Effective visual presentation*

*May not be present in this talk

Why worry?

- People are judgmental
- People know what they like
- If nobody understands your work, it doesn’t matter

Outline

- Metrics for evaluating visual presentation
- Presentation tips
- Software tips

Data-ink ratio

Data-ink ratio = \frac{\text{data-ink}}{\text{total ink used to print the graphic}}

- proportion of a graphic’s ink devoted to the non-redundant display of data-information
- 1.0 – proportion of a graphic that can be erased without loss of data-information

Example

```
35.9
```

Example

```
2 2 2 2 2 2 2 2 2 2 2
```

```
3 3 3 3 3 3 3 3 3 3 3
```

```
4 4 4 4 4 4 4 4 4 4 4
```
Possible reduction

Chart junk

Time series with junk

Observed deception

Lie-factor

Dimension deception
**Outline**

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**Color misuse**

[Image of a map with color misuse example]

**Color tip**

http://www.personal.psu.edu/~a/cab38/ColorBrewer/ColorBrewer.html

**Labeling tips**

some labels

instead of

some other labels

some other labels

**Causal inference**

[Image of a causal inference example]

**References**

- Edward Tufte, *The Visual Display of Quantitative Information*
- John Maeda, *Maeda & Media*
More references

- Donald Hoffman, *Visual Intelligence*
- Thomas Strothotte and Stefan Schlechtweg, *Non-Photorealistic Computer Graphics*

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GraphViz

[GraphViz=](http://www.graphviz.org/)

LaTeX tips

- Use pdflatex – TeX + ghostscript often produces poor output
- Bitmap images should be ~300 dpi
- Line art best from Adobe Illustrator*
- Gnuplot or MATLAB best for graphs*

*opinion

Labeling bitmaps in LaTeX

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.
If all else fails

Thanks for coming!
Questions?