Scale & Resolution
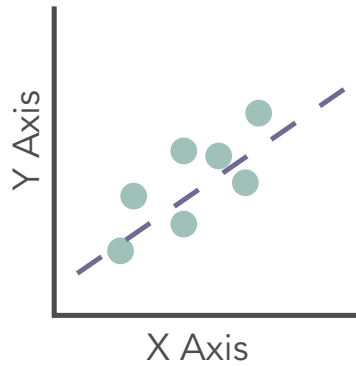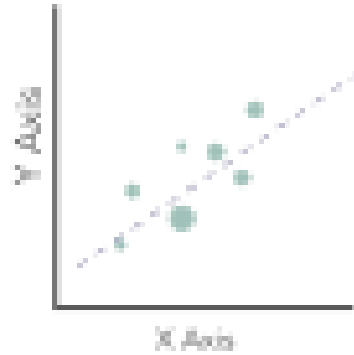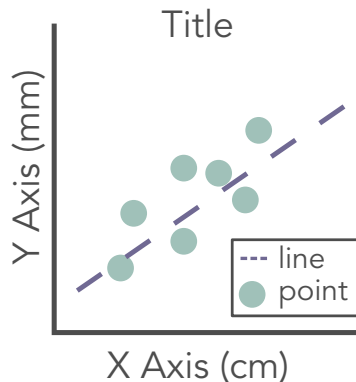
GOOD NOT GOOD

Scale
- All elements should be the right size for where they are in the figure
- Readability will be different for a paper, publication, or poster
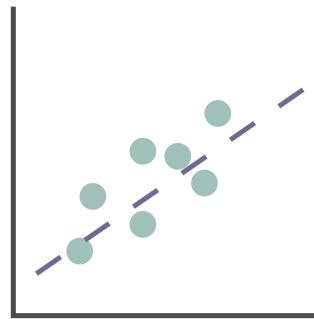- Ensure all data, text, and visual elements are consistently sized

Resolution
- Save and export all data and completed figures in high-resolution
- Work with lossless formats, such as: SVG, PNG, TIFF, RAW
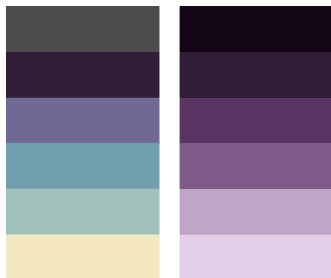
Units & Labels

GOOD NOT GOOD

Units
- Every axis needs a unit label, even if the measure is unitless
- If there are two plots side-by-side, make the axis limits consistent

Labels
- All axes need to be labeled (this may not apply for grouped sub-figures)
- Identify figure elements in the legend and/or the caption
- Titles should clarify the take-away message of the figure
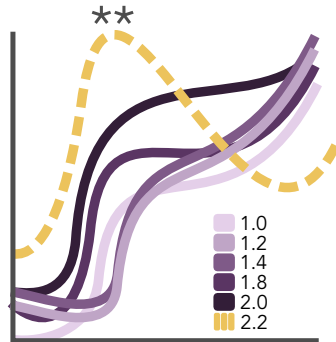
Colors

GOOD NOT GOOD

Colors
- Pick a color palette to use throughout the paper/poster/presentation
- Learn the color wheel: split-complementary colors pair well
- Muted colors look more professional; saturated colors draw attention
- Vary color lightness to show changes across an independent variable
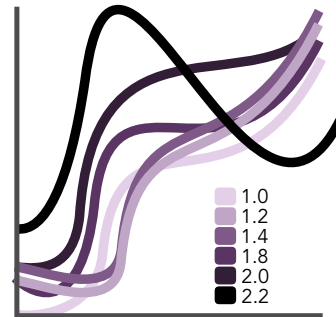- Ensure a color-blind reader can interpret the figure (see Accessibility)

Emphasis

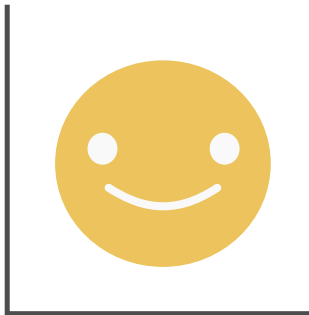**GOOD**   **NOT GOOD**

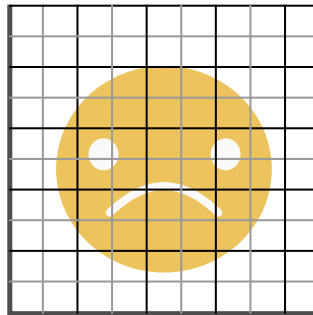Legend: 1.0, 1.2, 1.4, 1.8, 2.0, 2.2

Emphasis
- Visual changes can show the reader what is important in the data
- Use annotations, callouts, highlights, or changes in line style
- Define and use markers (*) for statistical signficance
- Have integrity: do not create a trend that isn't already there

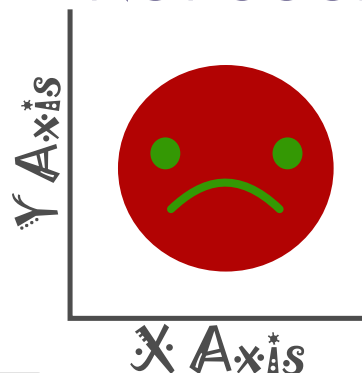## Ink:Content

GOOD   **NOT GOOD**

Ink:Content
- Minimize the ratio of ink (plotting elements) to content (your data)
- Be merciless when removing "chart junk" such as grid lines
- Anything not essential to understanding the data can be removed

Accessibility

GOOD   **NOT GOOD**

Y Axis   X Axis

a vector graphic of a yellow smiley with white eyes and upturned mouth

Accessibility
- Choose fonts without serifs, decoration, or complex ligatures
- Red-green color-blindness is common (1 in 12 men, 1 in 200 women)
- Some submissions require alt text, which is not the same as a caption
- Some submissions require accessible PDF files