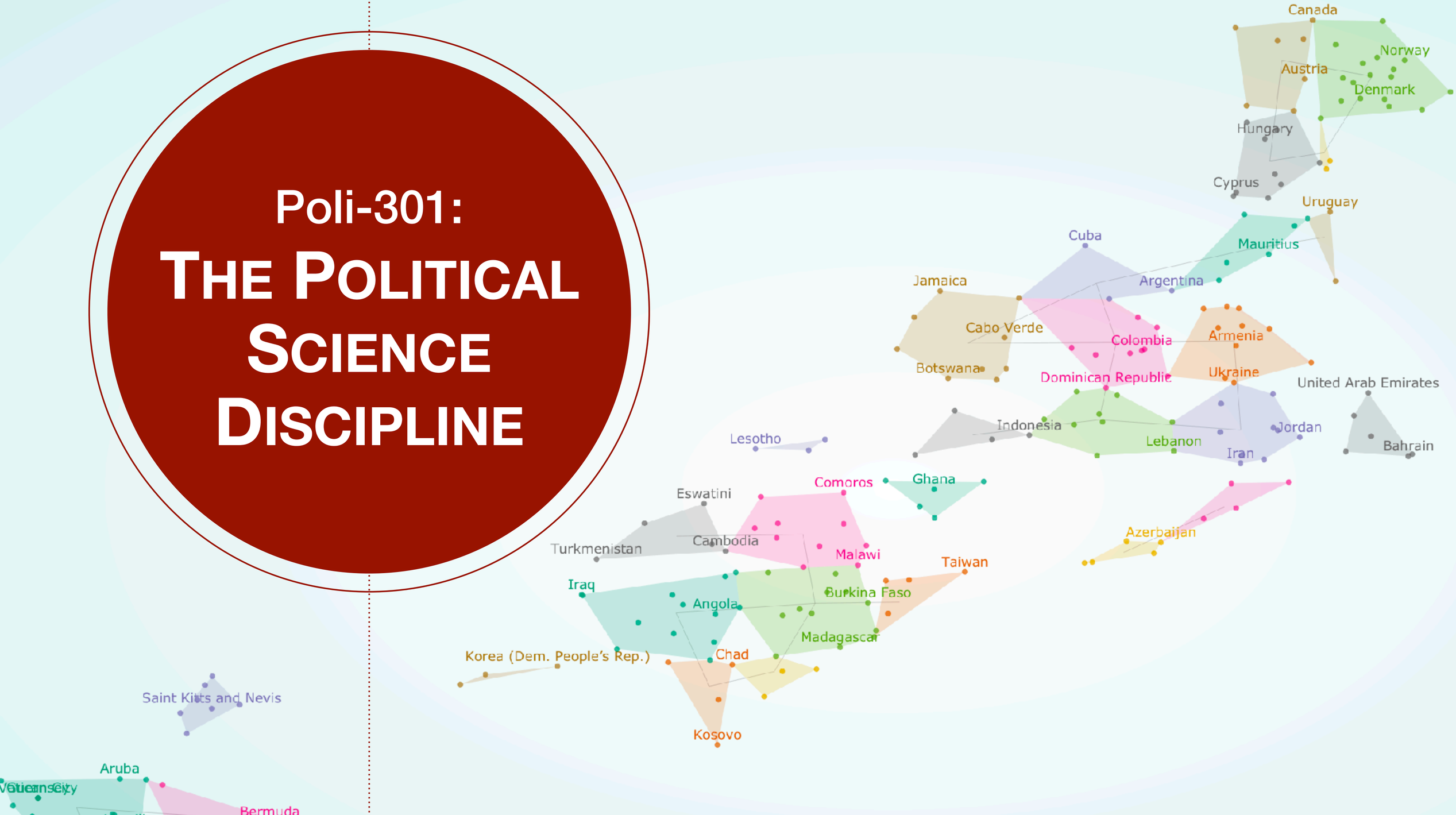
Poli-301:
The Political Science Discipline

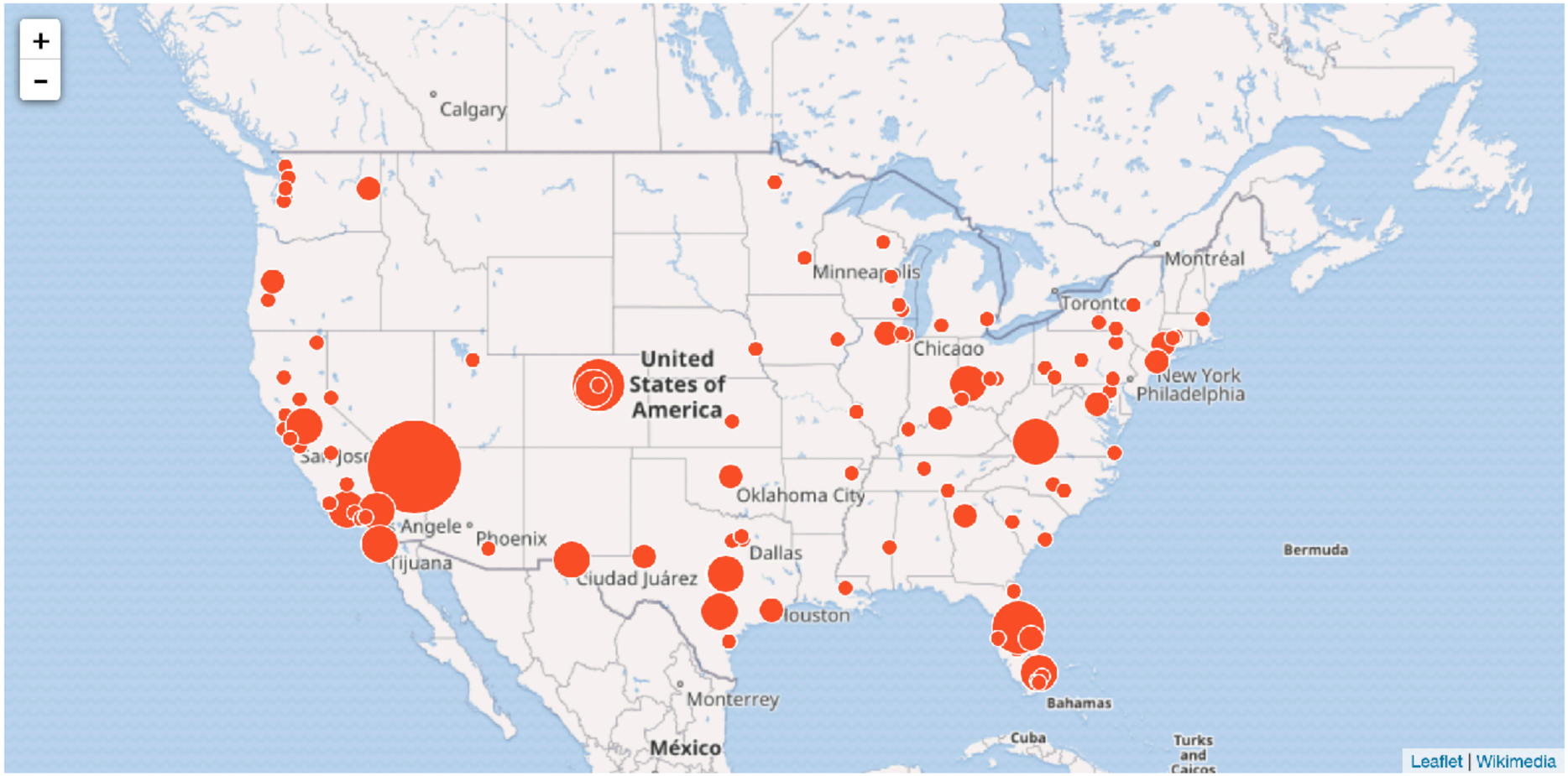


TODAY'S AGENDA

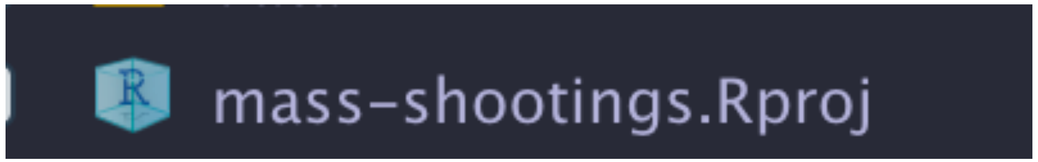
1. Finish up exercise from last week
2. More aesthetics
3. Practice + HOMEWORK

Mass shootings in the US

US Mass Shootings, 1982-2019: Data From MotherJones



In-class activity

- Download **mass-shootings.zip** from site
- Unzip file somewhere easy to find again (maybe a folder for this class?)
- Double-click on 

- Open **plot-shootings.R**

Adding labels

```
ggplot(gapminder_2002, aes(x = gdpPercap, y = lifeExp,
                           size = pop, color = continent,
                           label = country)) +
  geom_point() +
  geom_text()
```

1

More Aesthetics

More aesthetics

facet_()

labs()

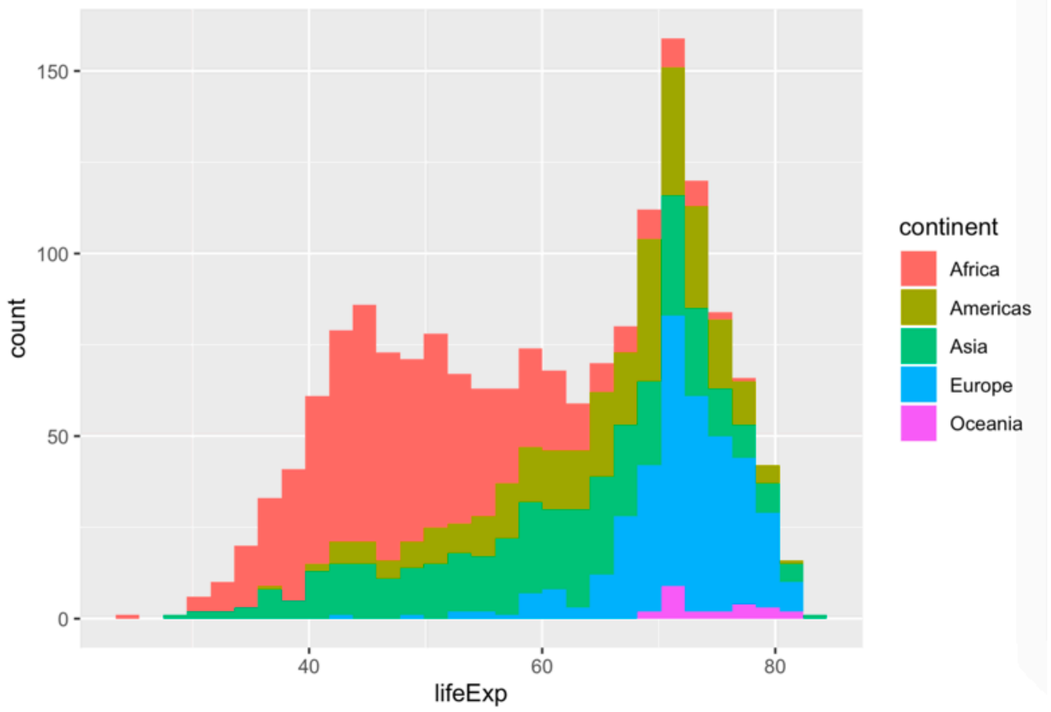
theme_()

scale_color_()

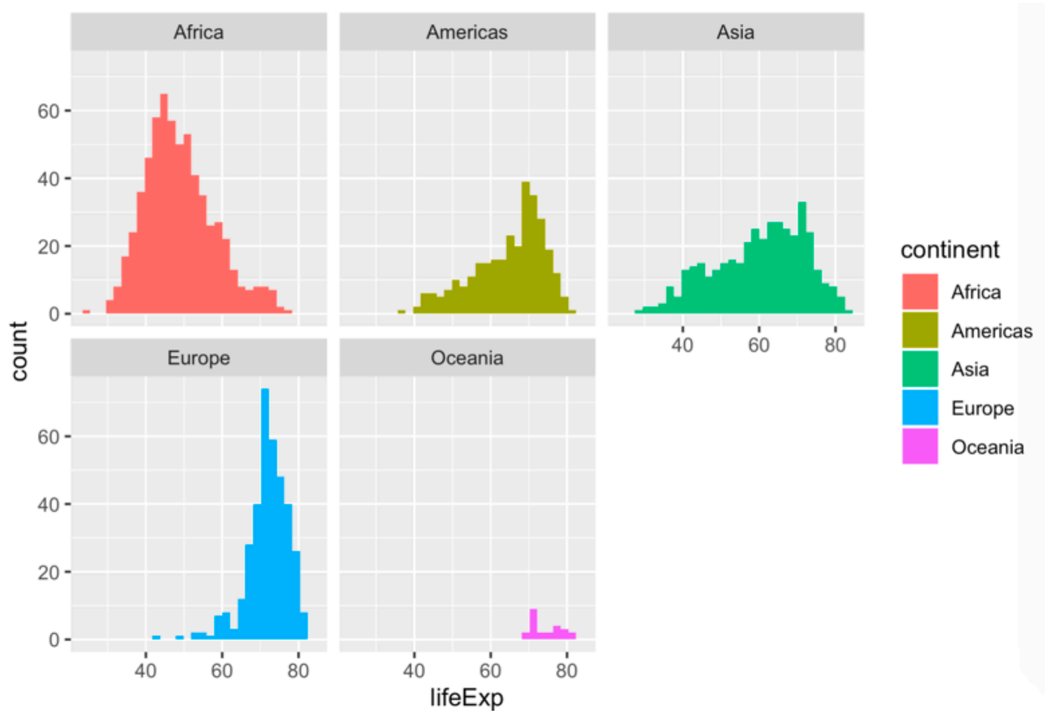
Facets

What's nice about this?

```
# look at distribution of life expectancy comparing continents
ggplot(gapminder, aes(x = lifeExp, fill = continent)) +
  geom_histogram()
```

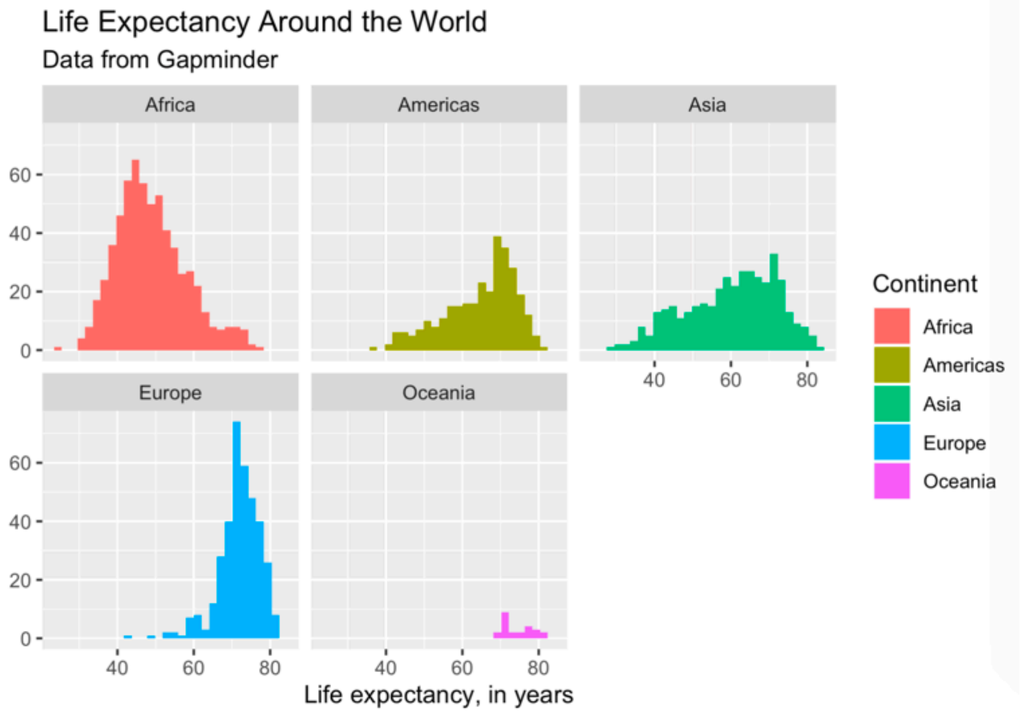



```
# look at distribution of life expectancy comparing continents
ggplot(gapminder, aes(x = lifeExp, fill = continent)) +
  geom_histogram() +
  facet_wrap(vars(continent))
```



Axis labels and titles

```
# let's add labels to make this more legible
ggplot(gapminder, aes(x = lifeExp, fill = continent)) +
  geom_histogram() +
  facet_wrap(vars(continent)) +
  labs(x = "Life expectancy, in years",
       y = "",
       title = "Life Expectancy Around the World",
       subtitle = "Data from Gapminder",
       fill = "Continent")
```



Use labs()

Labels must be in “”

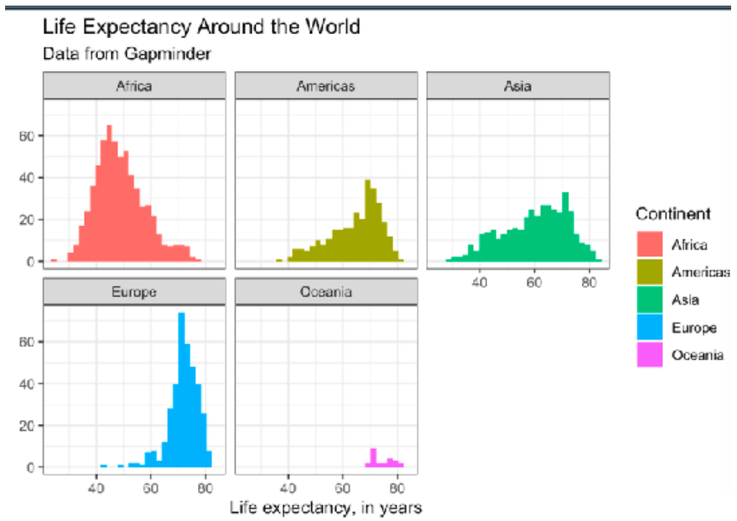
Themes

Themes are pre-set “looks” for your plot

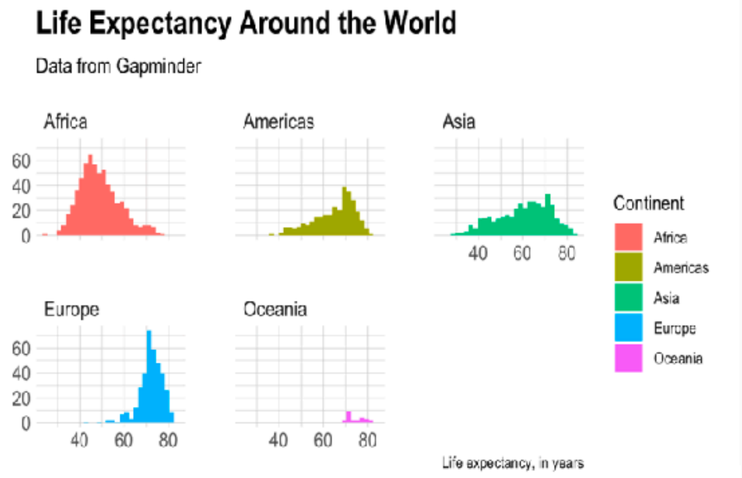
```
ggplot(gapminder, aes(x = lifeExp, fill = continent)) +
  geom_histogram() +
  facet_wrap(vars(continent)) +
  labs(x = "Life expectancy, in years",
       y = "",
       title = "Life Expectancy Around the World",
       subtitle = "Data from Gapminder",
       fill = "Continent") +
  theme_bw()
```

Themes

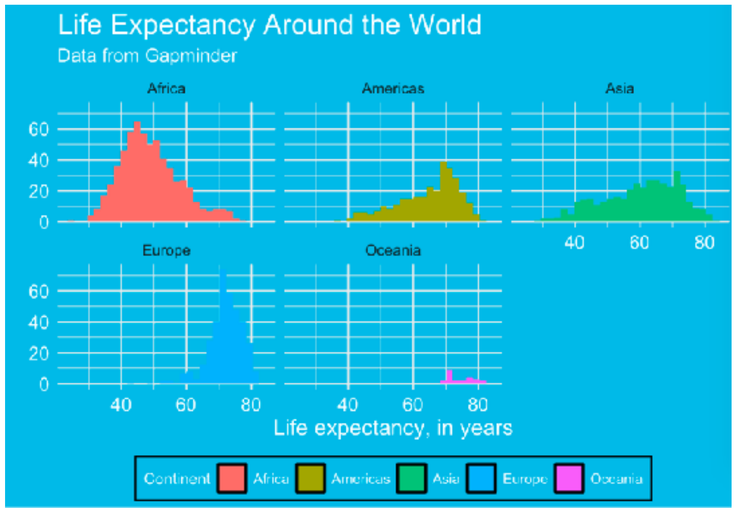
theme_bw()



theme_ipsum()



theme_spongeBob()



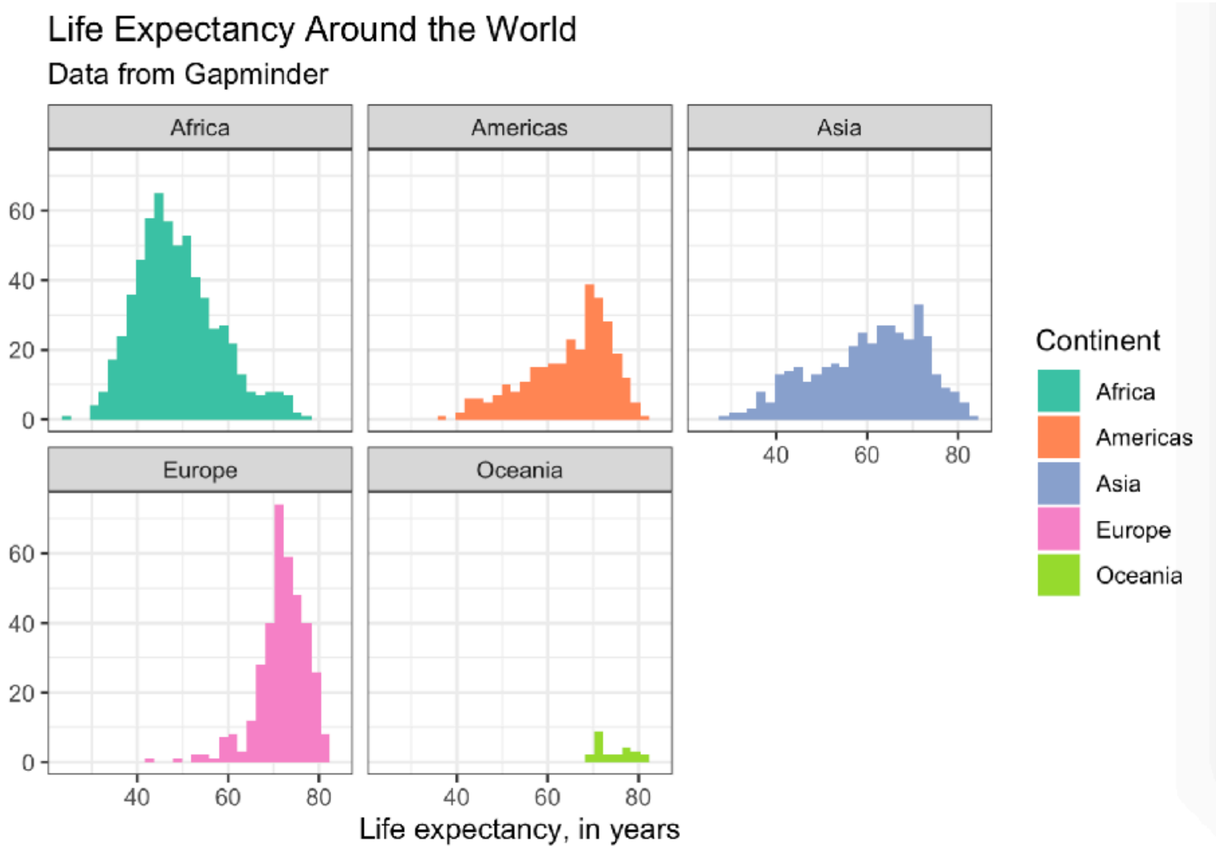
Colors

```
ggplot(gapminder, aes(x = lifeExp, fill = continent)) +
  geom_histogram() +
  facet_wrap(vars(continent)) +
  labs(x = "Life expectancy, in years",
       y = "",
       title = "Life Expectancy Around the World",
       subtitle = "Data from Gapminder",
       fill = "Continent") +
  theme_bw() +
  scale_fill_brewer(palette = "Set2")
```

Either use scale_fill_brewer() or scale_color_brewer()
Depends on what you put in aes()!

Colors

Go to http://colorbrewer2.org to find palettes



Practice

Make the nicest plot you can of:

Scatterplot of
GDP per capita (x-axis)
Life expectancy (y-axis)
Use color
Use faceting
Use labels

Time series line graph of
Time (x-axis)
Population (y-axis)
Use color
Use faceting
Use labels

hint: add theme(legend.position = “none") to get rid of legend