GRD 610A
Data Visualization II

January 27, 2021 | R Basics

Data Visualization of the Week

Revisit Padlet

https://padlet.com/jschilling_ccs/mmzv9zg2ic8e6igs

What makes an effective data visualization?
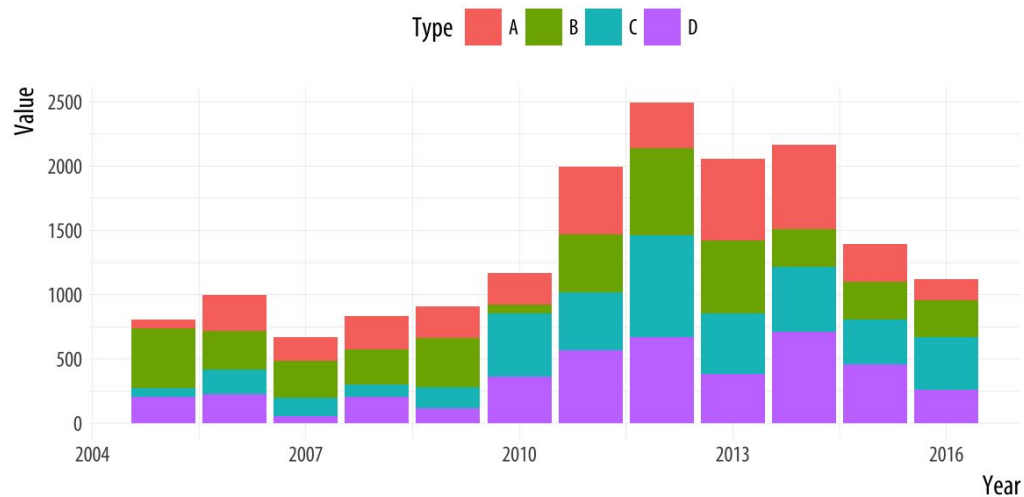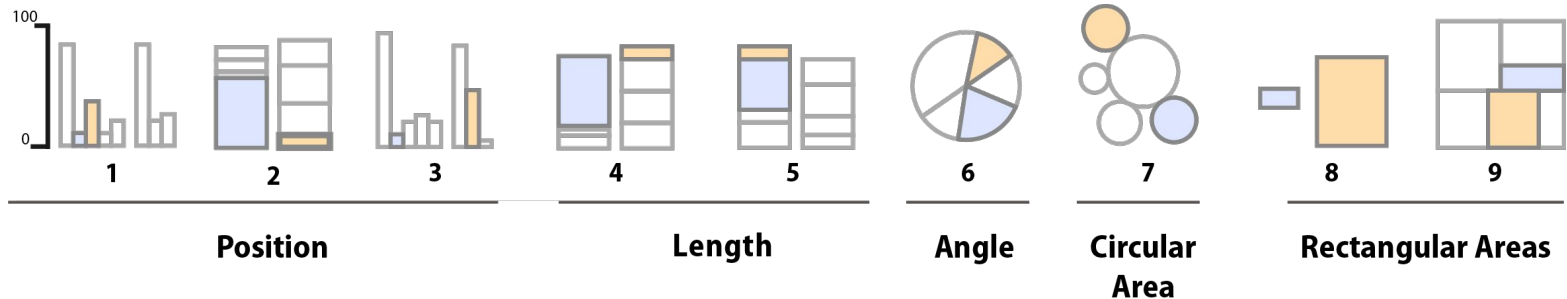
Look at Data

- Taste
- Data
- Perception

Figure 1.11, Healy (2019, p. 13)

Look at Data

- What should be kept in mind when selecting colors for a data visualization? Why?

- How can preattentive attributes be used in data visualization?

- What are the implications of the Gestalt principles on data visualization?

- Why is it important to understand how people decode graphs?

Figure 1.22, Healy (2019, p. 24)

Look at Data

- Which channels for representing data do you think are most effective? Why?
- In your opinion, what are the characteristics of effective data visualizations? What are the characteristics of ineffective data visualizations?
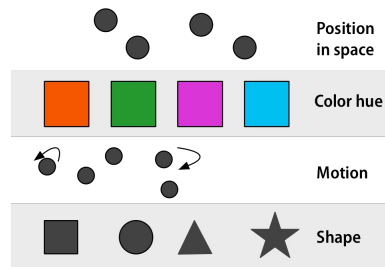- Why is it important to begin by learning principles of design, perception, and encoding/decoding?
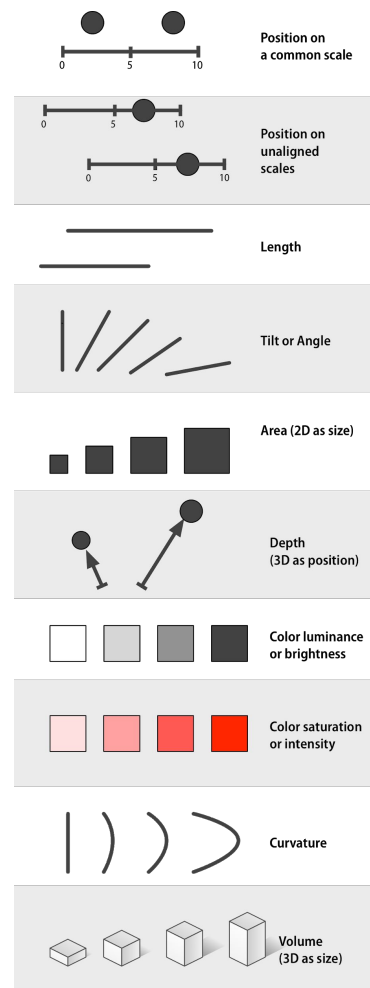

Figure 1.25, Healy (2019, p. 28)

Figure 1.24, Healy (2019, p. 27)

Let's Get Started in R

Data Visualization: A Practical Introduction by Kieran Healy, Chapter 2

R Markdown

- R Markdown allows a mix of text, code, and images to be written and saved in one document
- Making it easier to keep track of notes, code, and output together
- Outputs documents in HTML, Word, and PDF

Markdown	Output
`# Header`	**Header**
`## Subhead`	**Subhead**
`Plain text`	Plain text
`*italics*`	*italics*
`**bold**`	**bold**
`` `verbatim` ``	`verbatim`
`1. List`	1. List
`2. List`	2. List
`– Bullet 1`	° Bullet 1
`– Bullet 2`	° Bullet 2
`Footnote.[^1]`	Footnote.[1]
`[^1]: The footnote.`	[1] The footnote.

Figure 2.1 from p. 34 of Healy, Data Visualization: A Practical Introduction showing "elements of RMarkdown syntax"

R Markdown Setup

- Set parameters and output formats in the YAML
- Formatting text
- Code chunks and parameters on code chunks

- ?html_document
- Navigation

```
---
title: "Data Visualization Notes"
author: "Jenn Schilling"
date: "2020-01-27"
output:
 html_document:
  theme: flatly
  toc: TRUE
  toc_float: TRUE
  code_download: TRUE
---
```

R Markdown Notes File

Data Visualization: A Practical Introduction by Kieran Healy, Chapter 2, p. 36

15 Minute Break

Things to Know About R

Data Visualization: A Practical Introduction by Kieran Healy, Chapter 2, p. 38

R Basics

- R is an interpreter
  - \> means R is ready for a command
  - \+ means R is waiting for more information (your last command is not complete)
  - If you get stuck with +, press the Esc key to get back to >
  - CTRL + ENTER
- "Everything has a name"
  - Names are case sensitive
  - Objects
  - Functions
  - Constants
- "Everything is an object"

Lab Procedure

- Follow along with the book chapter
- Save your work as a .Rmd
- Knit to an HTML
- Submit to Blackboard after class
- [Rubric](#)

Let's Get into RStudio

Data Visualization: A Practical Introduction by Kieran Healy, Chapter 2, pp. 38-53

Tasks to Complete

- Reading (see Syllabus)

- Prepare for your Data Visualization of the Week