

# Data Visualization for Political Social Work

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## 1 How to Navigate This Presentation (scroll down □)

### 1.1 Navigation

- **o** for outline
- **f** for full screen
- **alt-click** for zoom

## 2 Outline of Conversation

### 2.1 Our Discussion Today

- Purpose: Focus on the “conceptual language” of data viz.
- Whatever tool you are using (Paper and Pencil, Markers on Whiteboard, Excel, Google Sheets, R), what are some conceptual considerations in making a data visualization?
- More specific technical resources at end.

## 3 Basic Considerations (scroll down □)

### 3.1 The Nature of Your Variables Determines the Nature of Your DataViz

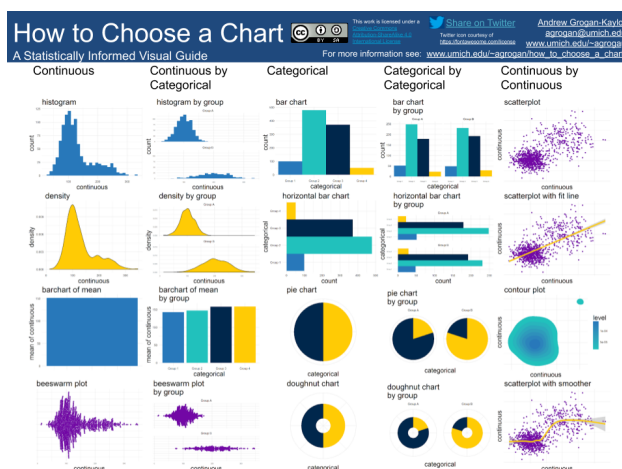
- Deciding upon the right data visualization to represent your data can be a daunting process.
- I believe that a *starting point* for this thinking is some basic statistical thinking about the *type* of variables that you have.
- At the broadest level, variables may be conceptualized as *categorical* variables, or *continuous* variables.

### 3.2 Variable Types

- *categorical variables* represent unordered categories like *neighborhood*, or *religious affiliation*, or *place of residence*.
- *continuous variables* represent a continuous scale like a *mental health scale*, or a *measure of life expectancy*.

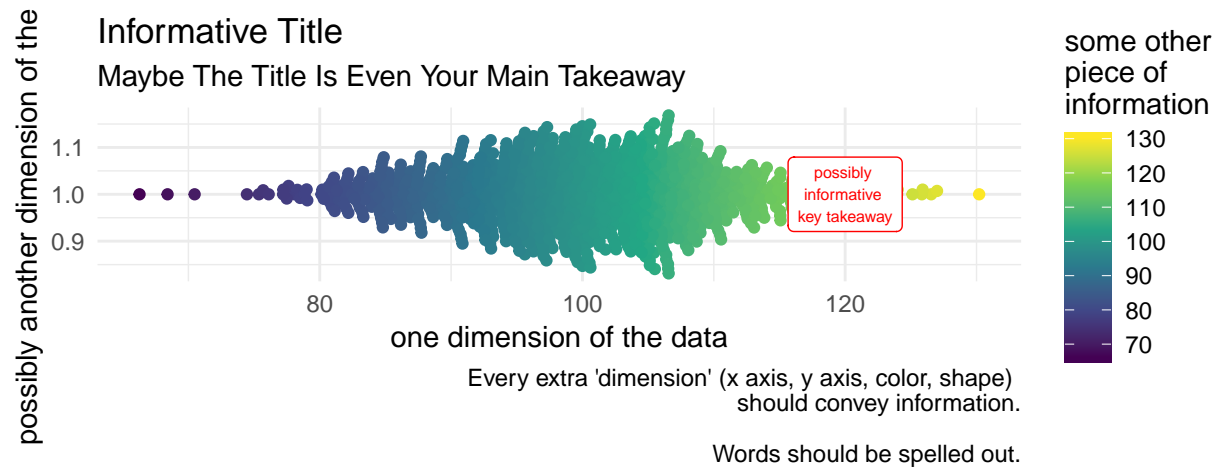
### 3.3 Visualization Possibilities

How To Choose A Chart



## 4 Story-Telling (scroll down ☐)

### 4.1 Your Graph Should Be A Self-Contained Story

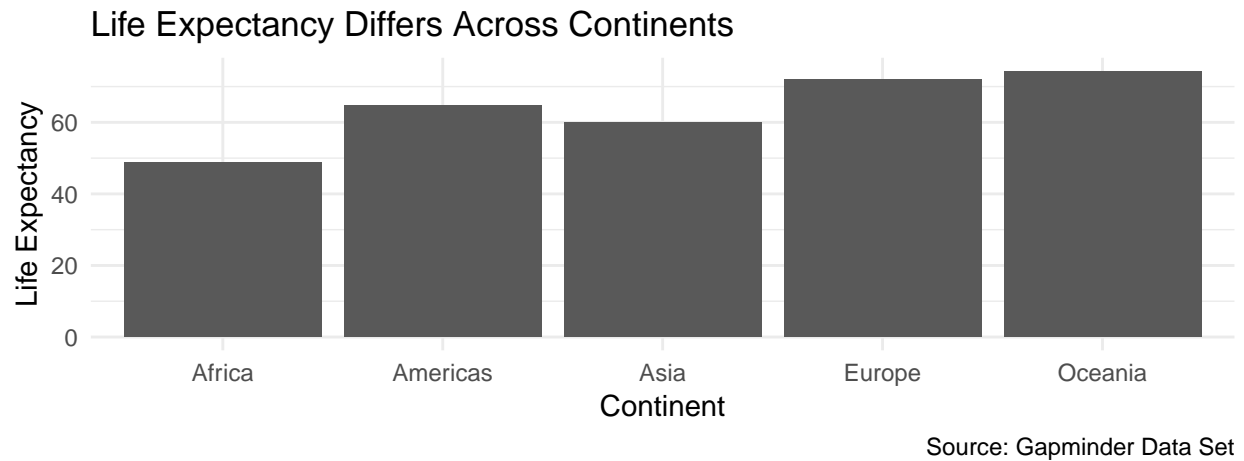


### 4.2 Your Graph Should Be Embedded In A Story

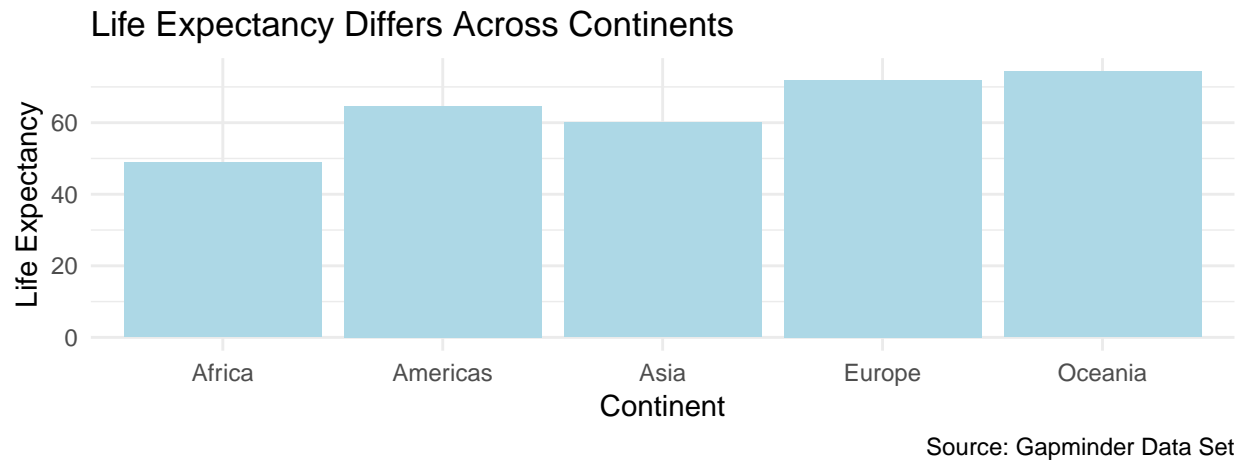


## 5 Color (scroll down □)

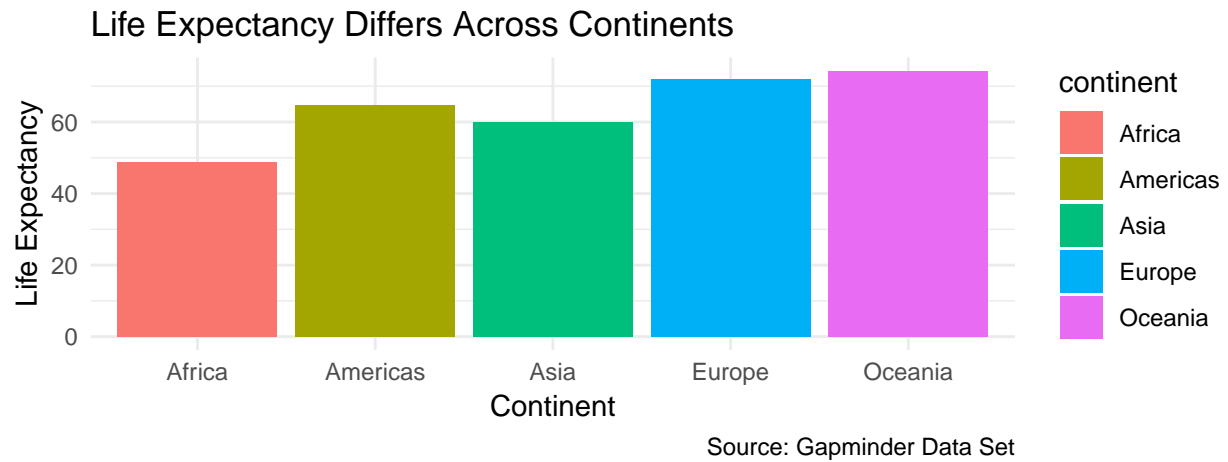
### 5.1 Greyscale Graph



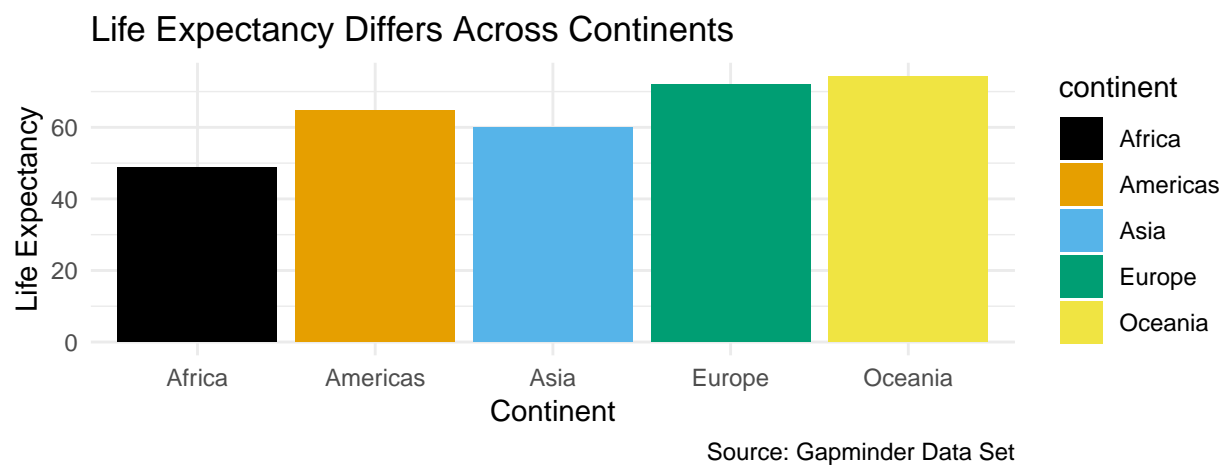
### 5.2 Color is Organizational Identity



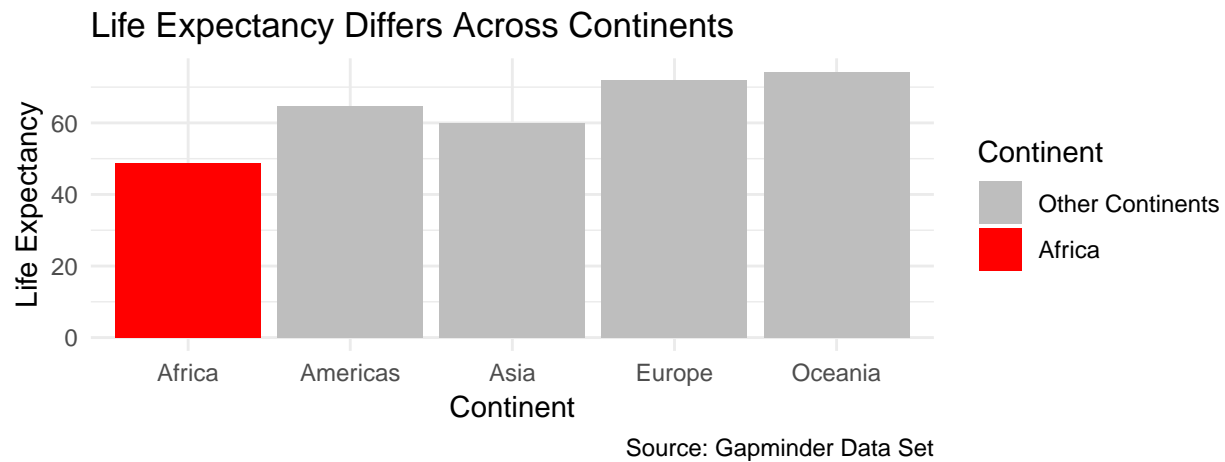
### 5.3 Color Is Information



### 5.4 Color Is Accessibility



## 5.5 Color Is Emphasis



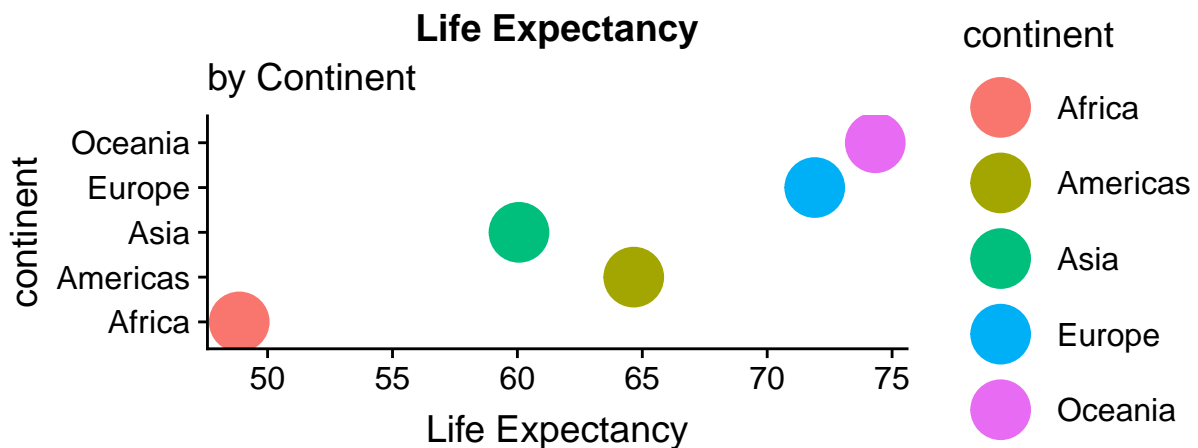
## 6 Cognition (scroll down ☐)

### 6.1 “Graphical Perception”

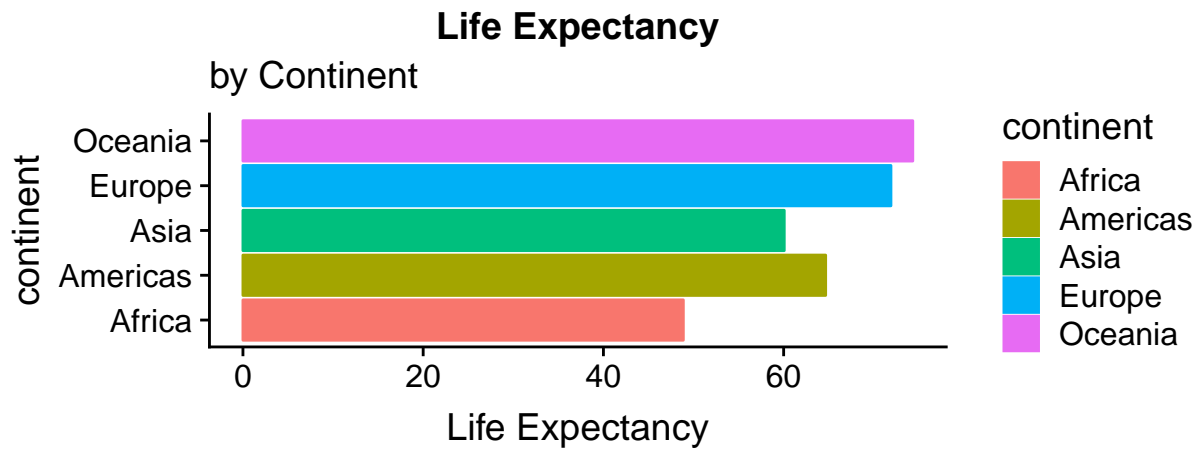
“Ordering elementary tasks by accuracy (Cleveland and McGill 1985):”

1. Position along a common scale
2. Position on identical but nonaligned scales
3. Length
4. Angle & Slope
5. Area
6. Volume, Density, Color Saturation
7. Color Hue

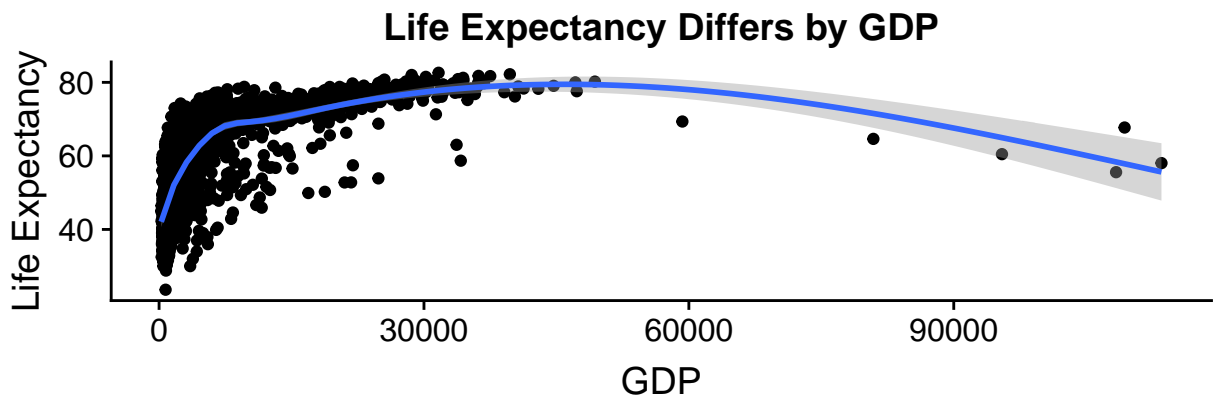
### 6.2 Example (Position Along A Common Scale)



### 6.3 Example (Length)



### 6.4 Example (Angle)



Source: Gapminder

## 7 Questions? (scroll down ☐)

### 7.1 Please Contact

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## References

Cleveland, William S, and Robert McGill. 1985. "Graphical Perception and Graphical Methods for Analyzing Scientific Data." *Science* 229 (4716): 828–33. <http://www.jstor.org/stable/1695272>.