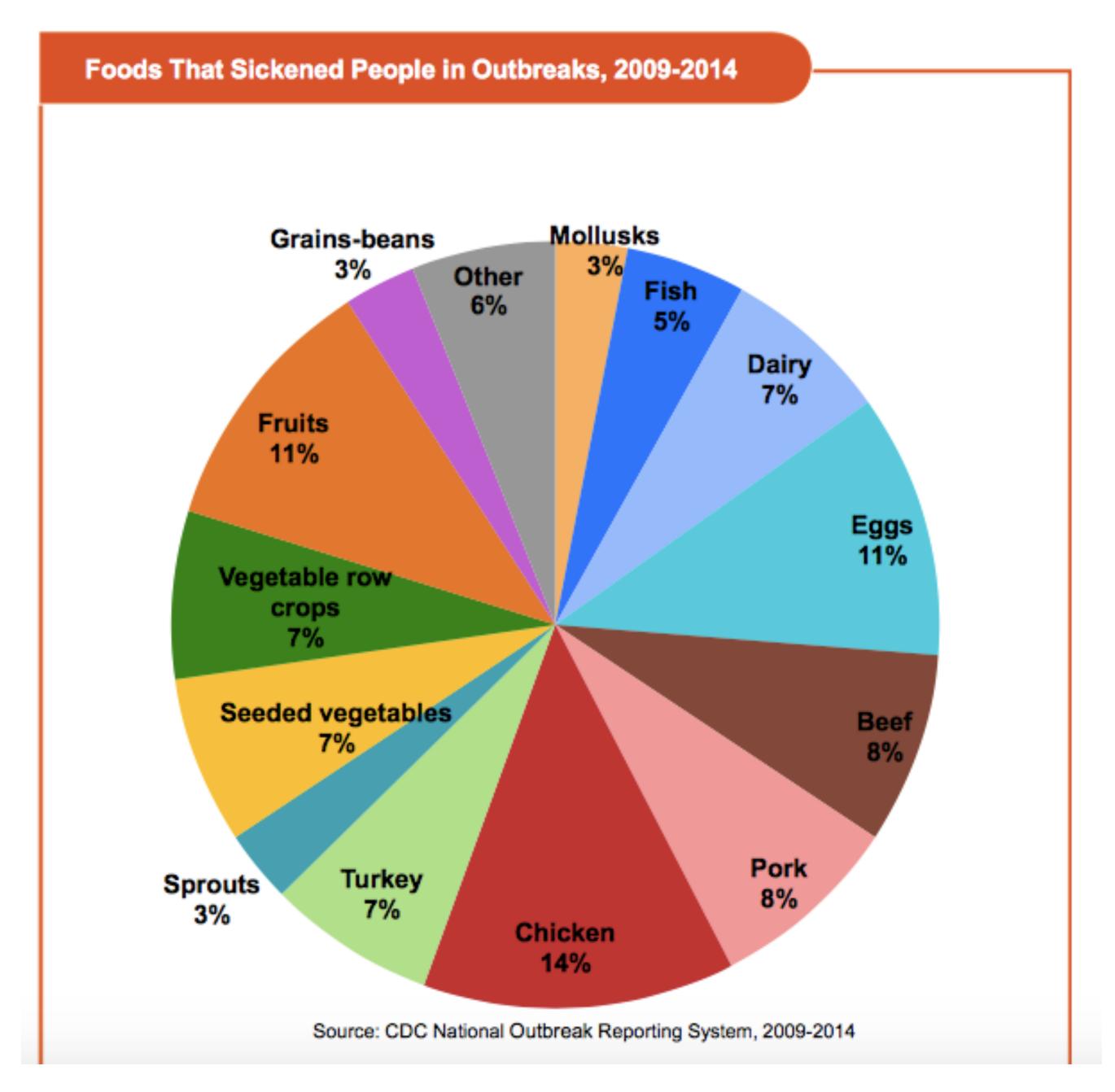
# GR5702 Exploratory Data Analysis and Visualization

Prof. Joyce Robbins

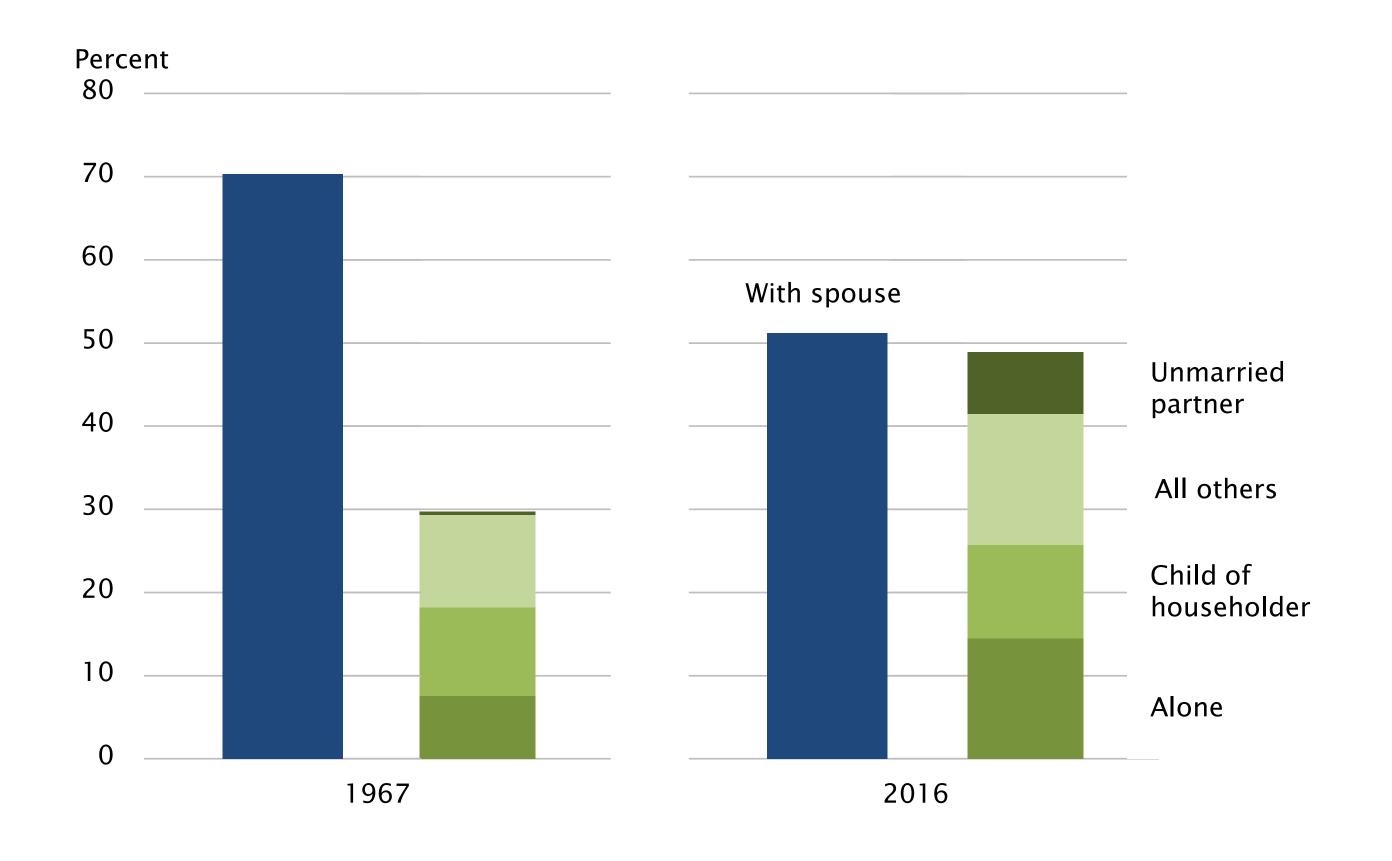


30 -25 -E-cigarettes only (5.9%) Any past-30-day e-cigarette use (16.0%) Combustibles, 20 noncombustibles, and e-cigarettes (2.6%) Percent (%) Noncombustibles and e-cigarettes (0.7%) E-cigarettes only (2.6%) Combustibles and Combustibles, e-cigarettes (6.6%) noncombustibles, and e-cigarettes (0.7%) Combustibles and 10 noncombustibles (1.1%) Noncombustibles and e-cigarettes (0.2%) Noncombustibles only (1.5%) Combustibles and e-cigarettes (1.8%) Any past-30-day 5 -Combustibles and noncombustibles (0.3%) e-cigarette use (5.3%) Combustibles only (6.8%) Noncombustibles only (0.6%) Combustibles only (1.2%) 0 Middle school High school Combustibles and noncombustibles E-cigarettes only Combustibles, noncombustibles, and e-cigarettes | Noncombustibles only Combustibles only ° Noncombustibles and e-cigarettes Combustibles and e-cigarettes

Figure 2.5 Past-30-day use of various tobacco products among U.S. middle and high school students; National Youth Tobacco Survey (NYTS) 2015

Figure AD-3a. Living arrangements of adults 18 and over

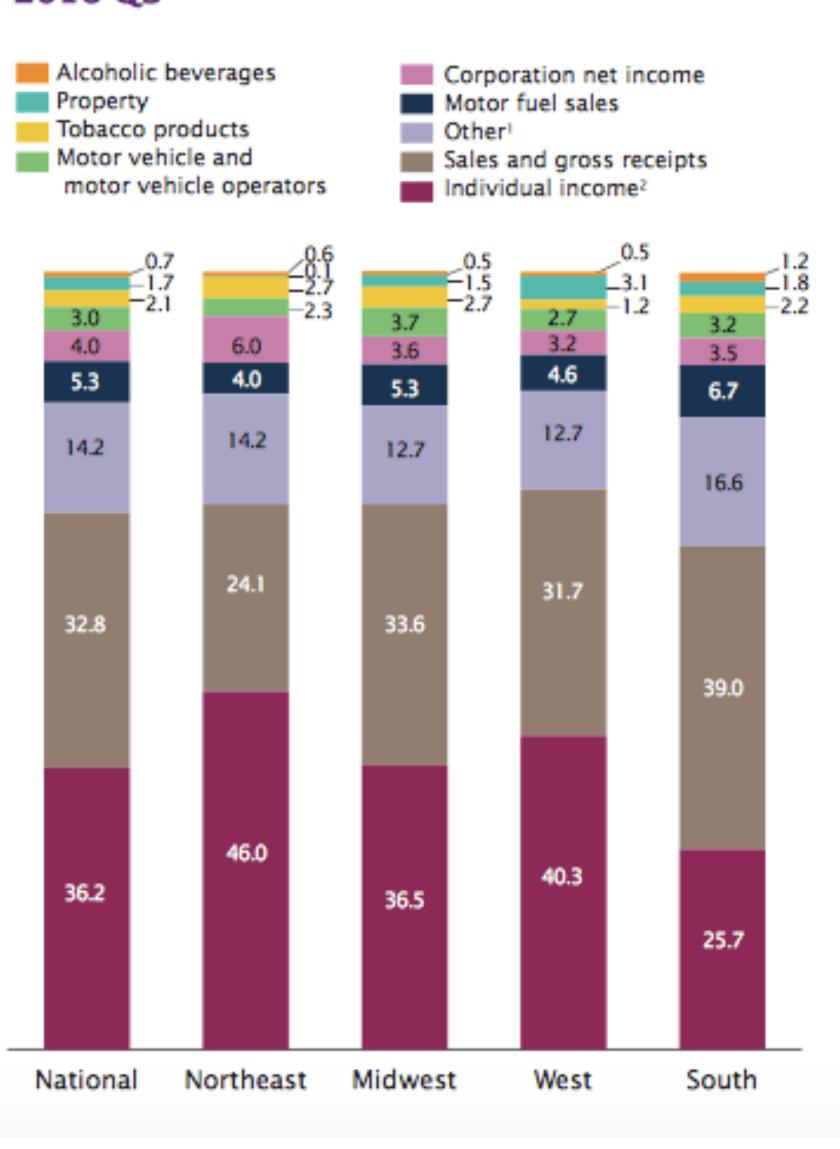
### Growing complexity Almost half of adults today do not live with a spouse



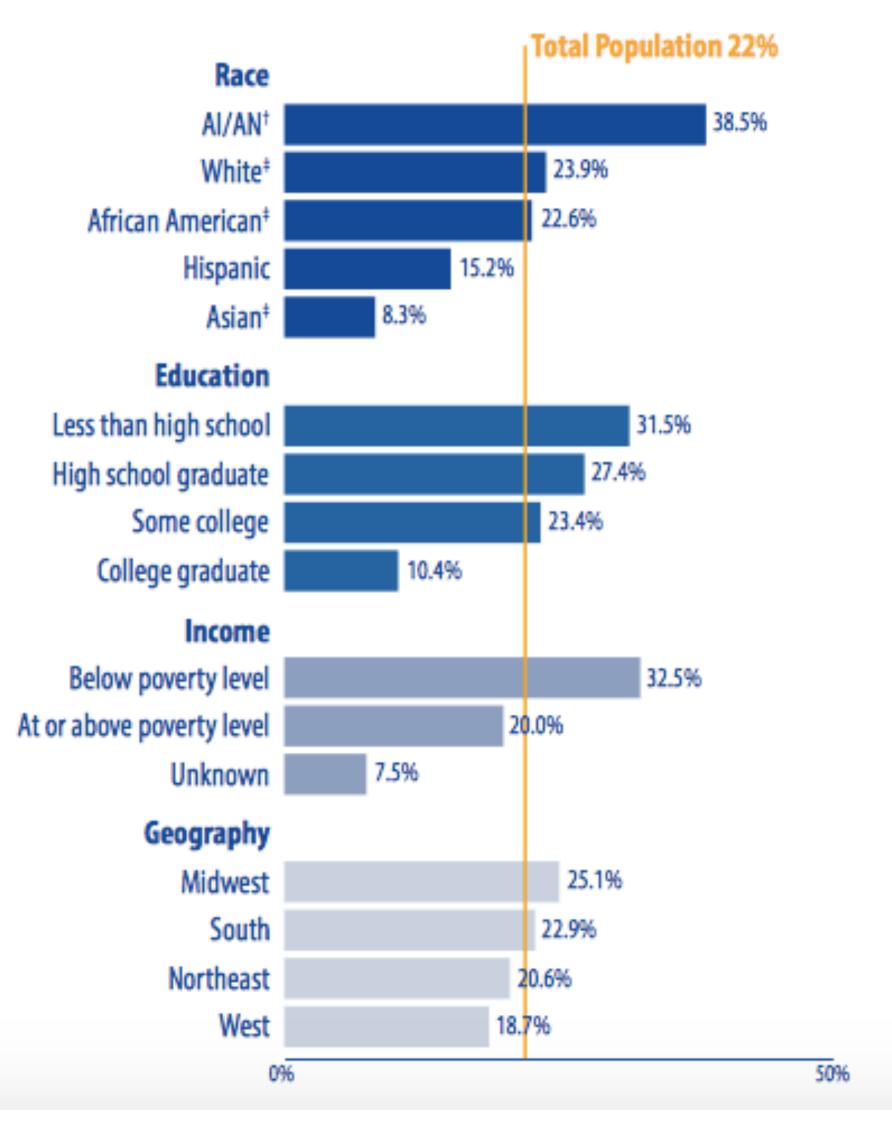


*Source*: Current Population Survey, Annual Social and Economic Supplement, 1967–2016

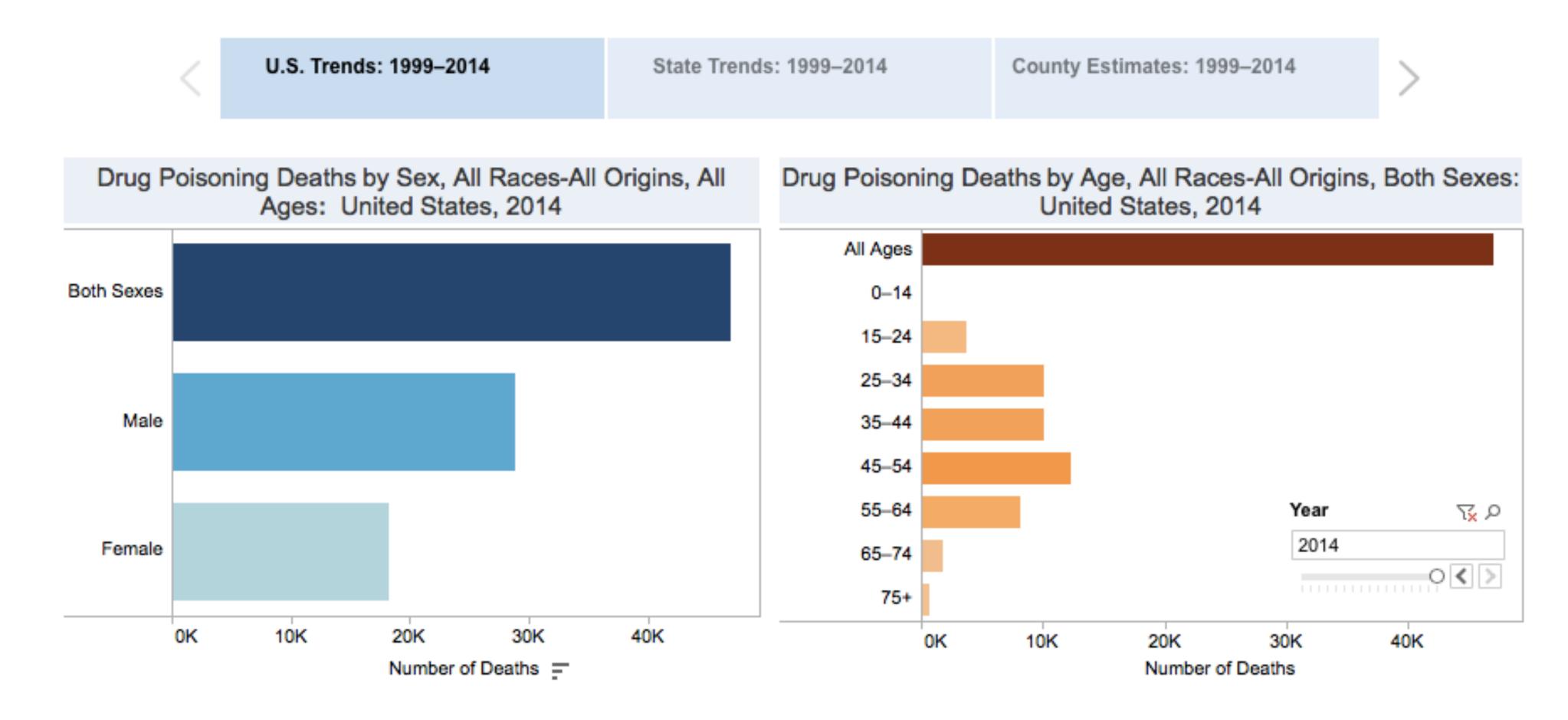
Distribution of State Government Revenue by Type of Tax for Nation and Census Regions: 2016 Q3



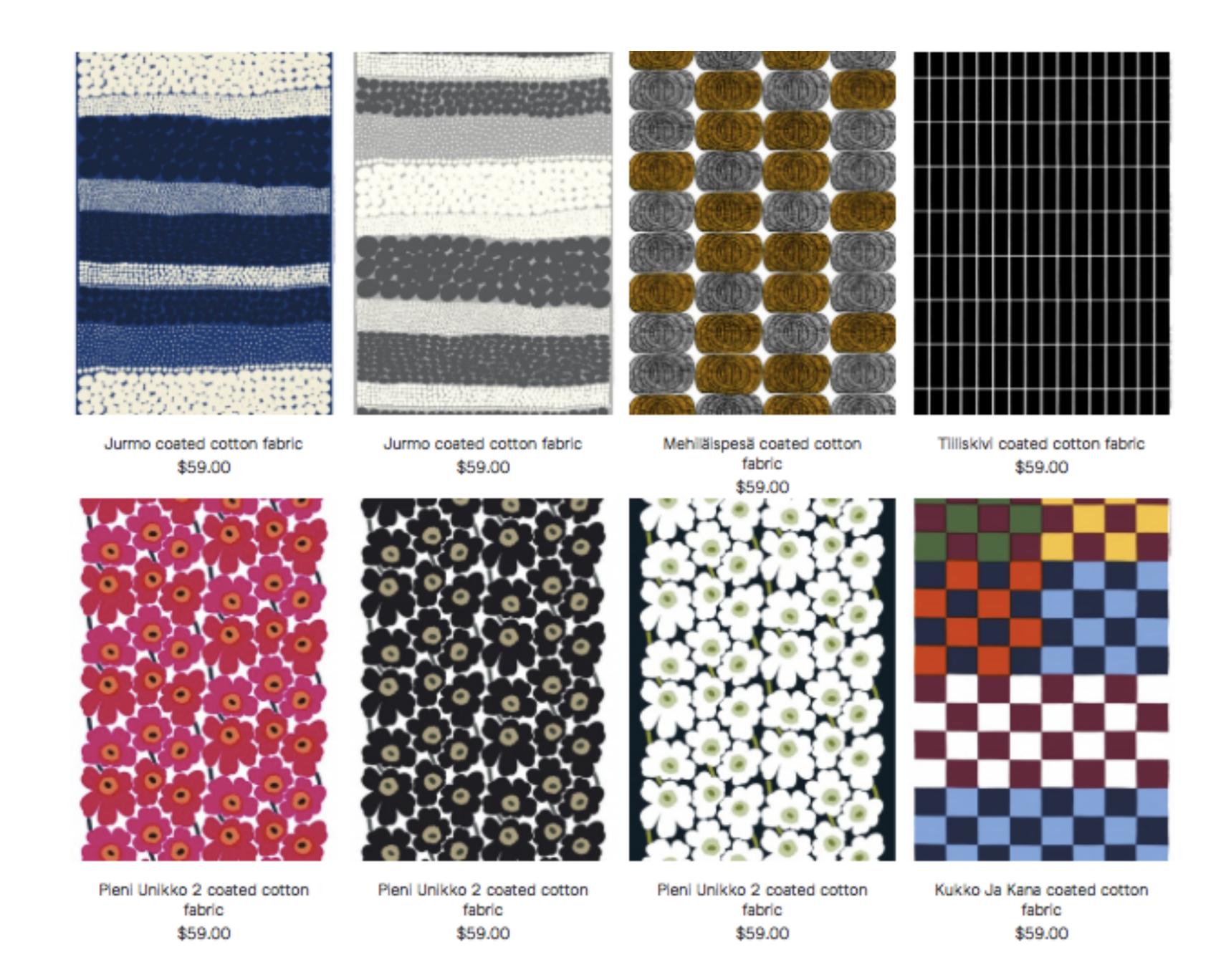
#### Current Cigarette Smoking Prevalence among Adults 18 and Older\*



#### Drug Poisoning Mortality: United States, 1999–2014



#### marimekko

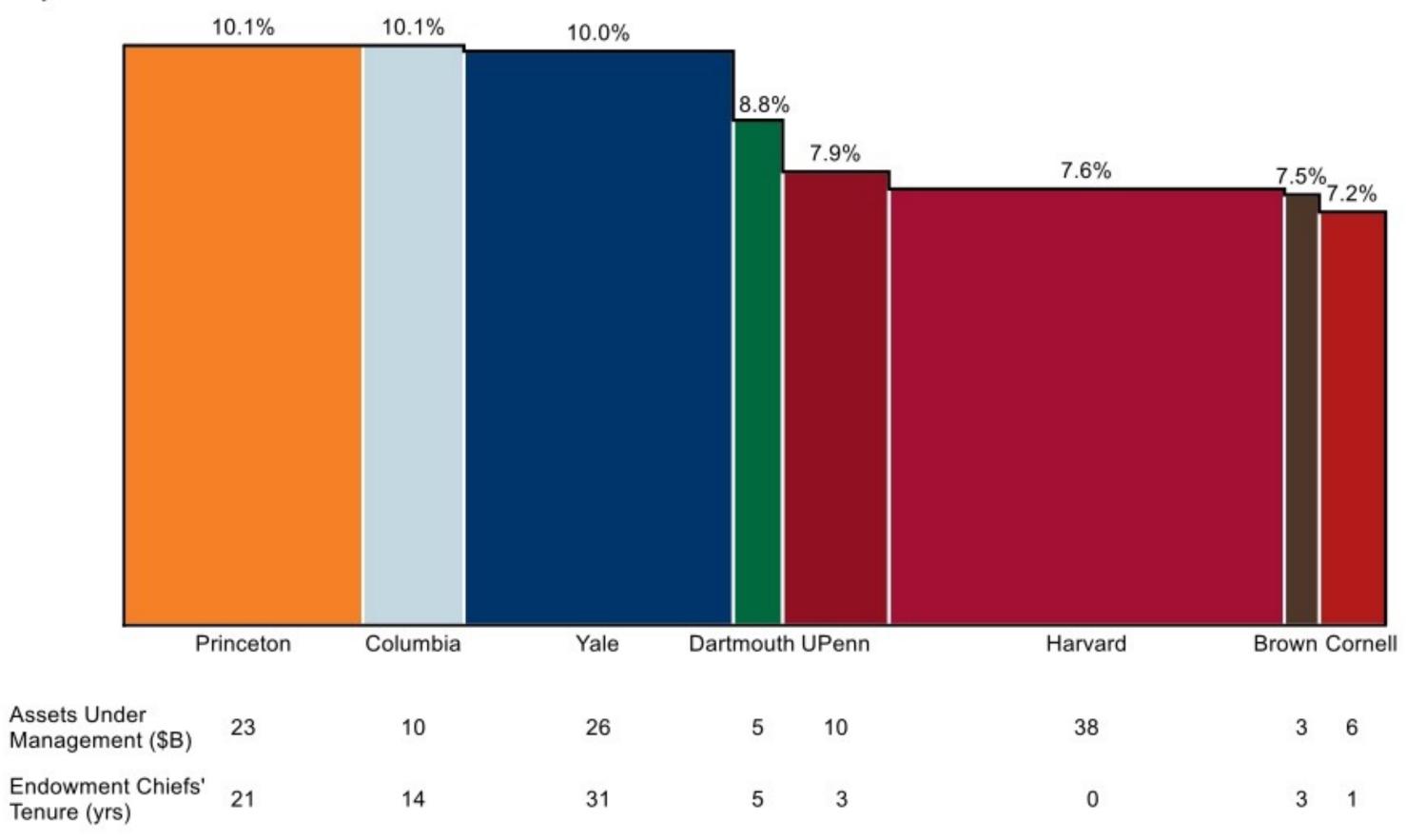




#### Ivy League Endowment Investment Returns

While Harvard has by far the largest endowment of any ivy, its returns over the last 10 years have been underwhelming.





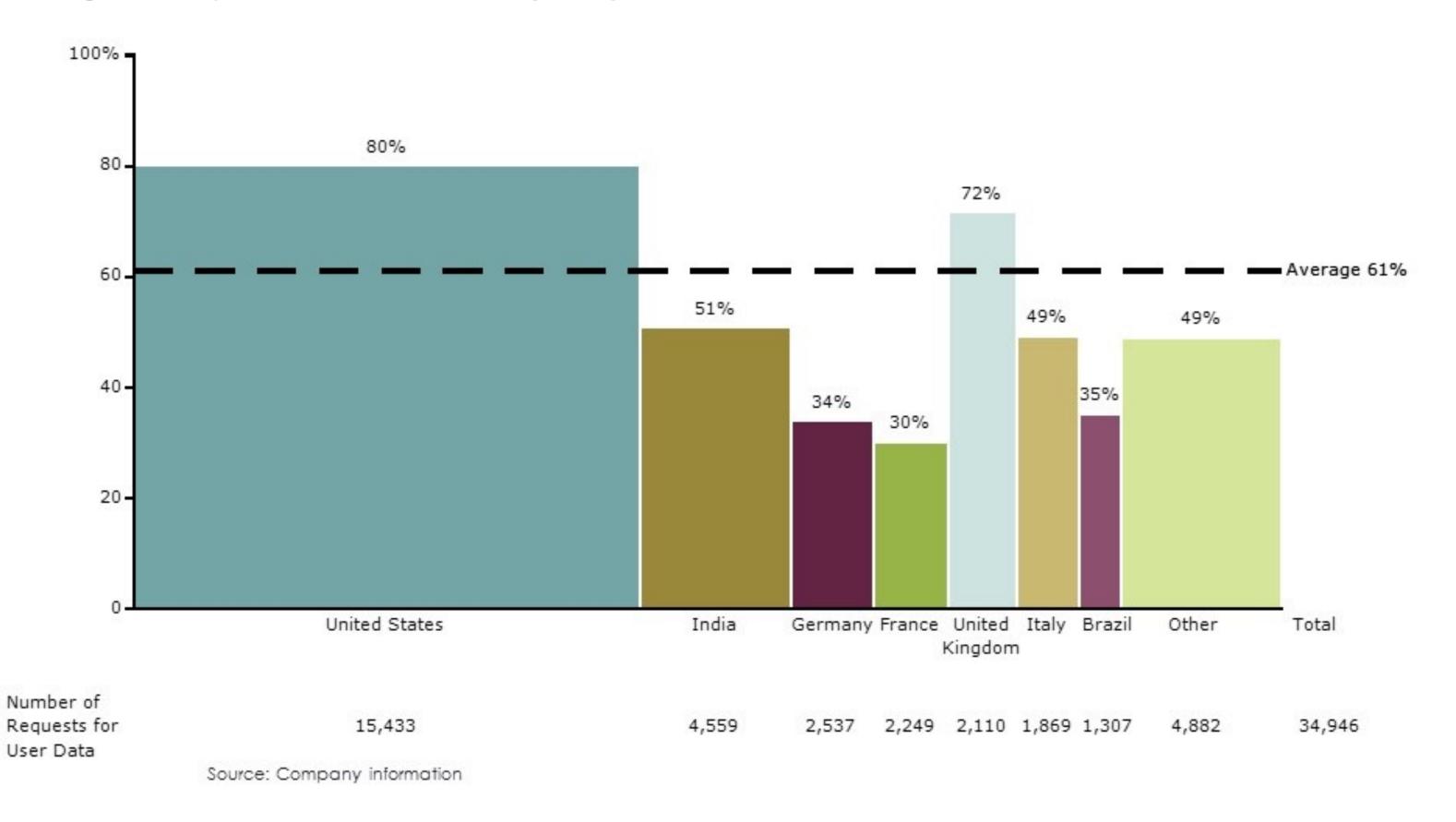
Source: Wall Street Journal

Subscribe to the Chart of the Week

# Facebook Government Data Requests by Country

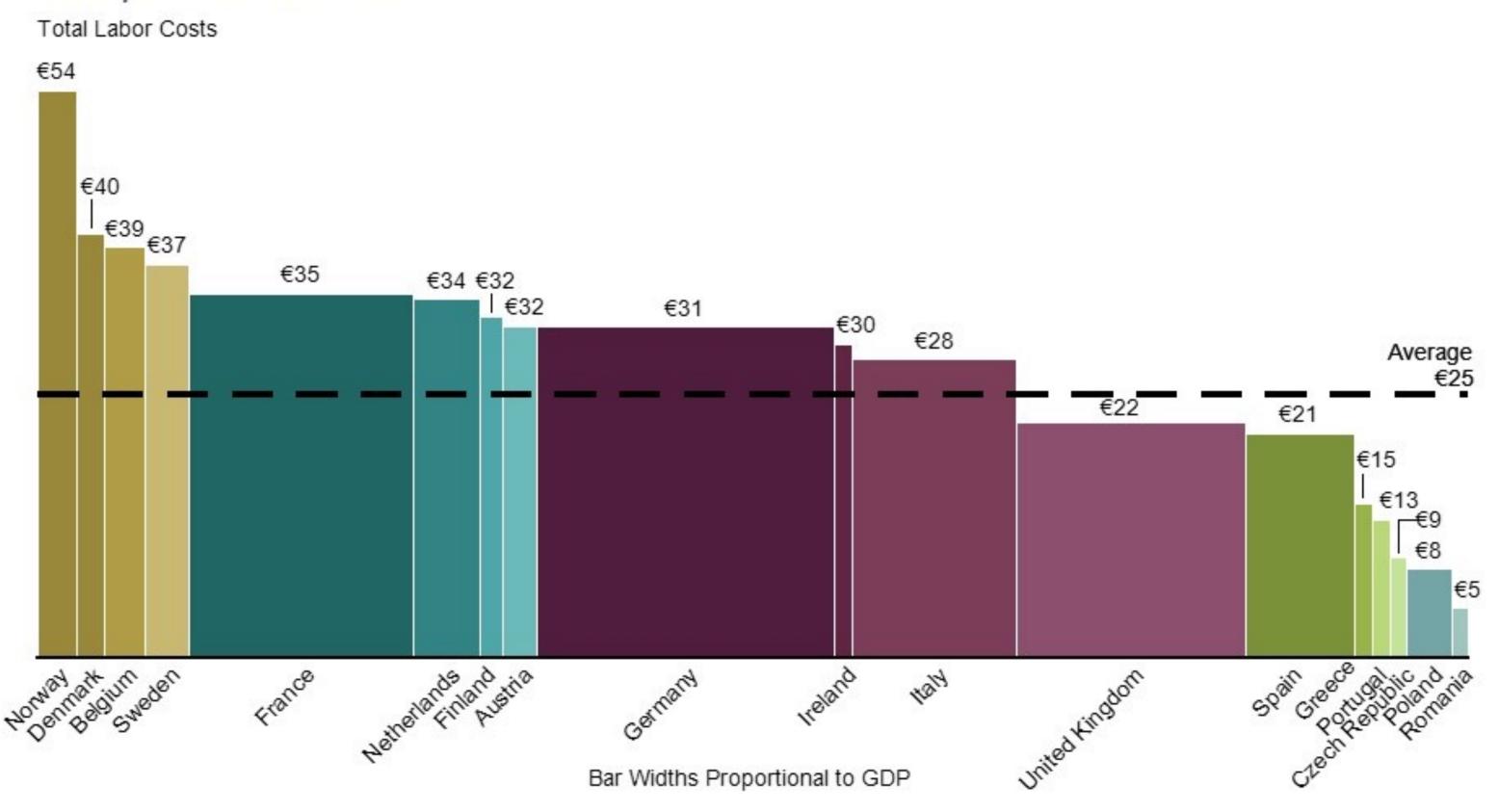
The US and UK grant highest percentage of government data requests

Percentage of Data Requests Where Some Data Produced (H1 2014)



# Tenfold Variation in Labor Costs Among European Countries

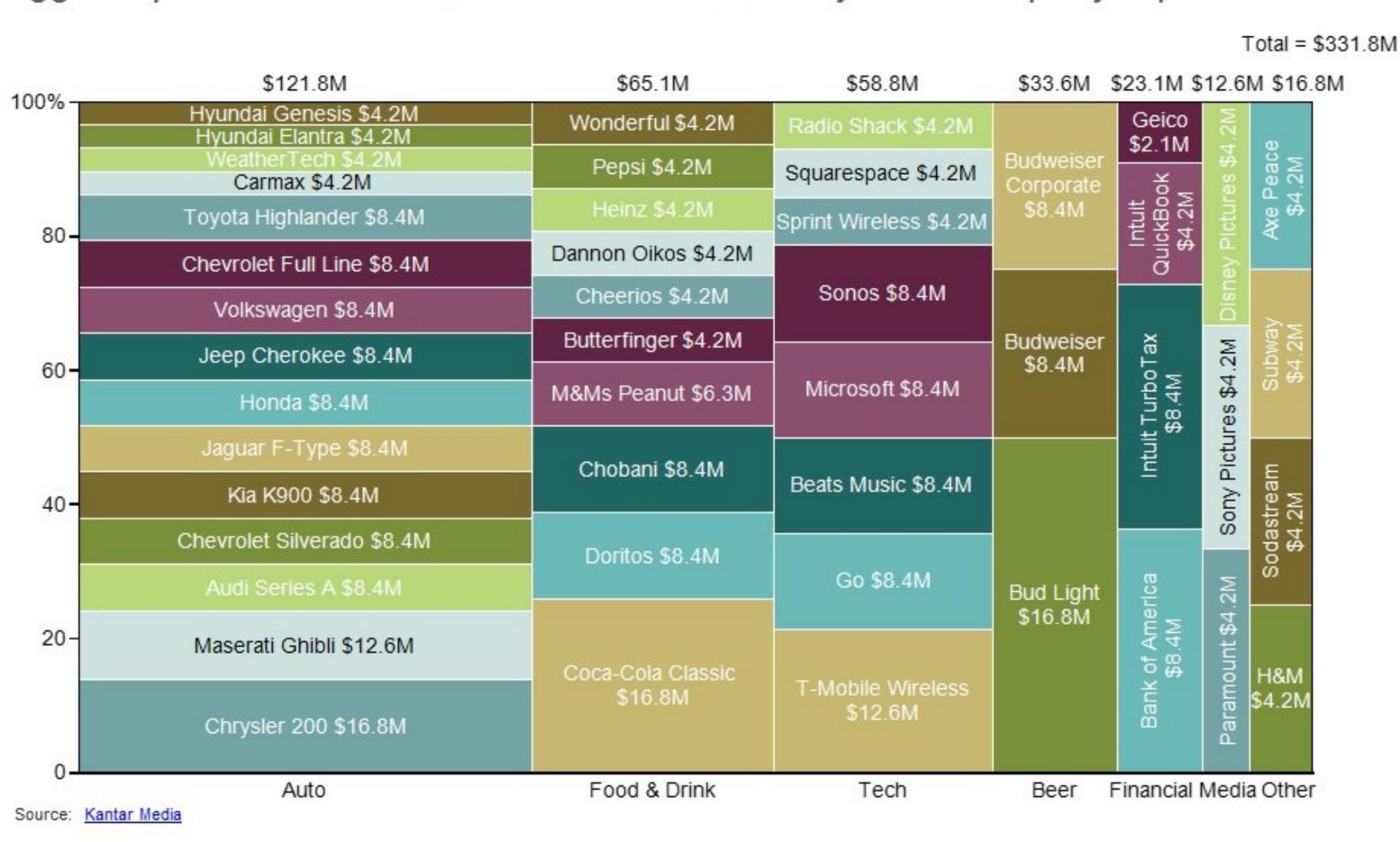
Total labor costs vary between €54 per hour and €5 per hour in the 18 largest European countries.



Source: Eurostat

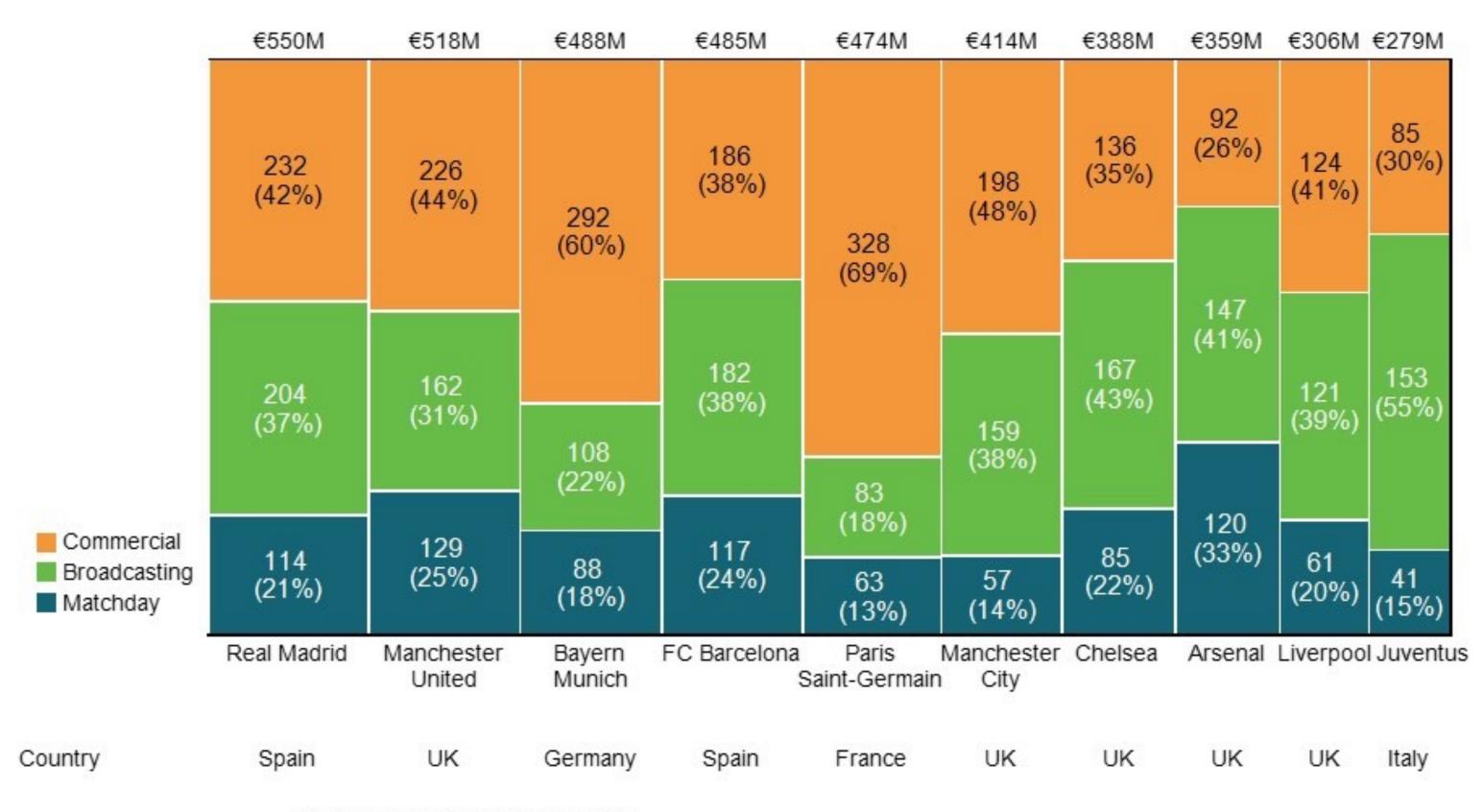
## Super Bowl Ad Spending

Despite all the beer and food consumed during the Super Bowl, auto is the biggest spender on ads and Budweiser is the only beer company represented.



#### Football Revenue Mix

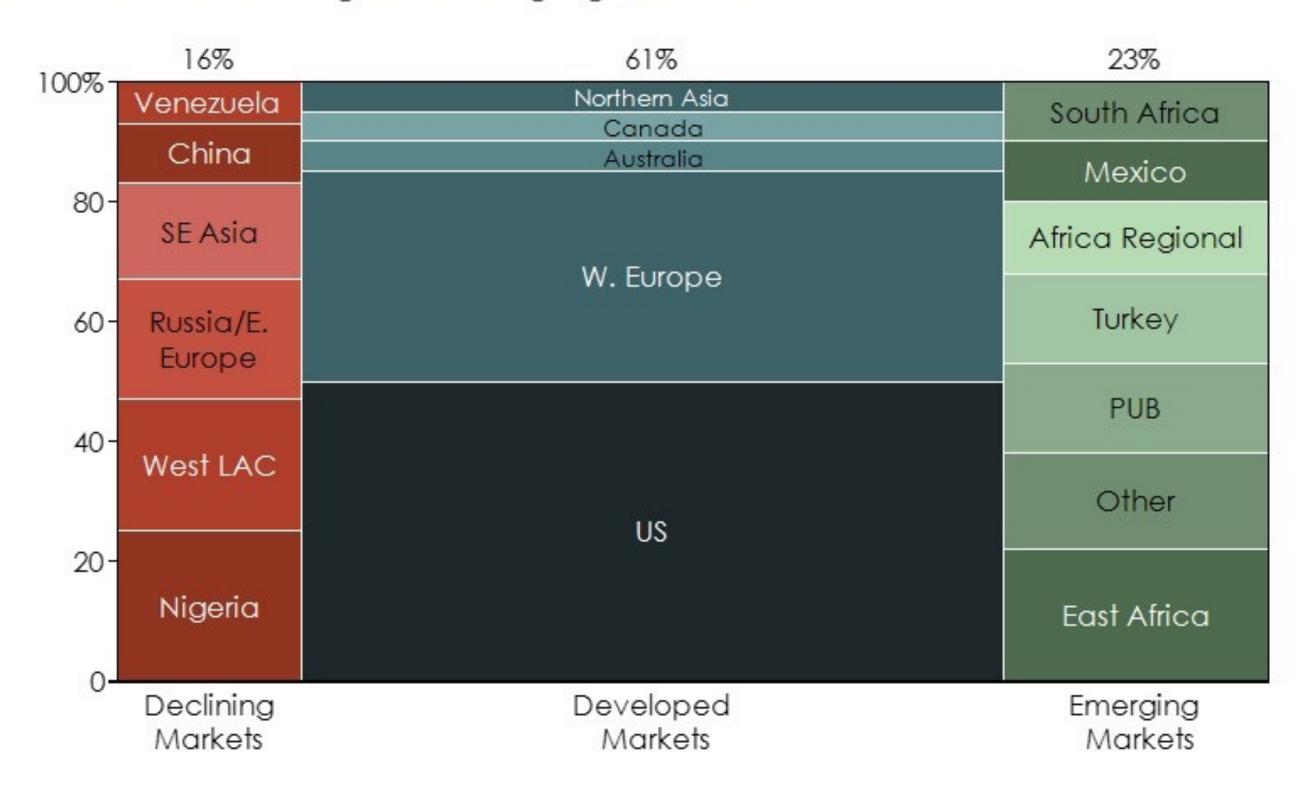
There is a significant variability in mix between Top 10 revenue teams.



Source: Football Money League 2015

## Diageo Market Map

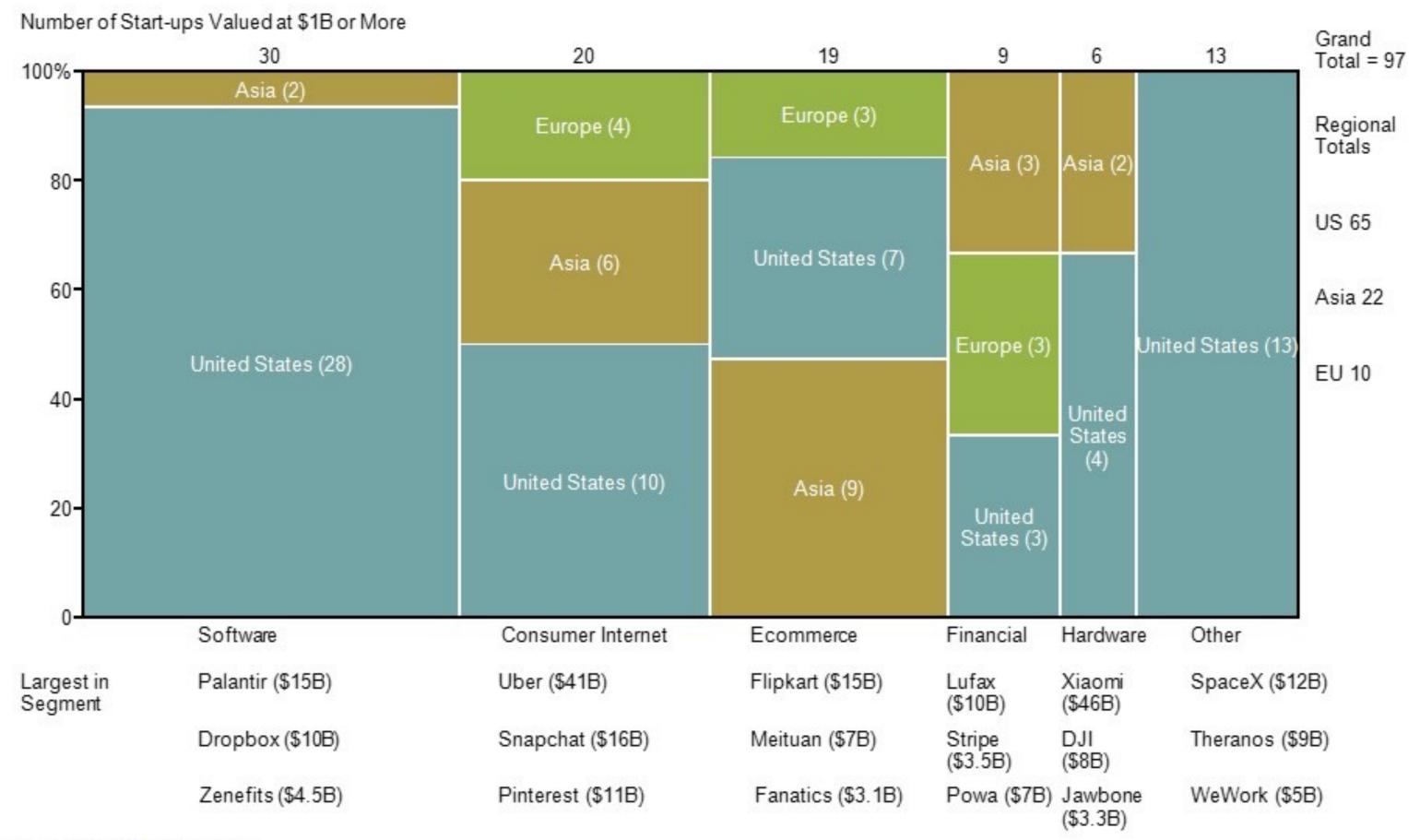
African markets are mixed, with Nigeria as the largest declining market and East Africa as the largest emerging market.



Source: Company data

### Billion Dollar Start-Ups

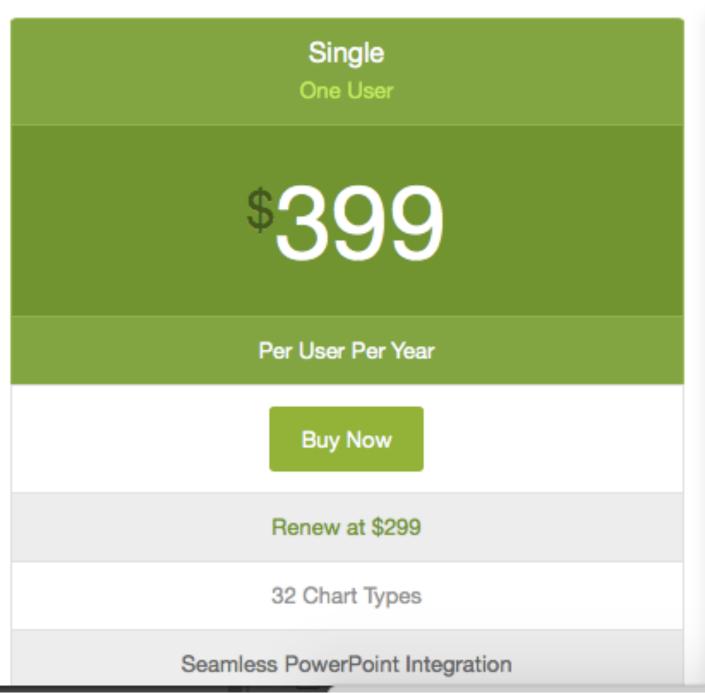
The 97 startups now valued at \$1B+ are spread across many tech sectors and 3 continents with a concentration in the US and in software-related companies.

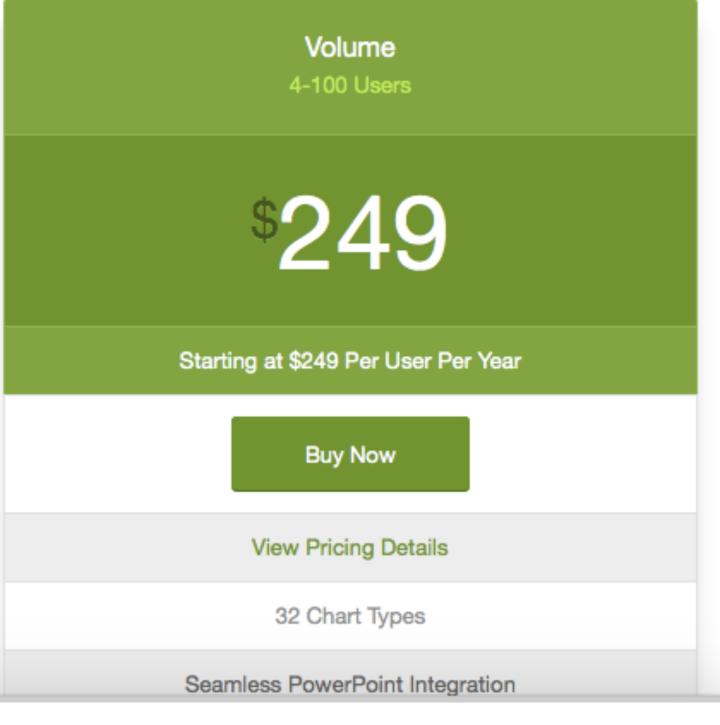


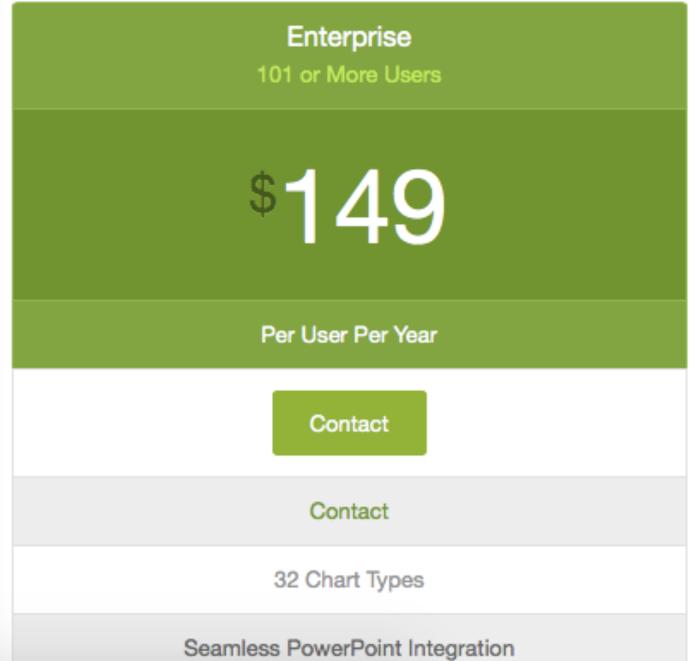
Source: Wall Street Journal



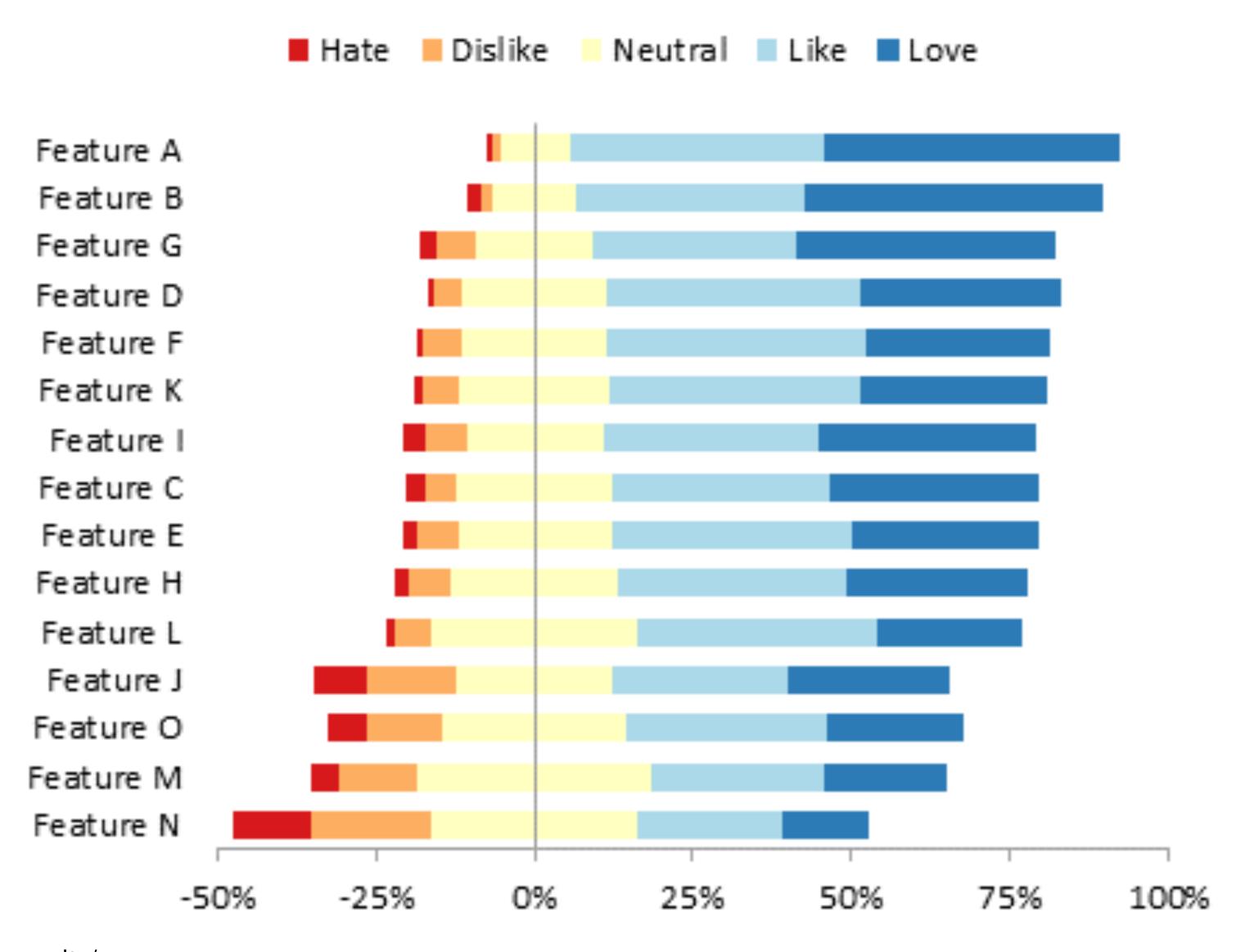
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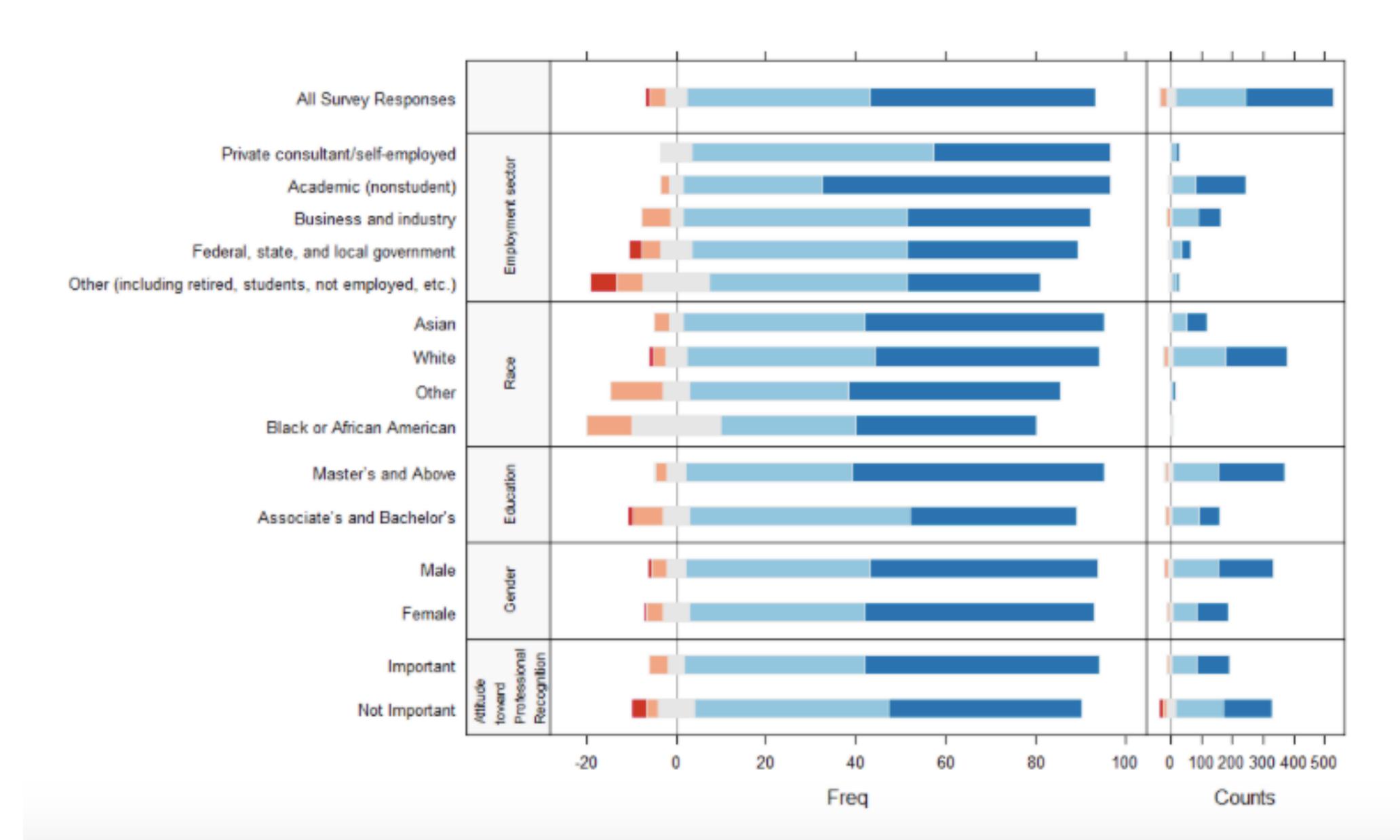




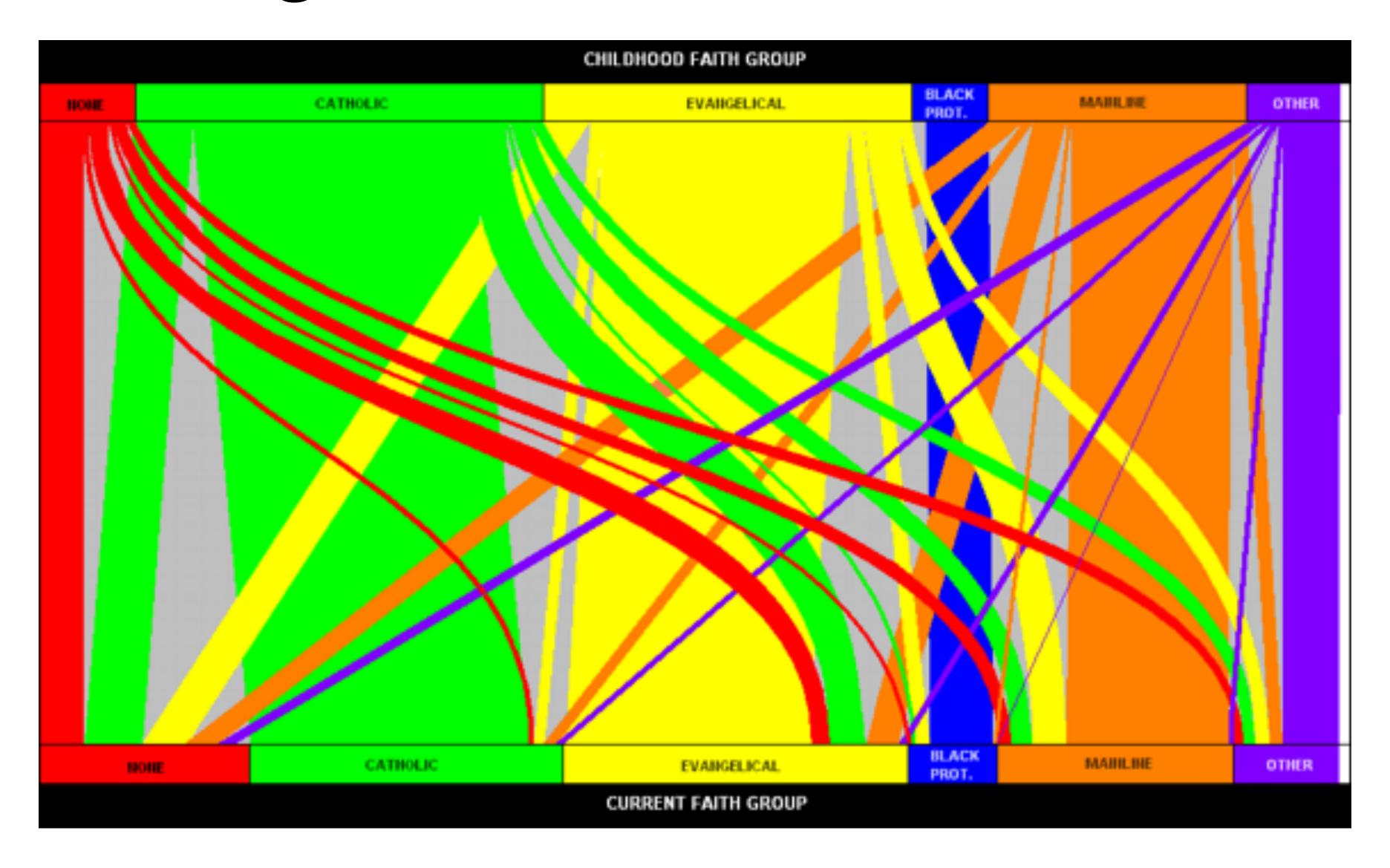
## Diverging Stacked Bar Chart



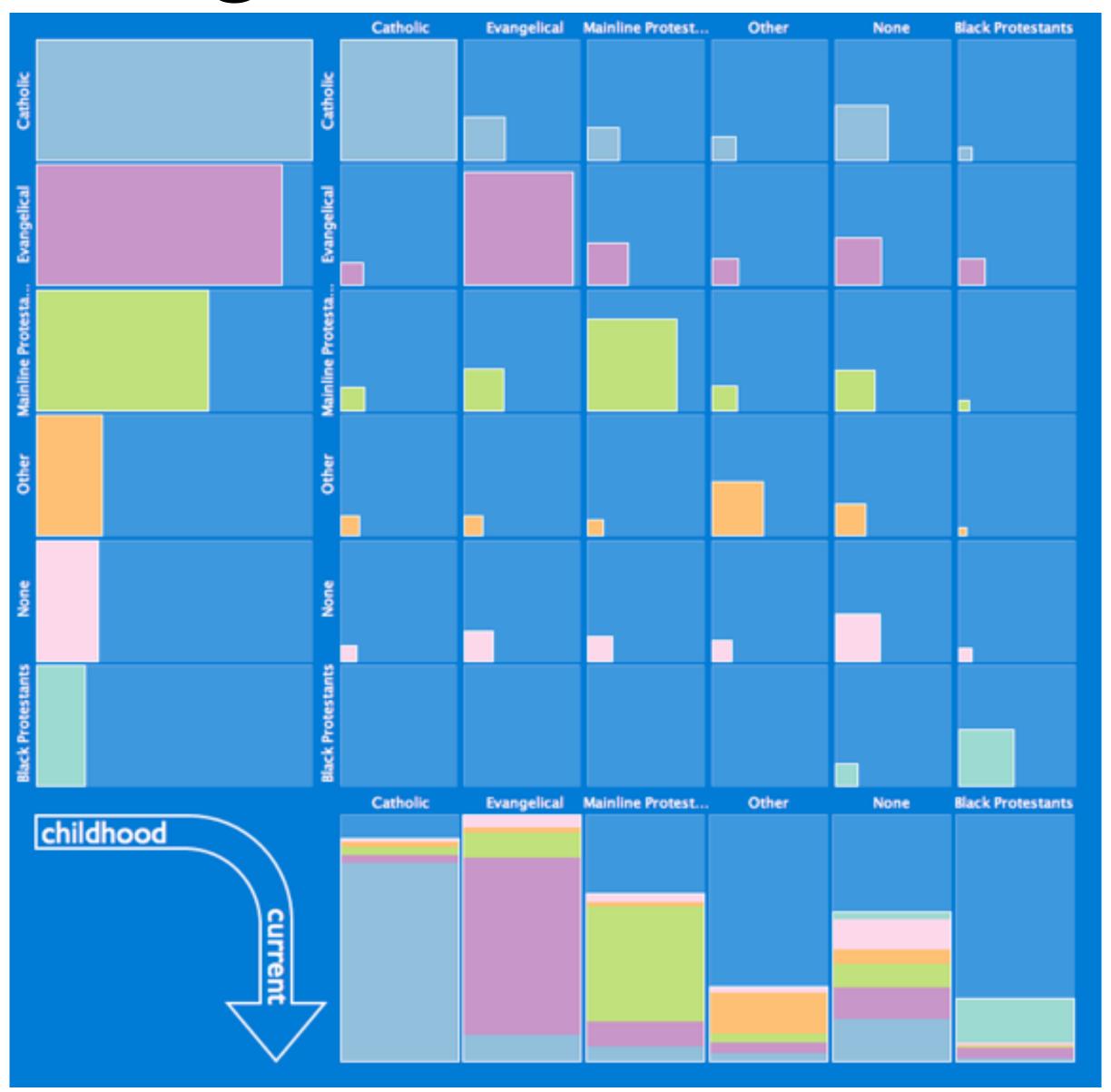
## Diverging Stacked Bar Chart



# Alluvial Diagram



# Fluctuation Diagram



## Remainder of lecture

see EDAV20170216.Rmd