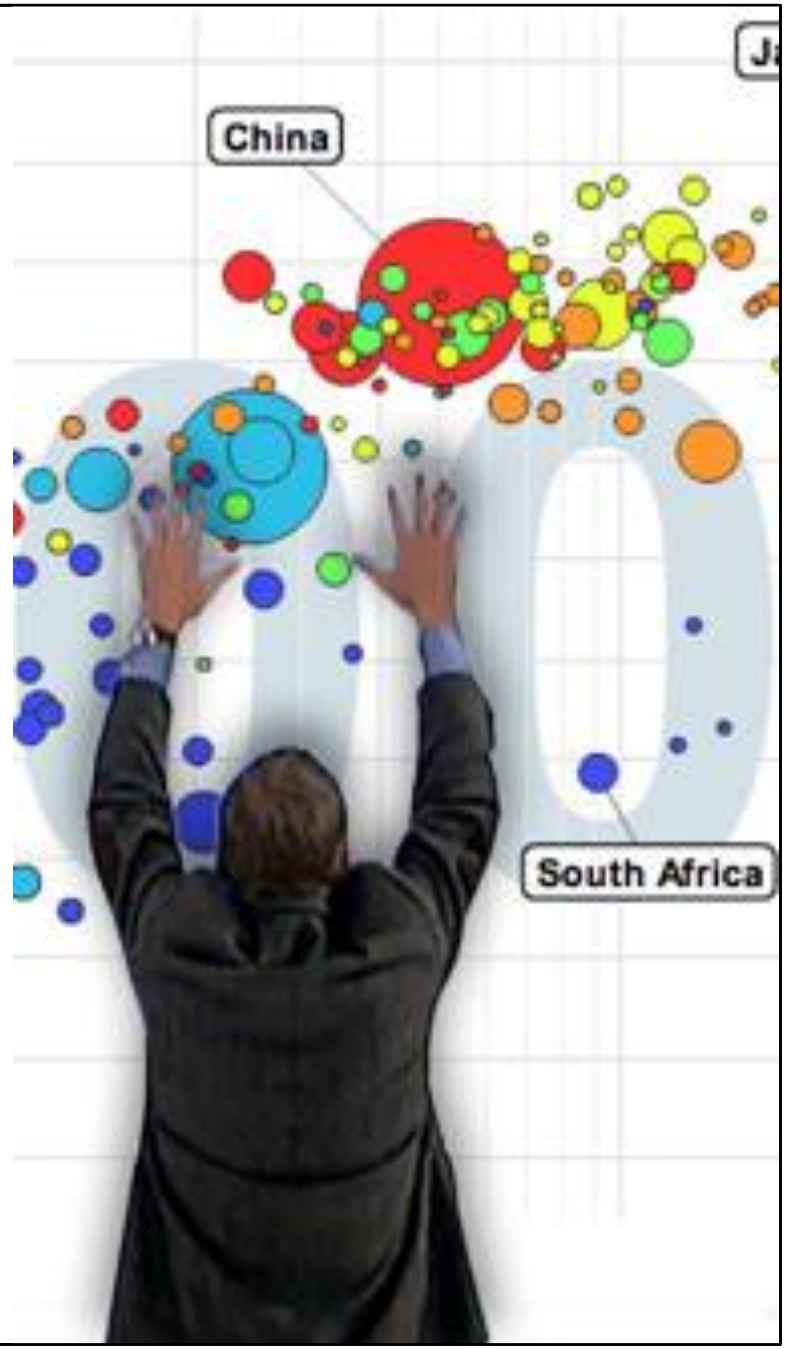
Import

Project 1

Do-file

- Insheet statement
- Drop if missing current data
- Reshape long
- Rename variable
- Sort by country & year
- Save as Stata .dta file

Lab 2: Five Files, Various Formats



Practice

Project 1

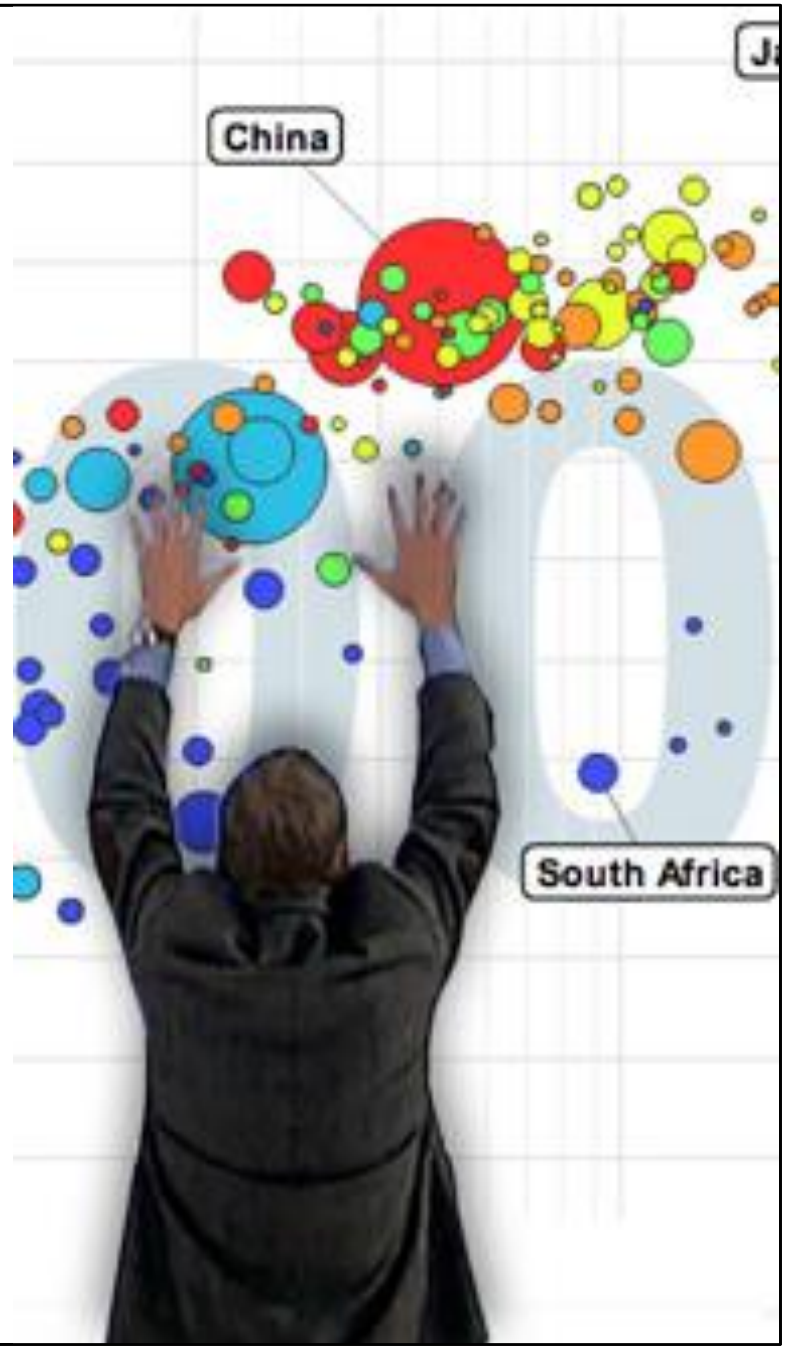
Today: Import Five Files, Various Pre-Formats

- Tab & comma delimited, excel, raw

Advanced: Import Raw *GapMinder* Data

- Option 1—Beginner—Preformat Var Names in Excel
- Option 2—Advanced—Rename Vars in Stata—Link.

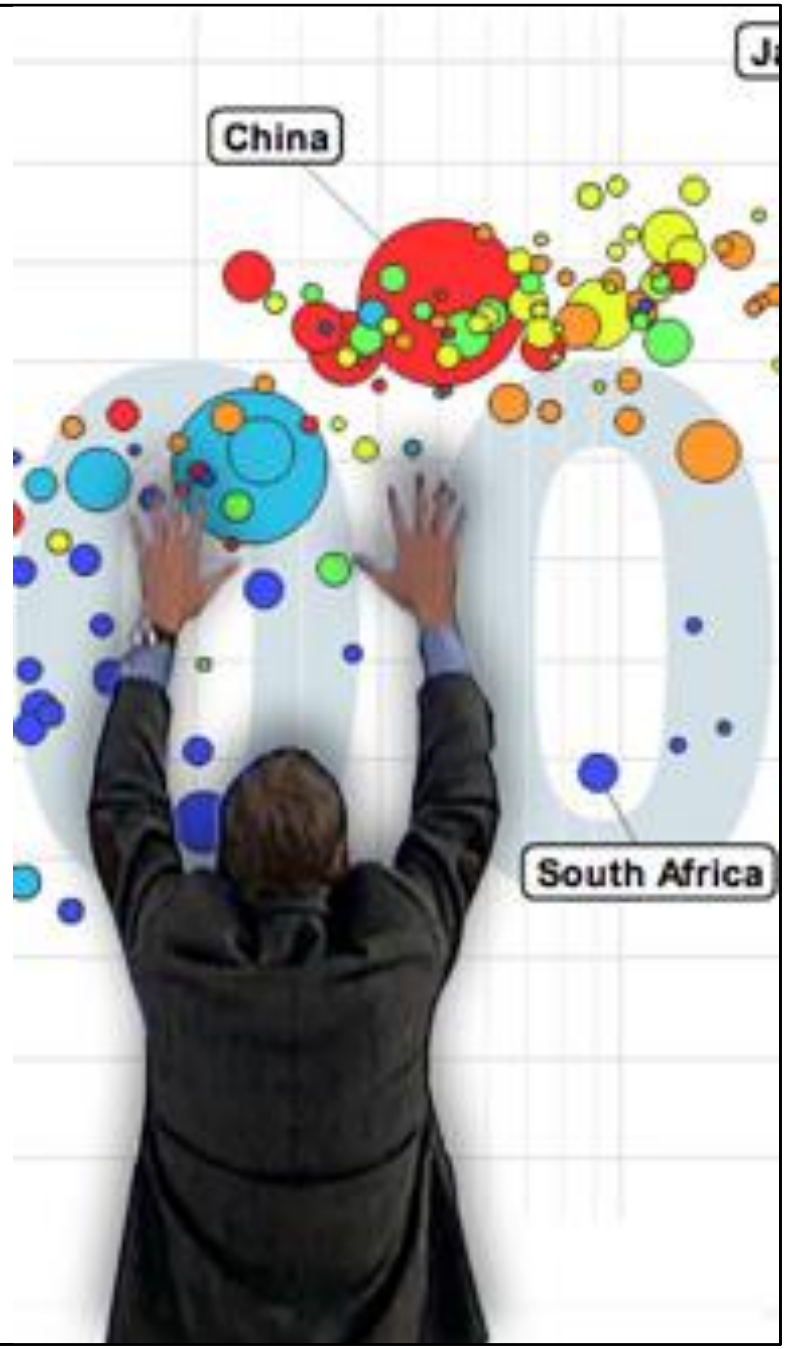
- See Extended Macro Function, Link.



Variables

Project 1

Variable Names	Wide	Long
Life Expectancy	ls1800	life
Total Population	tp1850	pop
Gross Domestic Product	gdp1900	gdp
Country Names	Vars	cc
Regions	group6	group6

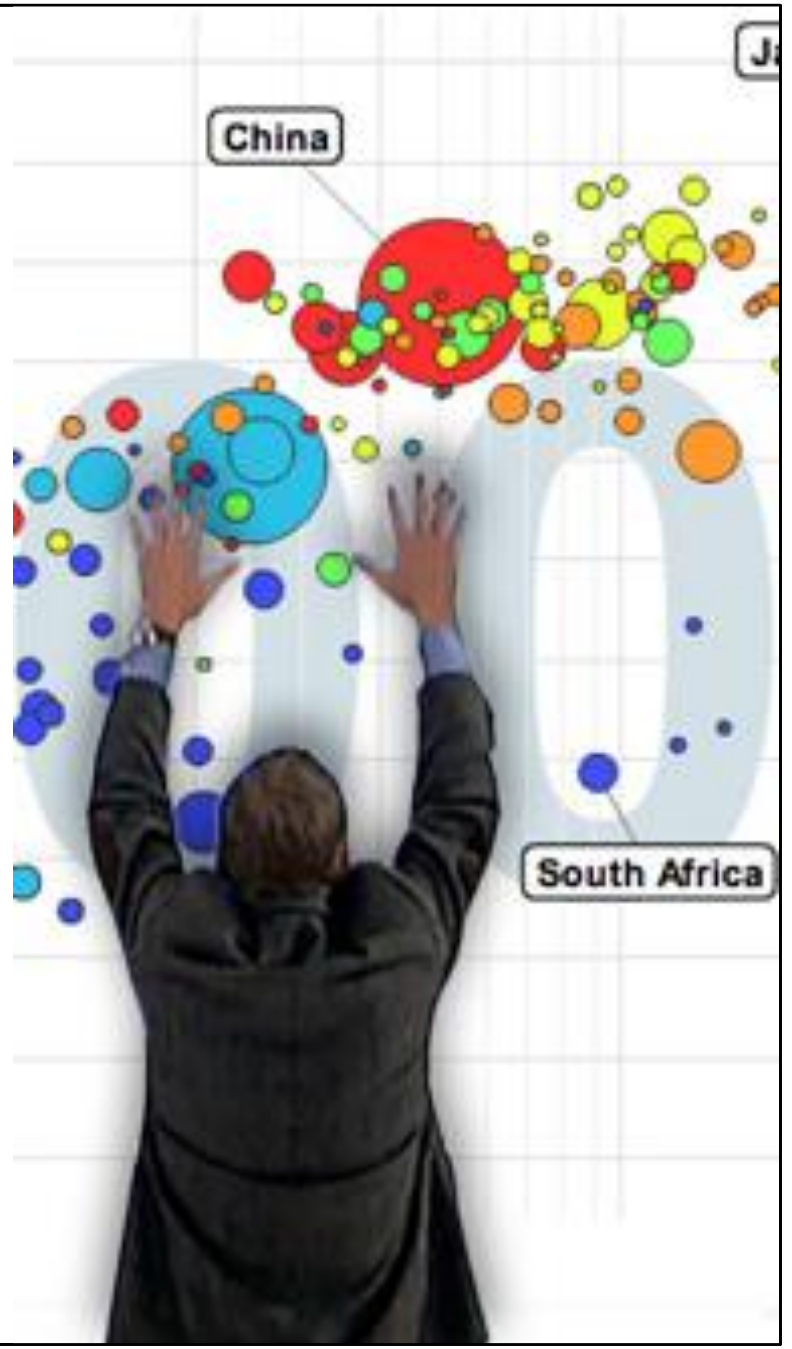


Clean

Project 1

Do-file

- Use Imported Data
- Describe & Summarize
- Reshape long
- Carryforward, fill-in missing
- Truncate lifespan (<24)
- Ln gdp
- Save

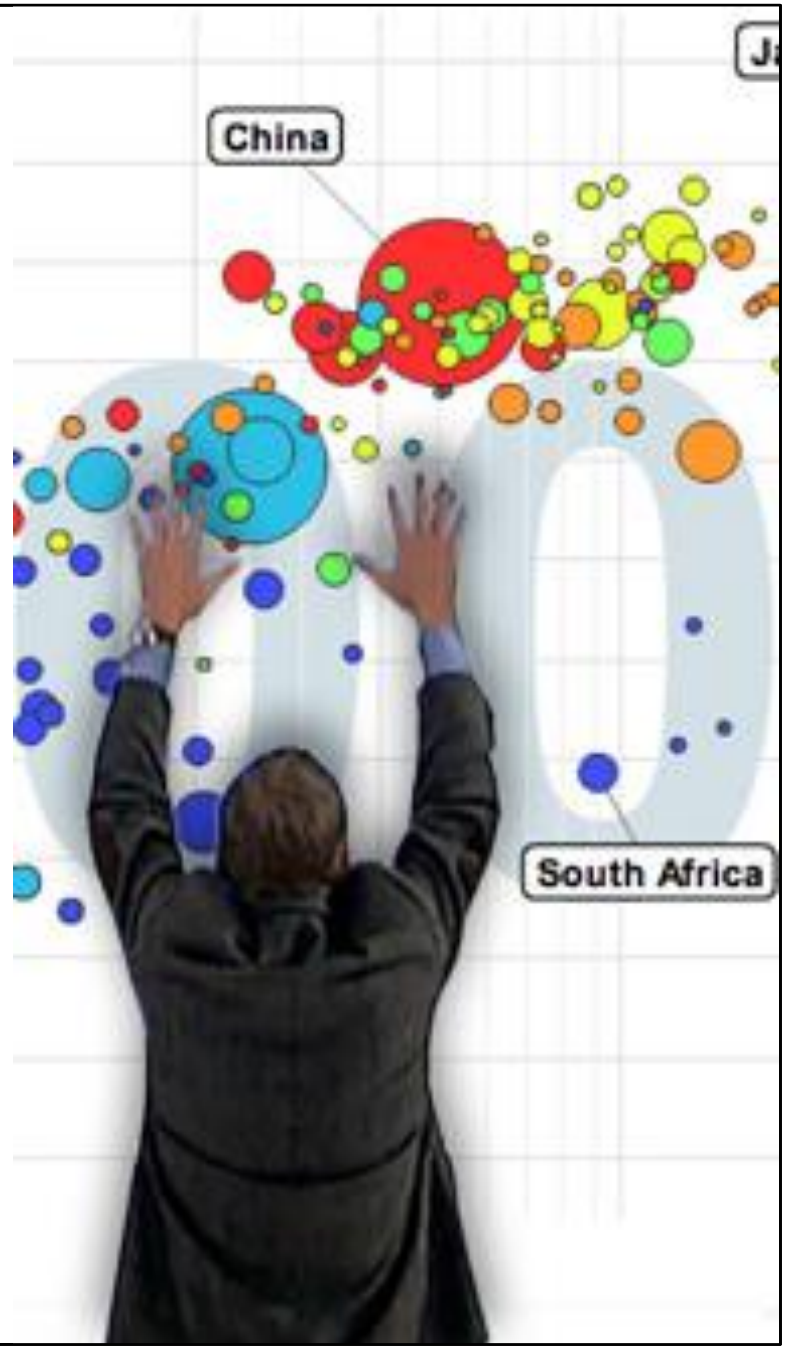


Merge

Project 1

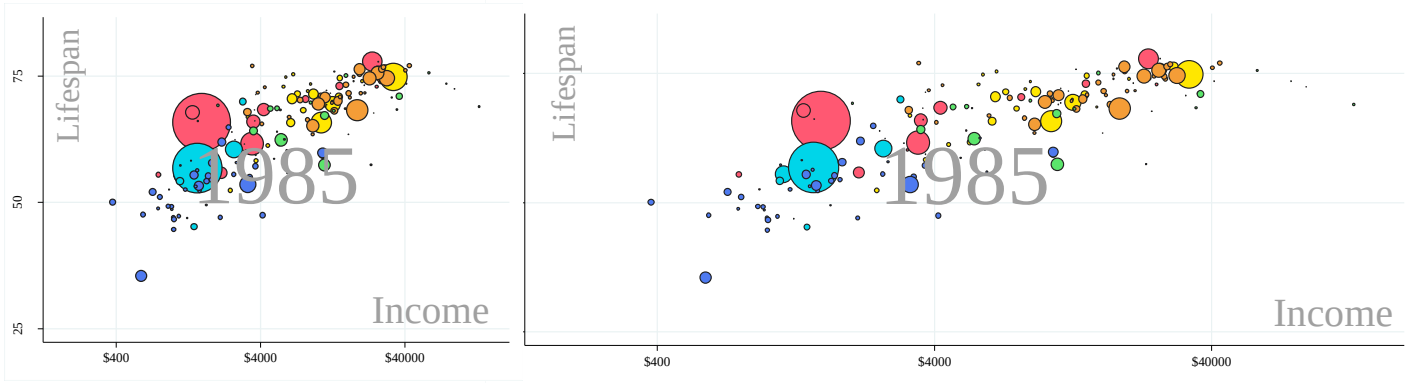
Do-file

- Merge 1:1, m:1, 1:m
- Drop _merge
- Sort by cc & year
- Save Merged Data



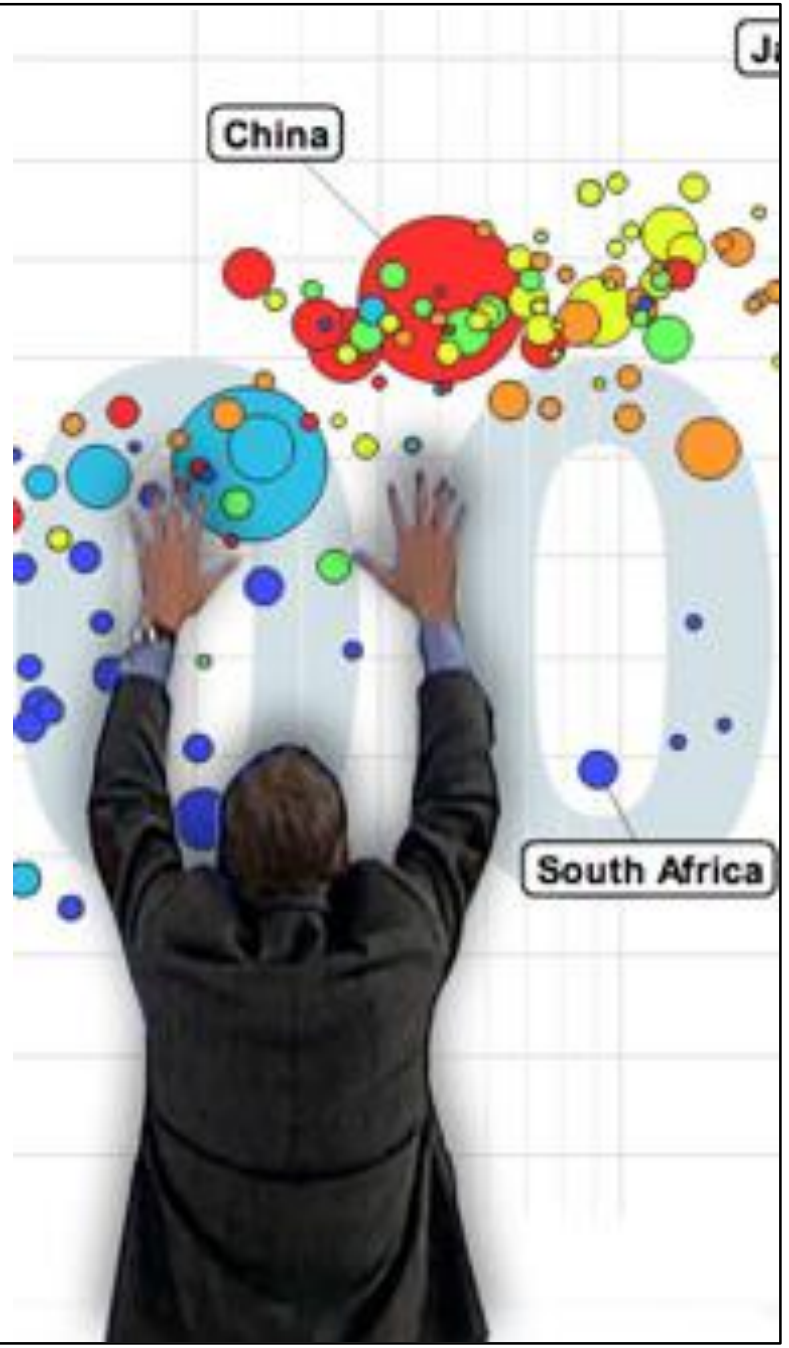
Graph

Project 1



Do-file

- separate life, by(group6)
- tw scatter life? gdp if year==1985 [w=pop] [, options]
- graph export 1985.png, replace



Loop

Project 1

Do-file

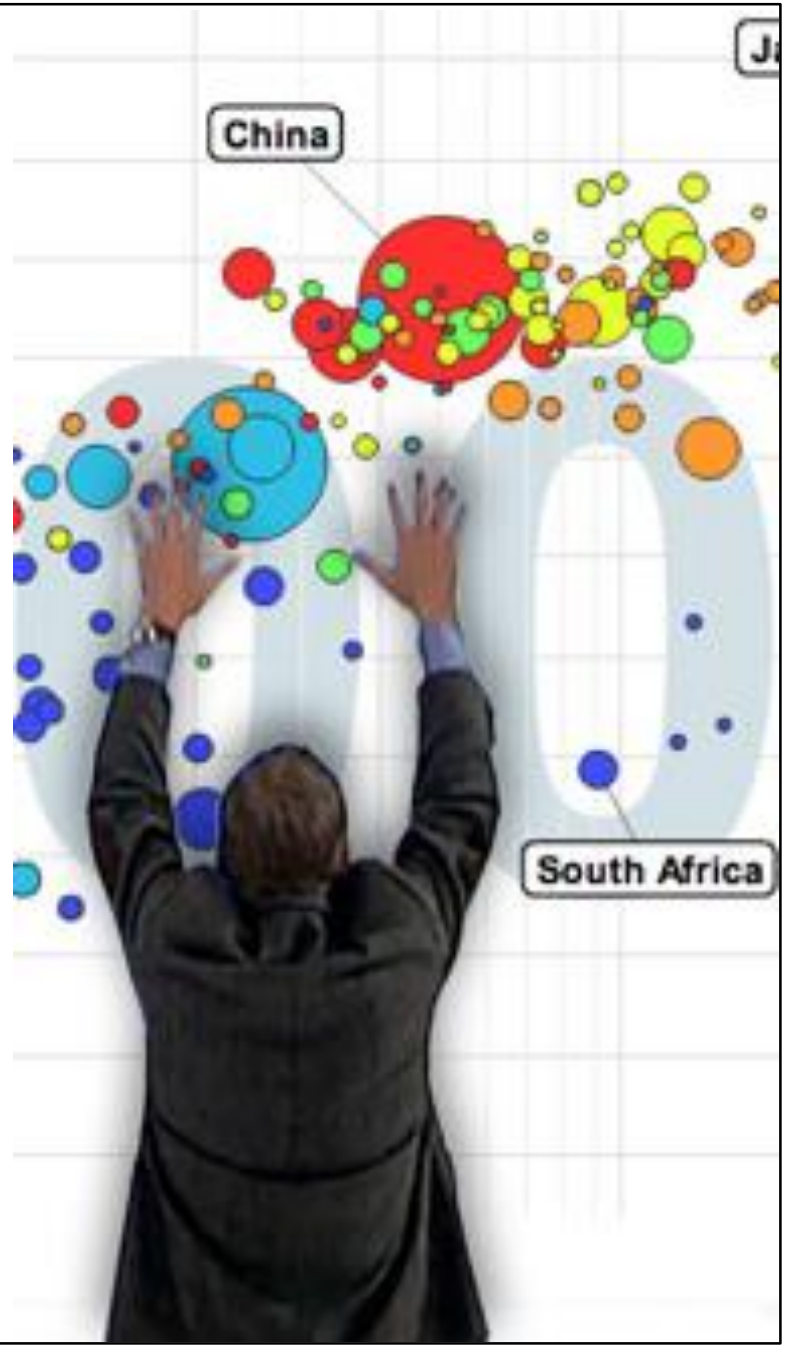
- set more off
- forvalues i=1800/2016 {

  tw scatter life? gdp if year==`i' [w=pop] [, options]

  ...

  graph export `i'.png, replace

  }



Combine

Project 1

Additional tools

- Animated file—ezgif.com
- Use Eyedropper to match colors—MS
- Find good colors—colorhexa.com