Exercise Data-Ink Ratio

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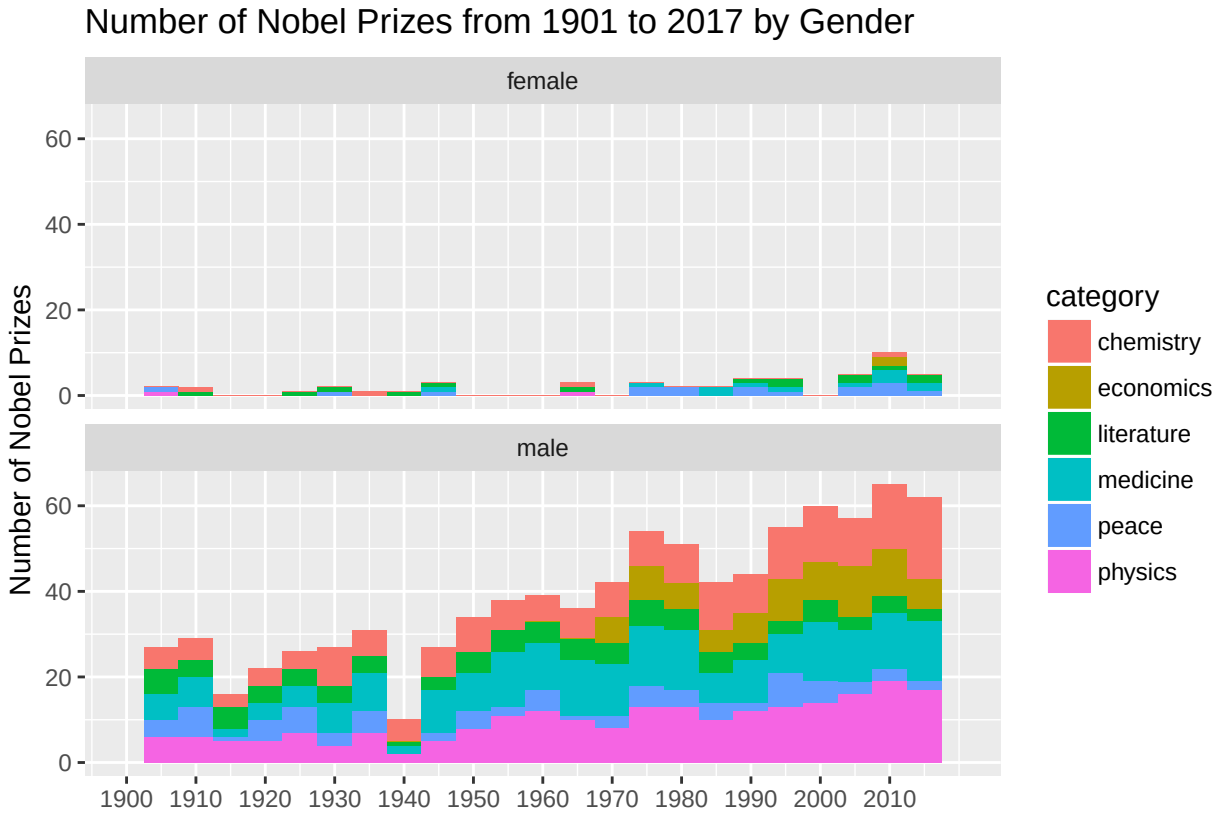
```
#Load Packages
if (!require("pacman")) install.packages("pacman")
pacman::p_load(dplyr, ggplot2, directlabels)

#Get Data
nobel <- read.csv(file = "data/nobel.csv")
nobel_plot <- nobel %>% filter(gender != "org", category != "")
```

Question 2

Try to increase the data-ink ratio to a degree that the figure (of your choice) is still legible but sparse in regard to non data-ink.

Answer 2:

```
# 1. Pre: Nobel Prizes by year over gender
p1a <- ggplot(data = nobel_plot, mapping = aes(x = year, fill = category)) +
      geom_histogram(position = "stack", binwidth = 5) +
      facet_wrap(c("gender"), scales = , dir = "v") +
      scale_x_continuous(breaks = seq(1900, 2010, 10), limits = c(1900, 2020)) +
      labs(title ="Number of Nobel Prizes from 1901 to 2017 by Gender ",
           y= "Number of Nobel Prizes", x = "")
p1a
```



```r
# 1. Post: Nobel Prizes by year over gender
p1b <- ggplot(data = nobel_plot,
              aes(x = year, color = gender, label = gender)) +
      geom_freqpoly(stat = "bin", binwidth = 1) +
      labs(title ="Number of Nobel Prizes from 1901 to 2017 \nby Gender ",
           y= "", x = "")  +
      geom_dl(method=list("get.means",
                          hjust = 3.3 , vjust= -4,
                          cex=0.8, rot = 10) ,
              stat = "bin", binwidth = 1)

p1b + theme(plot.title = element_text(hjust = 0.5),
            panel.background = element_blank(),
            axis.line = element_line(colour = "black"),
            legend.position = "none")
```