Bivariate EDA - Categorical

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Background

The General Social Survey (GSS) is a nationwide survey that has been administered since 1972 to gather data on contemporary American society in an attempt to monitor and explain trends in attitudes, behaviors, and attributes of American society. One part of that survey asked respondents to state their opinion on how their level of agreement with the following statement – "Animals have rights too". The results from respondents in 1993 and 1994 are recorded in AnimalRights.csv. Use the data to answer the questions below.

- What type of variable is each variable in the data set?
- What percentage of respondents were from 1993 and strongly agreed with the statement?
- What percentage of the respondents from 1993 strongly disagreed with the statement?
- What percentage of the respondents that were neutral about the statement were from 1993?

Getting The Data

```
> library(NCStats)
> setwd("C:/aaaWork/Web/GitHub/NCMTH107/modules/BivEDA_Categorical")
> d <- read.csv("AnimalRights.csv")
> str(d)
```

```
'data.frame':   2793 obs. of  2 variables:
 $ year    : int  1993 1993 1993 1993 1993 1993 1993 1993 1993 1993 ...
 $ response: Factor w/ 5 levels "Agree","Disagree",..: 4 4 4 4 4 4 4 4 4 4 ...
```

```
> levels(d$response)
```

```
[1] "Agree"    "Disagree" "Neither"  "StrAgree" "StrDis"
```

```
> d$response <- factor(d$response,
    levels=c("StrDis","Disagree","Neither","Agree","StrAgree"))
> levels(d$response)
```

```
[1] "StrDis"   "Disagree" "Neither"  "Agree"    "StrAgree"
```

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```
> ( freq.tbl <- xtabs(~year+response,data=d) )
```

```
      response
year    StrDis Disagree Neither Agree StrAgree
  1993     196      520     294   372       95
  1994     247      442     272   288       67
```

```
> percTable(freq.tbl,margin=1,digits=2)
```

```
      response
year   StrDis Disagree Neither  Agree StrAgree    Sum
  1993  13.27    35.21   19.91  25.19     6.43 100.01
  1994  18.77    33.59   20.67  21.88     5.09 100.00
```

```
> percTable(freq.tbl,margin=2,digits=2)
```

```
      response
year   StrDis Disagree Neither  Agree StrAgree
  1993  44.24    54.05   51.94  56.36    58.64
  1994  55.76    45.95   48.06  43.64    41.36
   Sum 100.00   100.00  100.00 100.00   100.00
```

```
> percTable(freq.tbl,digits=2)
```

```
      response
year   StrDis Disagree Neither  Agree StrAgree    Sum
  1993   7.02    18.62   10.53  13.32     3.40  52.89
  1994   8.84    15.83    9.74  10.31     2.40  47.12
   Sum  15.86    34.45   20.27  23.63     5.80 100.01
```

```
> barplot(freq.tbl,beside=TRUE,legend=TRUE,ylab="Frequency")
```