Lab9

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Exercise 1: Factor Coding

```
fc <- factor(c('D','C','C','A','A',
               'C','D','A','C','C',
               'A','A','C','A','C',
               'B','C','A','C','B'))
```

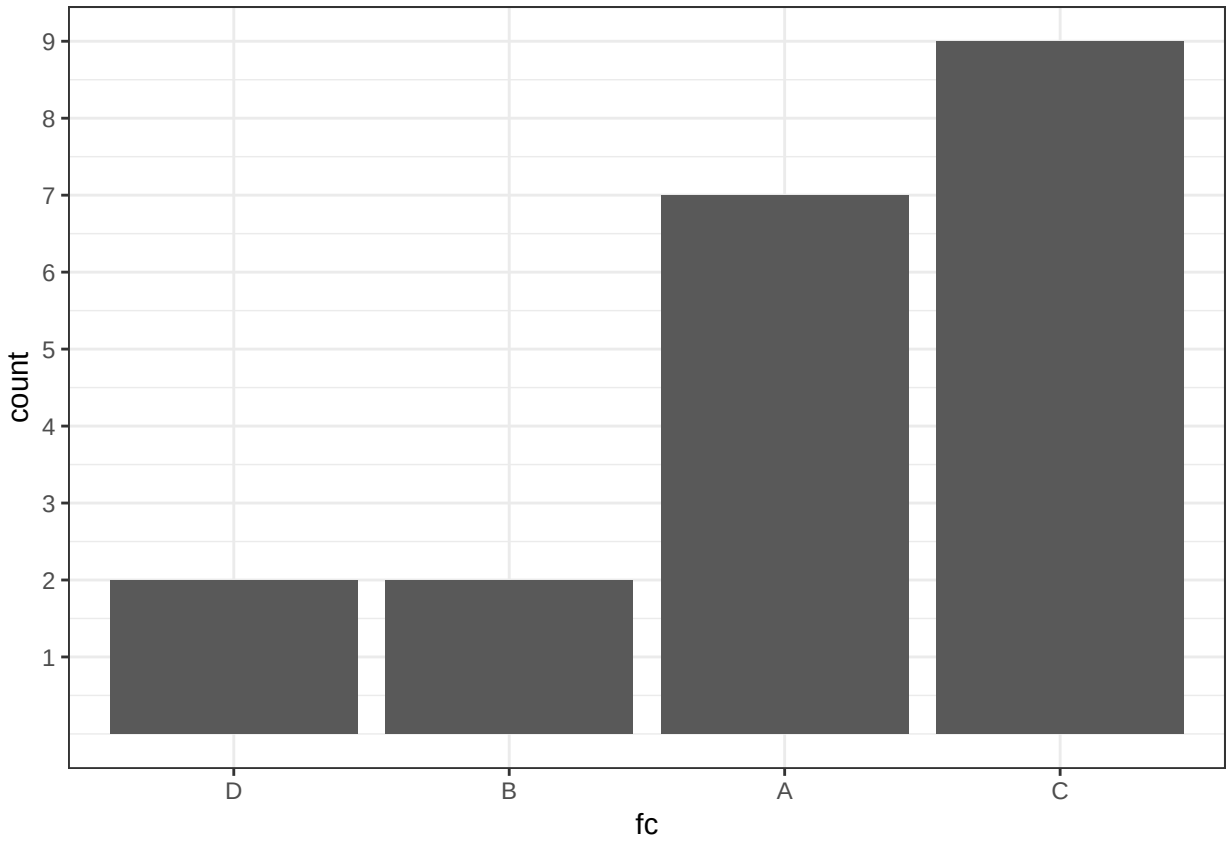
Q1

```
fc %>%
  fct_expand('E')
```

```
##  [1] D C C A A C D A C C A A C A C B C A C B
## Levels: A B C D E
```

Q2

```
fc_data <- data.frame(fc)
fc_data %>%
  mutate(fc = fct_rev(fct_infreq(fc))) %>%
  ggplot(aes(x = fc)) +
    geom_bar() +
    theme_bw() +
    scale_y_continuous(breaks = seq(1,10))
```



Q3

```
fc %>%
  fct_rev()
```

```
##  [1] D C C A A C D A C C A A C A C B C A C B
## Levels: D C B A
```

Q4

```
fc_data %>%
  filter(fc != 'C') %>%
  mutate(fc = fct_drop(fc)) %>%
  count(fc)
```

```
## # A tibble: 3 x 2
##   fc        n
##   <fct> <int>
## 1 A         7
## 2 B         2
## 3 D         2
```

Q5

```
fc %>%
  fct_collapse('AB' = c('A','B'))
```

```
##  [1] D  C  C  AB AB C  D  AB C  C  AB AB C  AB C  AB C  AB C  AB
## Levels: AB C D
```

Exercise 2: Sex, Lies, and Religion

Q1

```
slr <- read_table('sexlierel.txt')
```

```
## Parsed with column specification:
## cols(
##   gender = col_double(),
##   scale = col_double(),
##   perm = col_double(),
##   lie = col_double(),
##   relig = col_double(),
##   count = col_double()
## )
```

Q2

```
slr %>%
  select_if(is.numeric) %>%
  colnames() ->
  con.names

slr[,con.names[-6]] <- data.frame(apply(slr[con.names[-6]],2,as.factor))

slr %>%
  mutate(gender = fct_recode(gender,'Female' = '1','Male' = '2'),
         scale  = fct_recode(scale,'Ritualistic' = '1','Experiential' = '2',
                             'Ideological' = '3','Composite' = '4'),
         perm   = fct_recode(perm,'Low' = '1','High' = '2'),
         lie    = fct_recode(lie,'Lower' = '1','Higher' = '2'),
         relig  = fct_recode(relig, 'Low' = '1','High' = '2')) ->
  slr
slr
```

```
## # A tibble: 64 x 6
##    gender scale        perm  lie    relig count
##    <fct>  <fct>        <fct> <fct>  <fct> <dbl>
##  1 Female Ritualistic  Low   Lower  Low      52
##  2 Female Ritualistic  Low   Lower  High     74
##  3 Female Ritualistic  Low   Higher Low      50
##  4 Female Ritualistic  Low   Higher High     51
##  5 Female Ritualistic  High  Lower  Low      34
##  6 Female Ritualistic  High  Lower  High     13
##  7 Female Ritualistic  High  Higher Low      41
##  8 Female Ritualistic  High  Higher High     20
##  9 Female Experiential Low   Lower  Low      57
```

```
## 10 Female Experiential Low   Lower  High     69
## # ... with 54 more rows
```

Q3

Factor perm is in order of 'Low', 'High'.

```
levels(slr$perm)
```

```
## [1] "Low"  "High"
```

Now the order is in 'High', 'Low'.

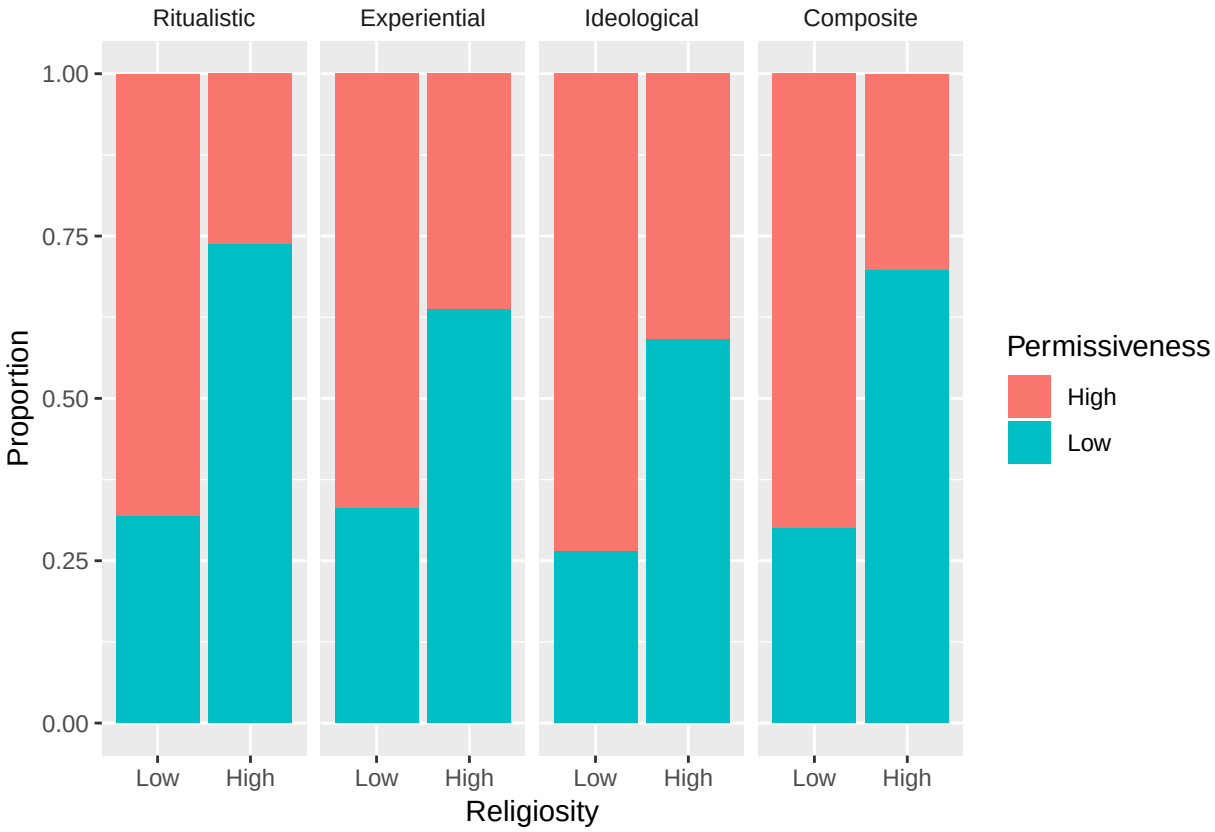
```
slr %>%
  mutate(perm = fct_rev(perm)) ->
  slr
levels(slr$perm)
```

```
## [1] "High" "Low"
```

Q4

Basically, for males within all scales of sexual permissiveness, the higher the level of religious,the lower the level of sexual permissiveness.

```
slr %>%
  filter(gender == 'Male') %>%
  ggplot(aes(x = relig, y = count, fill = perm)) +
  geom_col(pos = 'fill') +
  facet_grid(. ~ scale) +
  xlab('Religiosity') +
  ylab('Proportion') +
  scale_fill_discrete(name = 'Permissiveness') +
  theme(strip.background = element_rect(fill = 'white'))
```


Ritualistic
Experiential
Ideological
Composite
1.00
0.75
0.50
0.25
0.00
Proportion
Low
High
Religiosity
Permissiveness
High
Low