Midterm

```
library(tidyverse)
```

```
## ── Attaching packages ─────────────────────────────────────────── tidyv
erse 1.2.1 ──
```

```
## ✔ ggplot2 3.2.1     ✔ purrr   0.3.2
## ✔ tibble  2.1.3     ✔ dplyr   0.8.3
## ✔ tidyr   1.0.0     ✔ stringr 1.4.0
## ✔ readr   1.3.1     ✔ forcats 0.4.0
```

```
## ── Conflicts ──────────────────────────────────────────────── tidyverse_c
onflicts() ──
## ✖ dplyr::filter() masks stats::filter()
## ✖ dplyr::lag()    masks stats::lag()
```
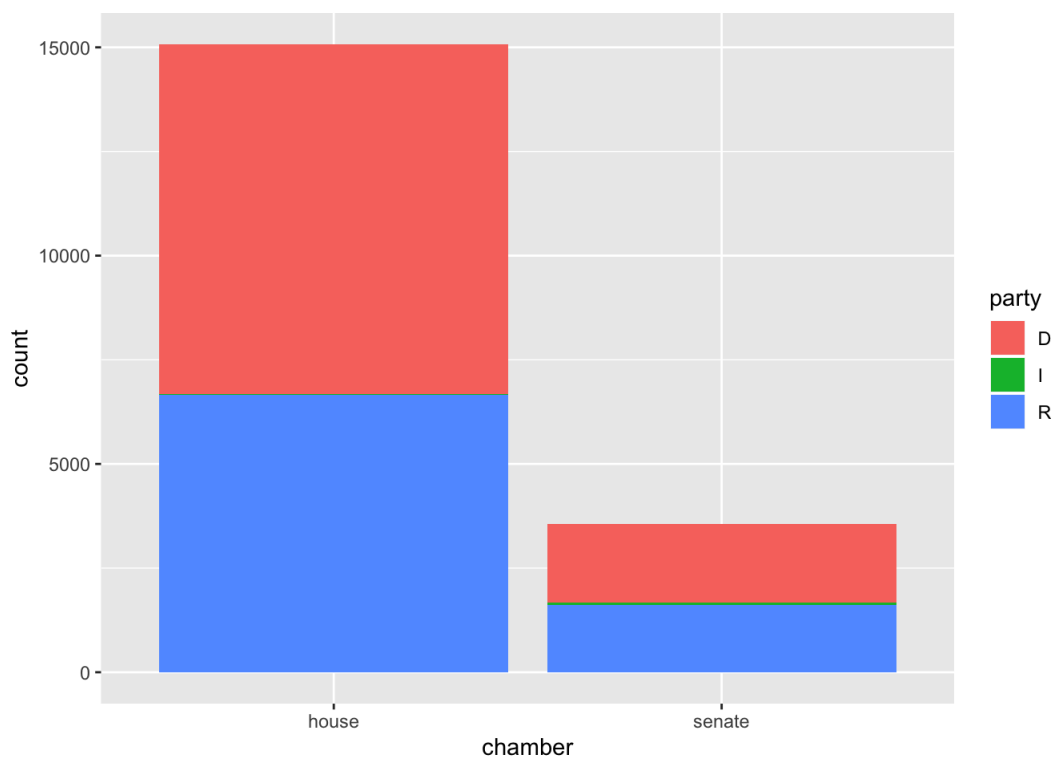
```
library(fivethirtyeight)

data(congress_age)
```

```
head(congress_age)
```

```
## # A tibble: 6 x 13
##   congress chamber bioguide firstname middlename lastname suffix birthday
##      <int> <chr>   <chr>    <chr>     <chr>      <chr>    <chr>  <date>
## 1       80 house   M000112  Joseph    Jefferson  Mansfie… <NA>   1861-02-09
## 2       80 house   D000448  Robert    Lee        Doughton <NA>   1863-11-07
## 3       80 house   S000001  Adolph    Joachim    Sabath   <NA>   1866-04-04
## 4       80 house   E000023  Charles   Aubrey     Eaton    <NA>   1868-03-29
## 5       80 house   L000296  William   <NA>       Lewis    <NA>   1868-09-22
## 6       80 house   G000017  James     A.         Gallagh… <NA>   1869-01-16
## # … with 5 more variables: state <chr>, party <chr>, incumbent <lgl>,
## #   termstart <date>, age <dbl>
```

```
a <- filter(congress_age, party == "D" | party == "R" | party == "I")
ggplot(a, aes(x = chamber, fill = party)) + geom_bar()
```

```
congress_age %>% arrange(age)
```

```
## # A tibble: 18,635 x 13
##    congress chamber bioguide firstname middlename lastname suffix
##       <int> <chr>   <chr>    <chr>     <chr>      <chr>    <chr>
## 1        89 house   J000151  Jed       Joseph     Johnson  Jr.
## 2        80 house   B000401  Lloyd     Millard    Bentsen  Jr.
## 3        94 house   D000471  Thomas    Joseph     Downey   <NA>
## 4        94 house   E000175  David     Farnham    Emery    <NA>
## 5       107 house   P000586  Adam      H.         Putnam   <NA>
## 6        89 house   G000420  William   Joseph     Green    <NA>
## 7        83 house   W000121  William   Creed      Wampler  <NA>
## 8       105 house   F000262  Harold    E.         Ford     Jr.
## 9        96 house   S000286  James     Michael    Shannon  <NA>
## 10       92 house   B000780  John      B.         Breaux   <NA>
## # … with 18,625 more rows, and 6 more variables: birthday <date>,
## #   state <chr>, party <chr>, incumbent <lgl>, termstart <date>, age <dbl>
```

Charles Samuel is the oldest.

```
congress_age %>% count(incumbent)
```

```
## # A tibble: 2 x 2
##   incumbent     n
##   <lgl>     <int>
## 1 FALSE      2937
## 2 TRUE      15698
```

```
recent <- filter(congress_age, congress == 113, party == "R" | party == "D")
```

```
onehunnid <- filter(congress_age, congress == 100)

onehunnid %>% count(incumbent)
```

```
## # A tibble: 2 x 2
##   incumbent     n
##   <lgl>     <int>
## 1 FALSE        63
## 2 TRUE        481
```

There were 63 new congresspeople in the 100th Congress.

```
congress_age %>% group_by(chamber) %>% summarize_at(vars(age), funs(mean))
```

```
## Warning: funs() is soft deprecated as of dplyr 0.8.0
## Please use a list of either functions or lambdas:
##
##   # Simple named list:
##   list(mean = mean, median = median)
##
##   # Auto named with `tibble::lst()`:
##   tibble::lst(mean, median)
##
##   # Using lambdas
##   list(~ mean(., trim = .2), ~ median(., na.rm = TRUE))
## This warning is displayed once per session.
```

```
## # A tibble: 2 x 2
##   chamber   age
##   <chr>   <dbl>
## 1 house    52.4
## 2 senate   57.3
```

The Senate is older.

```
ggplot(recent, aes(x = as.factor(party), y = age, fill = party)) +
  geom_boxplot()
```
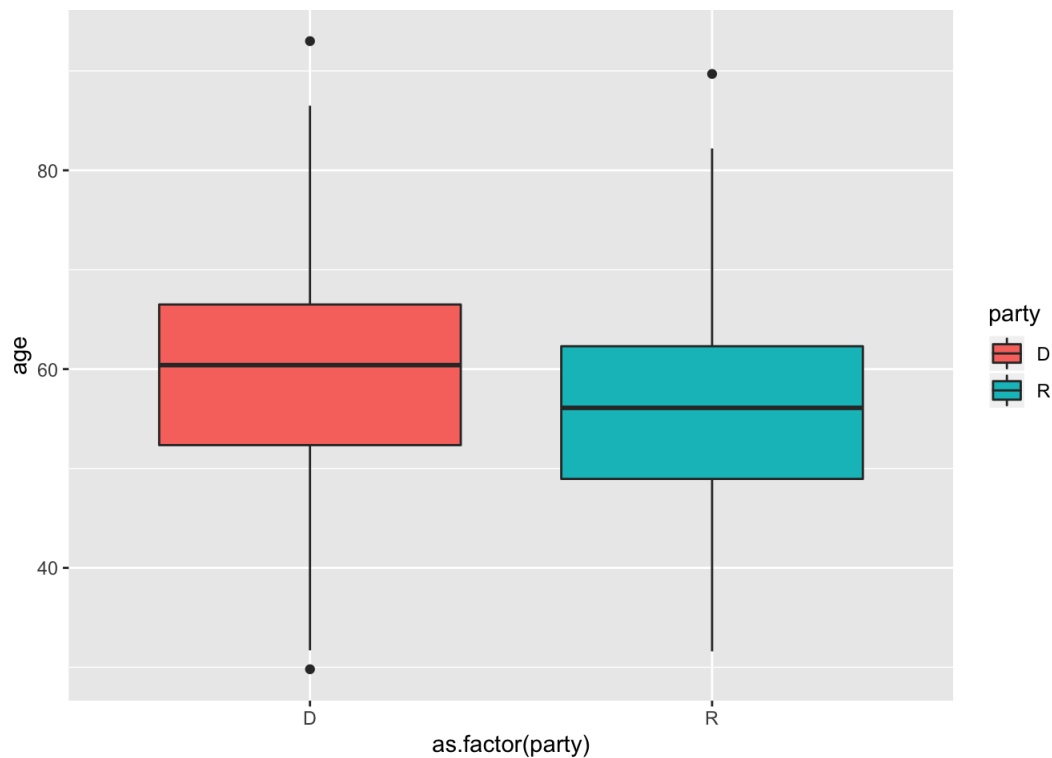

They are stagnant since they are the same age, neglecting the younger citizens beliefs. Also, the criticism is valid because the average age is in the mid-50's for both parties, which is pretty high age considering that most new ideas come from people of younger ages. This critcism is not equally valid for both parties because the average age for Democrats is 59.6 for Democrats while the average age for Republicans is 55.8, so although there is not a huge difference, there is still a slight difference in the ages which could allow for more new ideas to be part of the political conversation compared to Democrats.