Polishing Graphics

New packages

Be sure to install these packages: `RColorBrewer`, `ggthemes`, `viridis`

```
install.packages("RColorBrewer")
install.packages("ggthemes")
install.packages("viridis")
```

Timeline

- HW-2 due Sunday by 11:59 p.m.
- Mini-project 1 due by Fri., April 14 at 9:50 a.m.
  - Work in pairs
  - Choose your own data set
  - Create a data graphic
  - Write a short "blog post"
  - Present your graphic

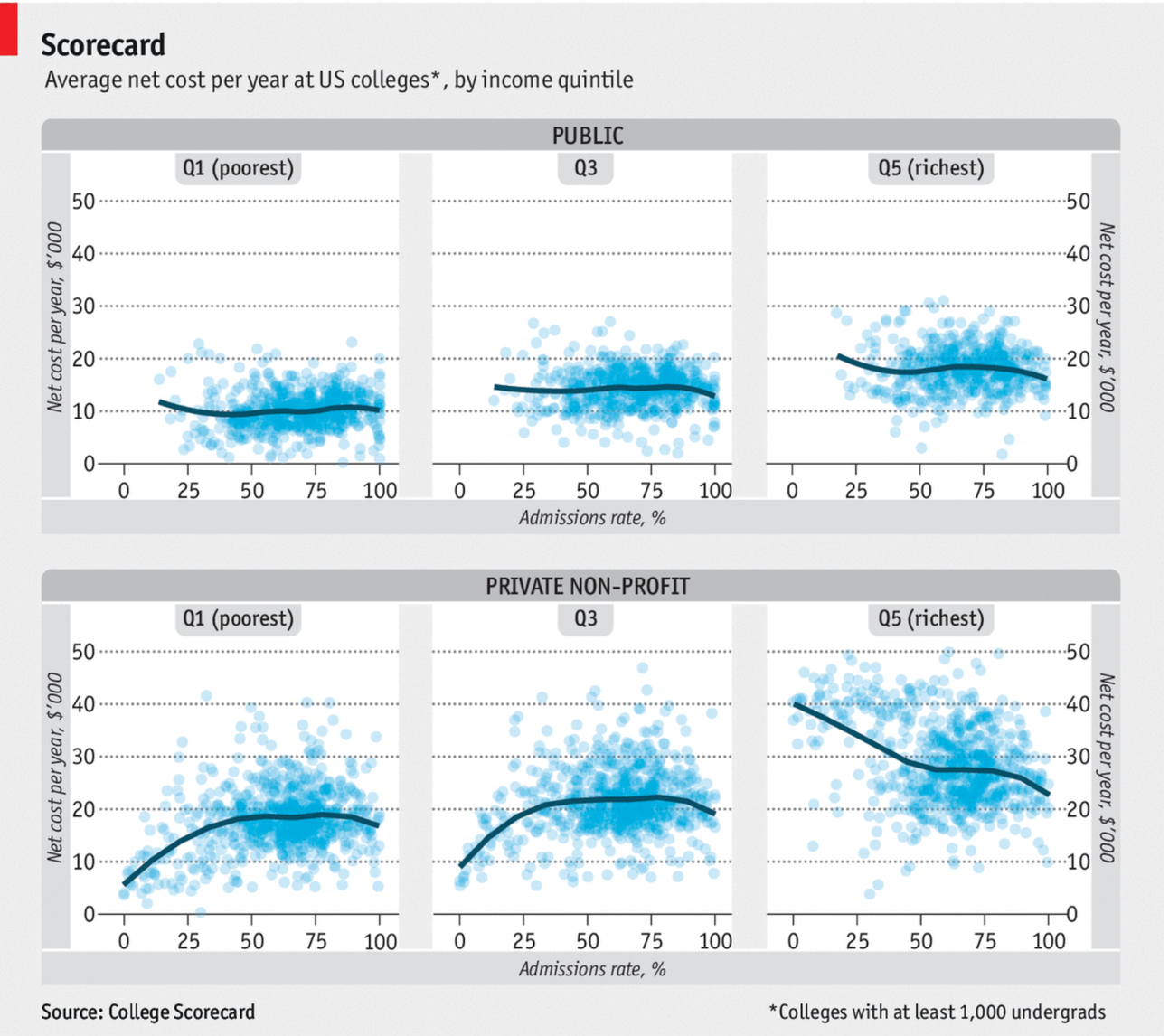
What we know

- A basic set of geometries
- How to map variables to aesthetics
- How to *set* colors
- How to change axis labels and titles
- How to add text annotations

What else is there?

- Reordering factors
- Changing color scales
- Changing themes

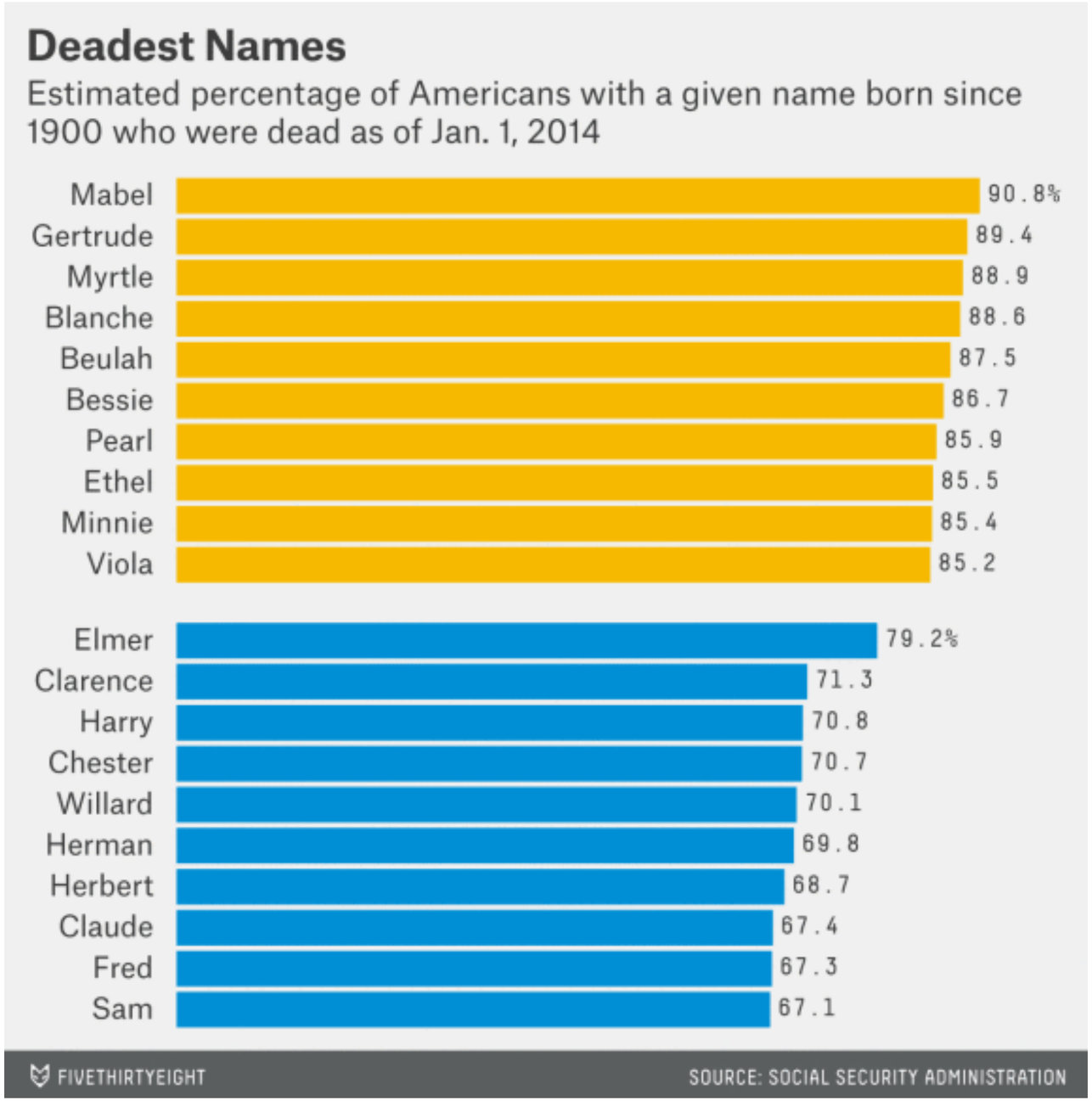
Your turn



Task: Recreate this graphic from *The Economist*

- `ScorecardSmallNarrow.csv` available on the course website
- Variables include:
  1. `CONTROL`: public (1) or private (2) institution.
  2. `ADM_RATE`: admissions rate (%)
  3. `income_group`: income quintile
  4. `net_cost`: avg. net cost for students
- Hint: `geom_smooth` will help

Polishing



Goals

- bar chart for names
- faceting and fill by sex
- flip the axes
- text giving the percentages

Changing scales

Recipe: `scale_<aes>_<method>`

Examples:

- `scale_fill_manual`
- `scale_fill_brewer`
- `scale_color_viridis`
- `scale_shape_manual`

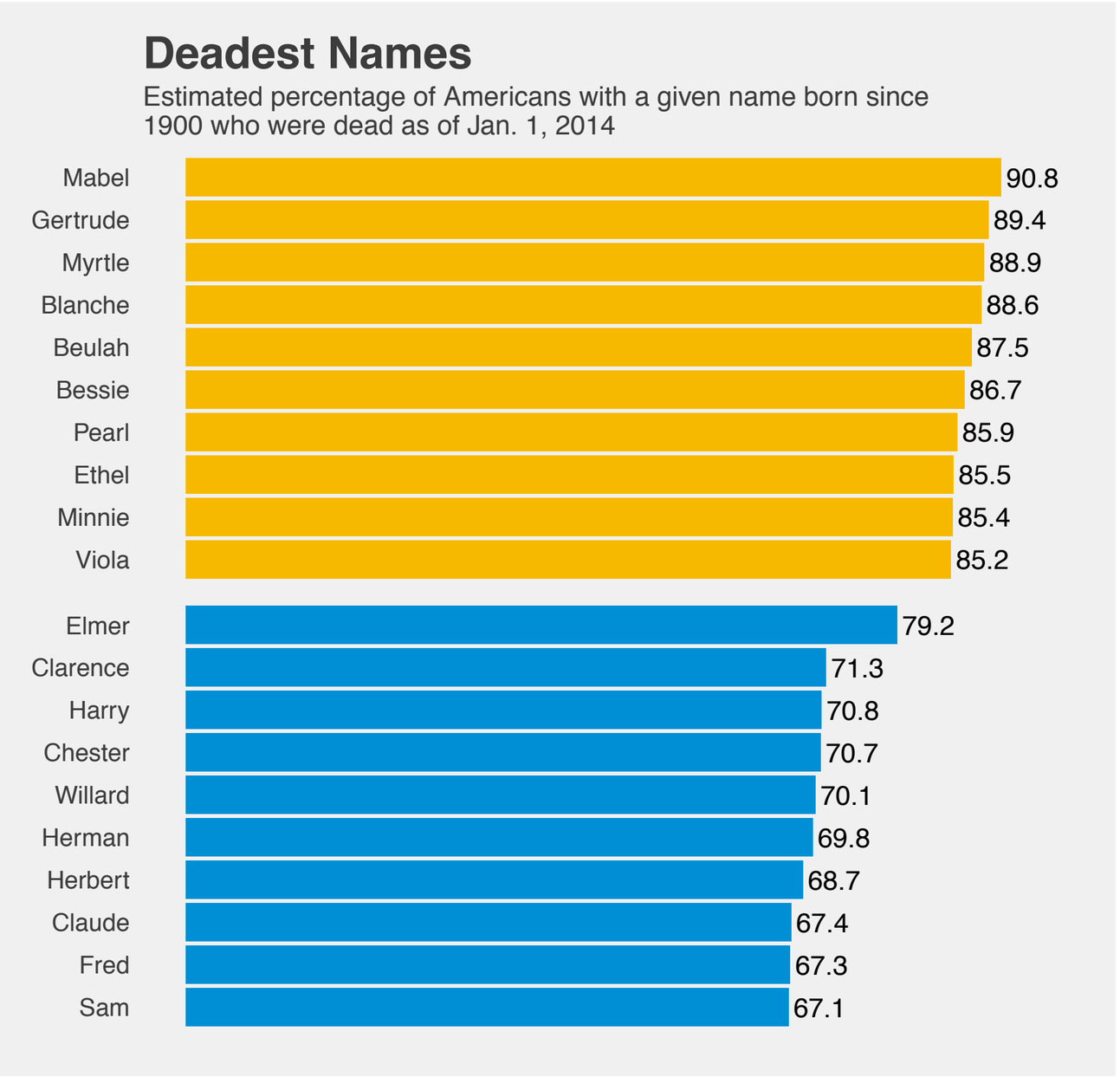
Changing themes

Loading ggthemes allows you to access numerous prebuilt themes

- `theme_wsj()`
- `theme_few()`
- `theme_hc()`
- `theme_gdocs()`

Custom themes

- `theme()` function allows us to fine tune every aspect of our plot canvas
- A LOT of decisions (run `?theme` to see more)
- A LOT of control




```
dnplot2 +
  theme_fivethirtyeight() +
  theme(legend.position = "none",
        panel.grid = element_blank(),
        strip.text = element_blank(),
        axis.text.x = element_blank()
        )
```