

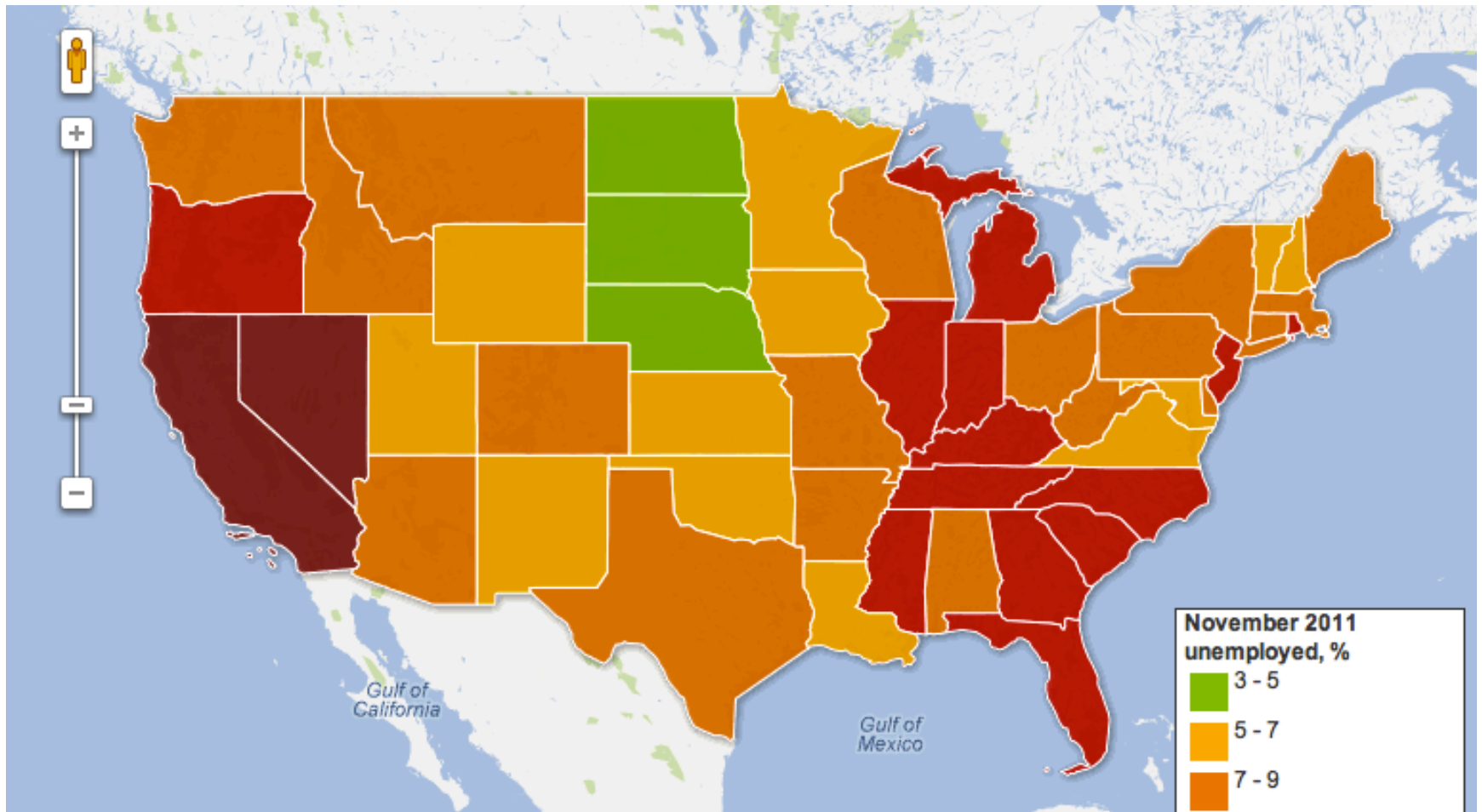
Day 2: Introduction to Visualizations

matplotlib

Summmarize

Complex

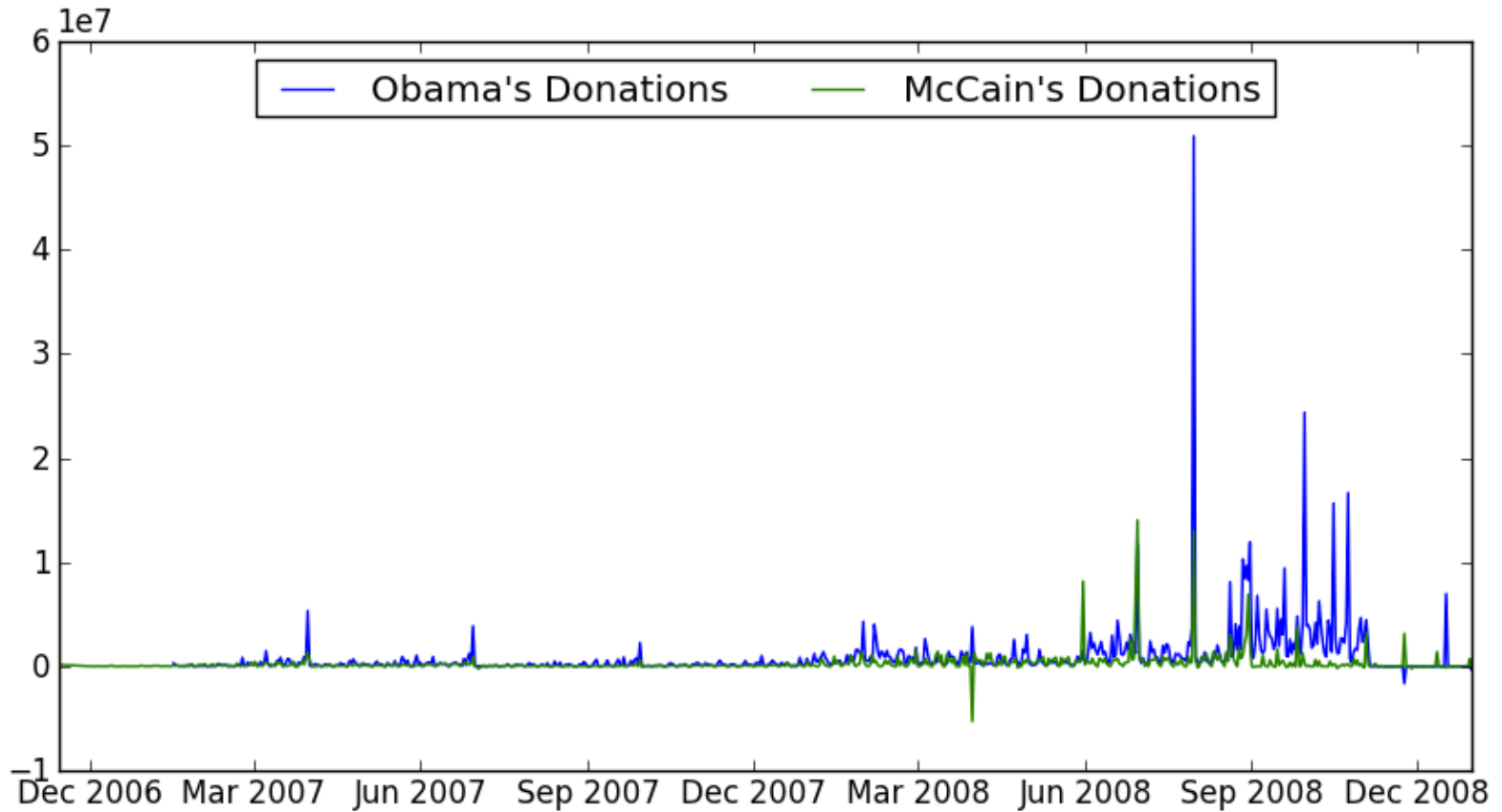
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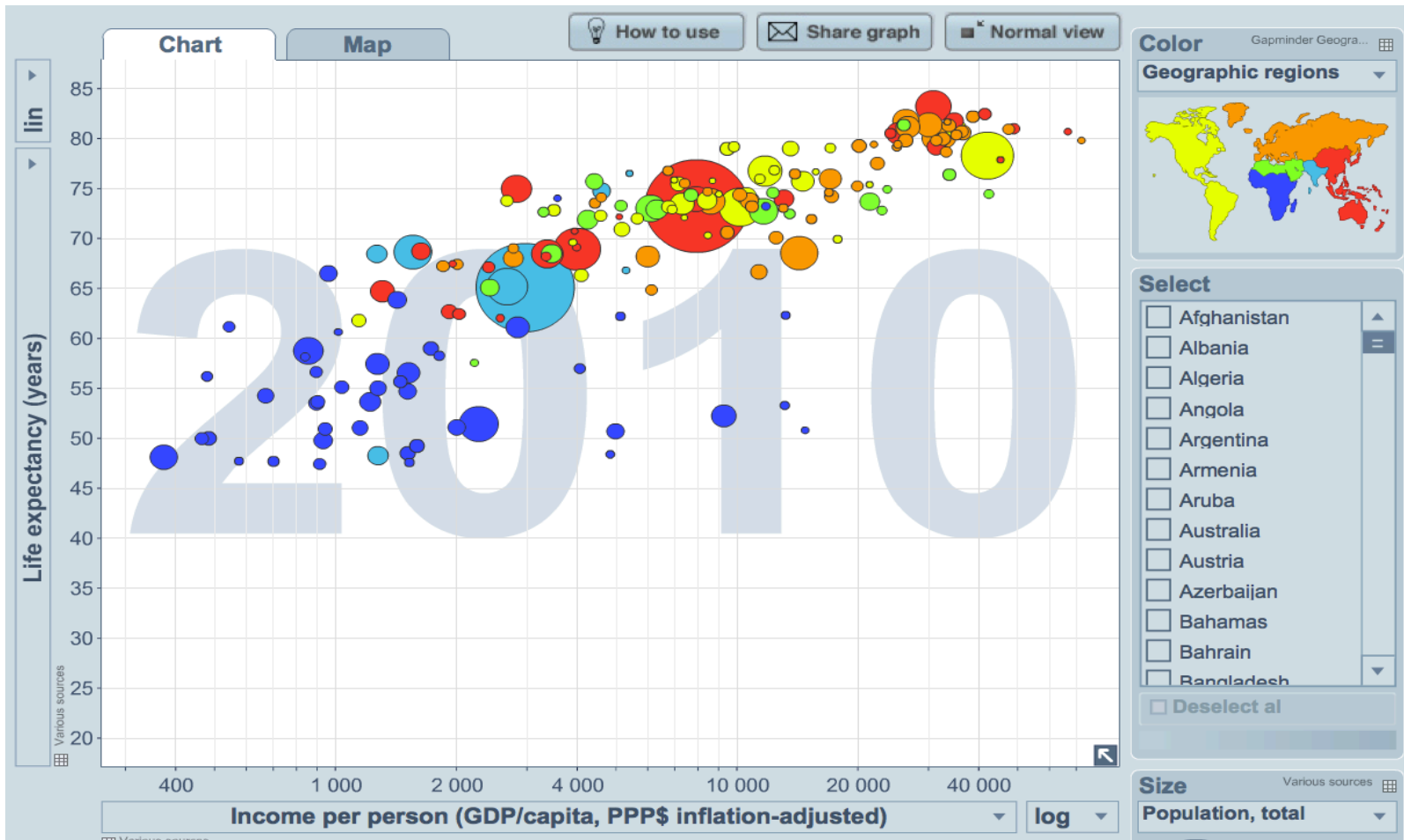


2

Exploring

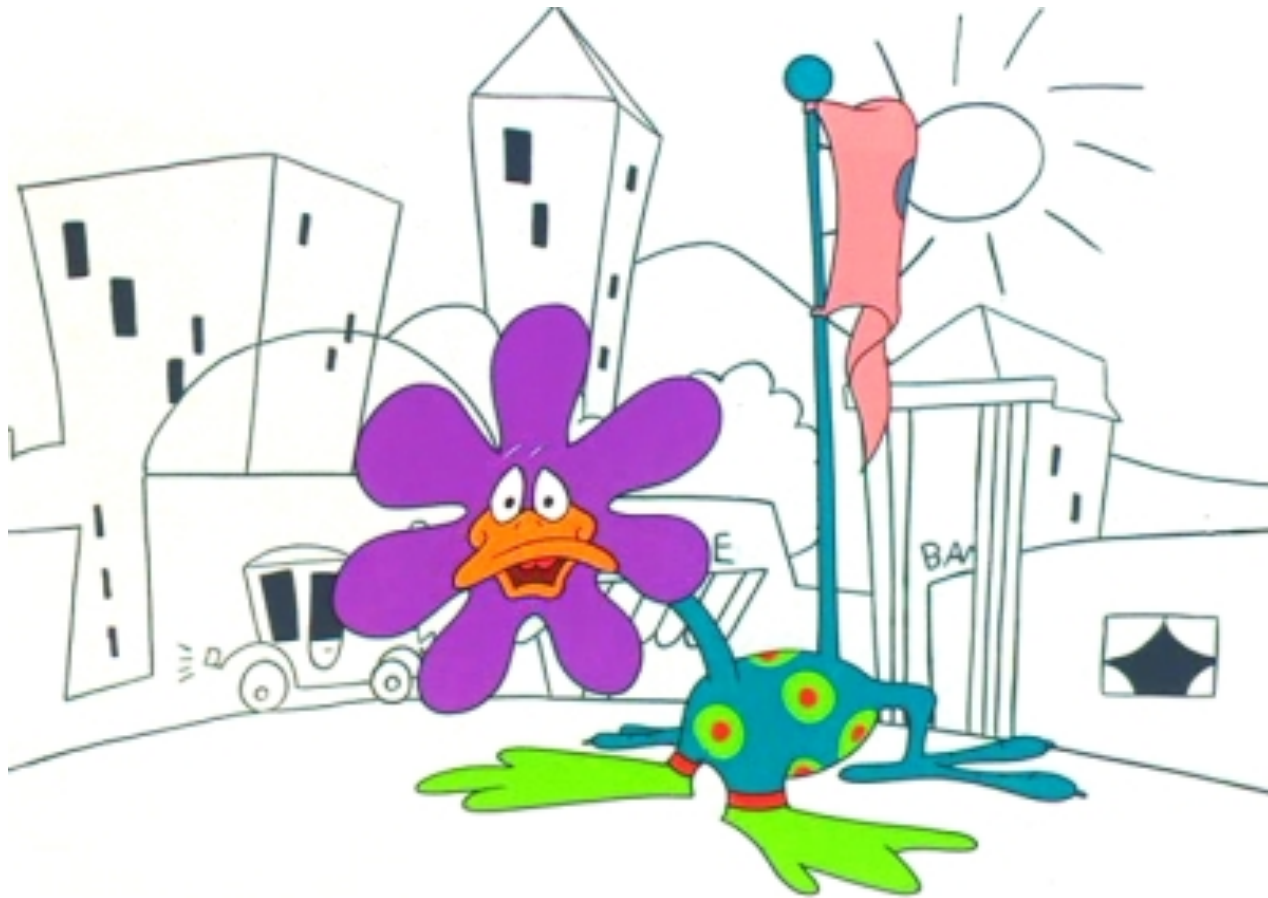


Storytelling



<http://www.gapminder.org/>

Animation?



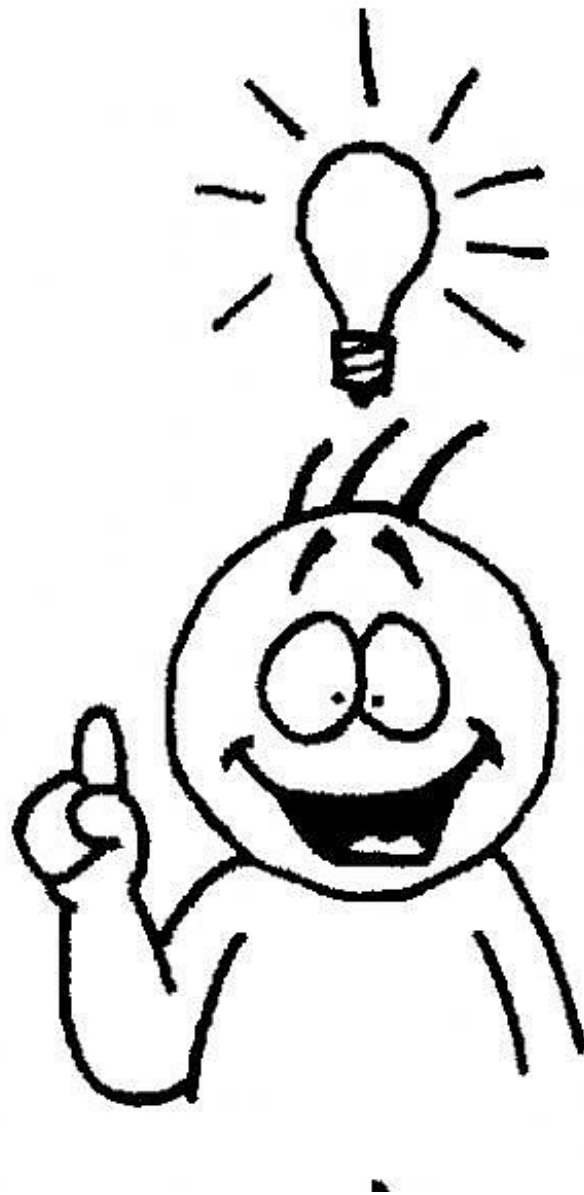
Animation?

ONLY SOMETIMES

“The Message”

Grandmaster Flash (1982)





**VIN
DIESEL**

**PAUL
WALKER**

**MICHELLE
RODRIGUEZ**

**JORDANA
BREWSTER**



FAST & FURIOUS

New Model. Original Parts.

APRIL 3

PG-13 PARENTS STRONGLY CAUTIONED—
Some Material May be Inappropriate for Children Under 13
INTENSE SEQUENCES OF VIOLENCE AND ACTION,
SMOKE, SOME SEXUAL CONTENT, LANGUAGE AND DRUG REFERENCES

COPYRIGHT

Visualization != Sexy Pictures

Fewer than 50%



become symptom-free on antidepressants, even after trying two different medications. Furthermore, many who do respond to medication slip back into major depression within a short while, despite sticking with drug treatment.

90%



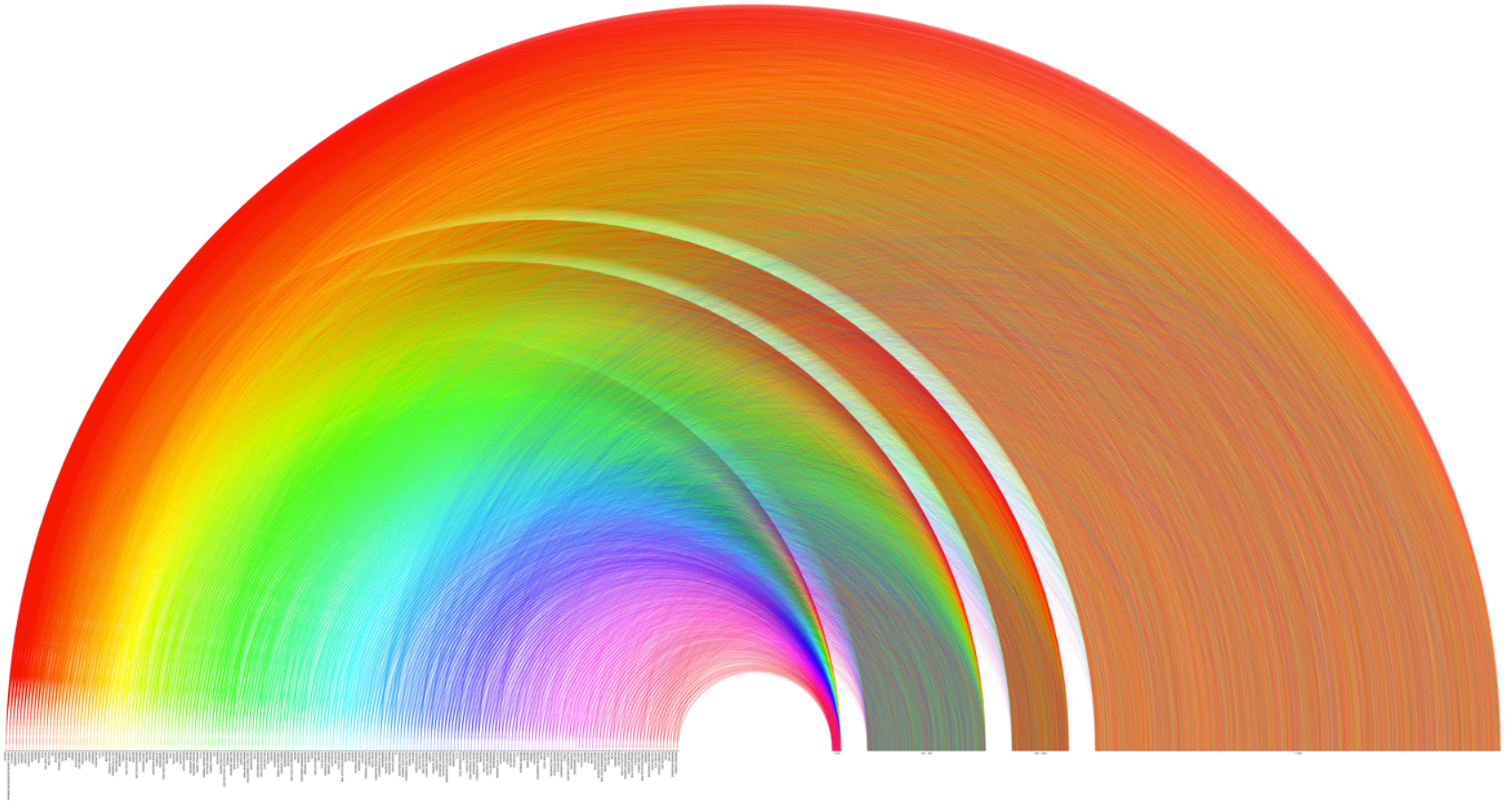
experience side effects

Most are minor. Diarrhea, dizziness, dry mouth, fatigue, headache, nausea, sexual side effects, sweating, tremors, and weight changes are the most common. Sometimes they are very severe, making it necessary to discontinue the medication and try another.

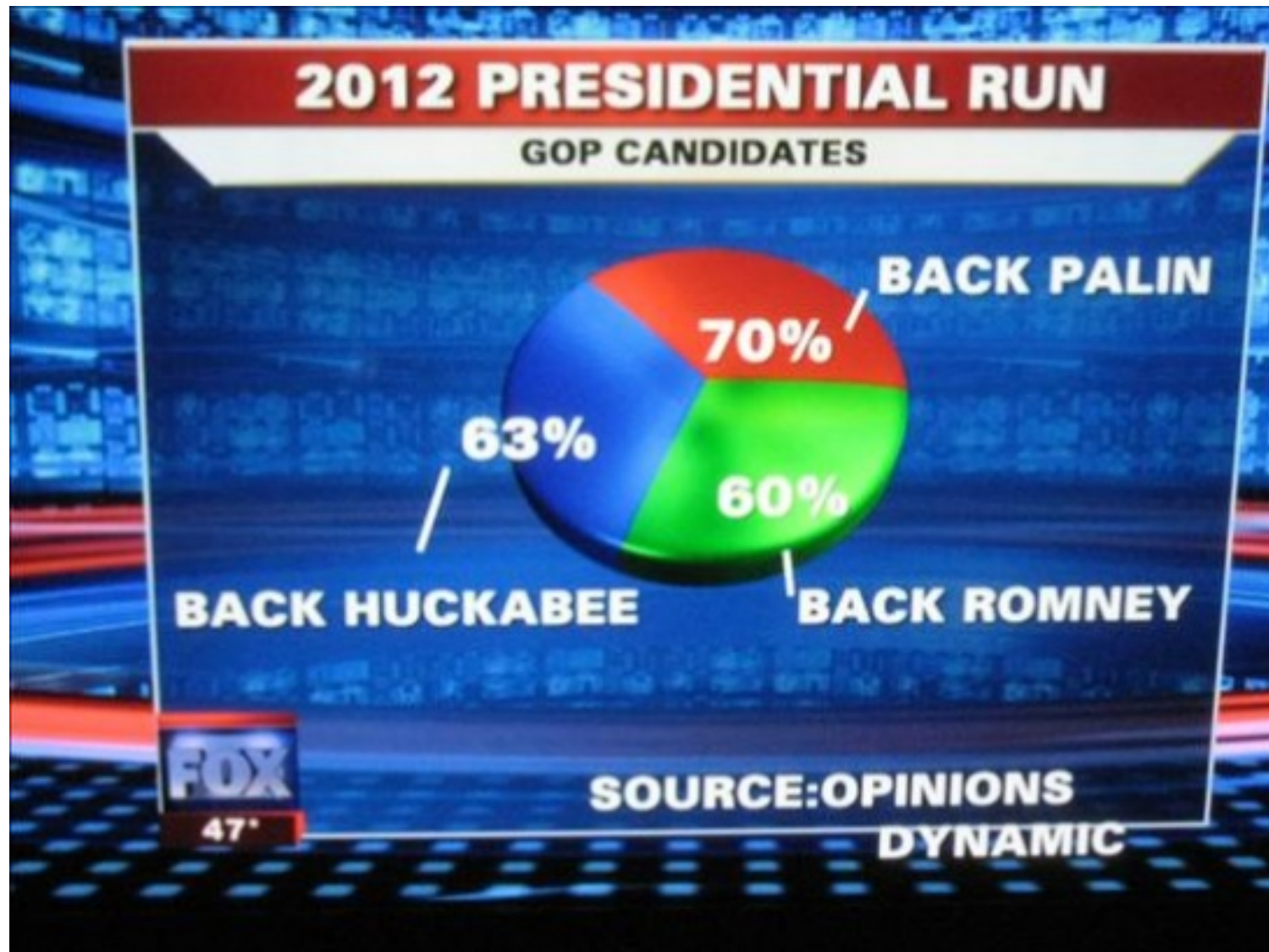
6.6%



of the U.S. adult population had experienced a major depressive



<http://www.pitchinteractive.com/election2008/jobarcs.html>



The Basics

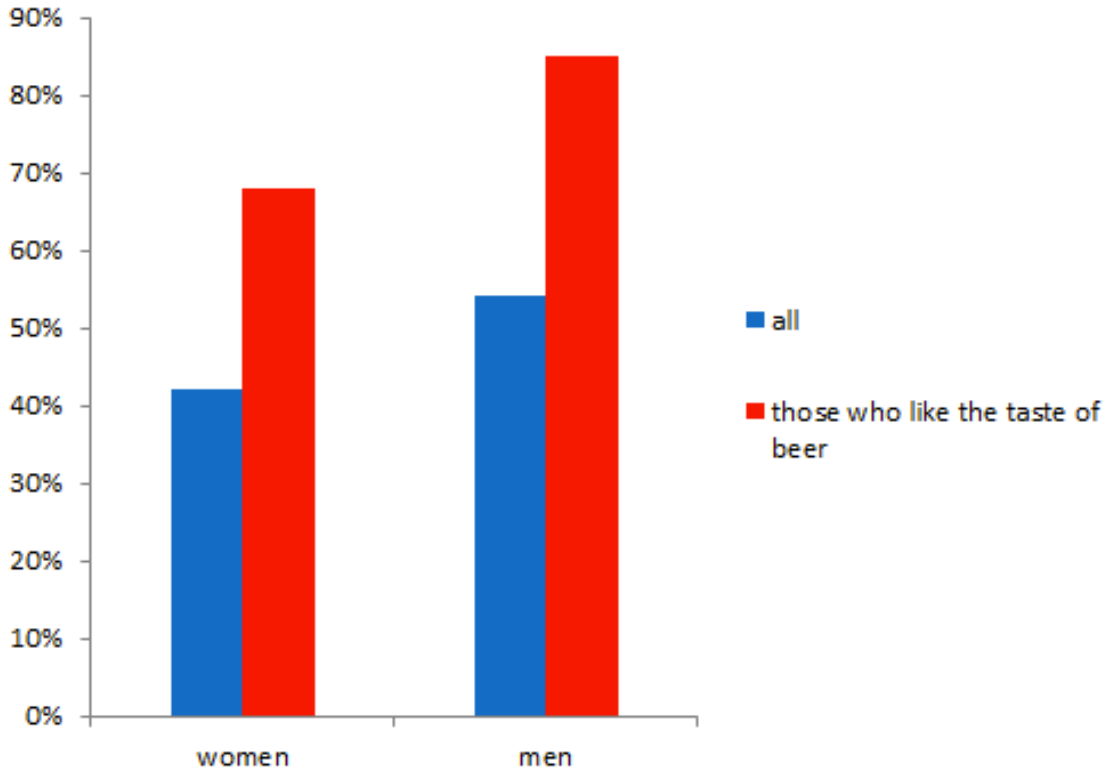
The Basics

blog.okcupid.com

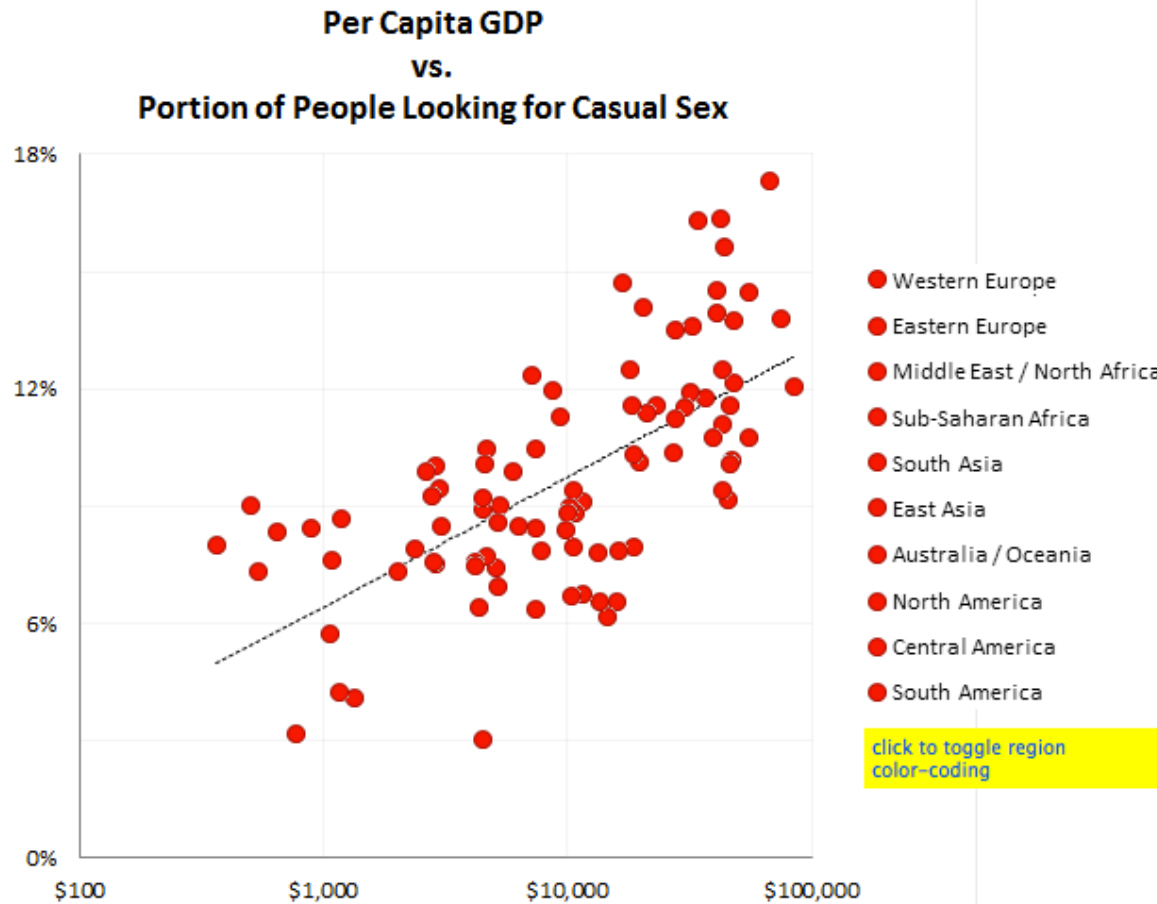
Bar Graph

Would you consider sleeping with someone on the first date?

- % answering yes -

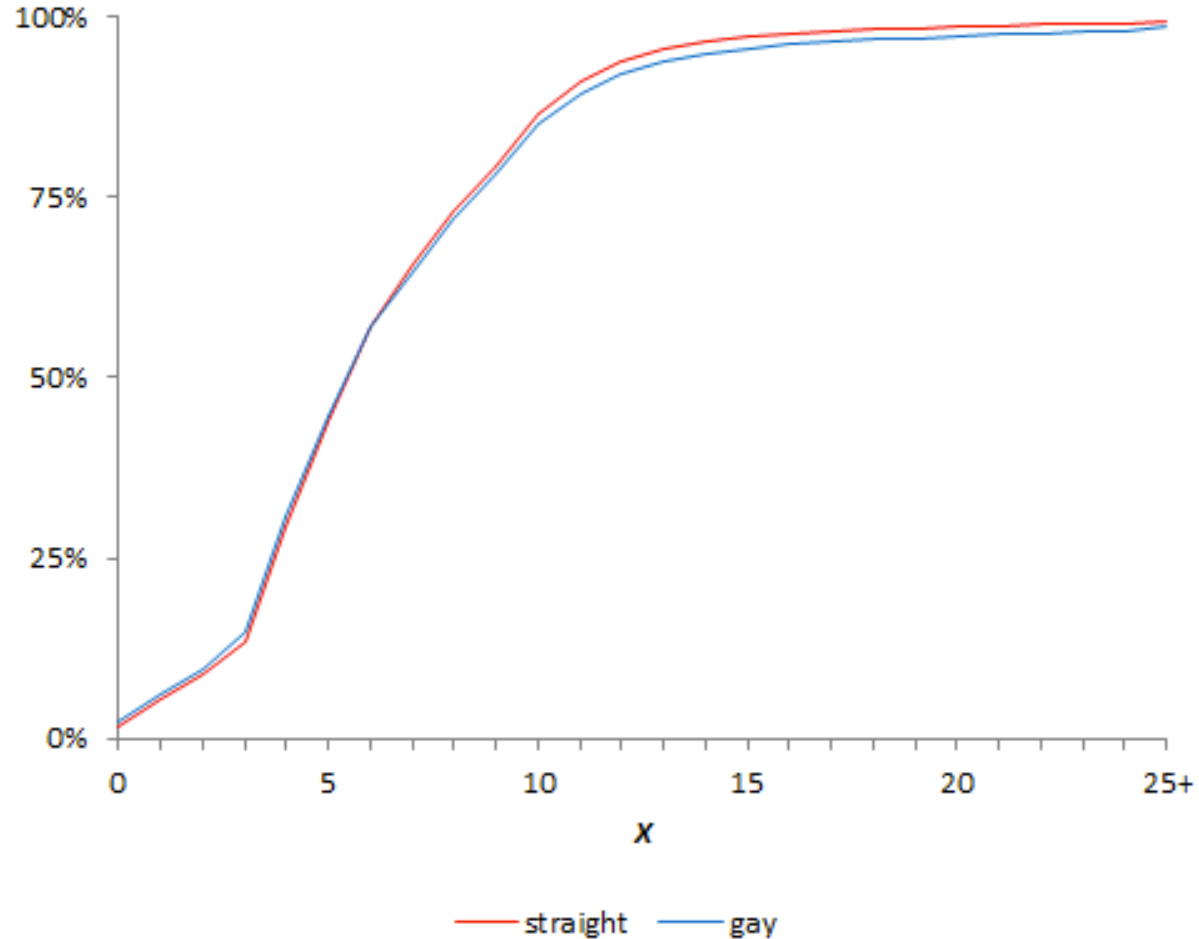


Scatter Plot



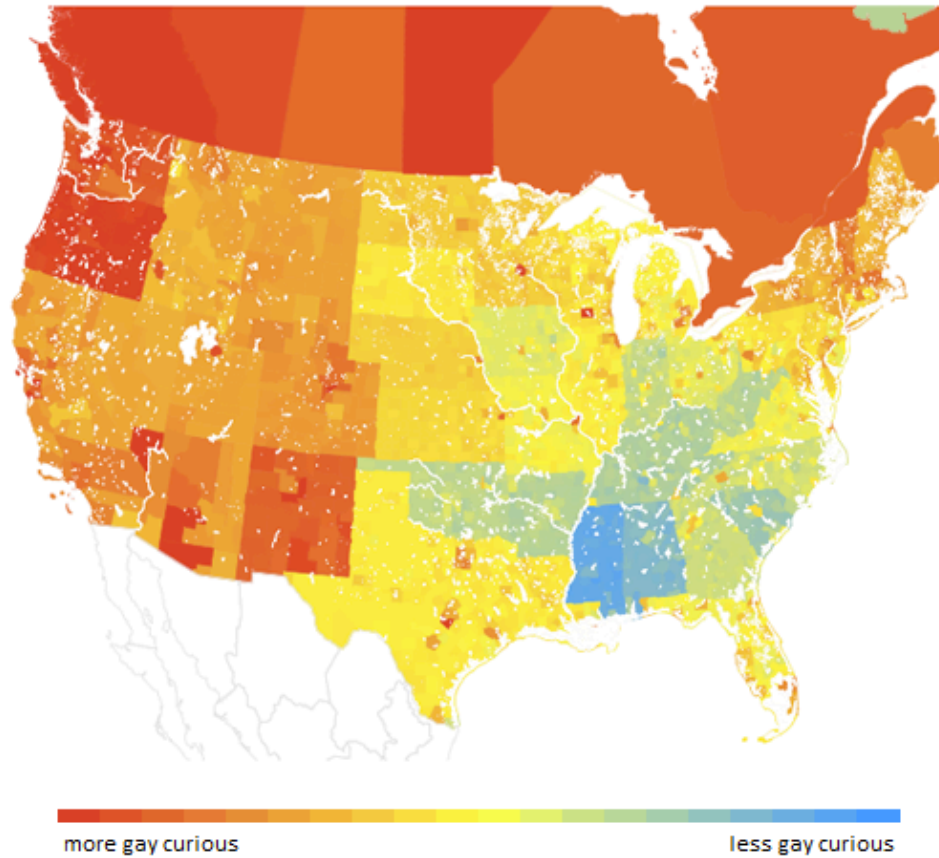
Line Graph

people with X or fewer sex partners

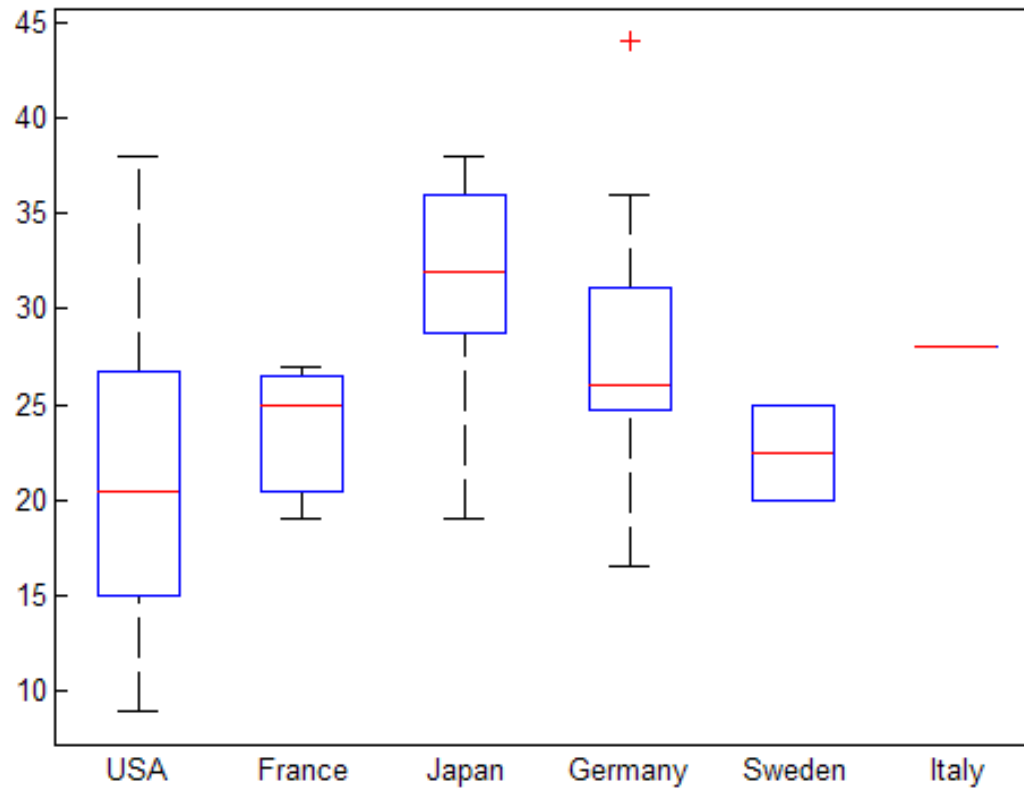


Choropleth Plots

Who's Gay Curious in the U.S. & Canada



Box Plots

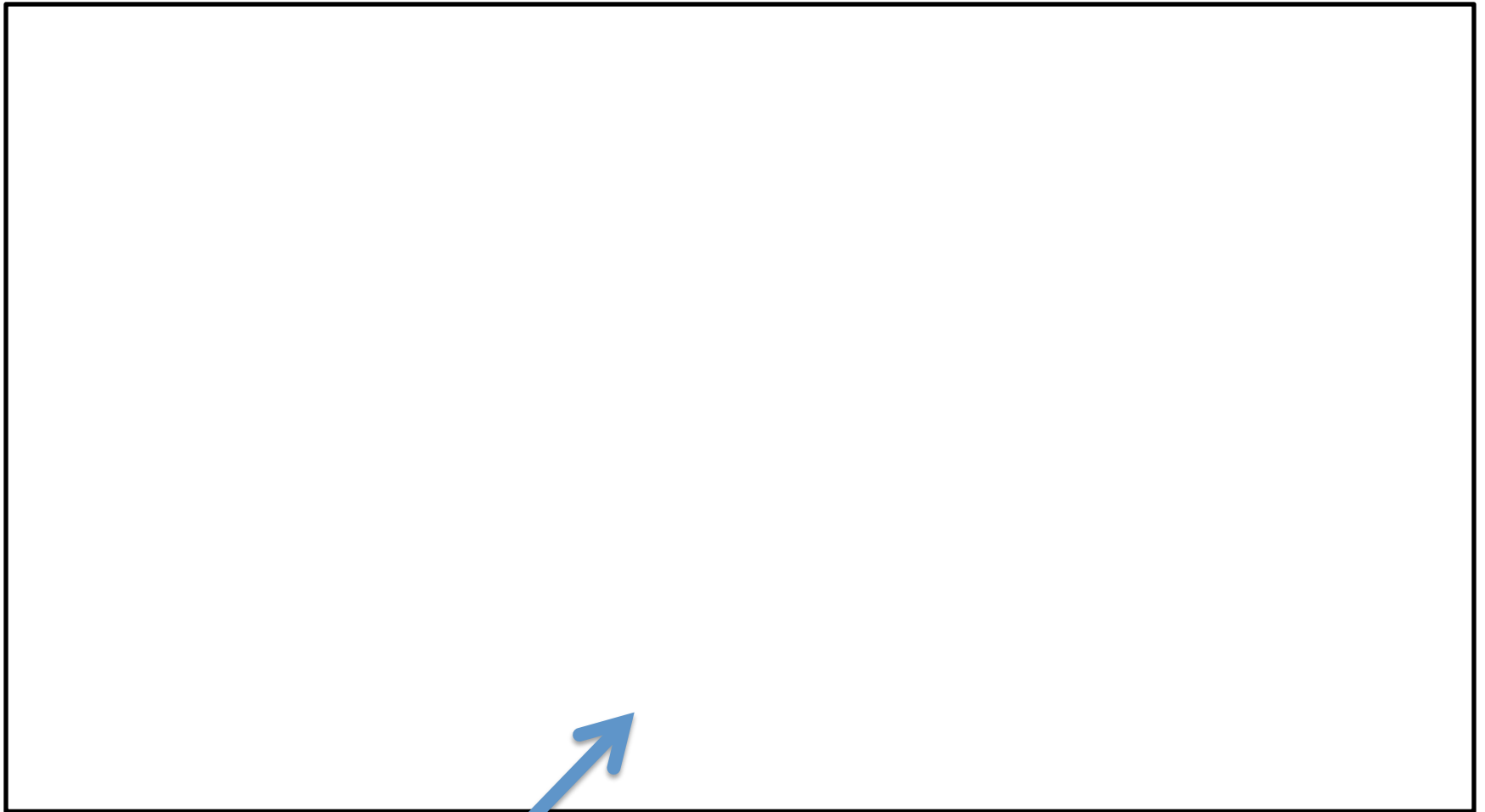


matplotlib

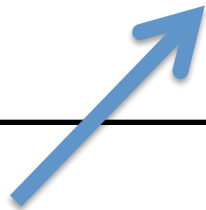
Python's version of Matlab plotting

How `matplotlib` Draws

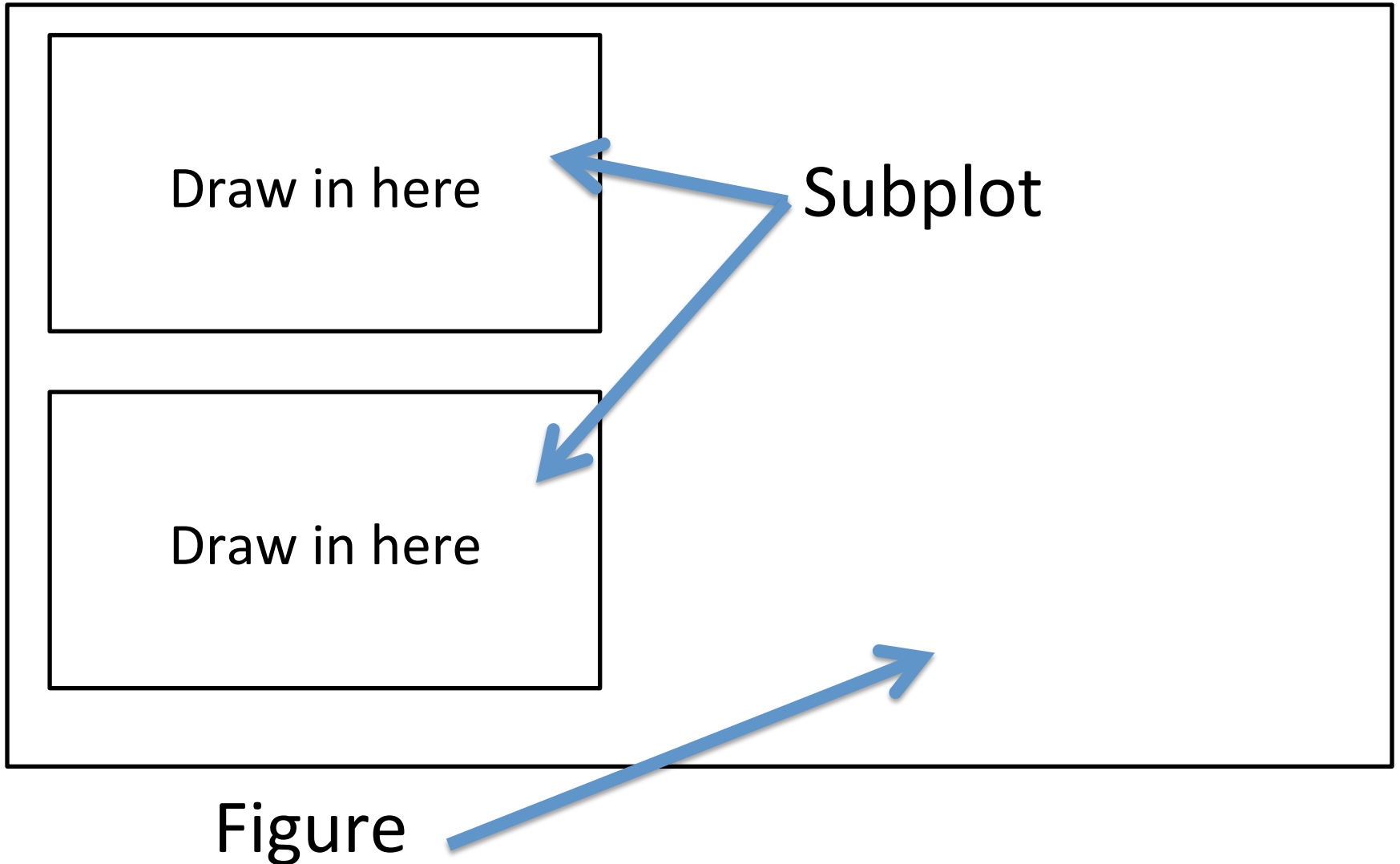
Figure object



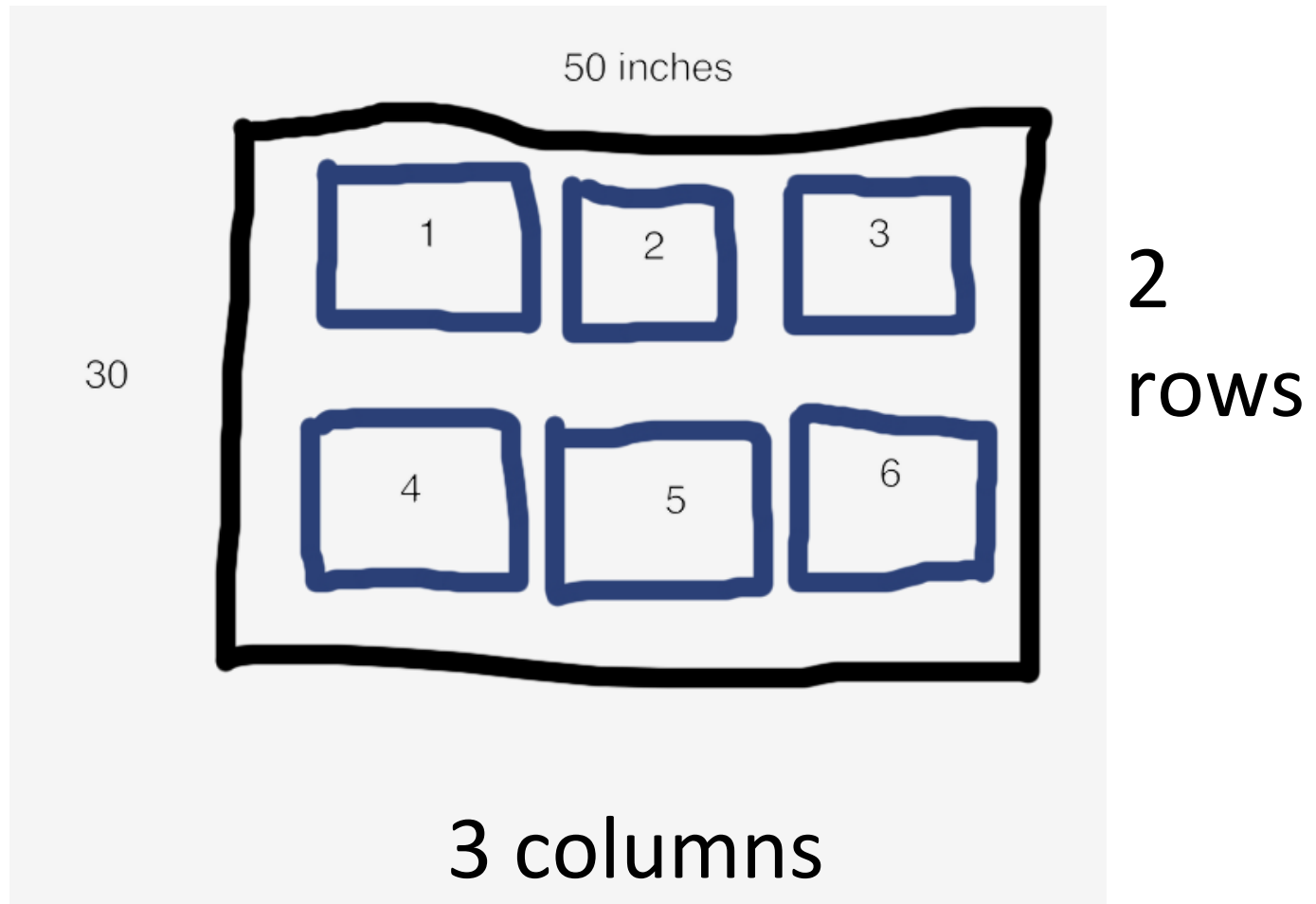
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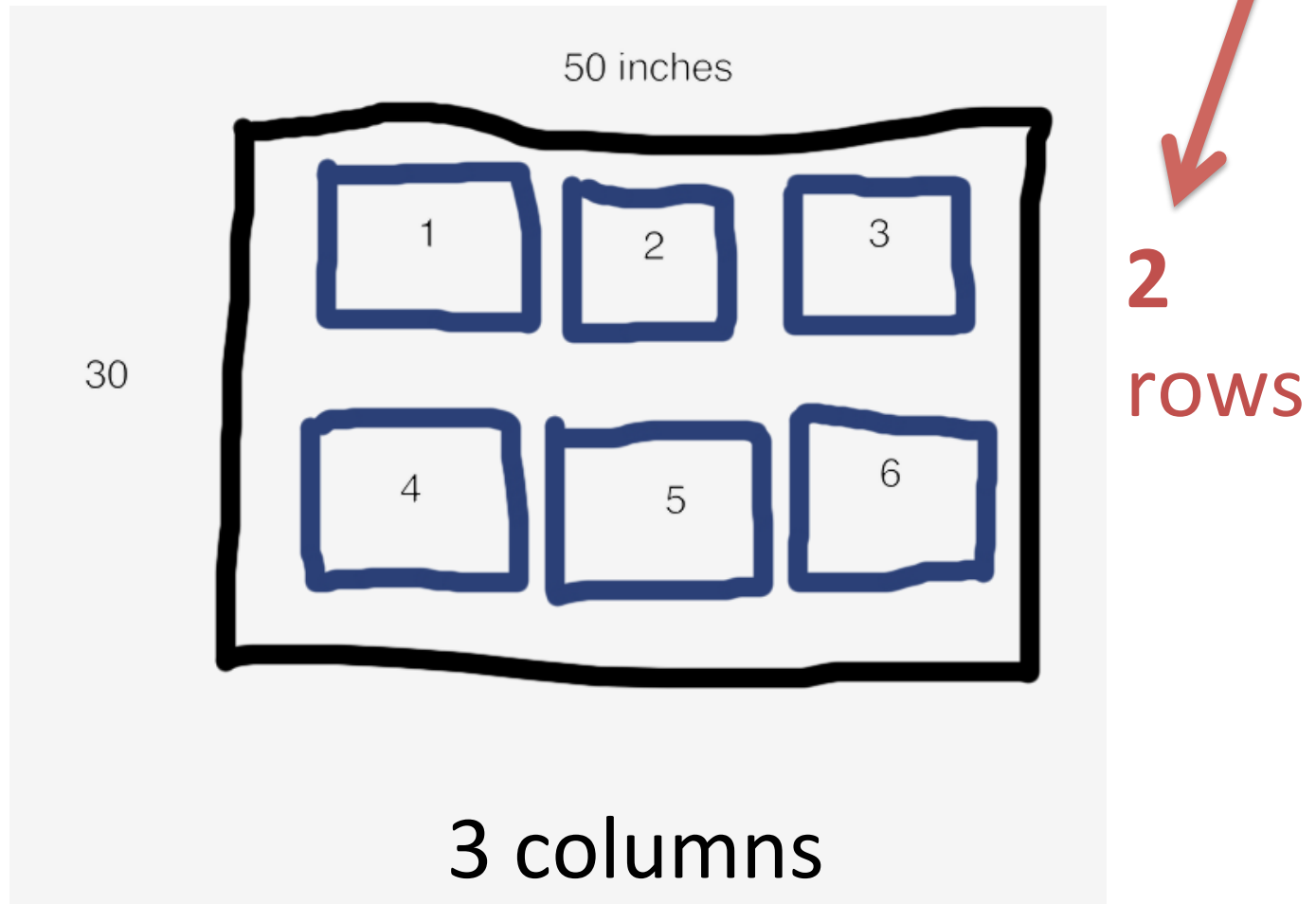
Subplot object



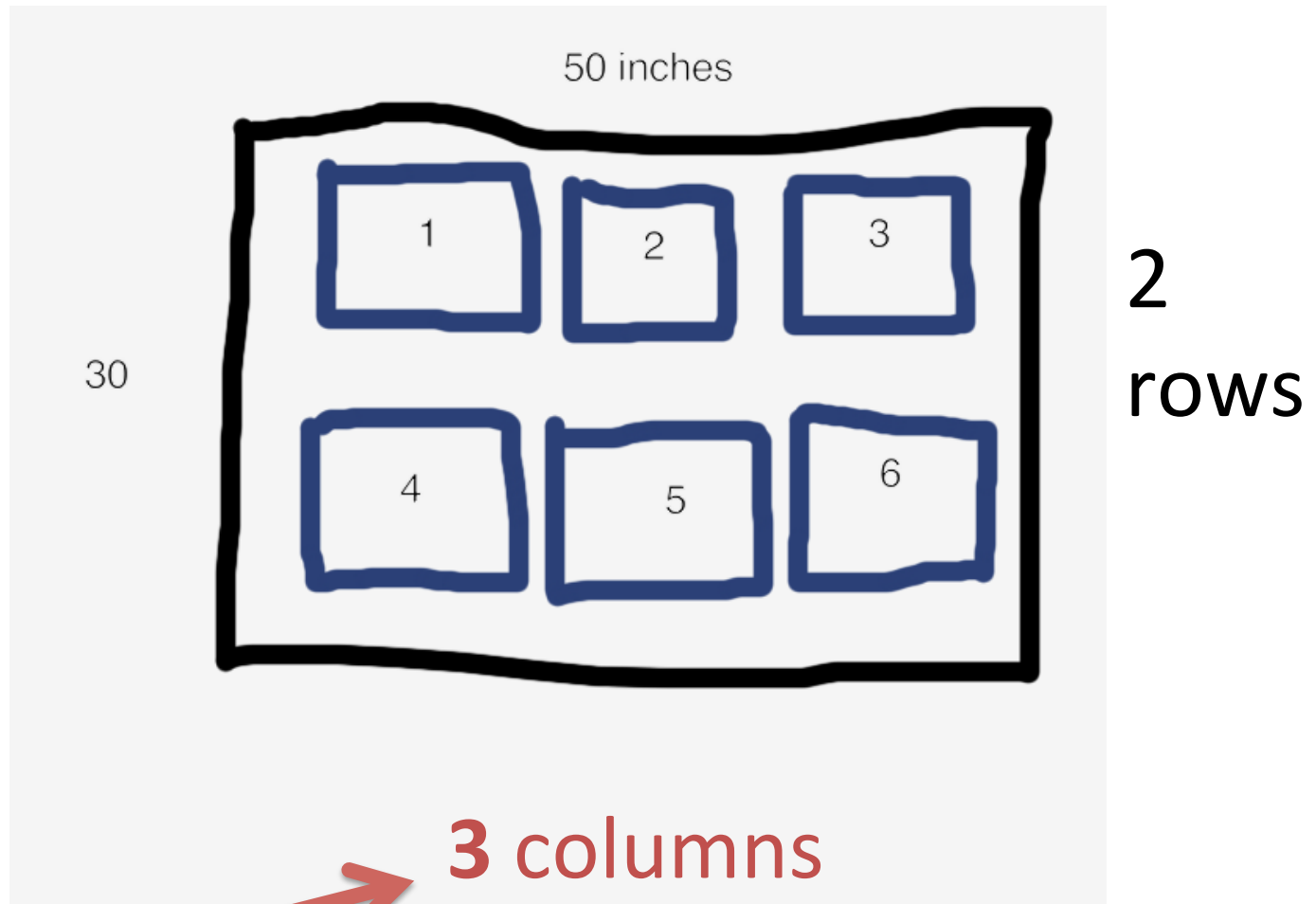
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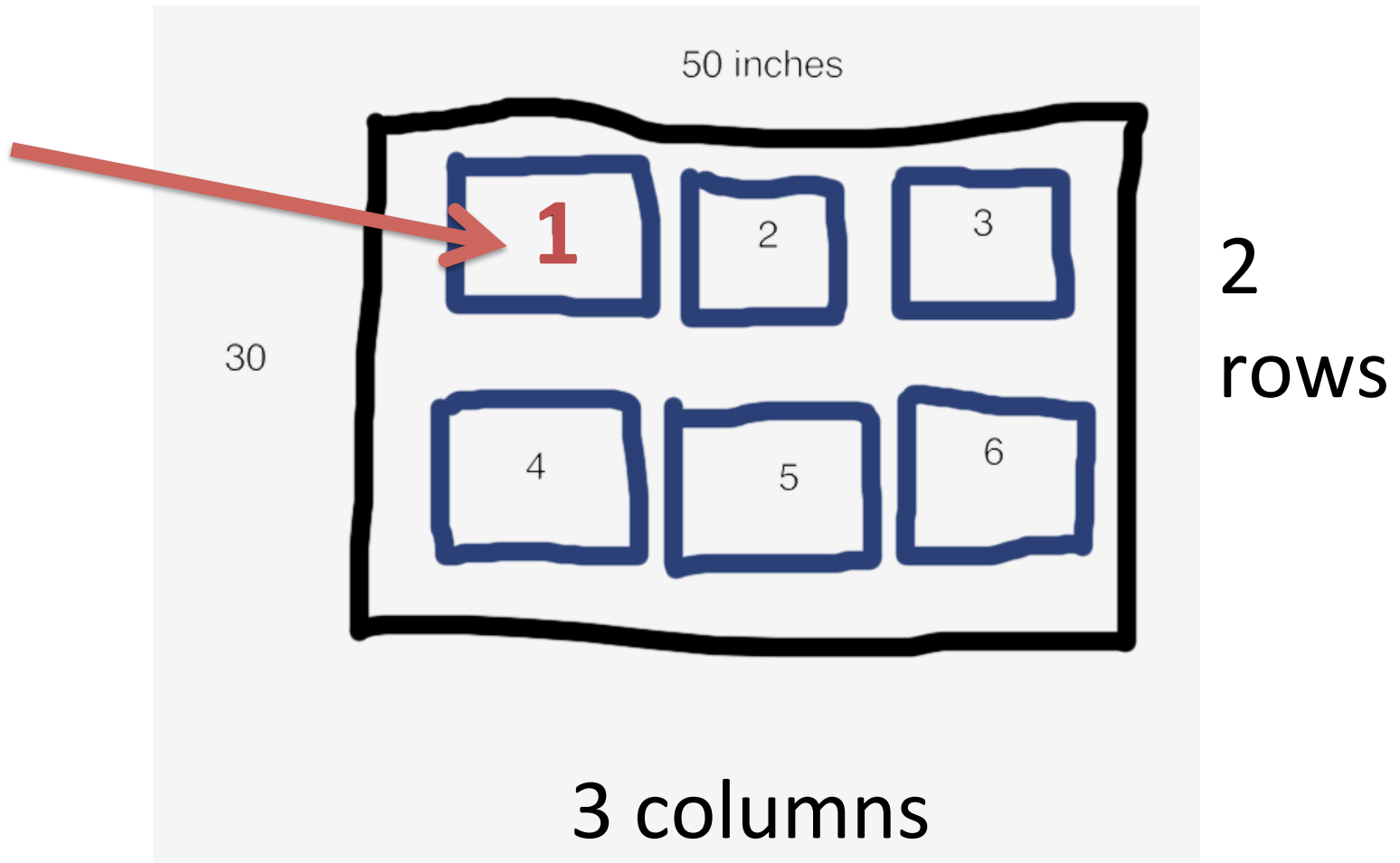
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`figure.add_subplot(2, 3, 1)`



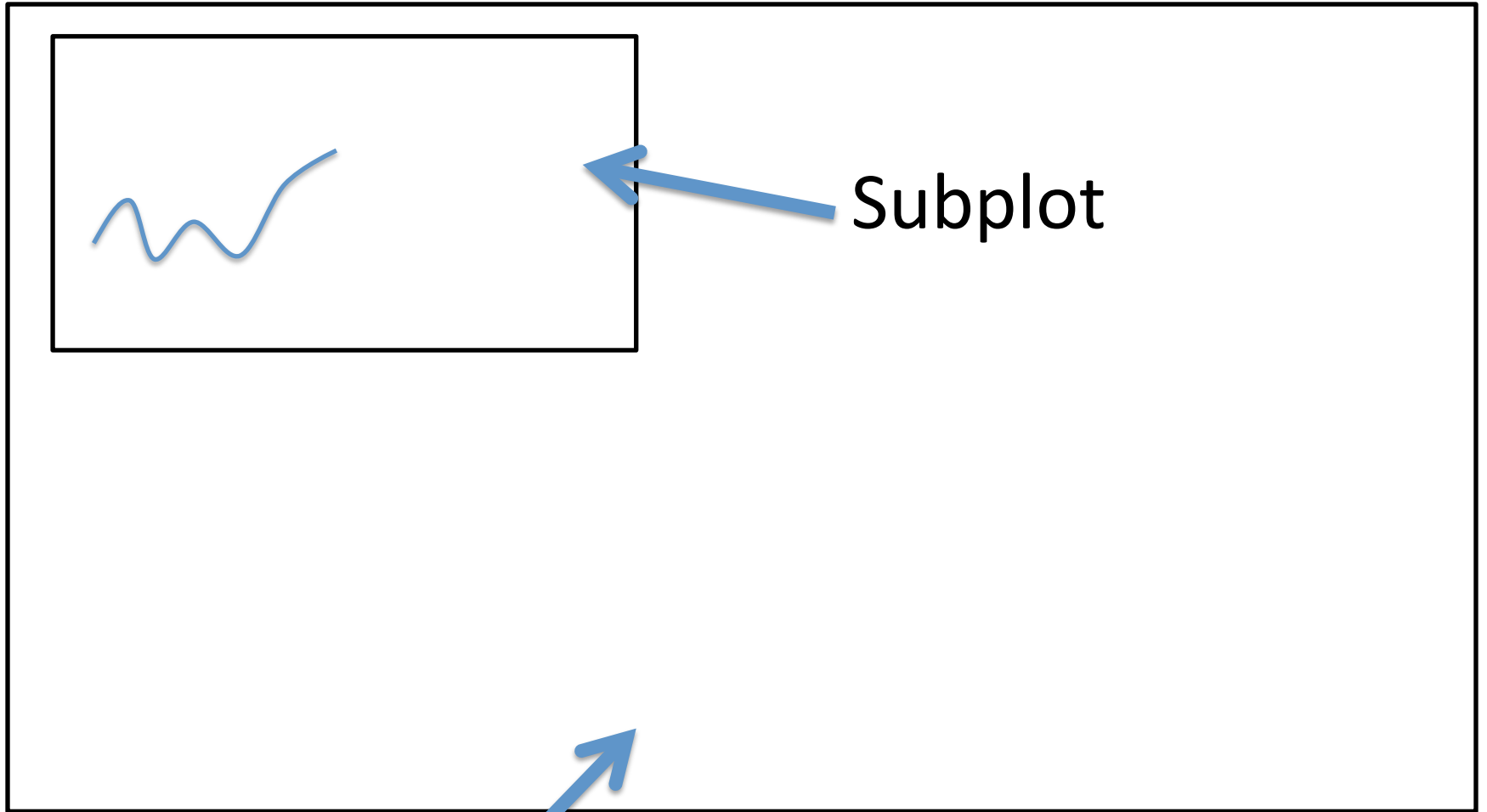
`figure.add_subplot(2, 3, 1)`



Charting Library

- `subplot.bar()`
- `subplot.plot()`
- `subplot.scatter()`
- `subplot.boxplot()`

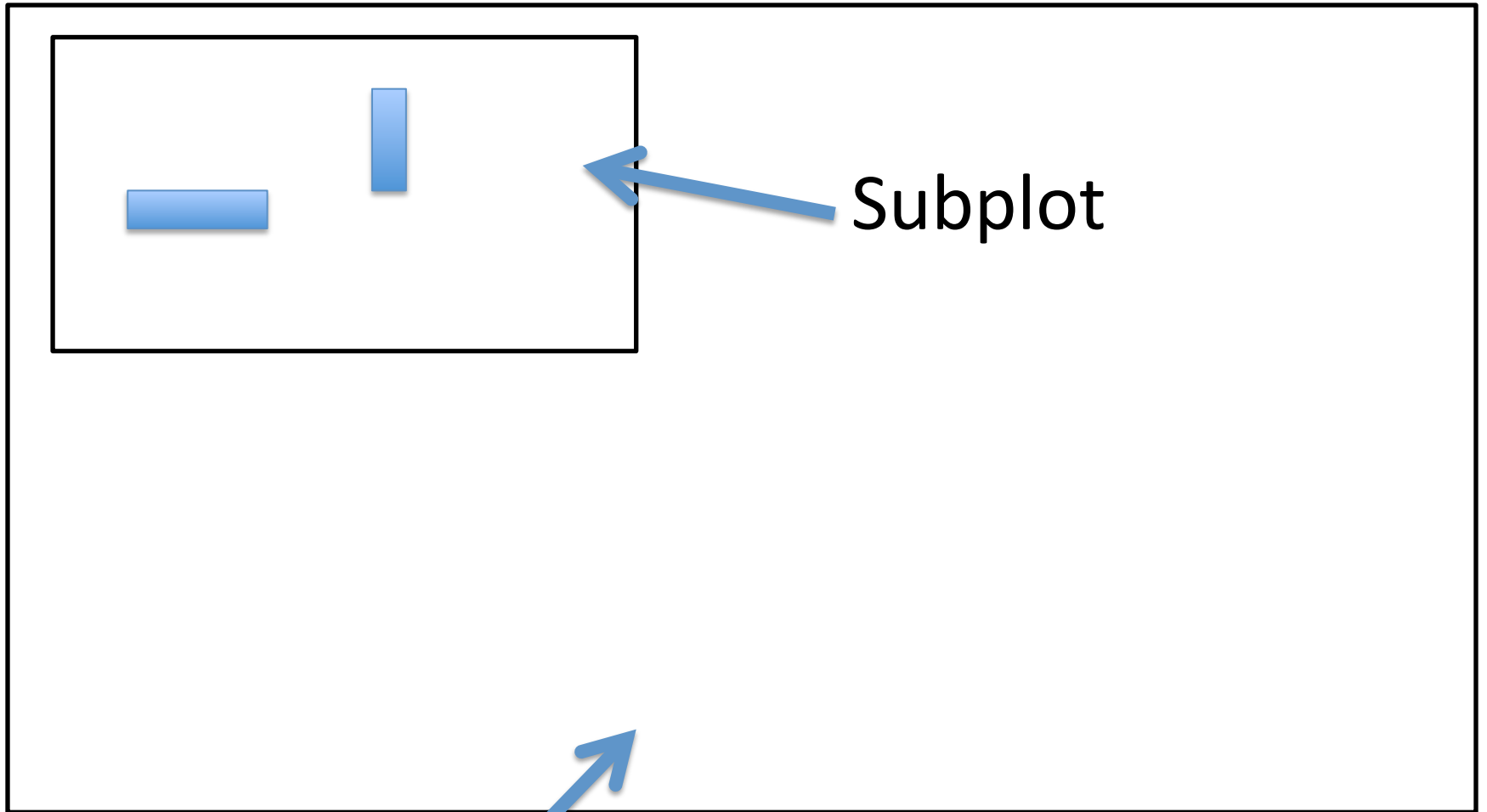
Lines



Subplot

Figure

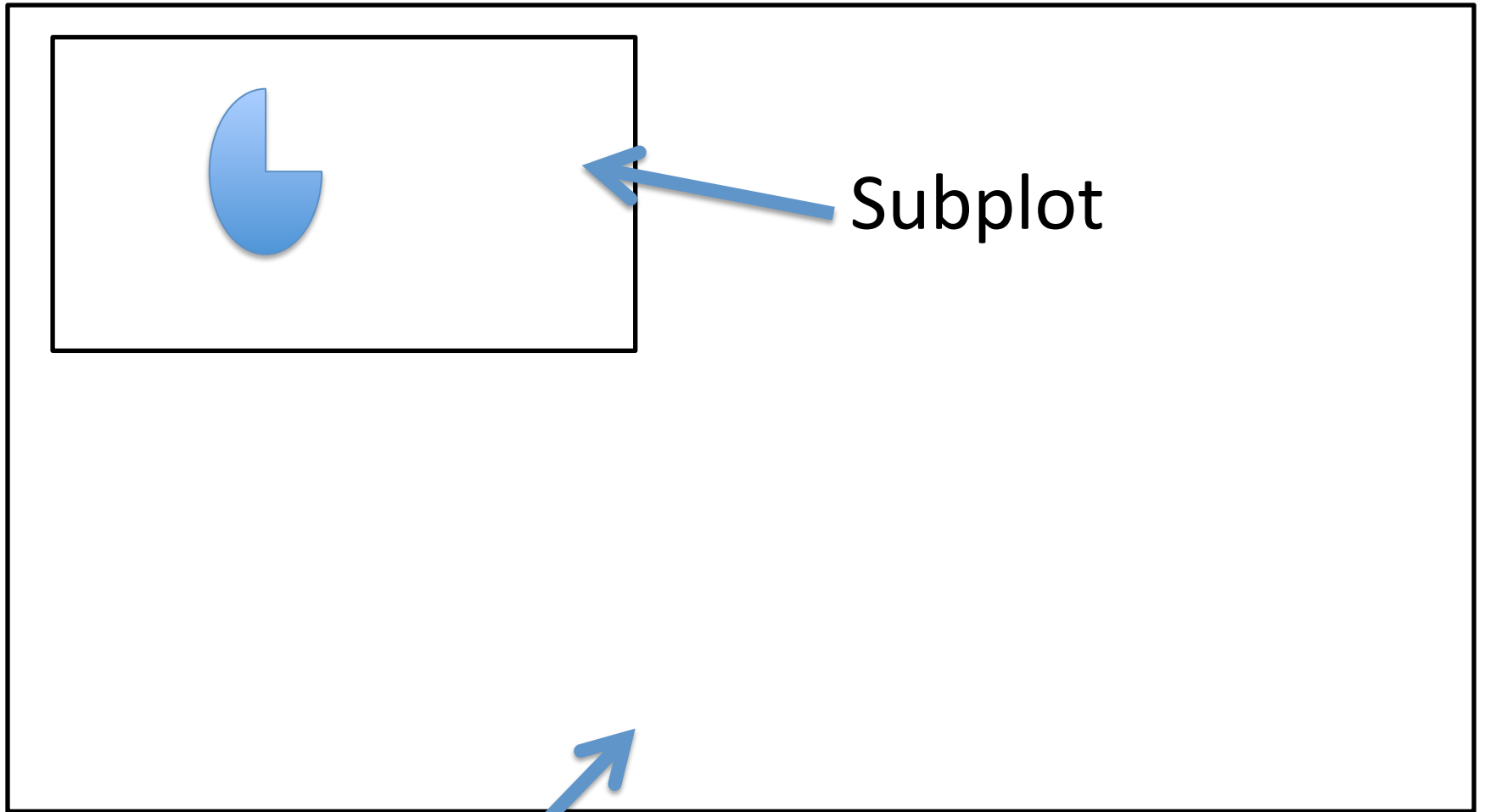
Boxes



Subplot

Figure

Polygons



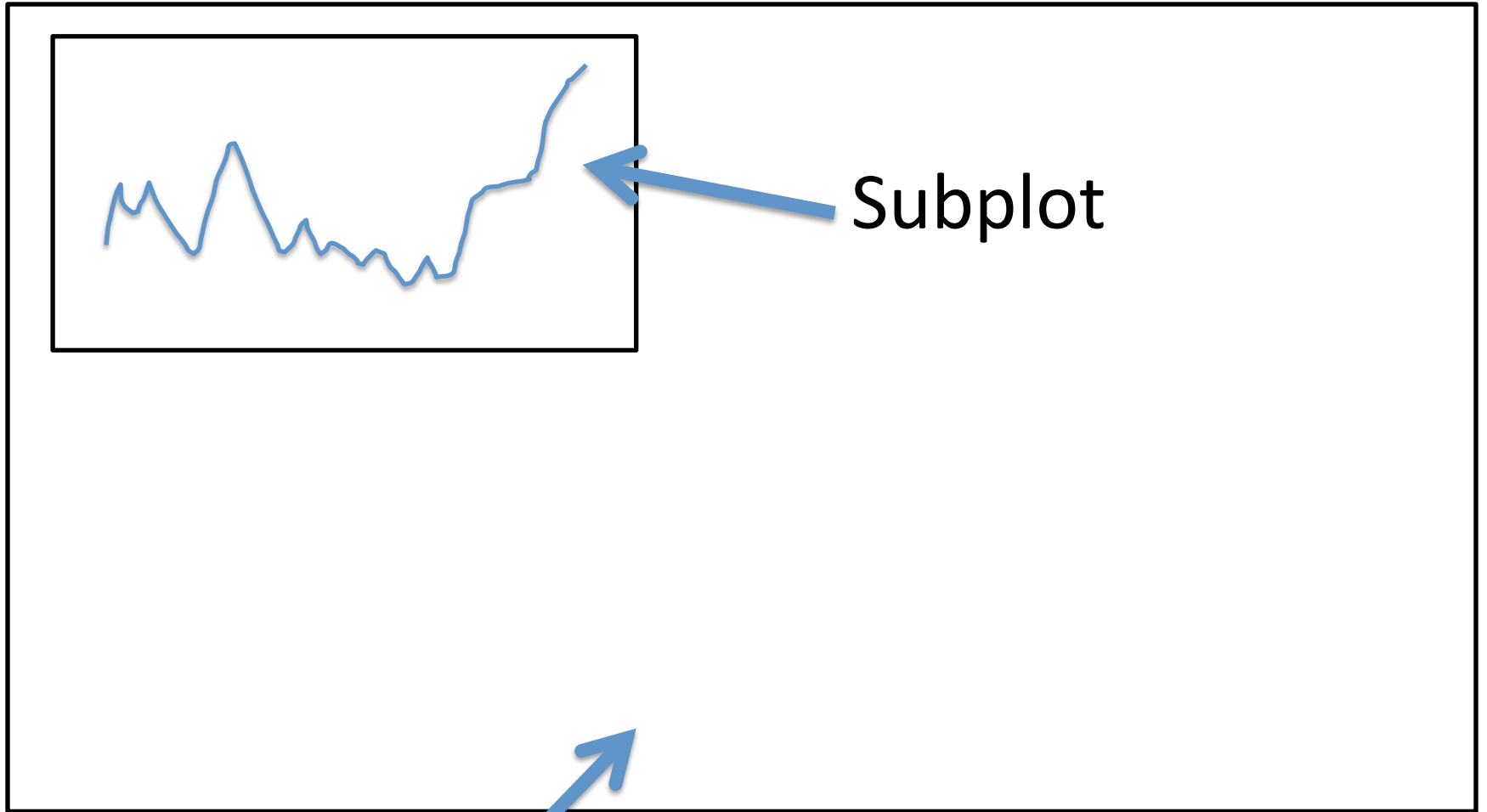
Subplot

Figure

Painting



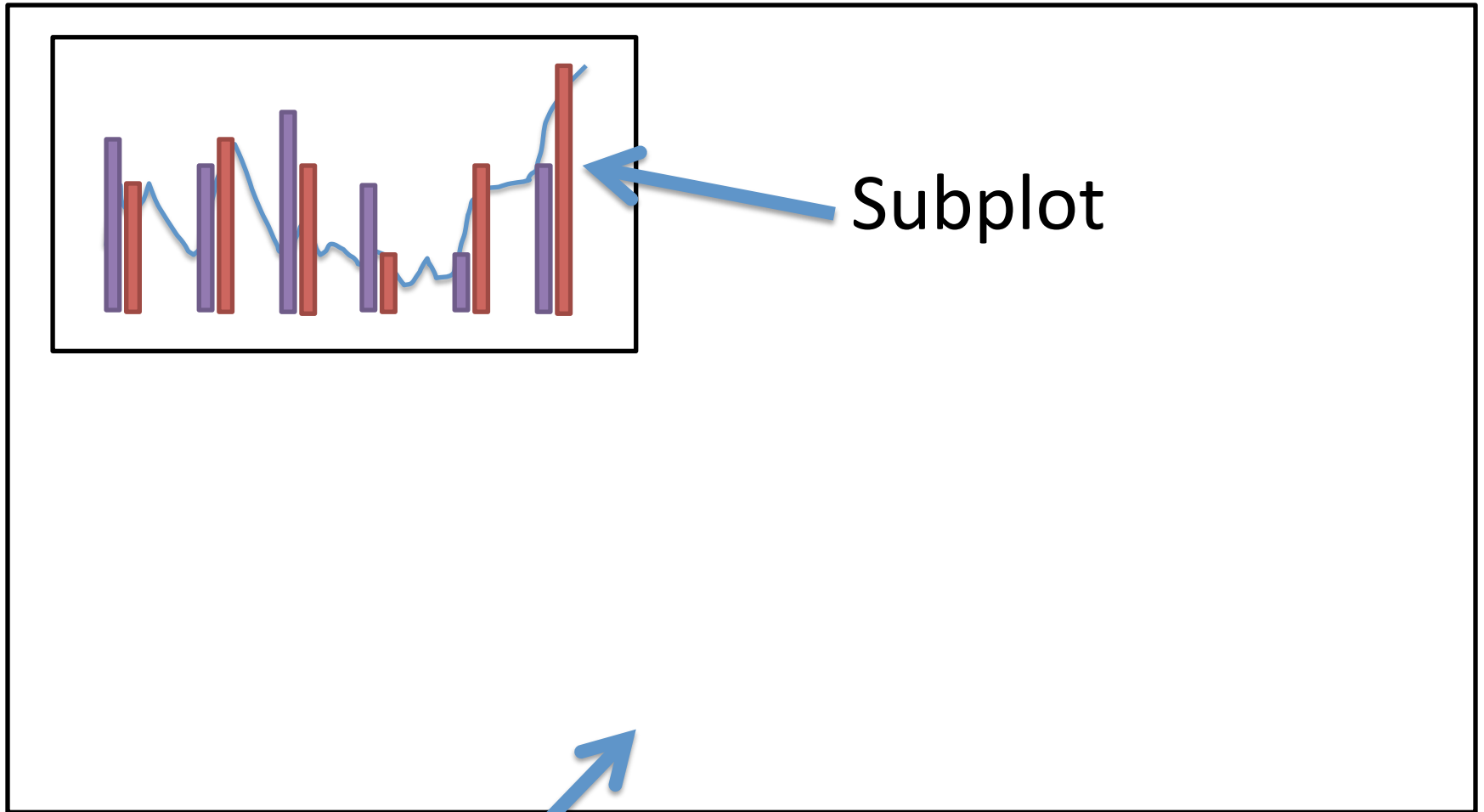
Overlaps



Figure

Subplot

Overlaps

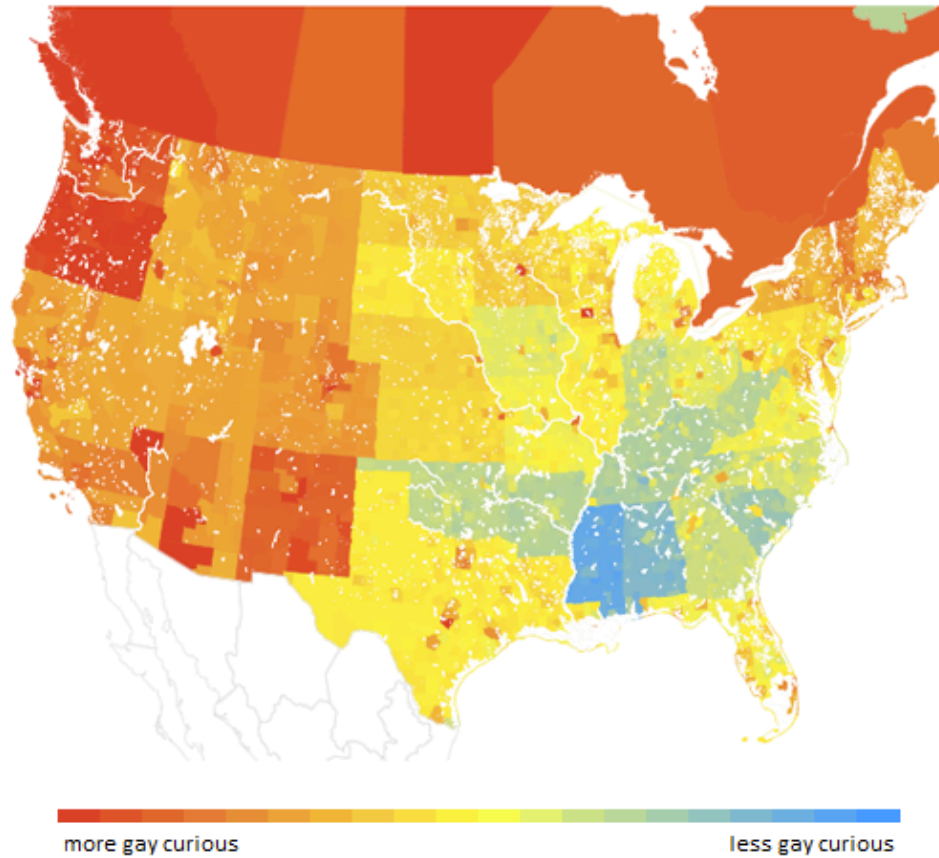


Figure

Subplot

Choropleth Plots

Who's Gay Curious in the U.S. & Canada

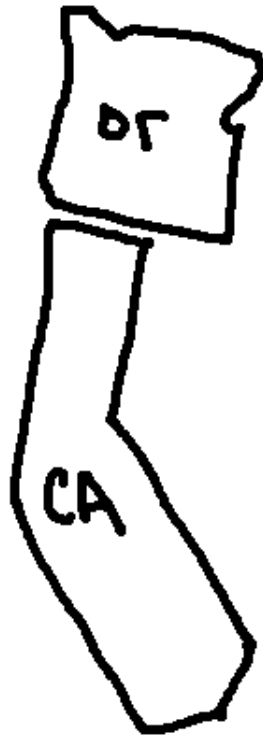


No Easy Way

How Maps are Drawn



How Maps are Drawn



Helper Functions

FIPS


draw_county(subplot, county_id, color)

draw_state(subplot, state, color)

dataiap.github.com/day2/

git