

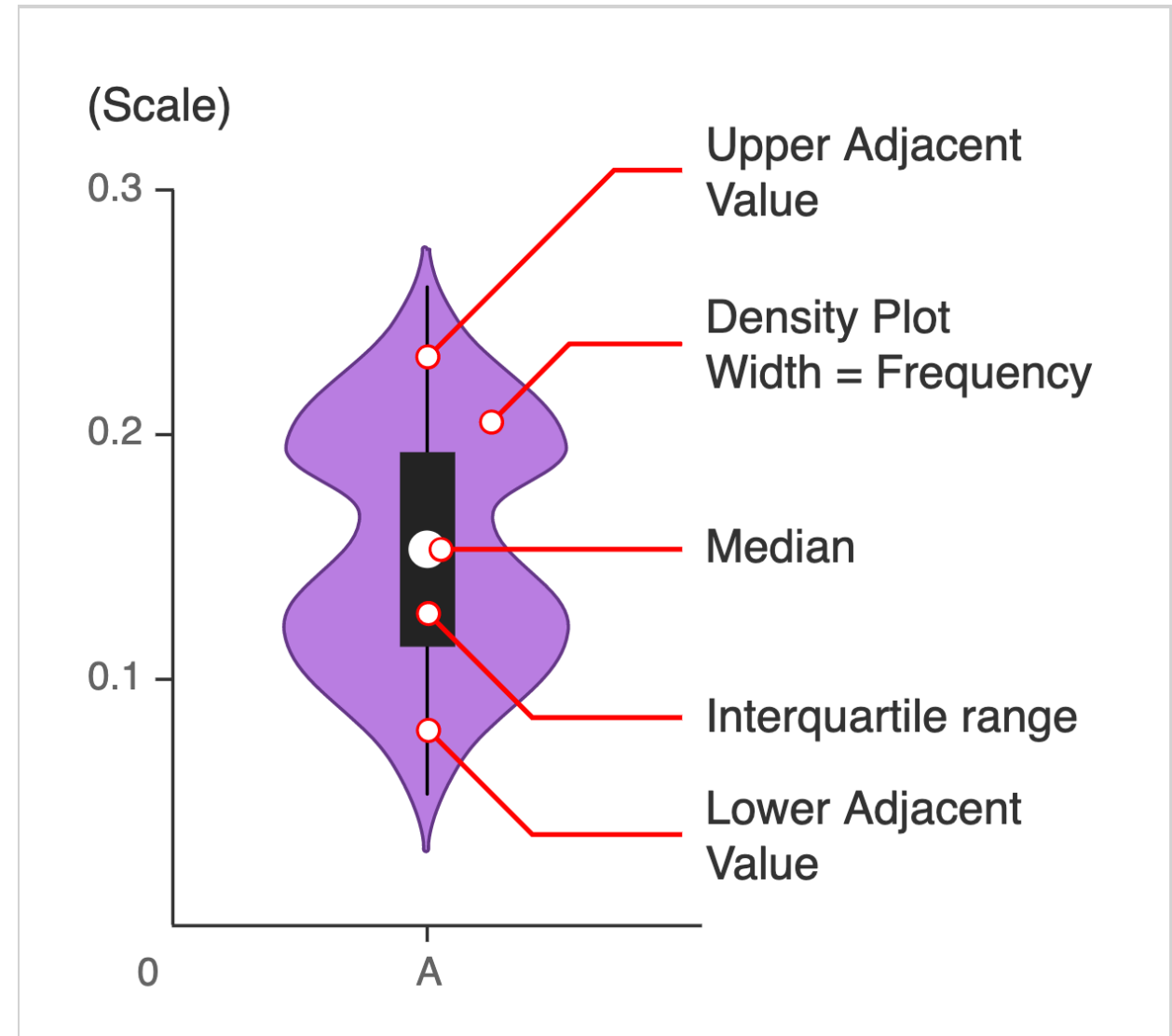
Agenda Week 5 Day 2

Today:

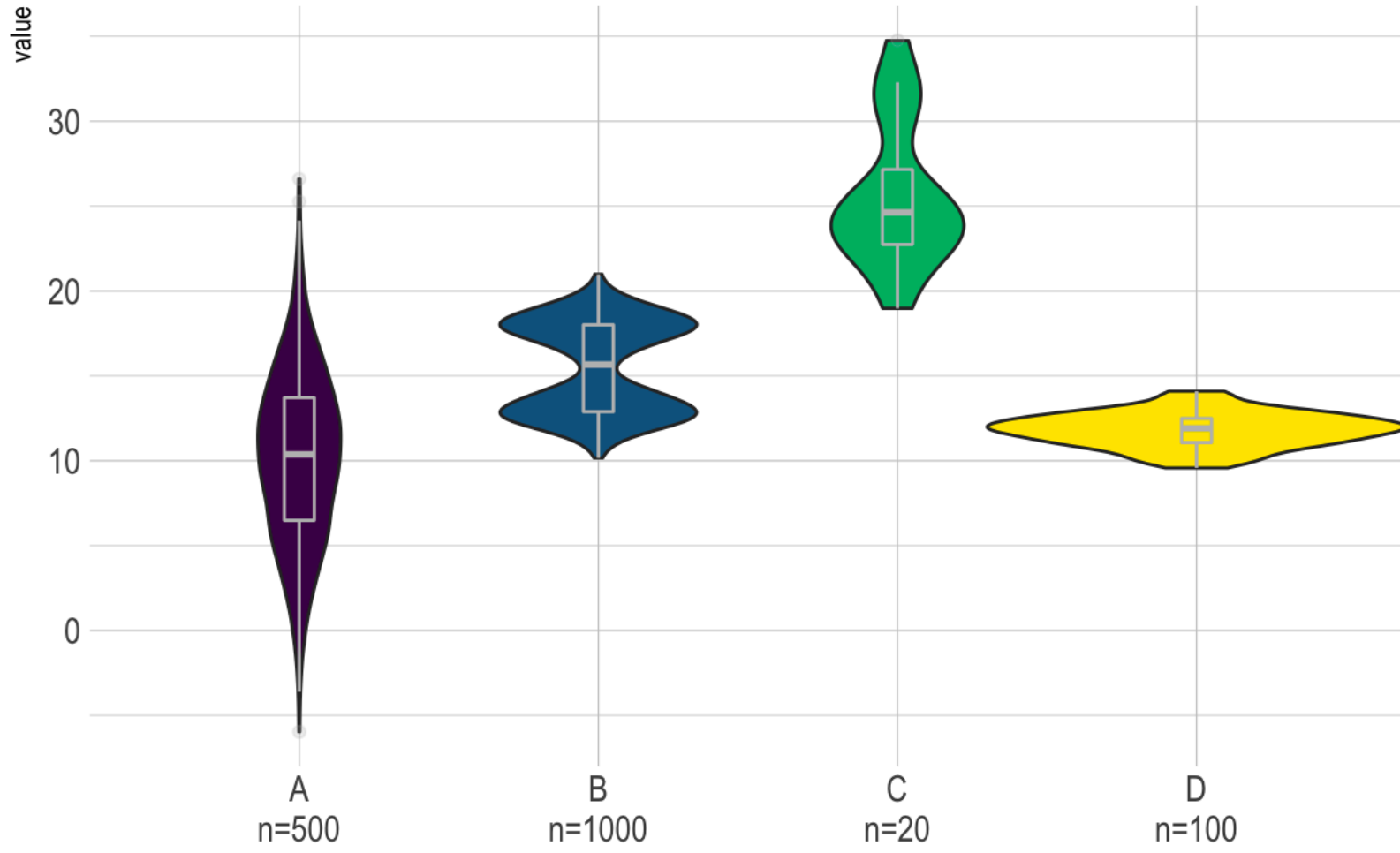
1. Interpreting (+critiquing) graphics from last time
 - boxplots, violin plots, correlation
2. Start thinking more deeply about 'when to use' different visualization + statistical approaches
3. Alluvial plots!

Violin Plots

- When to use it?
- Similar to boxplots
- Show probability density of data at different values
- Sometimes includes:
 - median marker
 - interquartile ranges



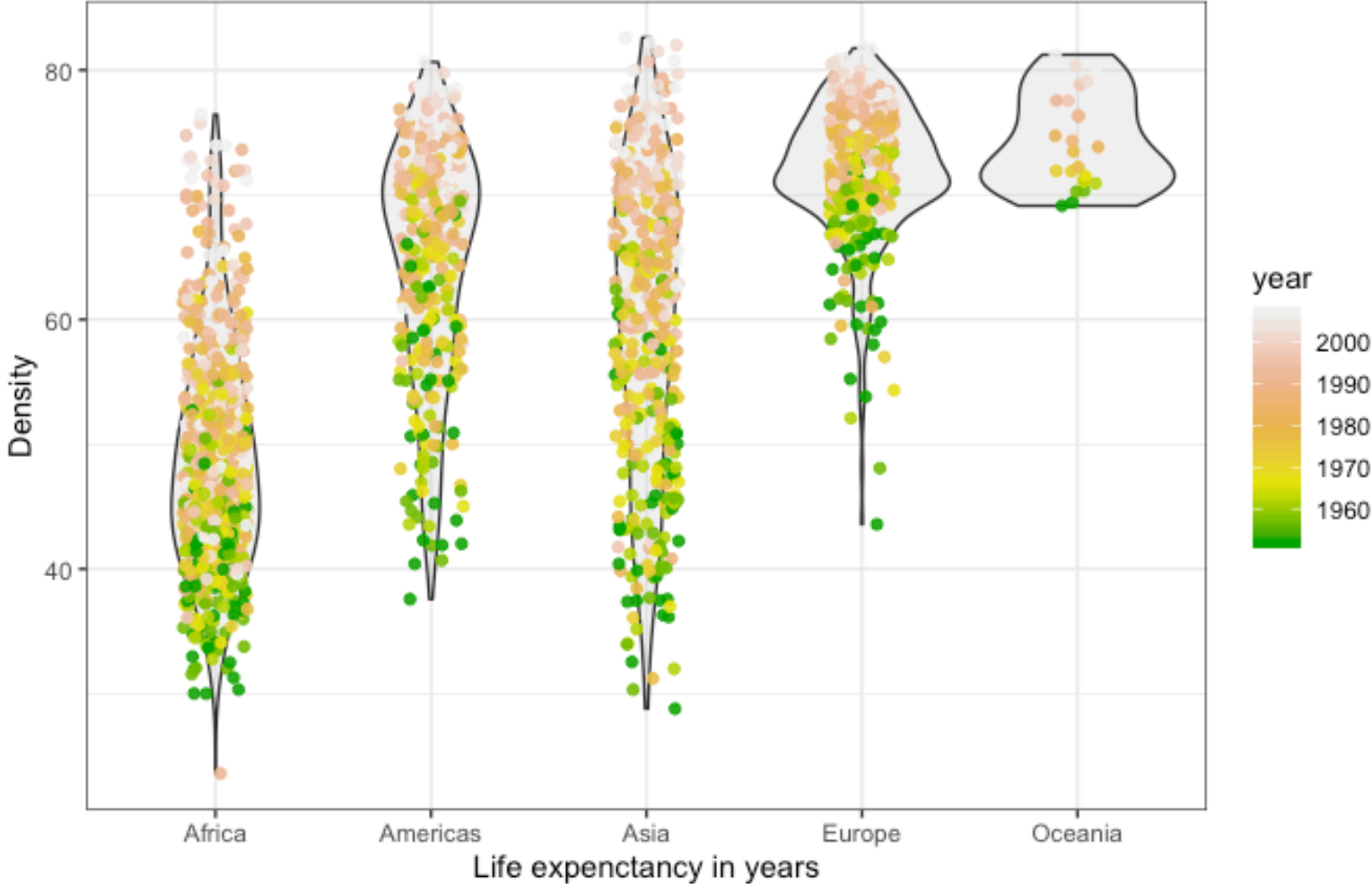
A Violin wrapping a boxplot



Critique

Distribution of global life expectancy 1952-2007

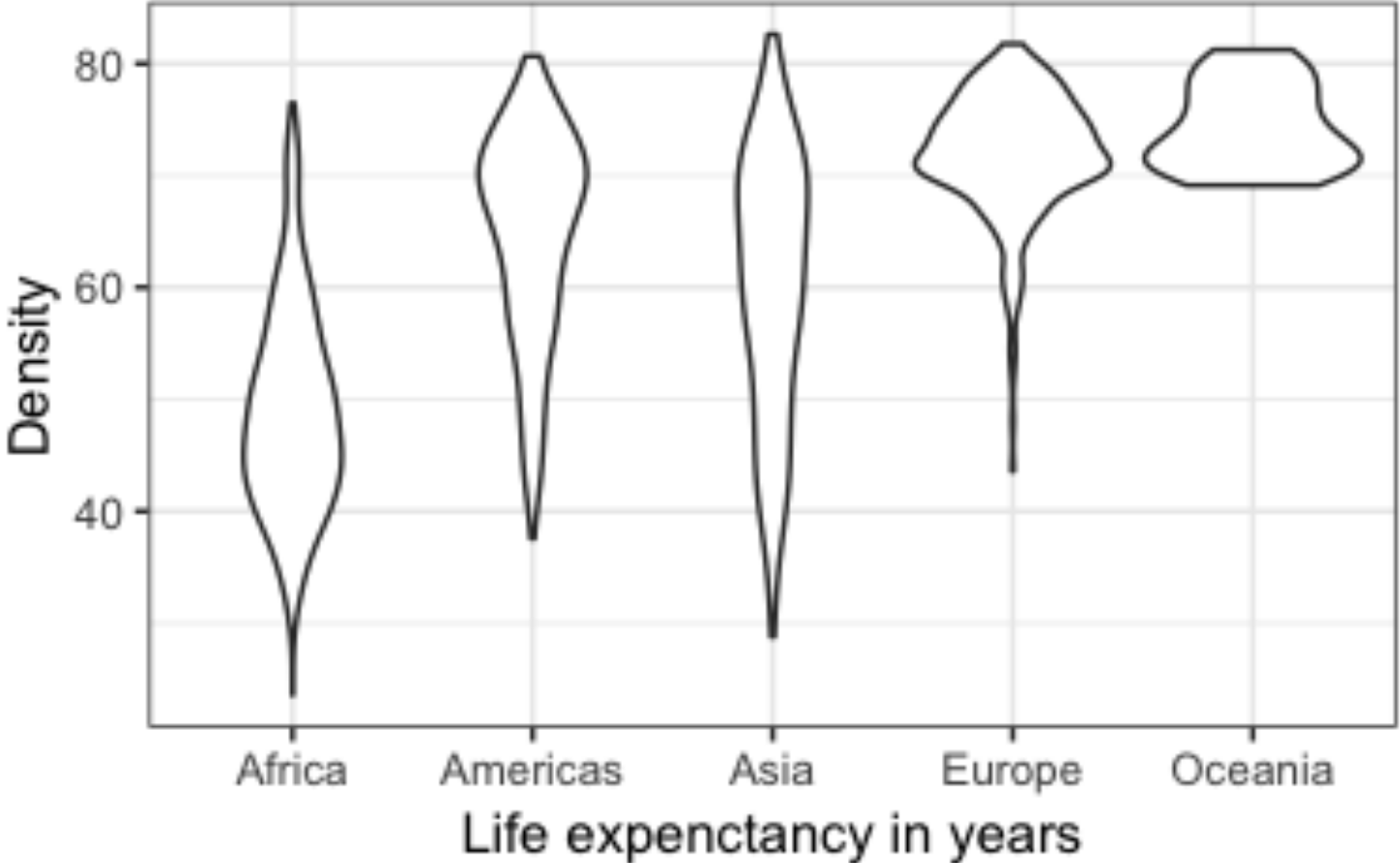
Data source: Gapminder package



Critique

Distribution of global life expectancy 1952-2

Data source: Gapminder package



Correlation: when is it useful?

- Bivariate correlation
 - visual exploration: scatterplots
- Correlation across multiple (or all) variables in the data
 - correlation matrix
 - Correlogram

Critique

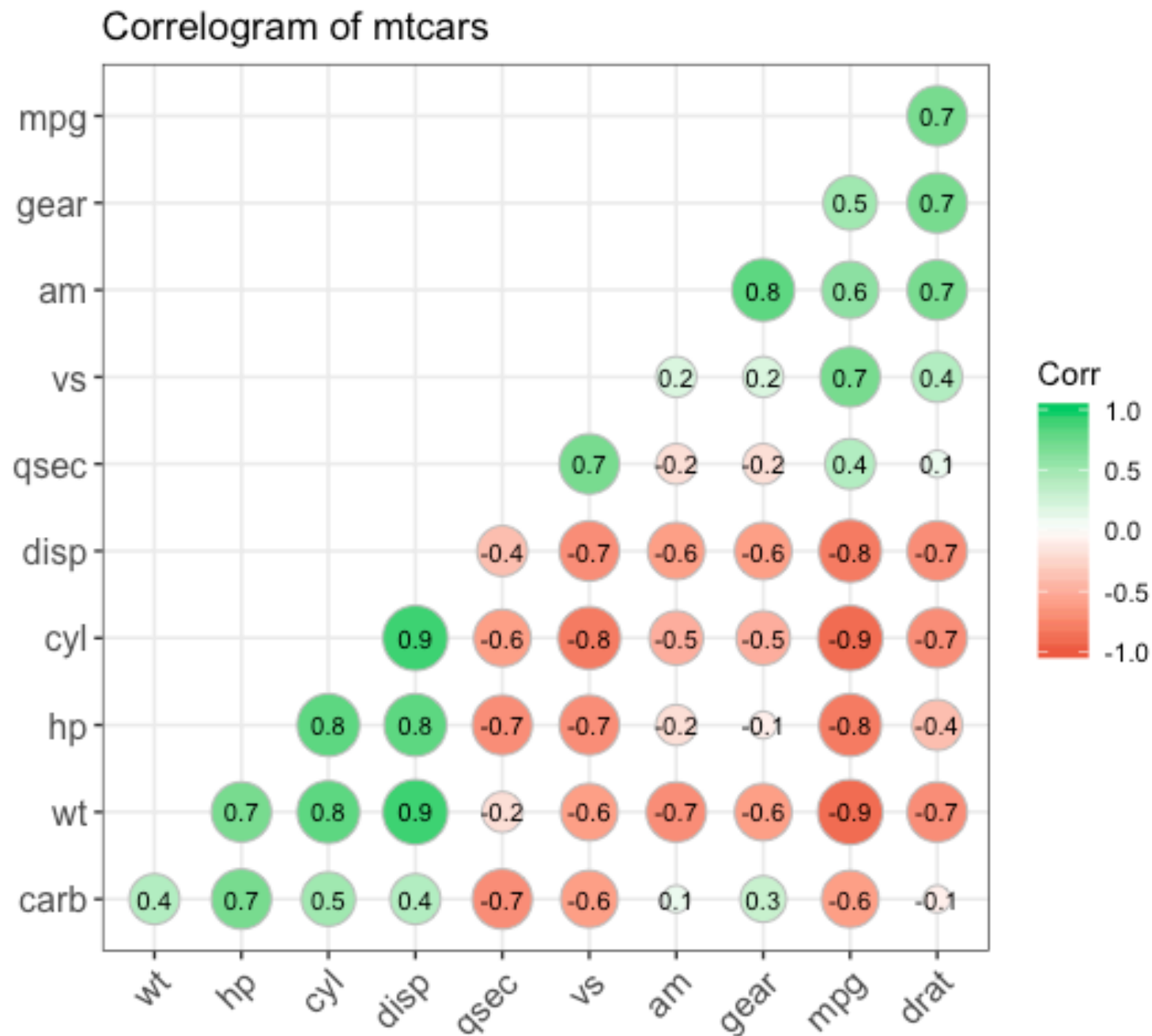
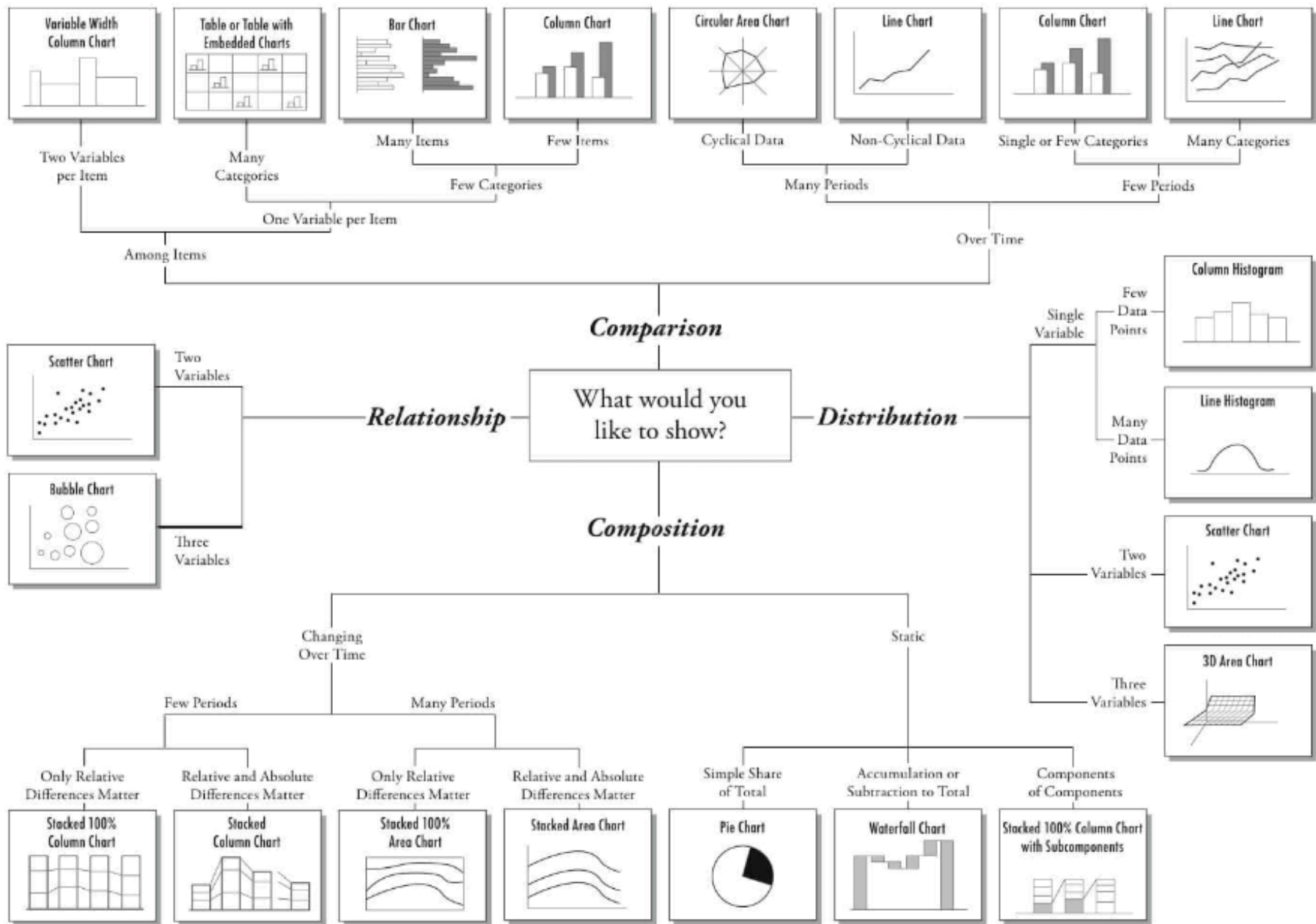


Chart Suggestions—A Thought-Starter



tophat

do you see a pattern?

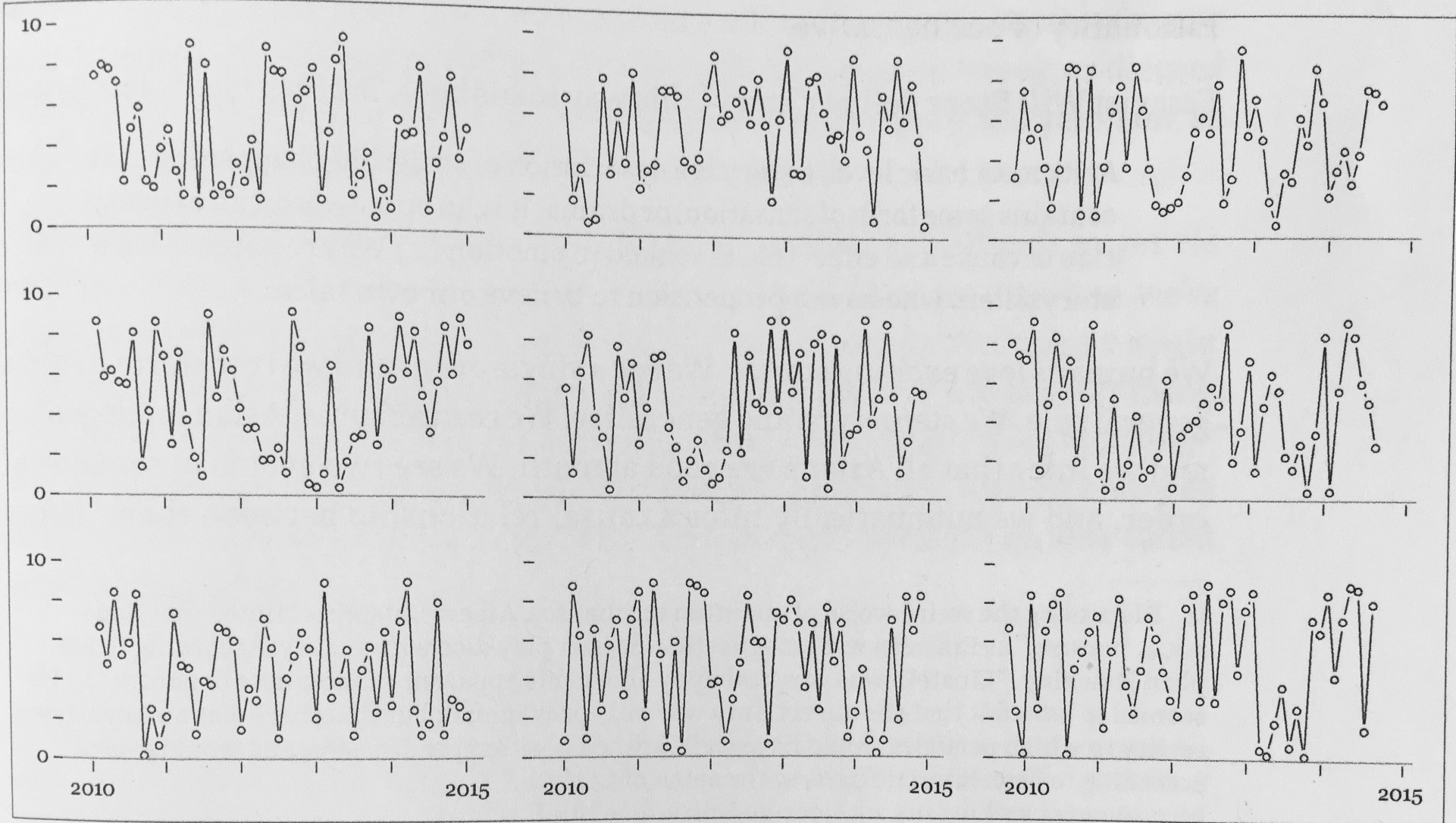
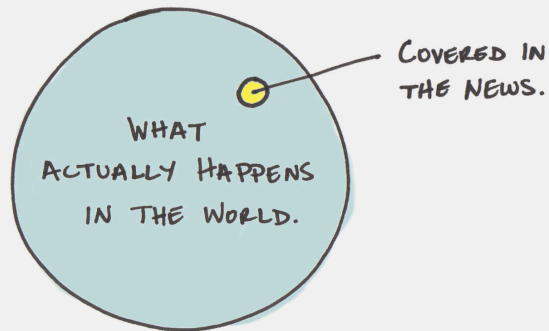


Figure 1: Time series plots showing a common underlying pattern across different data sets.

Types of bias

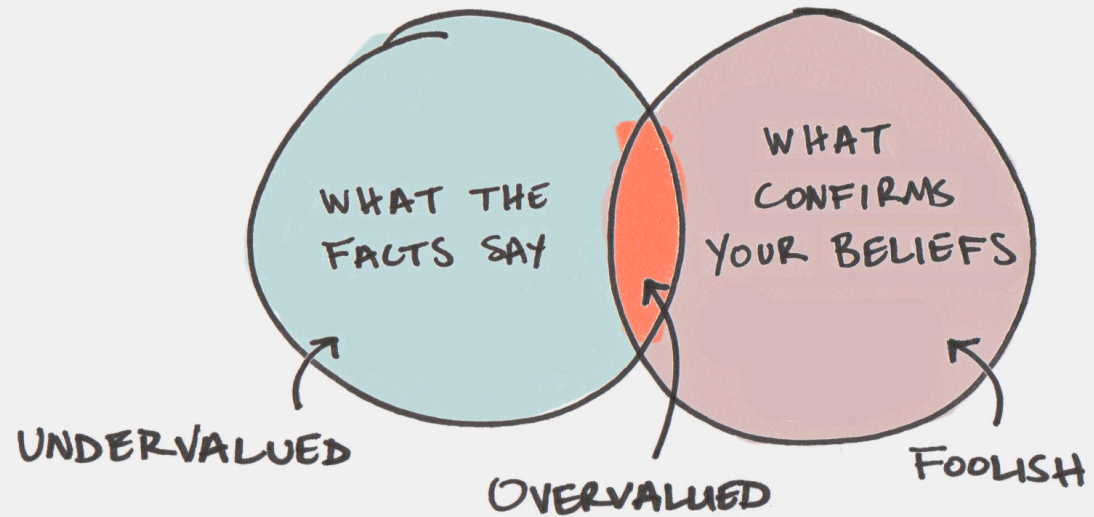
- patternicity
- confirmation bias
- availability bias / observability bias

THE AVAILABILITY HEURISTIC



JamesClear.com

THE CONFIRMATION BIAS



JamesClear.com