GRID3

GEO-REFERENCED INFRASTRUCTURE AND DEMOGRAPHIC DATA FOR DEVELOPMENT

The Good, the Bad, and the Handbook: Adopting a Visual Language for GRID3 Cartography & Beyond

Elements and data types

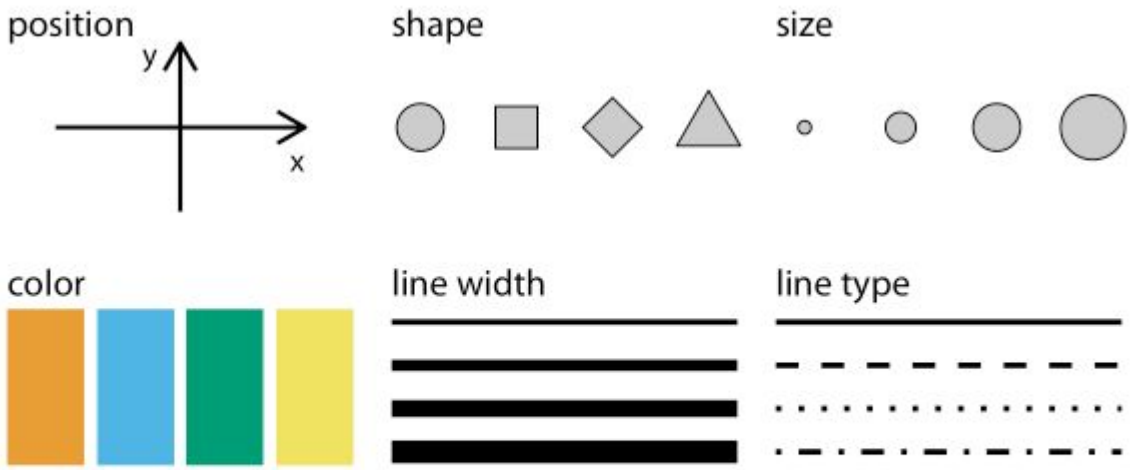


Figure 2.1: Commonly used aesthetics in data visualization: position, shape, size, color, line width, line type. Some of these aesthetics can represent both continuous and discrete data (position, size, line width, color) while others can usually only represent discrete data (shape, line type).

Type aka “font”

- “Type” is the text on a page (what a *typesetter* places on a printing block)
- “Font” is the ***face*** *of* **a** particular ~~type~~
- In most cases typesetting has transitioned to the digital domain. These words are effectively synonymous. *Nobody will bat an eyelash if you use them interchangeably, unless they’re a jerk, like me.*
-

Font families

- CSS-style:
  - Title
  - Heading
  - Body
- Establishing a visual hierarchy of type is critical in suggesting a coherent identity [this extends to all visual design discussed in this event]

Color

- Deciding on a scheme
  - TASTEFUL and RESPONSIBLE use in balance
  - Fitting an aesthetic to a rigid use framework (not the other way around!)
- Use cases
  - As a tool to distinguish
  - To represent data values
  - As a tool to highlight
- Example color schemes/ramps

Take advantage of expectations and use the connotative power of color (and use the power of suggestion to confirm or deny expectations) e.g. water is blue, avoid using it when the viewer is already anticipating water etc

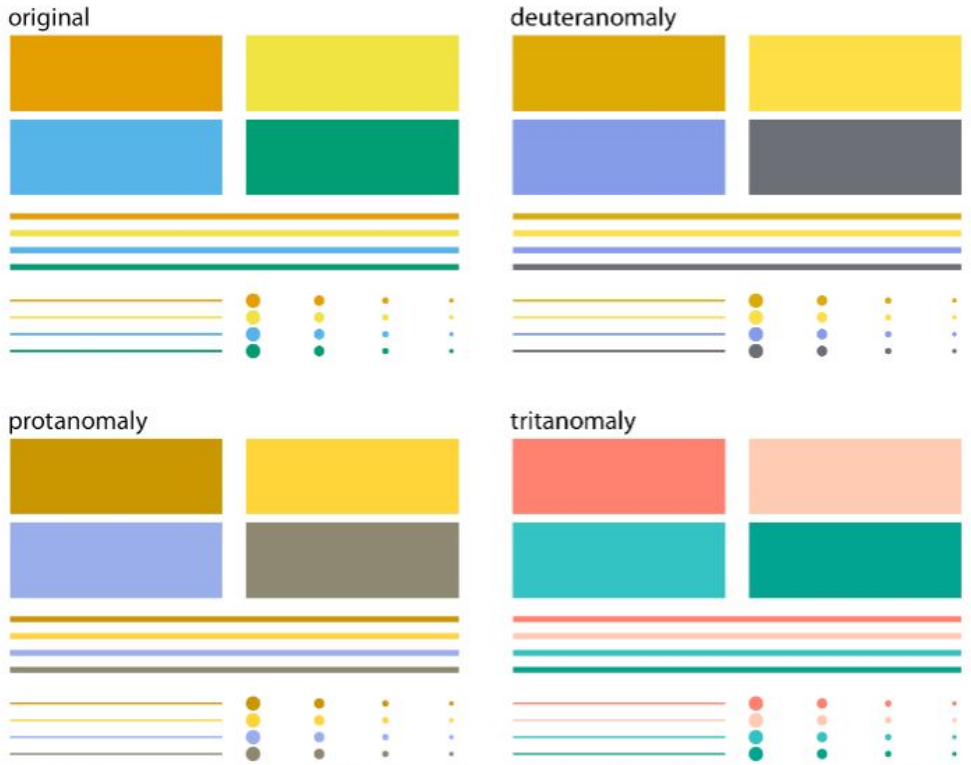
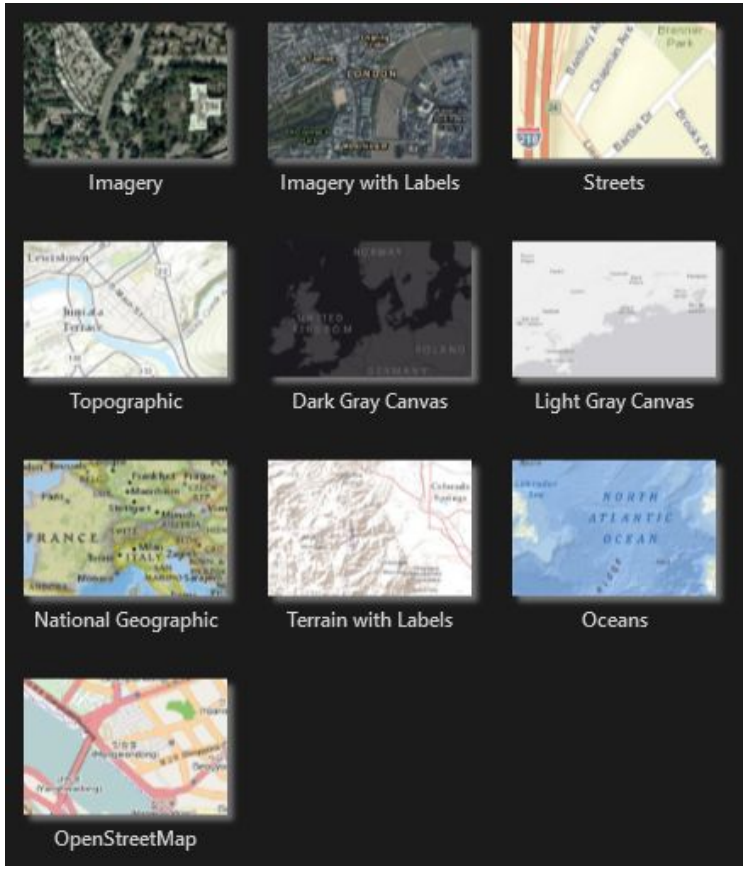


Figure 19.11: Colored elements become difficult to distinguish at small sizes. The top left panel (labeled "original") shows four rectangles, four thick lines, four thin lines, and four groups of points, all colored in the same four colors. We can see that the colors become more difficult to distinguish the smaller or thinner the visual elements are. This problem becomes exacerbated in the cvd simulations, where the colors are already more difficult to distinguish even for the large graphical elements.

Stroke / Weight

Basemaps (Esri ArcGIS Pro / ArcMap)

- Web service
  - Requires persistent online connection unless manually prepared
  - 10 default maps - more via Living Atlas (Add Data > Living Atlas)
- Assess the purpose for including
  - Context (e.g. admin boundaries, topography)
  - Embedded layers (OpenStreetMap)
  - Visual interest (hillshade)
- Consider the medium
  - Esri's raster web tiles cap at **96dpi**
  - Plenty for dynamic *screen use* (72dpi) but will appear pixelated in static, production-quality prints (300dpi)
  - Vector tiles use scalable graphics, ensuring sharpness for print. Filter for Basemaps > Vector Basemaps within Living Atlas



Fundamentals (follow up session?)

- Adobe suite and free alternatives
- Scalable vs non-scalable graphics
- Export
  - File formats
  - Size considerations
  - Web vs print

References

Fundamentals of Data Visualization

Claus O. Wilke

Formulating an internal pattern language: critique

Bearing the aforementioned standards and elements in mind, provide space to field feedback on several “mostly good” and “mostly bad” maps and other graphics. Discuss what elements are irrefutably positive/negative and what may be salvageable.

Take time to discuss what makes the figure good/bad:

functionally
aesthetically

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