

Datavis, infovis, infographics

- Increasing control
- Designer makes choices to tell a story
- But can you make a graphic without choices?

Choices

- Aesthetics (axes, color, facets, areas)
- Scales (area scaling, anchoring to zero or elsewhere)
- Scale transformations (logs, logistics, what to do about limits)
- Smoothing (linear, loess, spline)

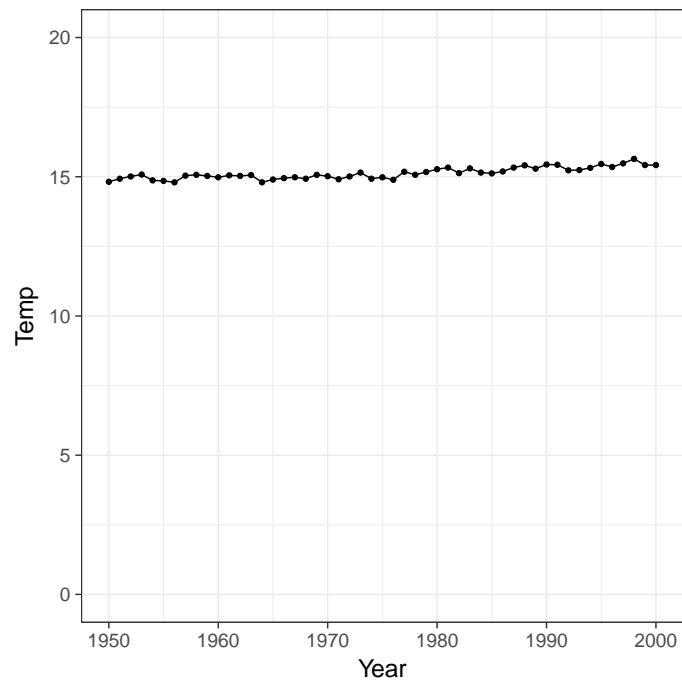
Banana example



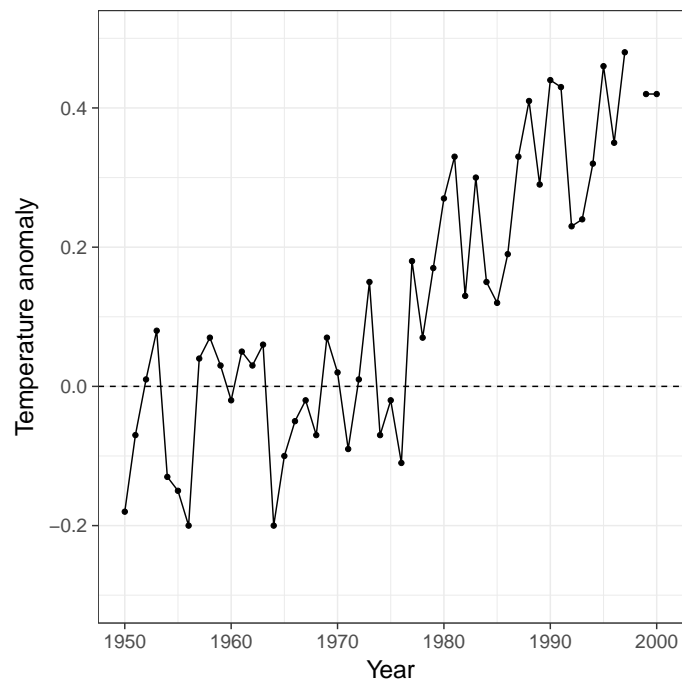
Types of choices

- Choices based on
 - Data types
 - Questions
 - Hypotheses
 - Conclusions

Climate example



Climate example

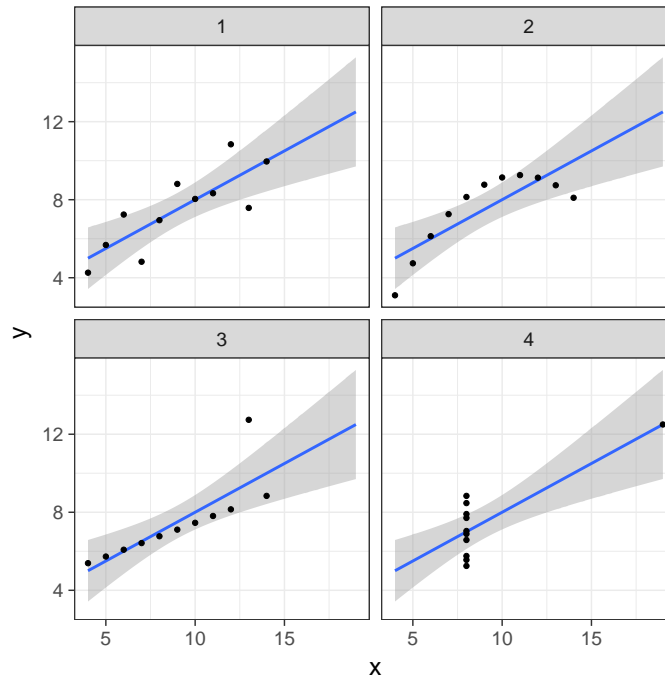


Climate data

- Could provide perspective with other data
 - A boxplot of a historical range
 - A comparative picture of an actively changing time

- Need to be careful about comparing uncertainties from different time periods
- Link: Climate data from US government
- Link: A nice visualization (but very forum-specific)

Choosing what to show



Creative visual information

- Non-standard information can be useful
 - Link: dog faces
- But also hard to link to a bigger picture

Avoiding choices

- Avoid choices by providing more information
 - Use more than one figure
 - Or dynamic features in figures

Fly wing shapes

Link: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3786396/figure/F2/>

Link: Healthcare scatterplot

Conclusions

- Give thought to your goals
- Give thought to your decisions
- Be conscious when you are withholding information
 - Be willing to use more than one picture
 - Use dynamic features to give access to detail