

R Coding Demonstration

Week 3: Anchoring Vignettes

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Gov 51 (Harvard)

Studying political efficacy

- 2002 World Health Organization survey of people in China and Mexico.
- Goal: determine feelings of political efficacy.
- Question: “How much say do you have in getting the government to address issues that interest you?”
 1. No say at all
 2. little say
 3. some say
 4. a lot of say
 5. unlimited say
- Problems?

- Load the data:

```
vignettes <- read.csv("data/vignettes.csv")
```

Name	Description
self	Respondent's own reported political efficacy (1-5 scale)
alison	Respondent's evaluation of political efficacy in Alison vignette (1-5 scale)
jane	Respondent's evaluation of political efficacy in Jane vignette (1-5 scale)
china	Respondent in the China sample (1) or Mexican sample (0)
age	Age of respondent

Question 1

1. Create a subset of the data for the Chinese respondents
2. Create a barplot of the proportions for each response to the question rating their own political efficiency.

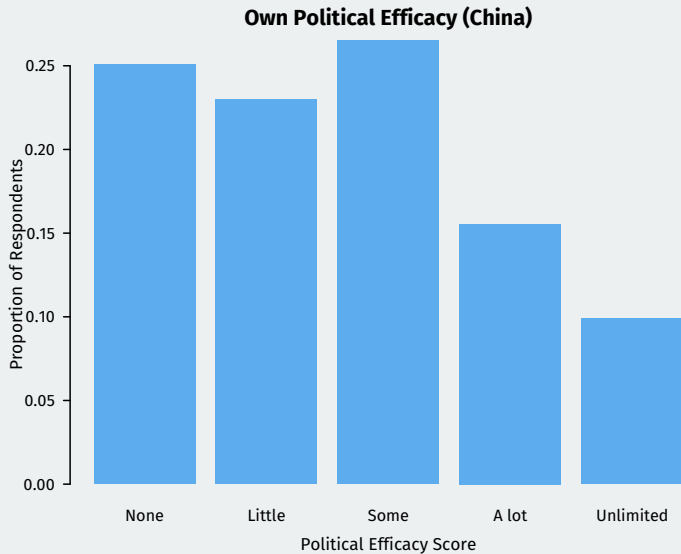
Answer 1

```
china <- subset(vignettes, china == 1)

ch_props <- prop.table(table(china$self))
labs <- c("None", "Little", "Some",
          "A lot", "Unlimited")

barplot(ch_props, names.arg = labs,
        border = NA, col = "steelblue2",
        las = 1,
        main = "Own Political Efficacy (China)",
        xlab = "Political Efficacy Score",
        ylab = "Proportion of Respondents")
```

Answer 1 (con't)



Question 2

1. Create a subset of the data for the Mexican respondents/
2. Create a barplot of their self-reported efficiency. Compare to the barplot for the Chinese respondents.

Do these results surprise you given that Mexico is a democracy with freedom of expression and China's institutions only allow for limited citizen input into politics?

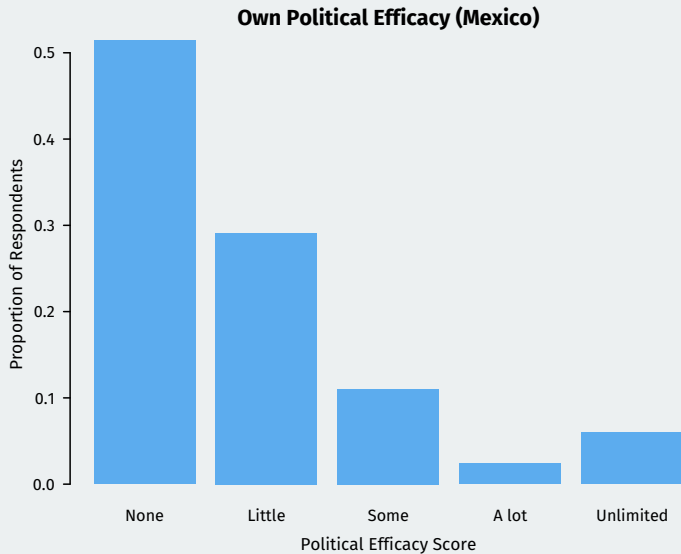
Answer 2

```
mexico <- subset(vignettes, subset = china == 0)

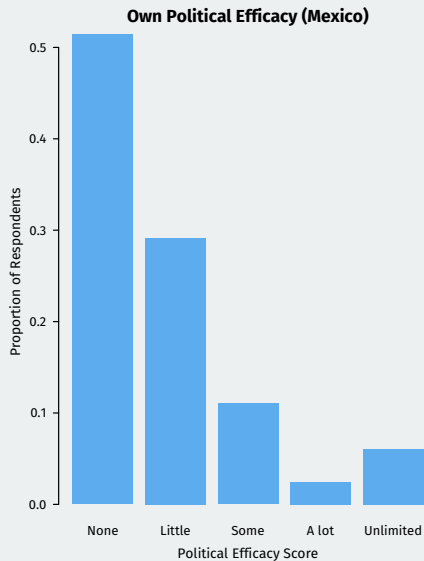
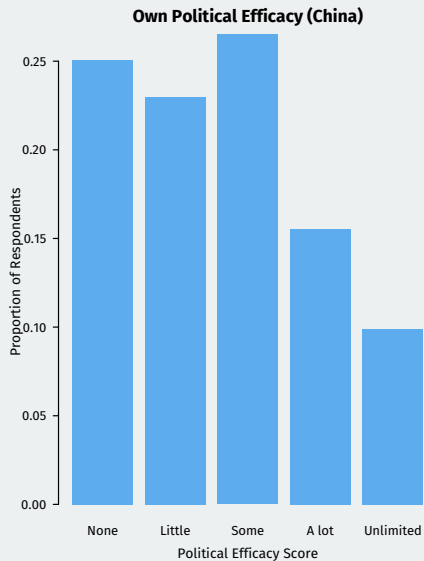
mx_props <- prop.table(table(mexico$self))
labs <- c("None", "Little", "Some",
          "A lot", "Unlimited")

barplot(mx_props, names.arg = labs,
        border = NA, col = "steelblue2",
        las = 1,
        main = "Own Political Efficacy (Mexico)",
        xlab = "Political Efficacy Score",
        ylab = "Proportion of Respondents")
```


Answer 2 (con't)



Comparison



Question 3

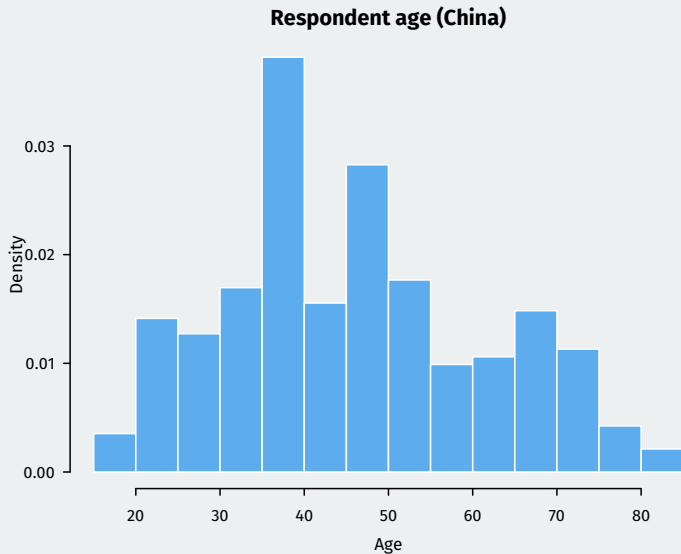
Maybe it's the case that the two samples are dramatically different in some way.

1. Use the China sample to plot a histogram of the ages of respondents.

Answer 3

```
hist(china$age,  
     freq = FALSE,  
     xlab = "Age",  
     main = "Respondent age (China)",  
     col = "steelblue2",  
     border = "white",  
     las = 1)
```

Answer 3 (con't)



Question 4

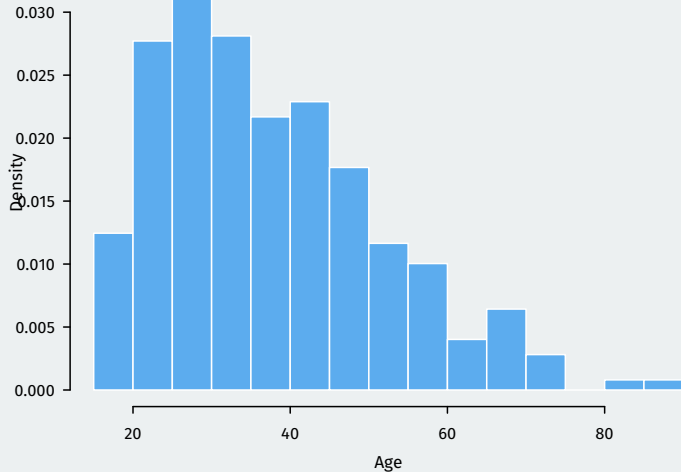
1. Use the Mexico sample to plot a histogram of the ages of those respondents.
2. Compare them to the China sample. Do they differ? Could this be a reason for the results on self-efficacy?

Answer 4

```
hist(mexico$age,  
     freq = FALSE,  
     xlab = "Age",  
     main = "Respondent age (Mexico)",  
     col = "steelblue2",  
     border = "white",  
     las = 1)
```

Answer 4 (con't)

Respondent age (Mexico)



Vignettes to the rescue

- Solution: anchor responses with **vignettes** with different levels of “objective” efficacy:

***Alison** lacks clean drinking water. She and her neighbors are supporting an opposition candidate in the forthcoming elections that has promised to address the issue. It appears that so many people in her area feel the same way that the opposition candidate will defeat the incumbent representative.*

- How much say does **Alison** have in getting the government to address issues that interest her?
 - Use the same scale as self-assessment.

***Jane** lacks clean drinking water because the government is pursuing an industrial development plan. In the campaign for an upcoming election, an opposition party has promised to address the issue, but she feels it would be futile to vote for the opposition since the government is certain to win.*

- How much say does **Jane** have in getting the government to address issues that interest her?

Moses vignette

Moses lacks clean drinking water. He would like to change this, but he can't vote, and feels that no one in the government cares about this issue. So he suffers in silence, hoping something will be done in the future.

- How much say does **Moses** have in getting the government to address issues that interest him?
- “Objective” ranking: Alison > Jane > Moses.

Question 5

Let's compare the self-reported efficacy against the vignettes. The Moses vignette is clearly the least efficacious. What proportion of respondents in each sample rate themselves (strictly) lower than Moses?

Answer 5

```
mean(china$self < china$moses)
```

```
## [1] 0.562
```

```
mean(mexico$self < mexico$moses)
```

```
## [1] 0.249
```

Question 6 (Challenge)

Let's create a scale that adjusts the self-reported score for the answers to the various vignettes. First, create a subset that ranks the vignettes in the correct order of efficacy (Alison $>$ Jane $>$ Moses).

Then, create a measure in each subset with the following values:

- 1 if self score $<$ Moses score
- 2 if self score \geq Moses, but $<$ Jane
- 3 if self score \geq Jane, but $<$ Alison
- 4 if self score \geq Alison.

Create barplots for the China and Mexico samples of these scores. Do they show the same thing as the self-reported scores?

Answer 6 (China subset)

```
## create subsets for respondents with correct ordering
ch_right <- subset(china, alison >= jane & jane >= mores)

## create measures
ch_right$self.adj <- NA
ch_right$self.adj[ch_right$self < ch_right$mores] <- 1
ch_right$self.adj[ch_right$self >= ch_right$mores &
  ch_right$self < ch_right$jane] <- 2
ch_right$self.adj[ch_right$self >= ch_right$jane &
  ch_right$self < ch_right$alison] <- 3
ch_right$self.adj[ch_right$self >= ch_right$alison] <- 4

## create proportion table
ch_props_adj <- prop.table(table(ch_right$self.adj))
```

Answer 6 (Mexico subset)

```
## create subsets for respondents with correct ordering
mx_right <- subset(mexico, alison >= jane & jane >= mooses)

## create MX adjusted rating
mx_right$self.adj <- NA
mx_right$self.adj[mx_right$self < mx_right$mooses] <- 1
mx_right$self.adj[mx_right$self >= mx_right$mooses &
                  mx_right$self < mx_right$jane] <- 2
mx_right$self.adj[mx_right$self >= mx_right$jane &
                  mx_right$self < mx_right$alison] <- 3
mx_right$self.adj[mx_right$self >= mx_right$alison] <- 4

## create MX proportion table
mx_props_adj <- prop.table(table(mx_right$self.adj))
```


Answer 6 (con't)

```
par(mfrow = c(1,2))
labs_adj <- c("< Moses", "[Moses, Jane)",
             "[Jane, Alison)", ">=Alison")

barplot(ch_props_adj, names.arg = labs_adj,
       border = NA, col = "steelblue2",
       las = 1,
       main = "Vignette-adjusted Political Efficacy (China)",
       xlab = "Political Efficacy Score",
       ylab = "Proportion of Respondents")

barplot(mx_props_adj, names.arg = labs_adj,
       border = NA, col = "steelblue2",
       las = 1,
       main = "Vignette-adjusted Political Efficacy (Mexico)",
       xlab = "Political Efficacy Score",
       ylab = "Proportion of Respondents")
```

Answer 6 (con't)

