

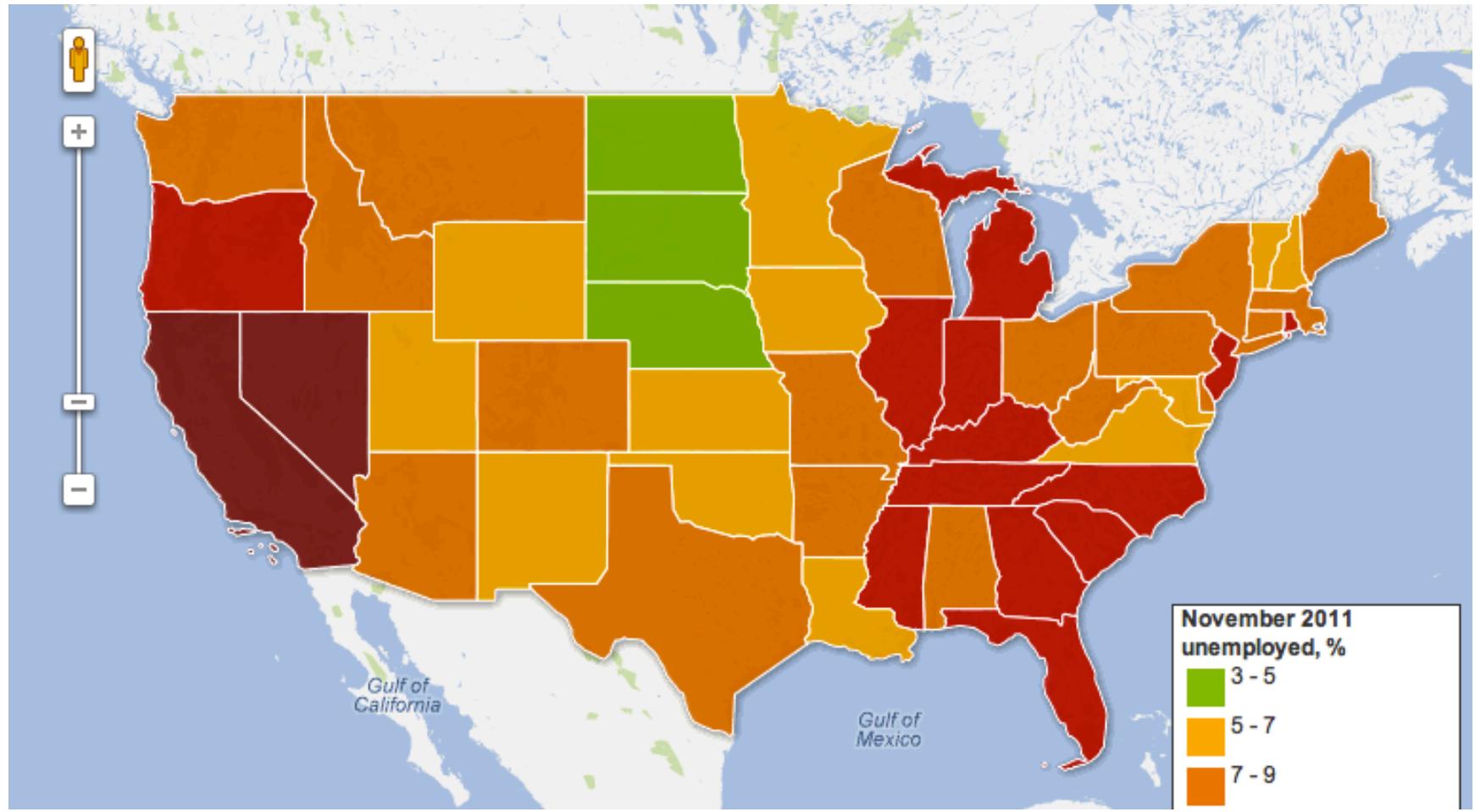
Day 2: Introduction to Visualizations

matplotlib

Summarize

Complex

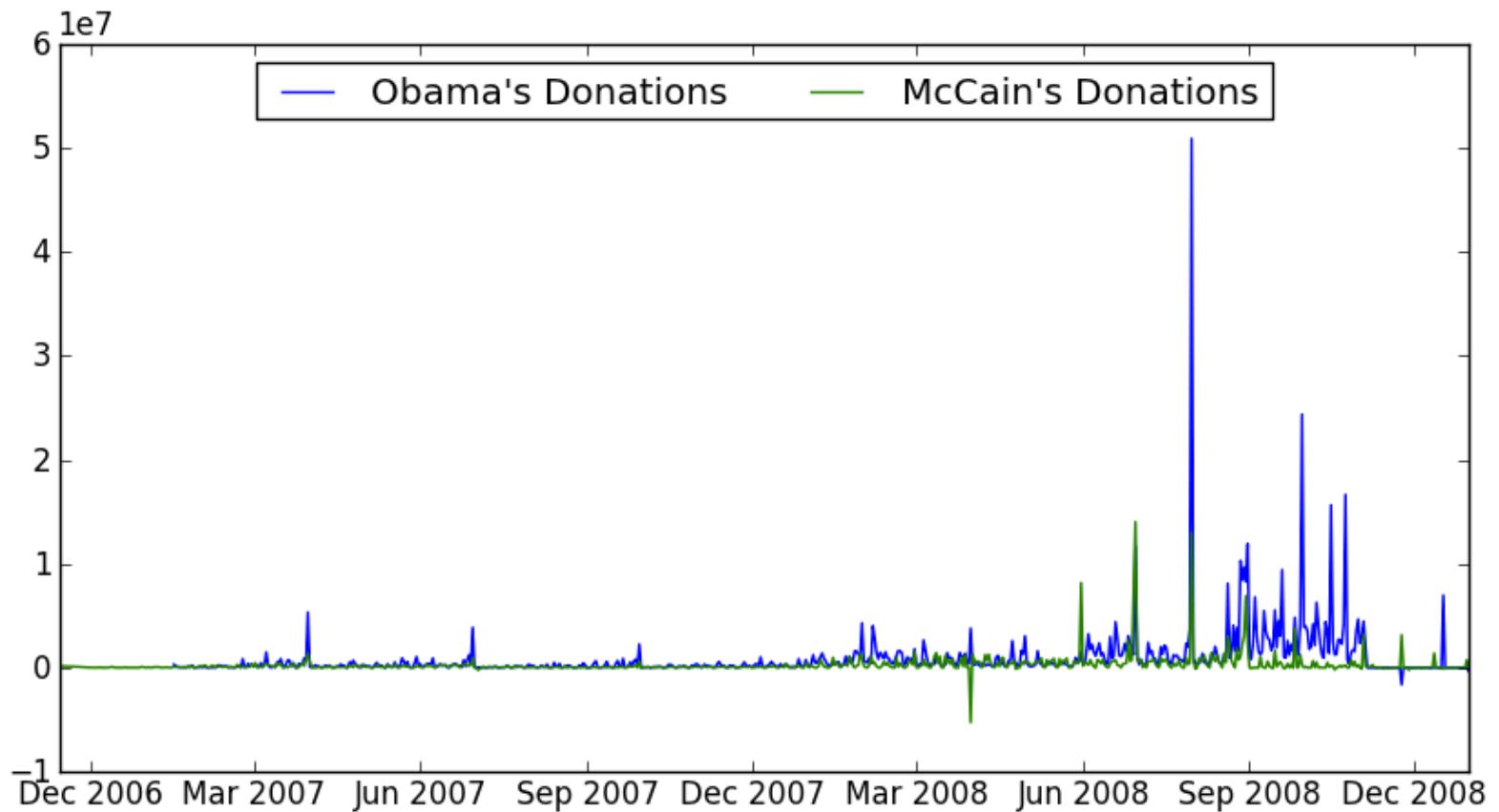
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2

Exploring



Storytelling



Animation?



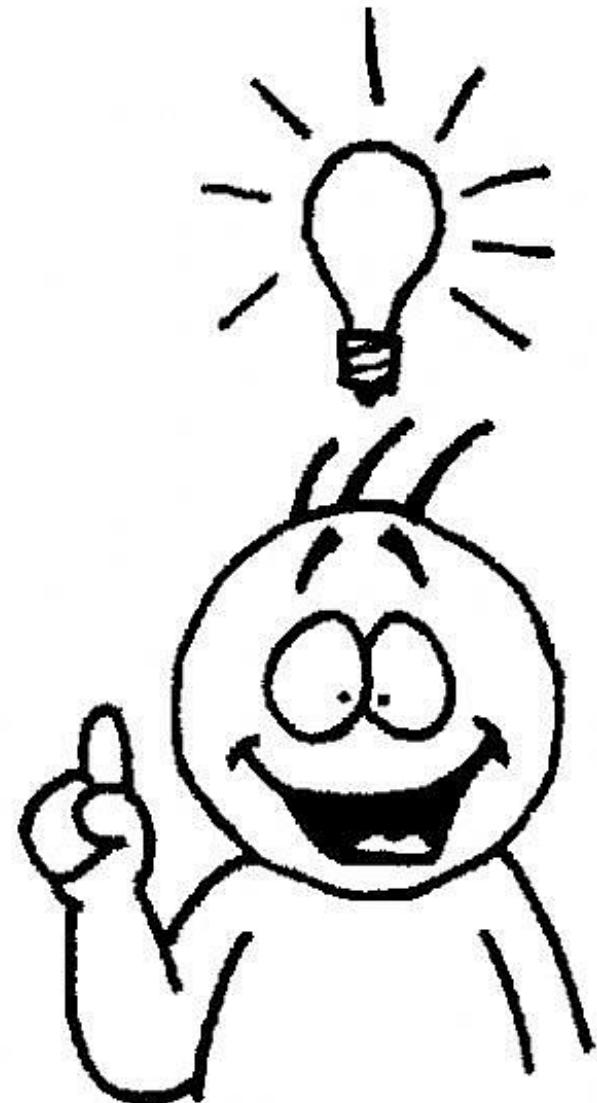
Animation?

ONLY SOMETIMES

“The Message”

Grandmaster Flash (1982)





VIN
DIESEL

PAUL
WALKER

MICHELLE
RODRIGUEZ

JORDANA
BREWSTER



FAST & FURIOUS

New Model. Original Parts.

APRIL 3

Visualization != Sexy Pictures

Fewer than 50%

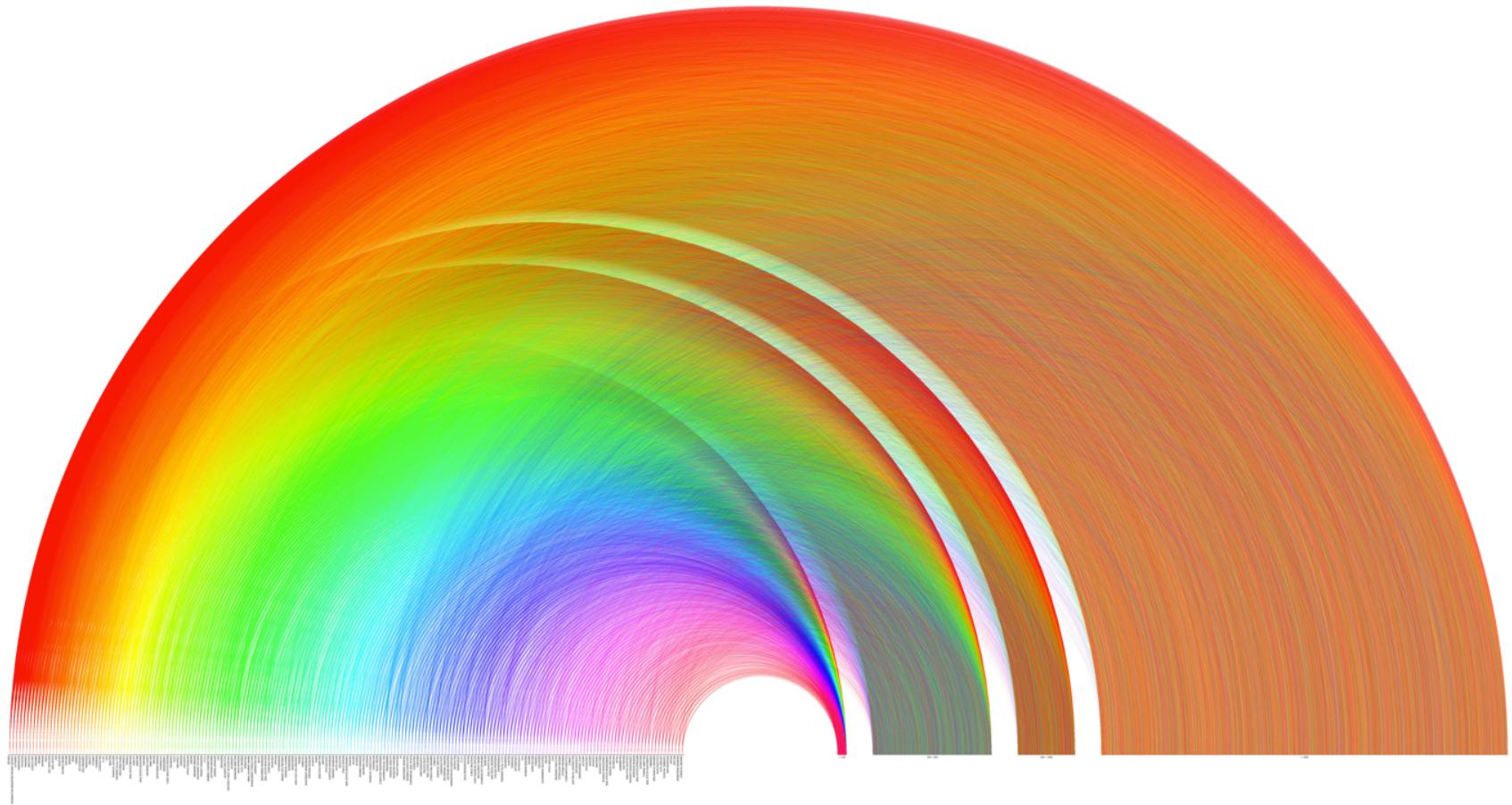
become symptom-free on antidepressants, even after trying two different medications. Furthermore, many who do respond to medication slip back into major depression within a short while, despite sticking with drug treatment.

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>

2012 PRESIDENTIAL RUN

GOP CANDIDATES



FOX
47°

SOURCE: OPINIONS
DYNAMIC

The Basics

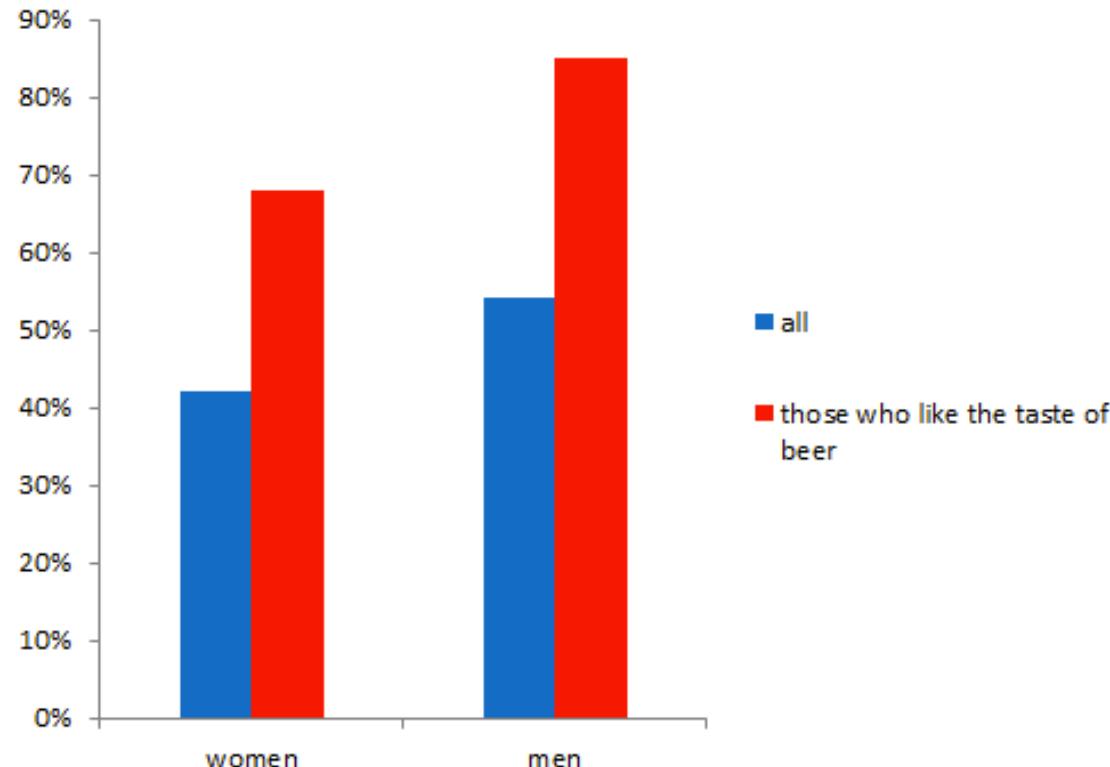
The Basics

blog.okcupid.com

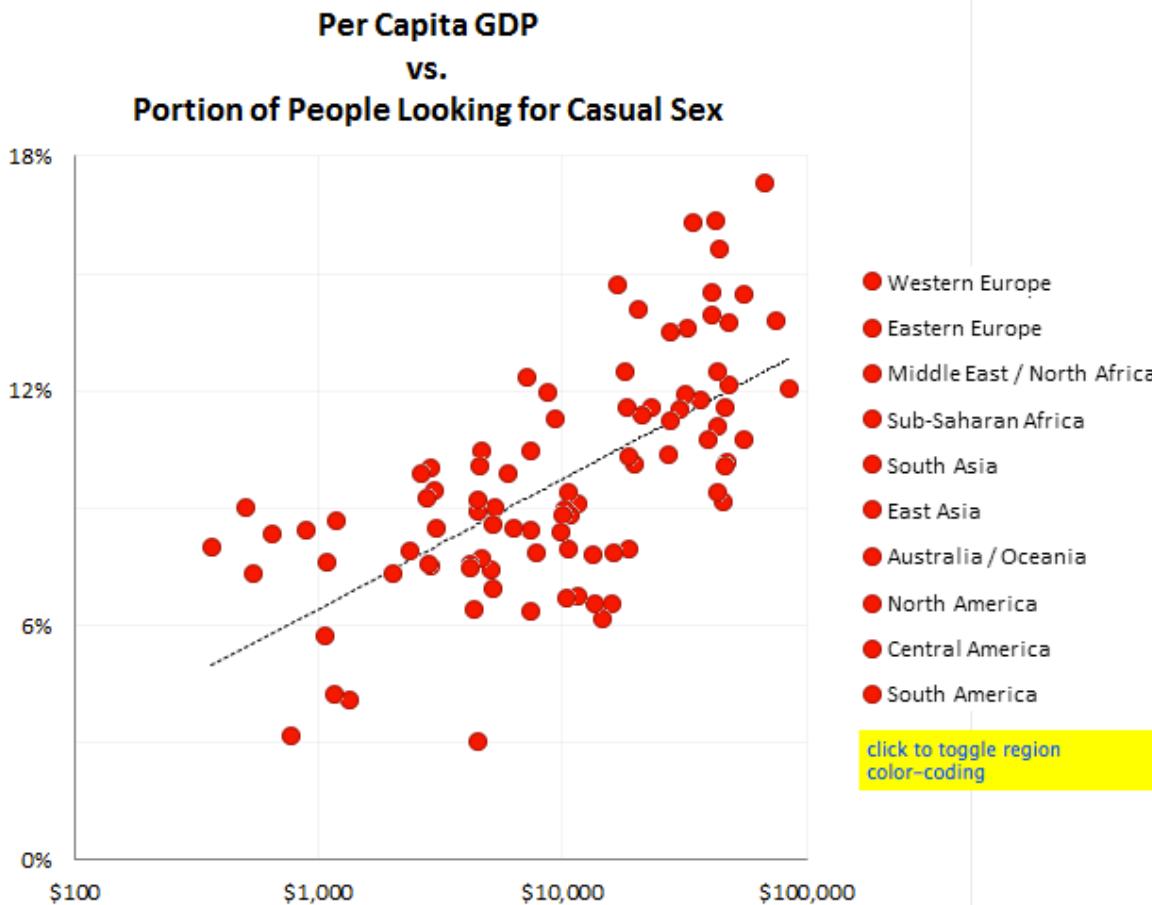
Bar Graph

**Would you consider sleeping with
someone on the first date?**

- % answering yes -

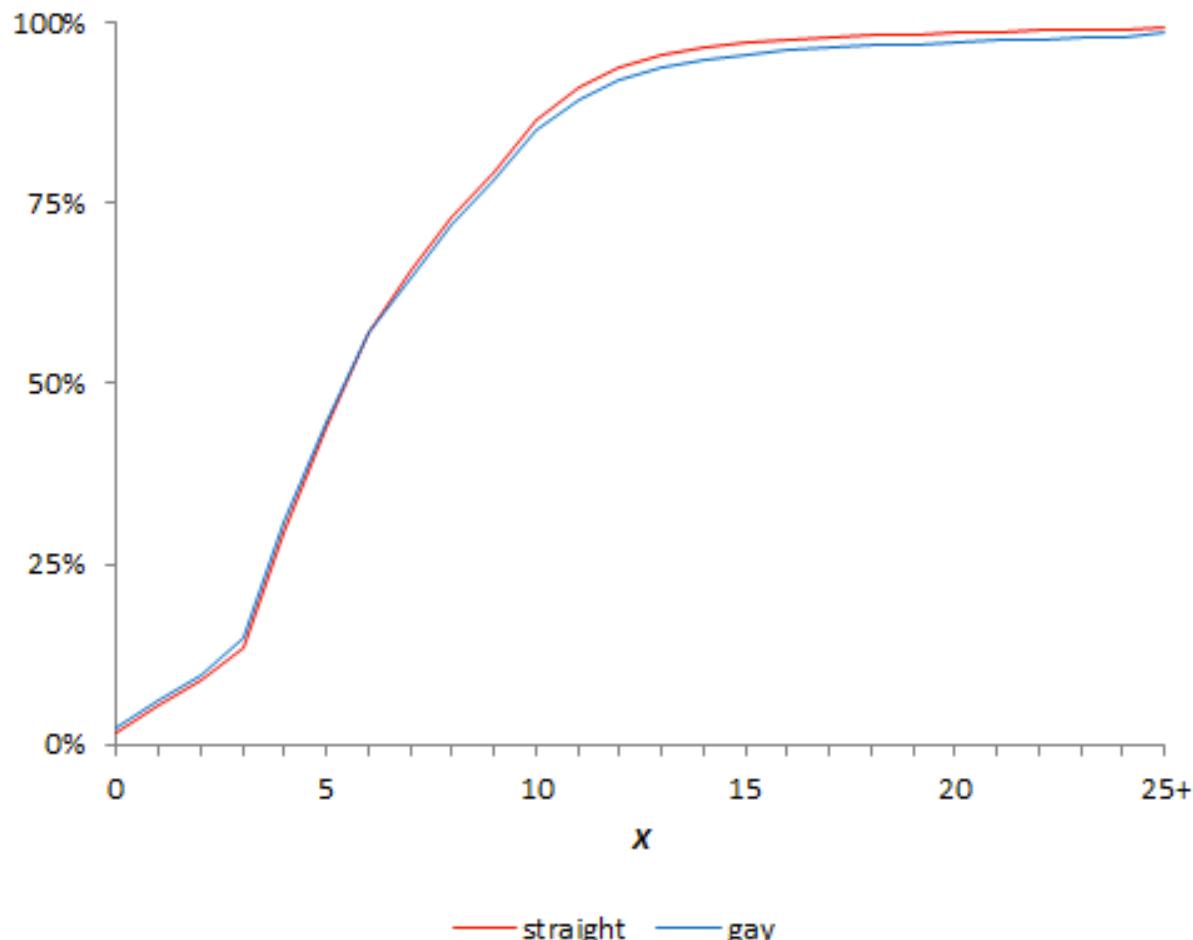


Scatter Plot



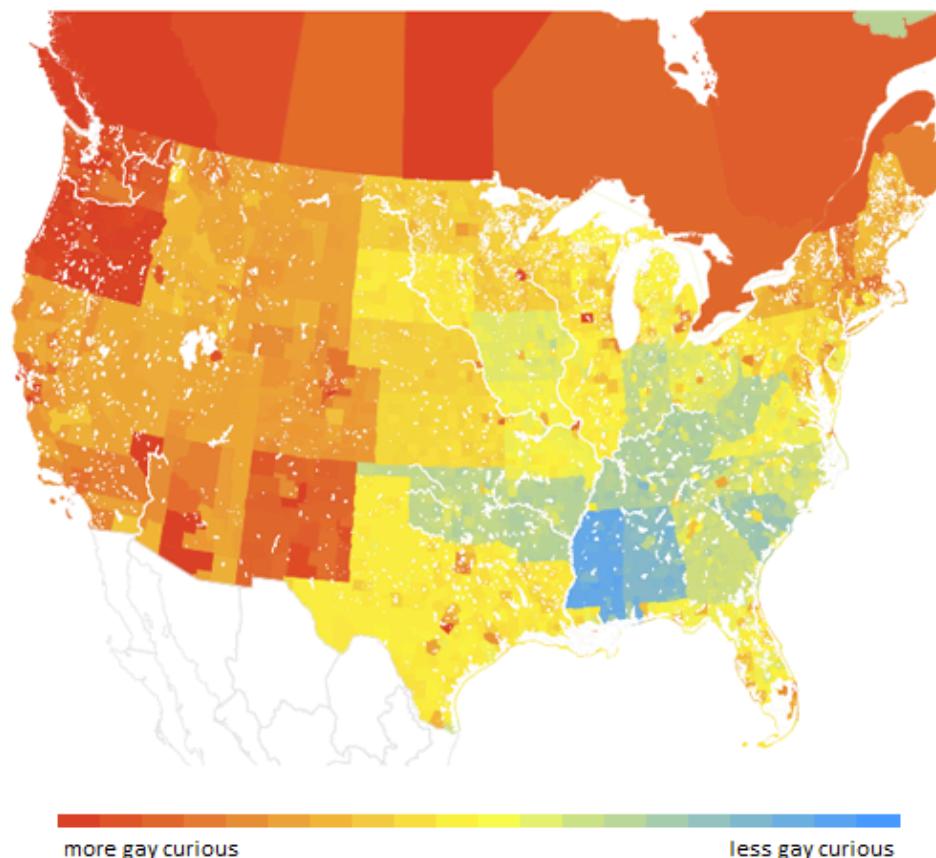
Line Graph

people with X or fewer sex partners

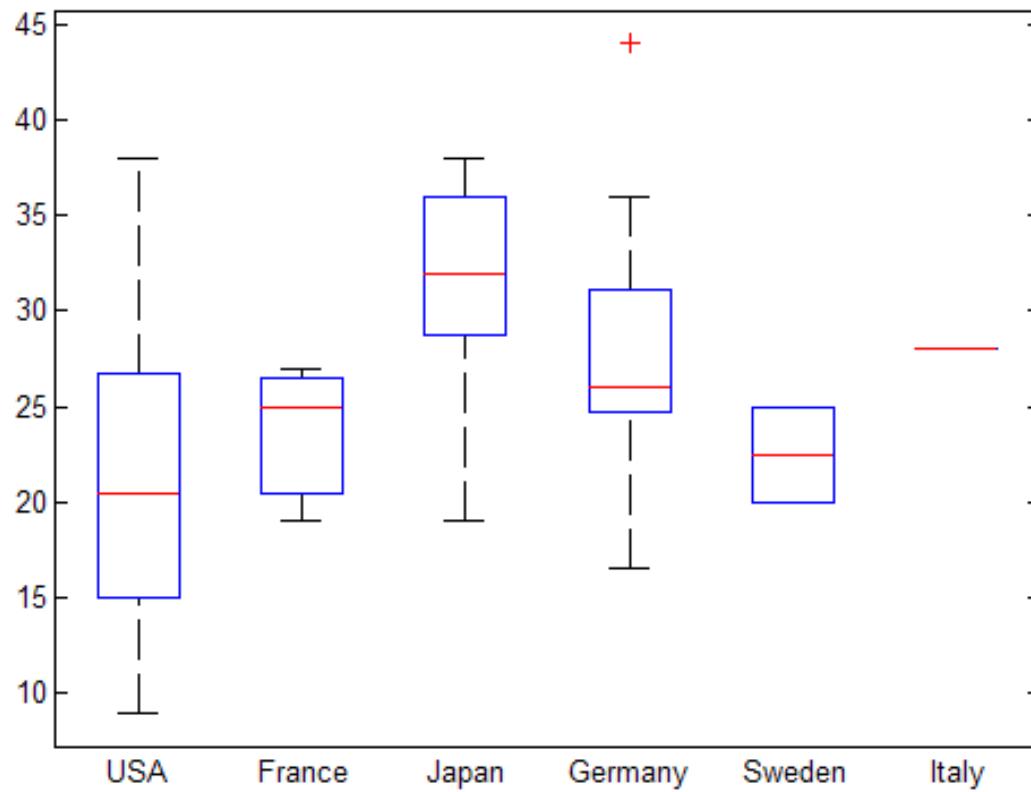


Choropleth Plots

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



Box Plots

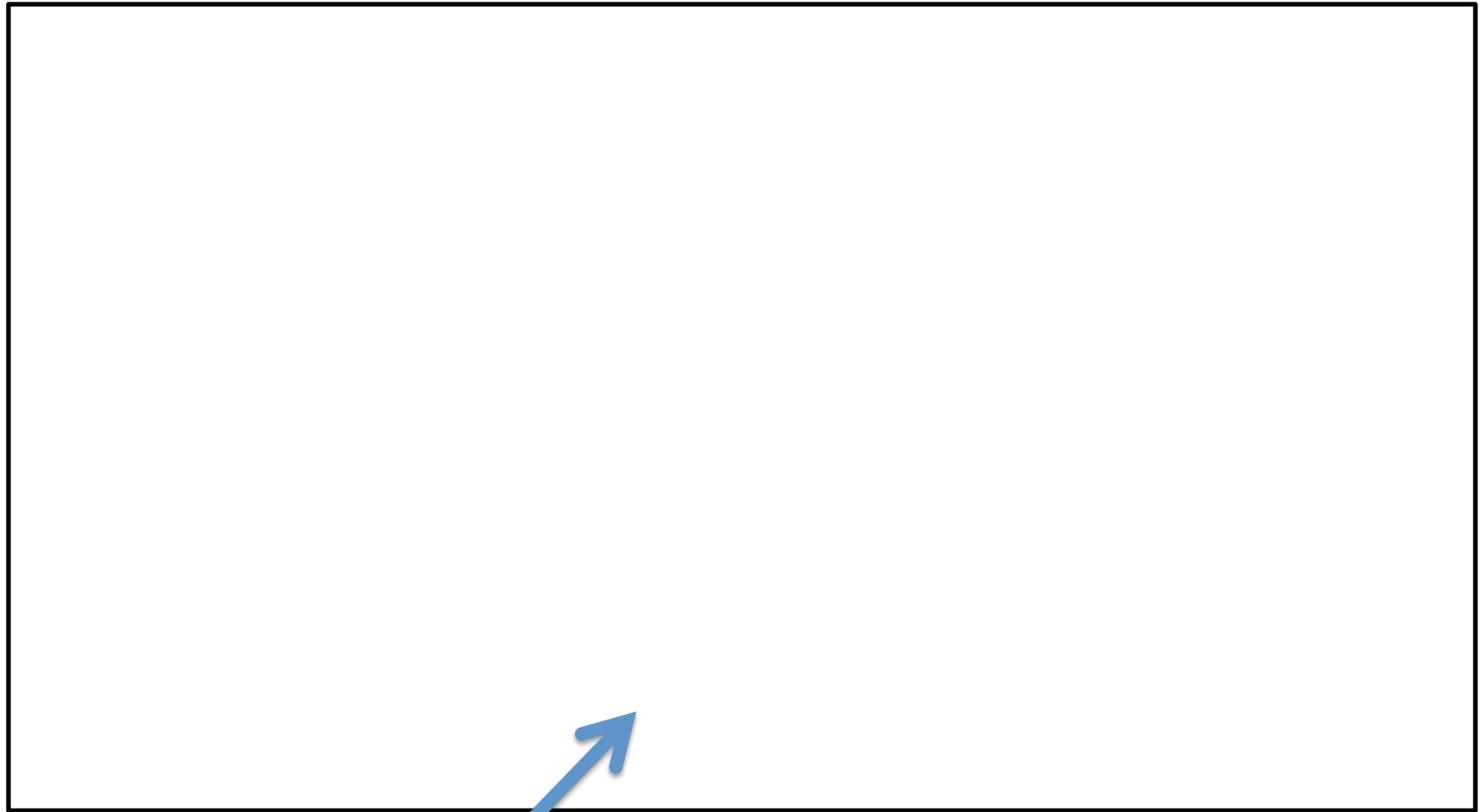


matplotlib

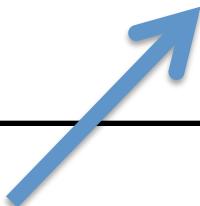
Python's version of Matlab plotting

How matplotlib Draws

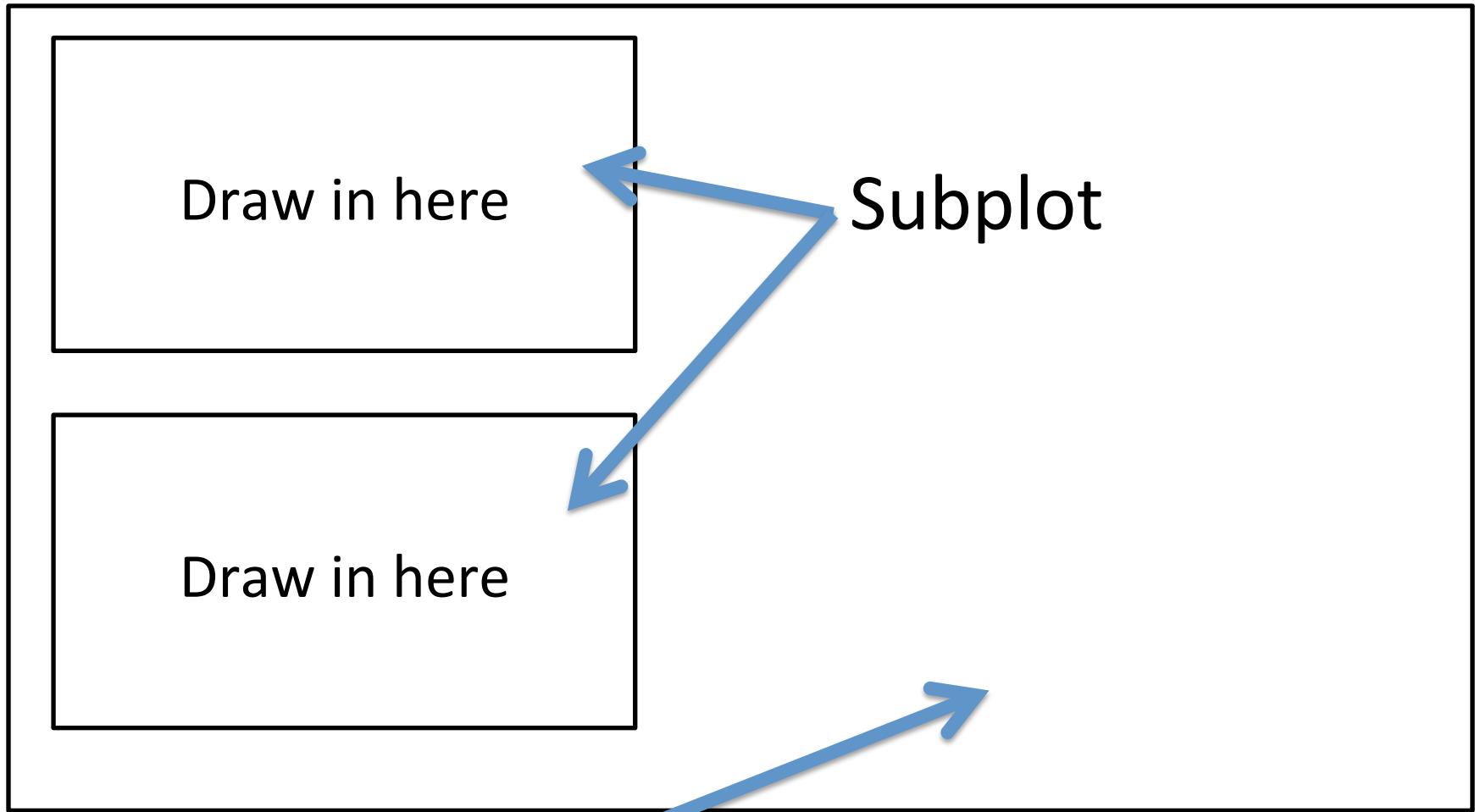
Figure object



Figure



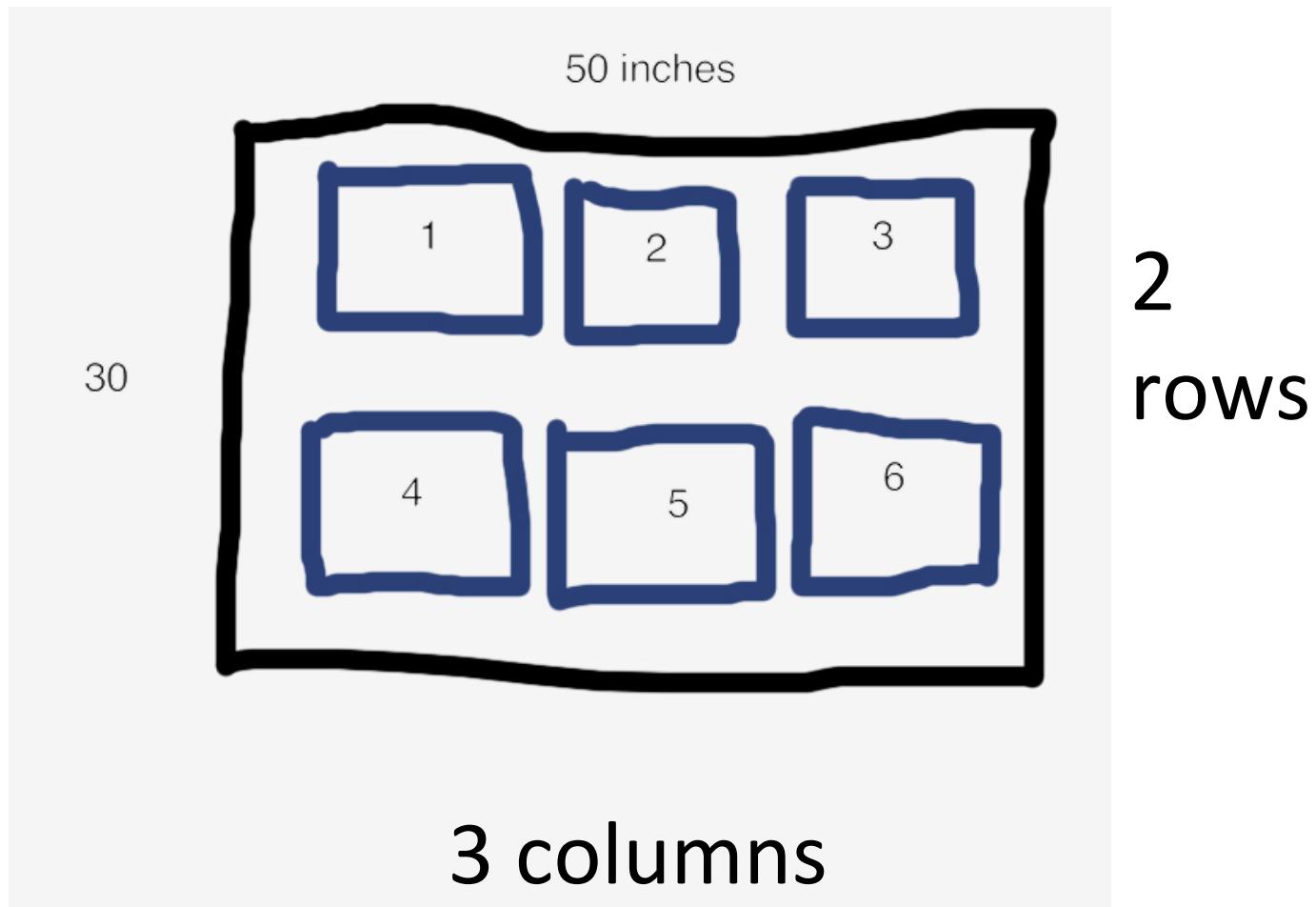
Subplot object



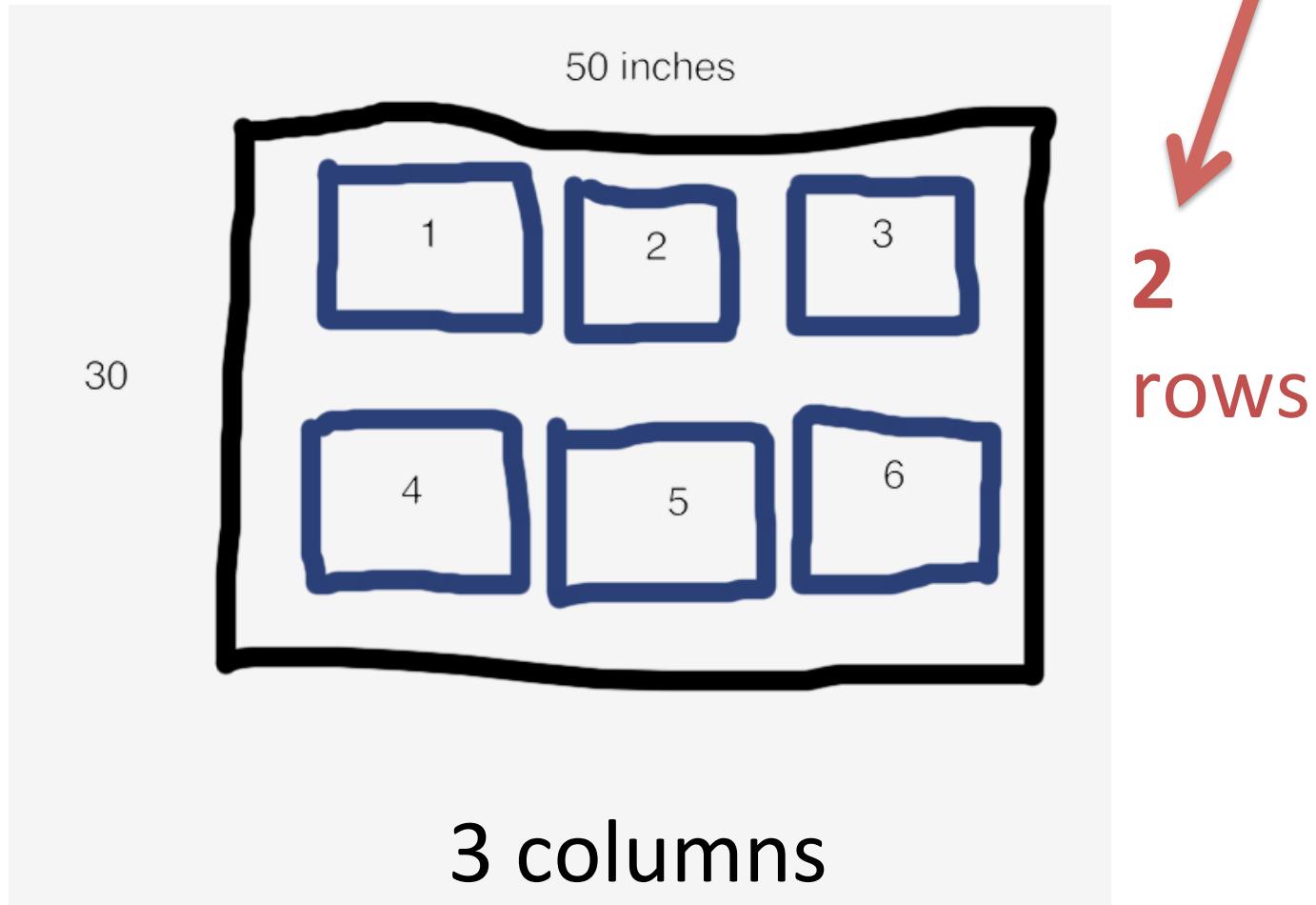
Figure

Subplot

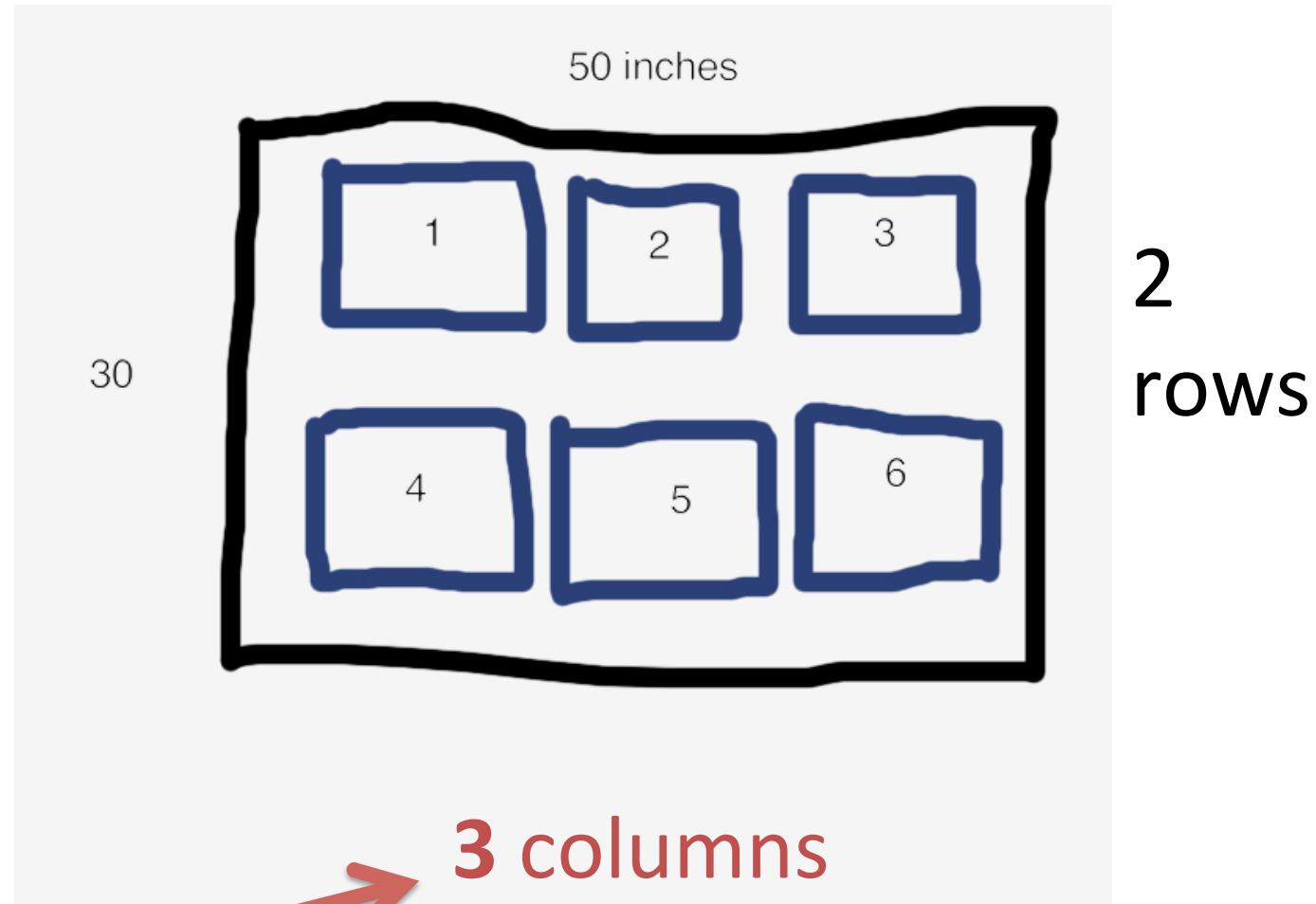
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figure.add_subplot(2, 3, 1)
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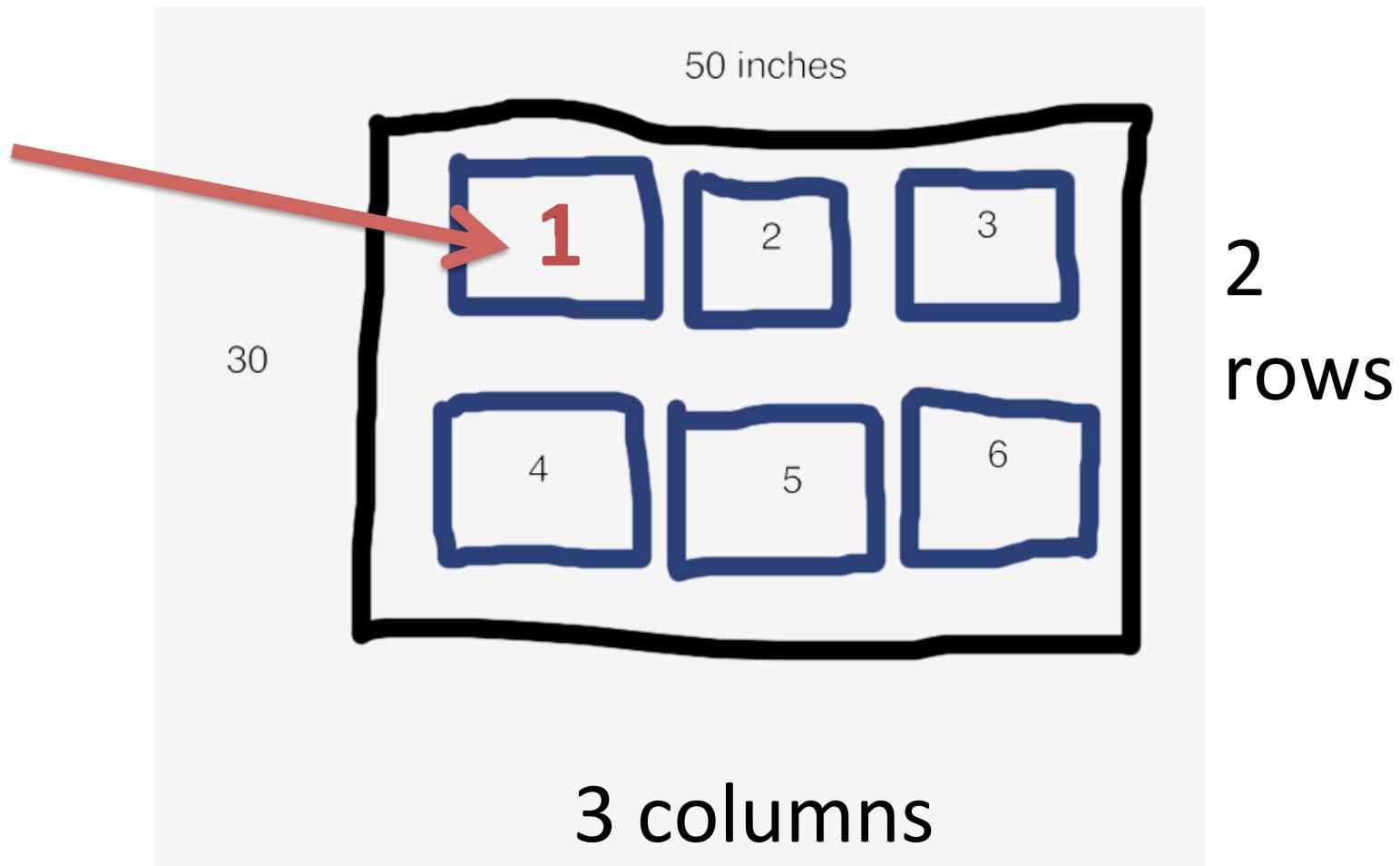
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figure.add_subplot(2, 3, 1)
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```
figure.add_subplot(2, 3, 1)
```



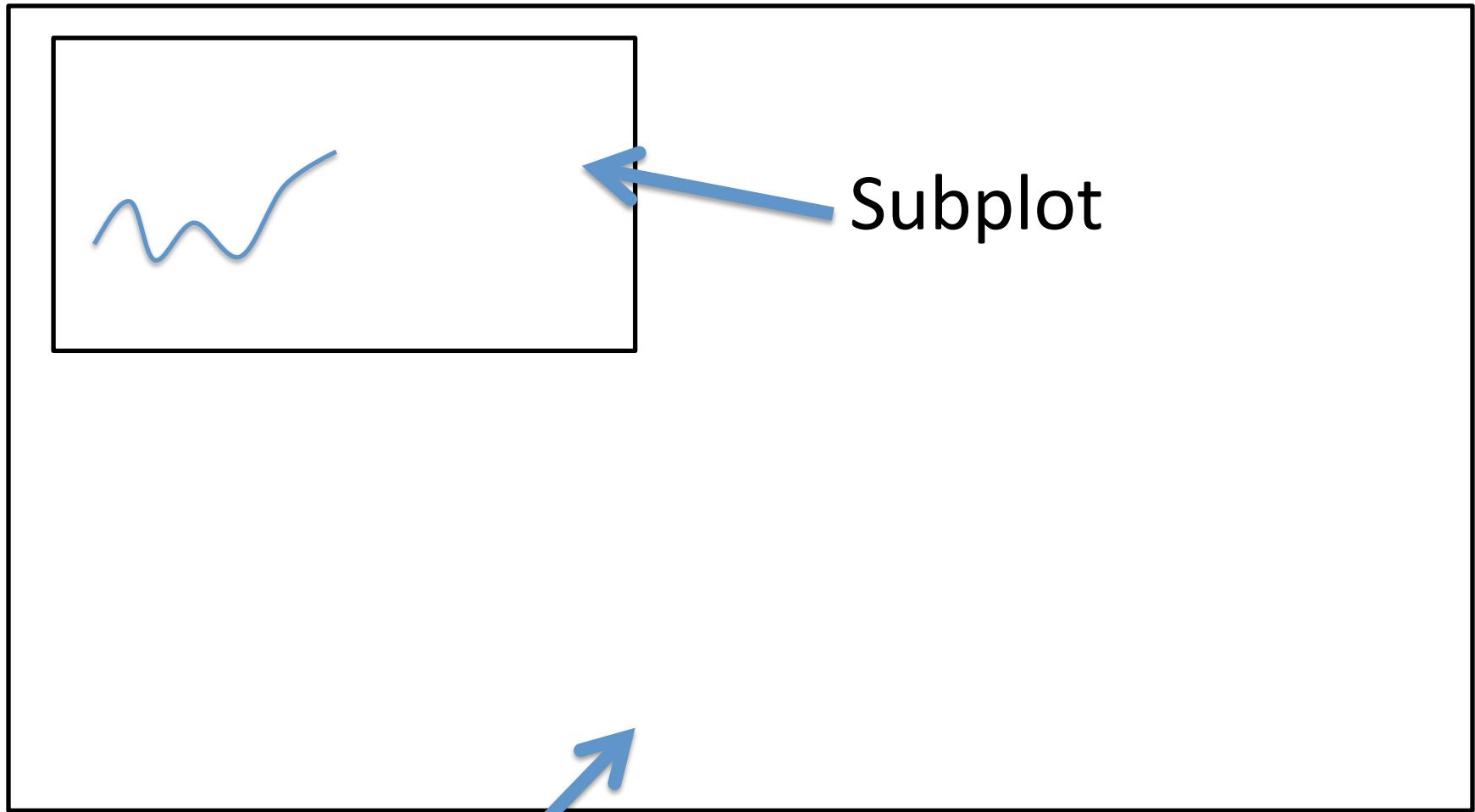
```
figure.add_subplot(2, 3, 1)
```



Charting Library

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

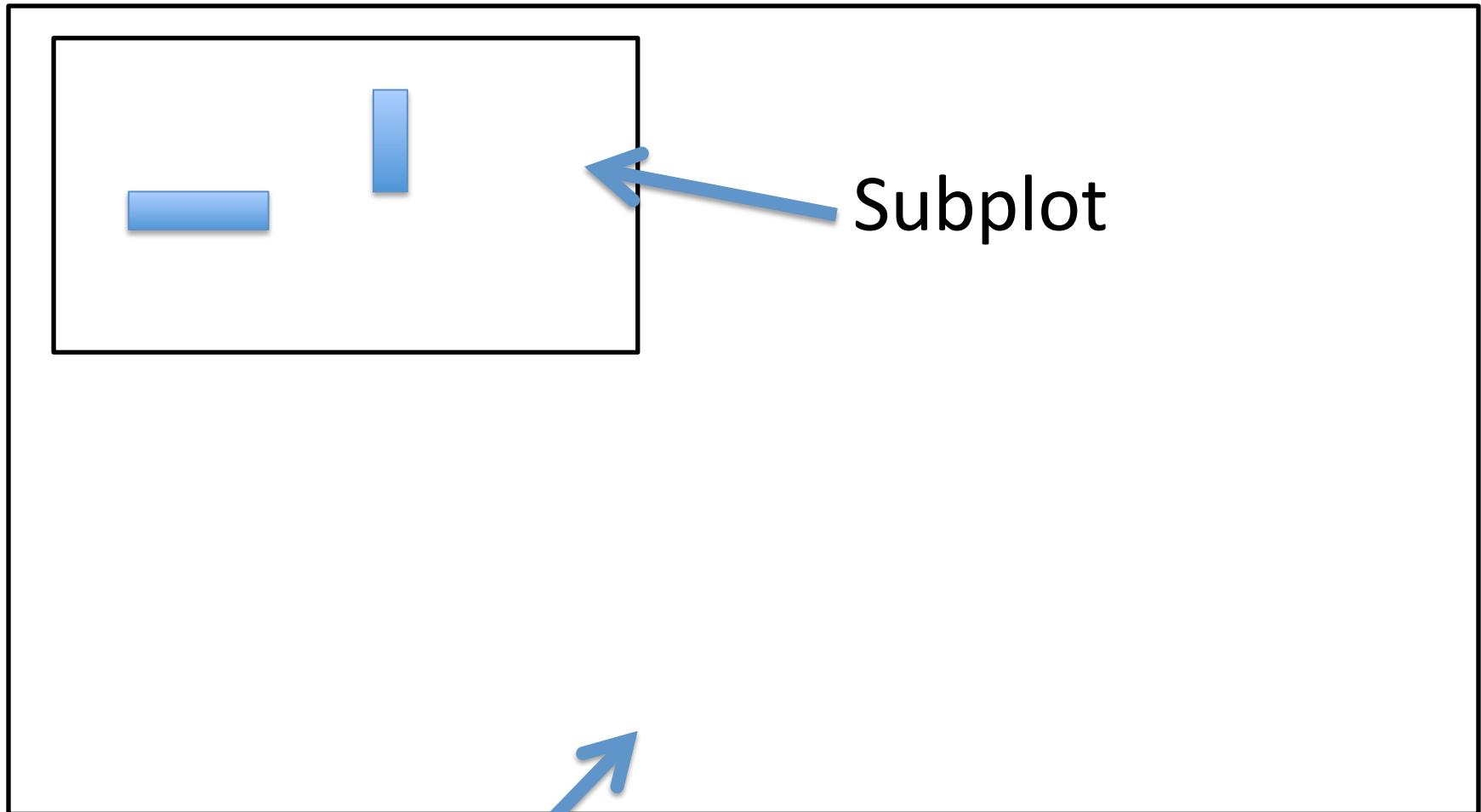
Lines



Figure

Subplot

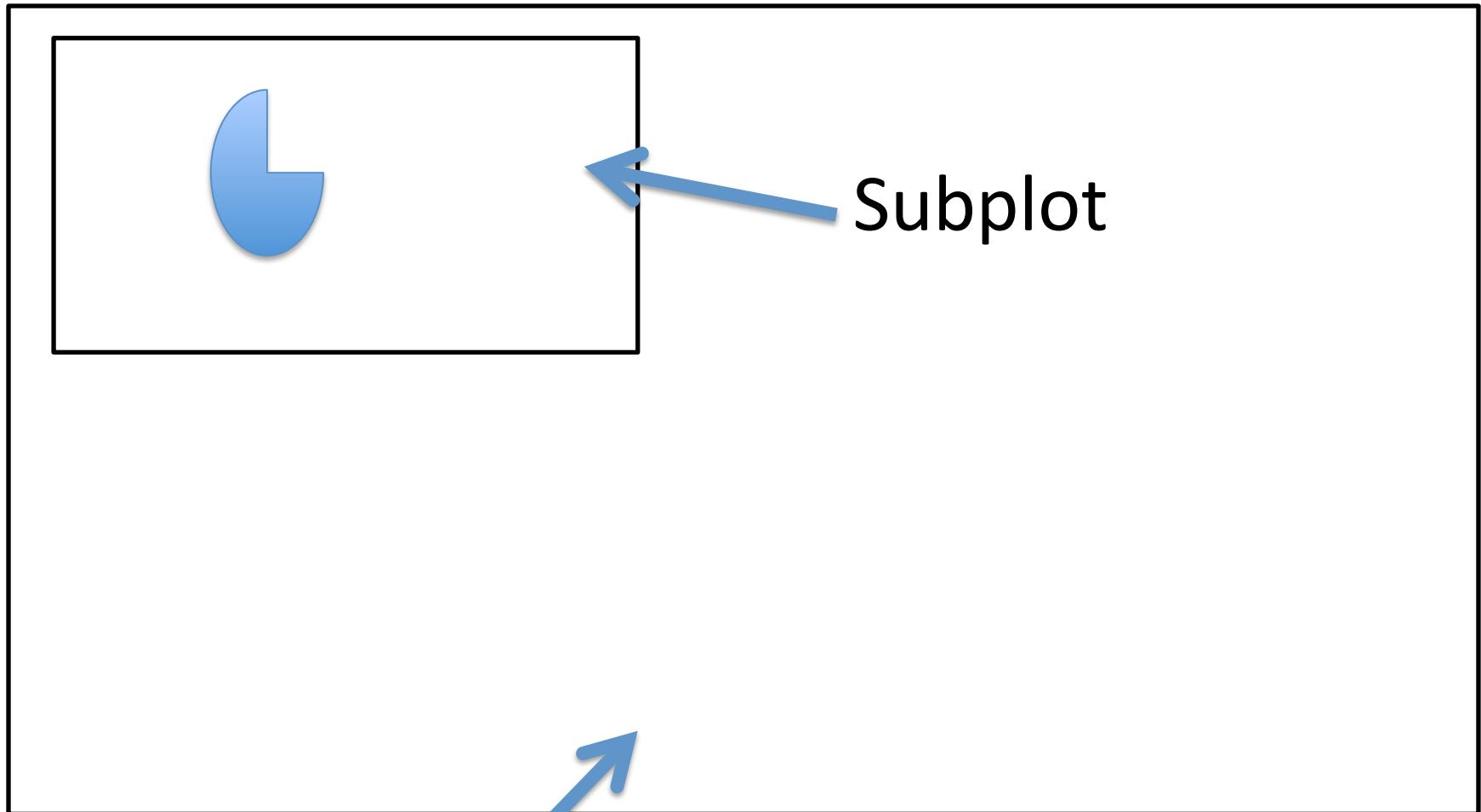
Boxes



Figure

Subplot

Polygons



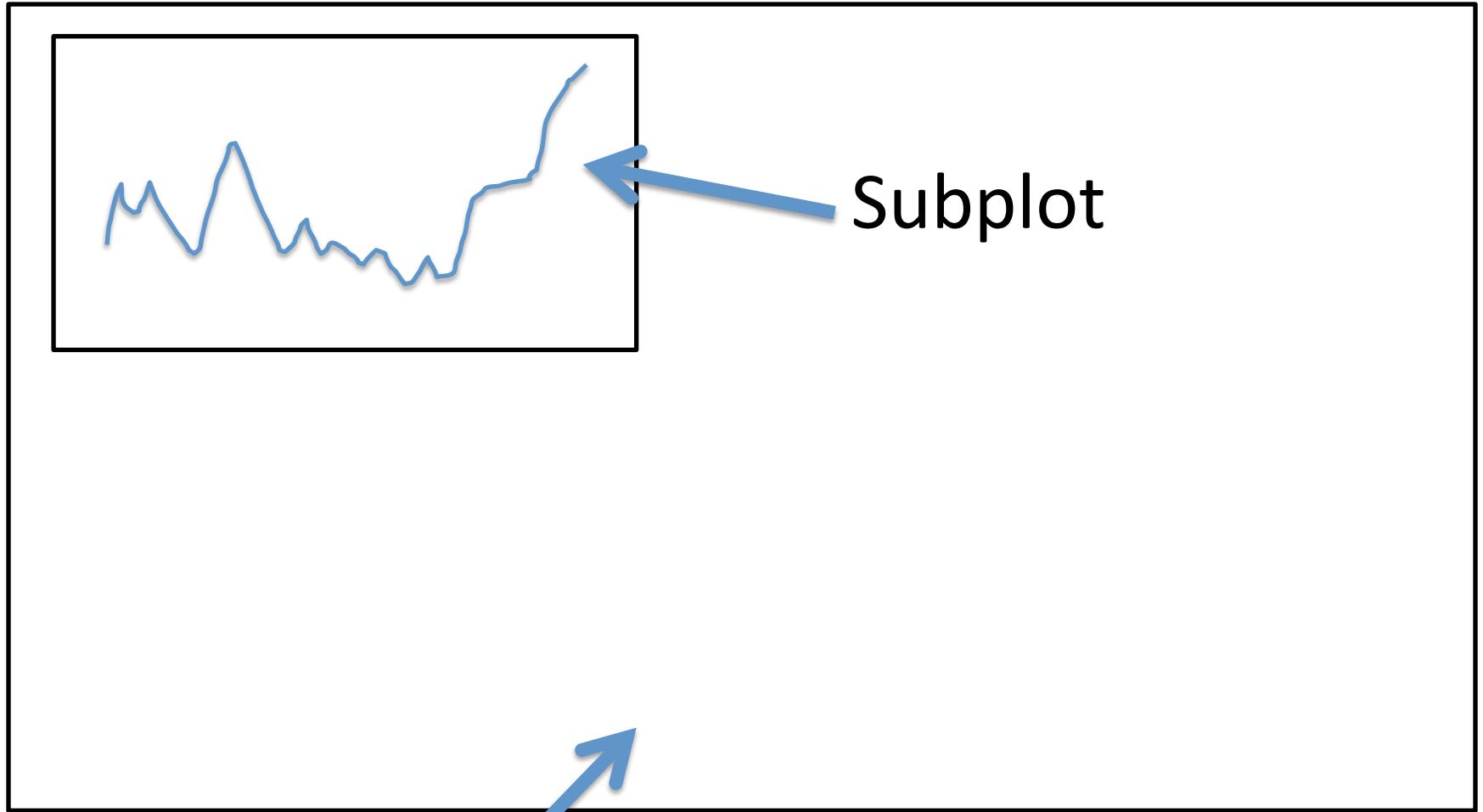
Figure

Subplot

Painting



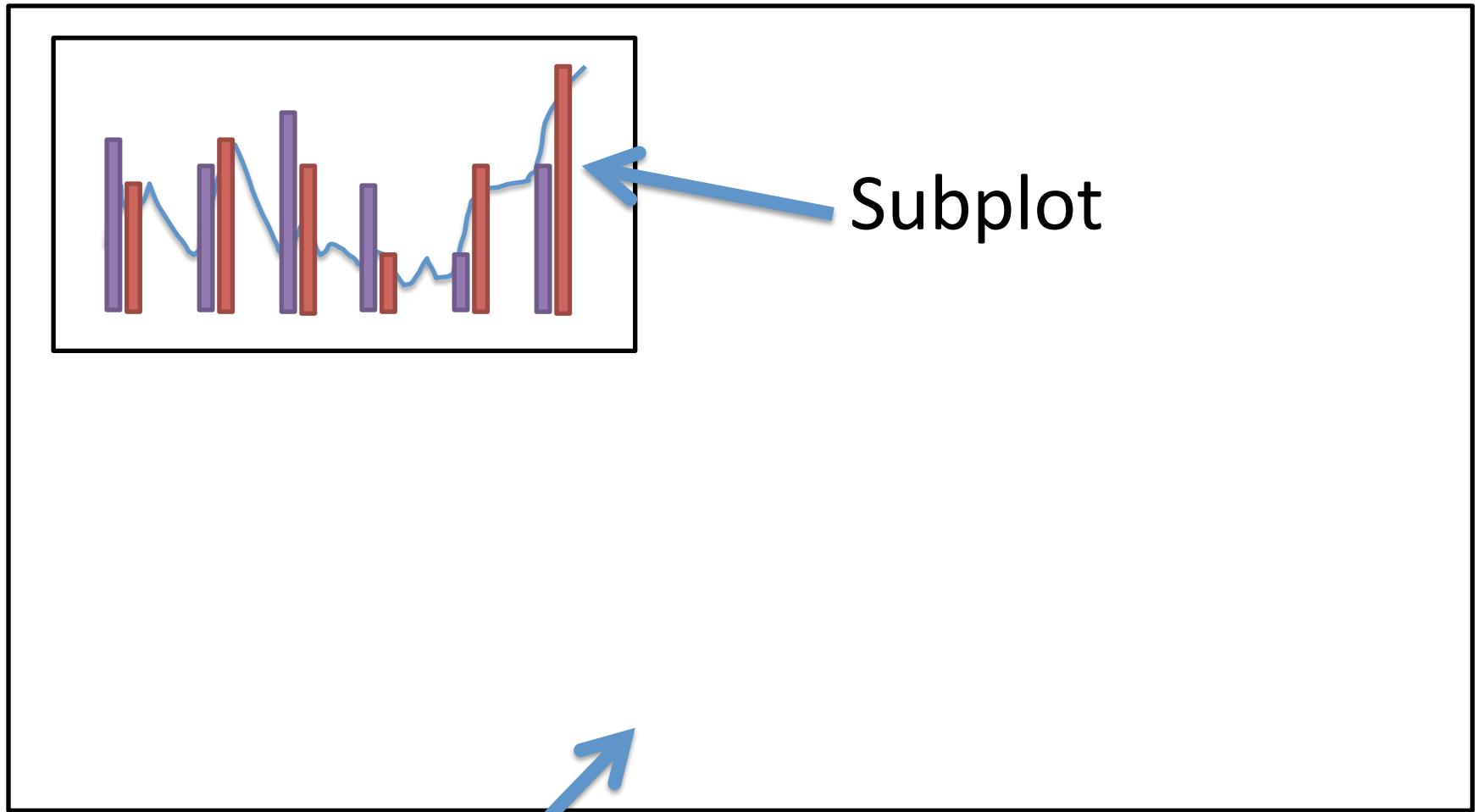
Overlaps



Figure

Subplot

Overlaps

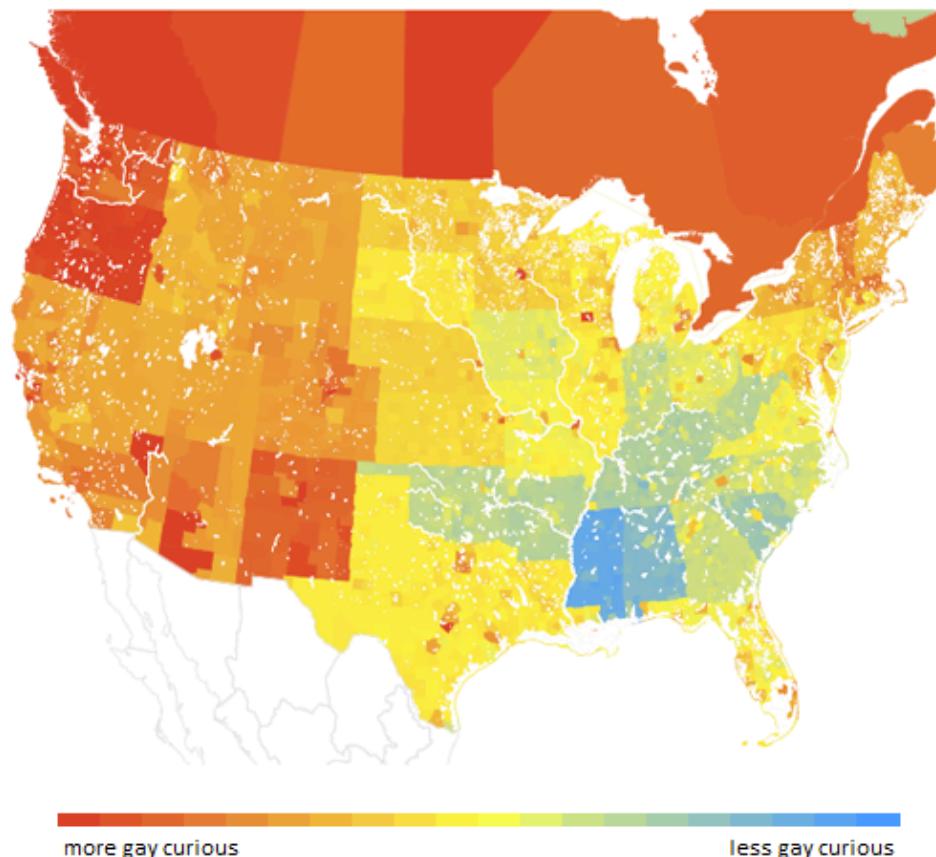


Figure

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/dataiap/day2/

git