Facets

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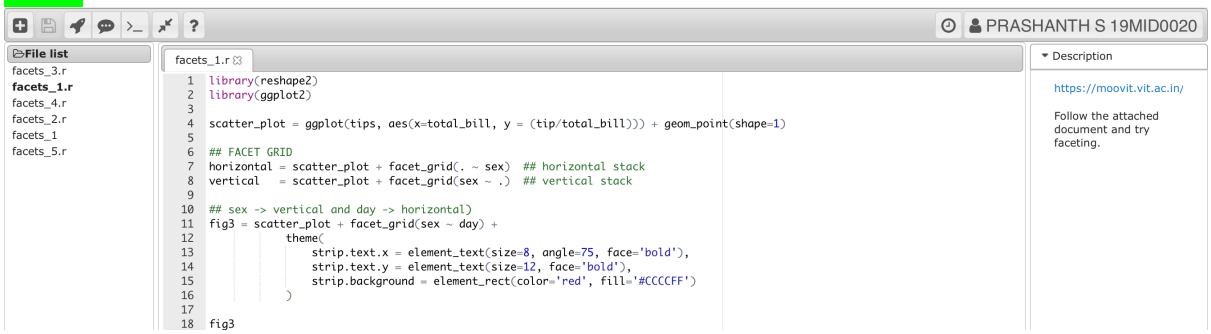
Code



Mam, I implemented the code in moodle as-well as in RStudio also. In-order to avoid confusion with continuous output, I am including my implementation in RStudio also.

Facets

Importing the libraries

```
library(reshape2)
library(ggplot2)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

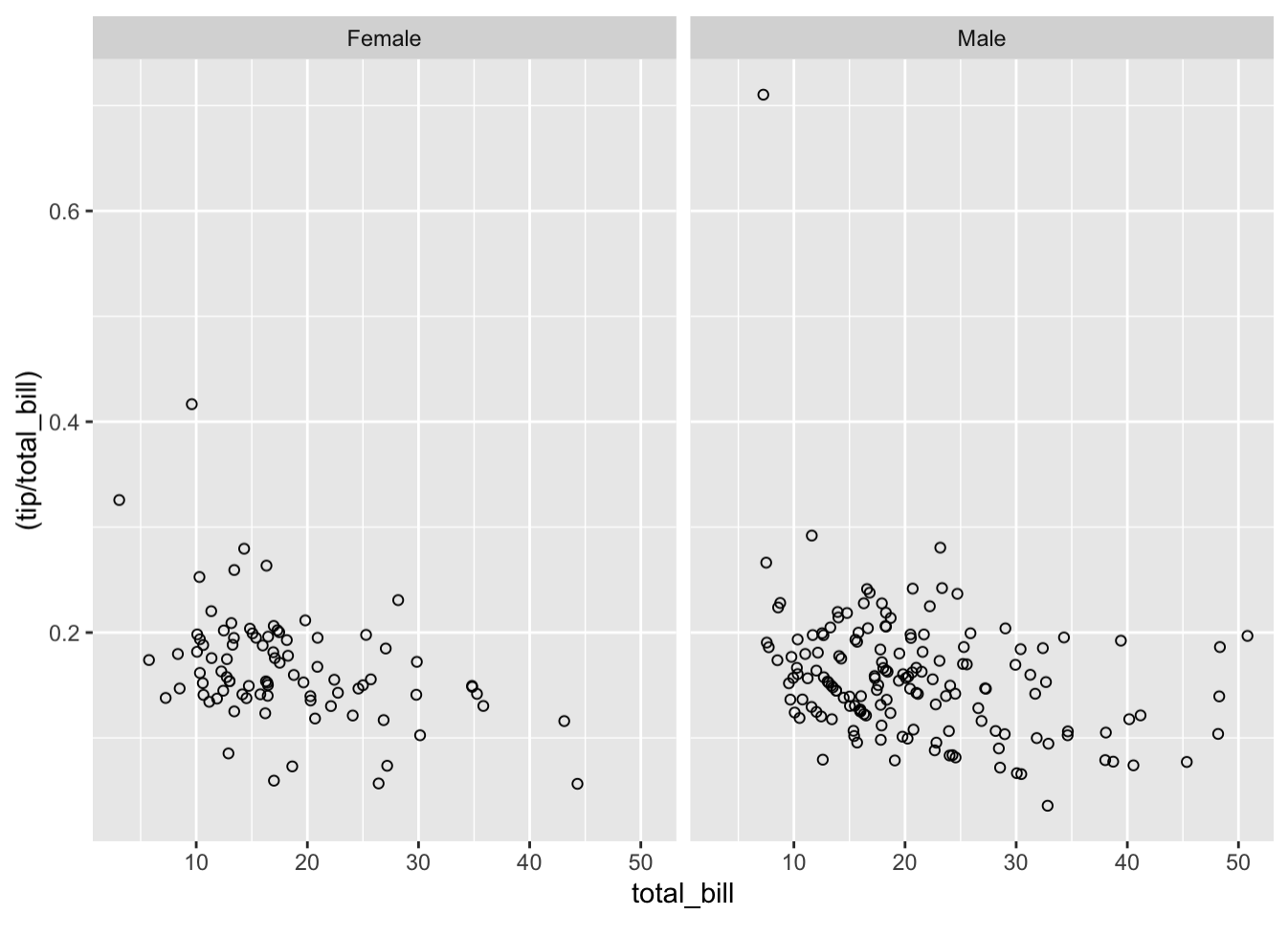
```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

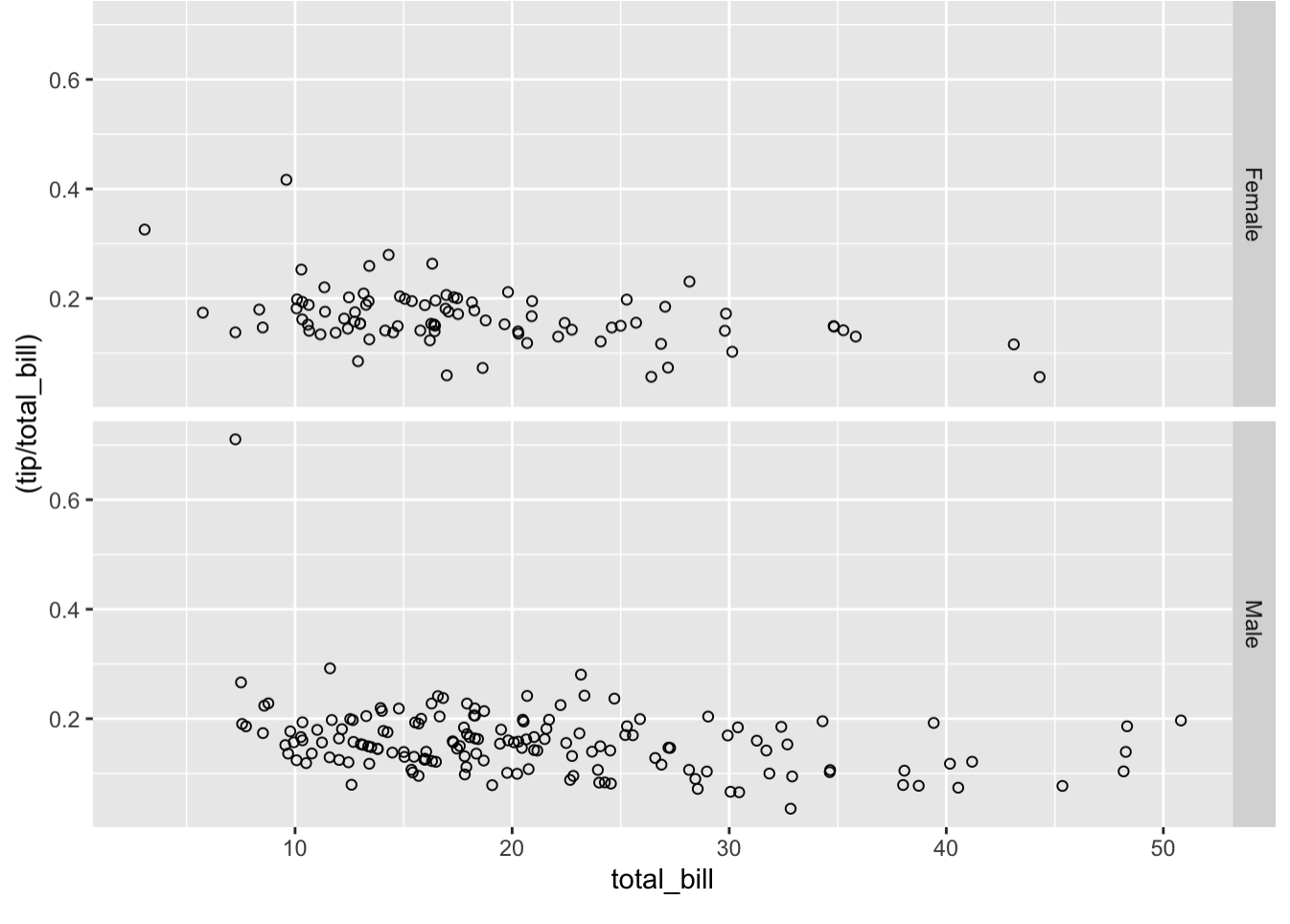
```
scatter_plot = ggplot(tips, aes(x=total_bill, y = (tip/total_bill))) + geom_point(shape=1)
```

```
## FACET GRID
horizontal = scatter_plot + facet_grid(. ~ sex)  ## horizontal stack
vertical   = scatter_plot + facet_grid(sex ~ .)  ## vertical stack
```

```
horizontal
```

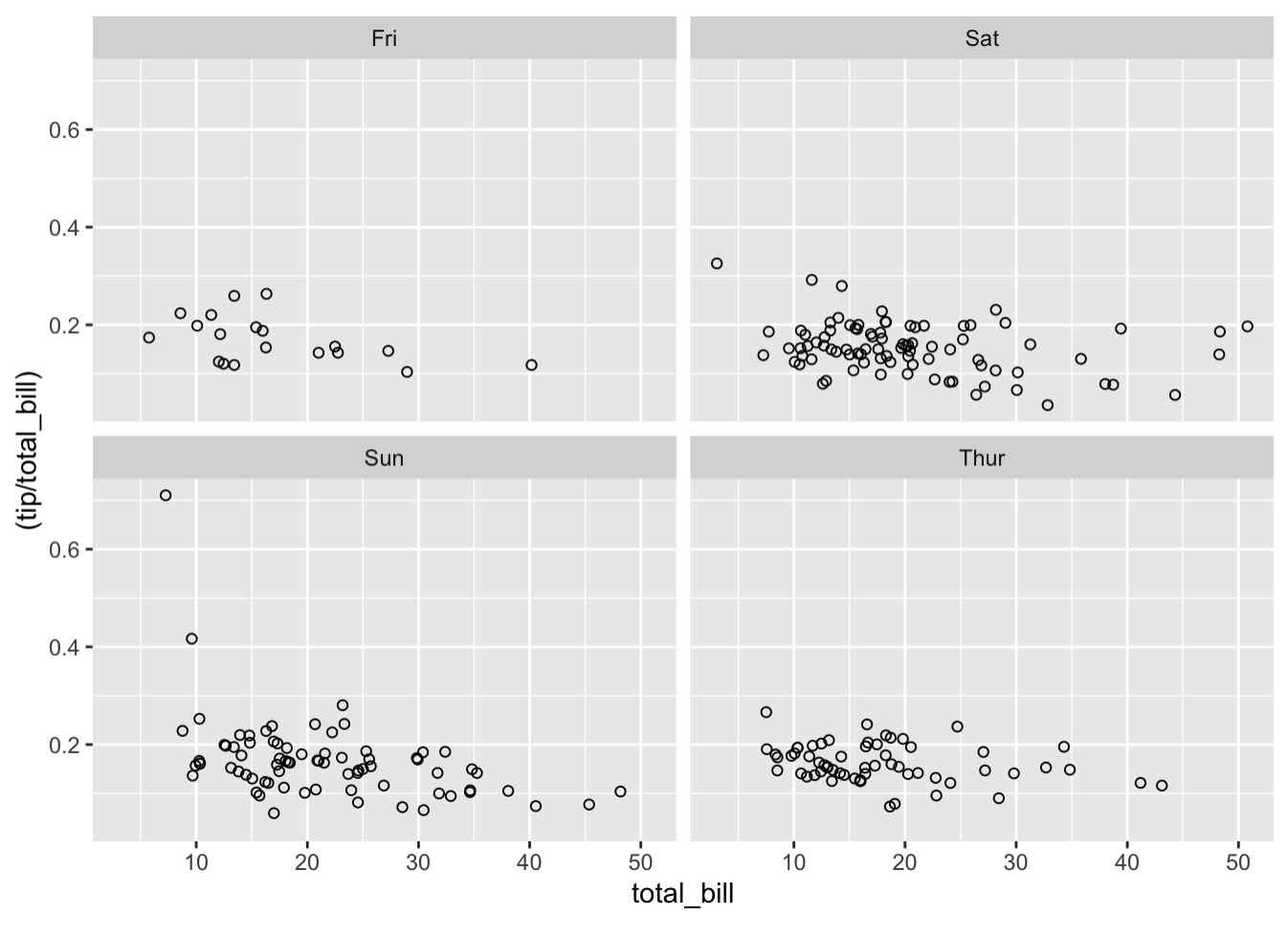



```
vertical
```

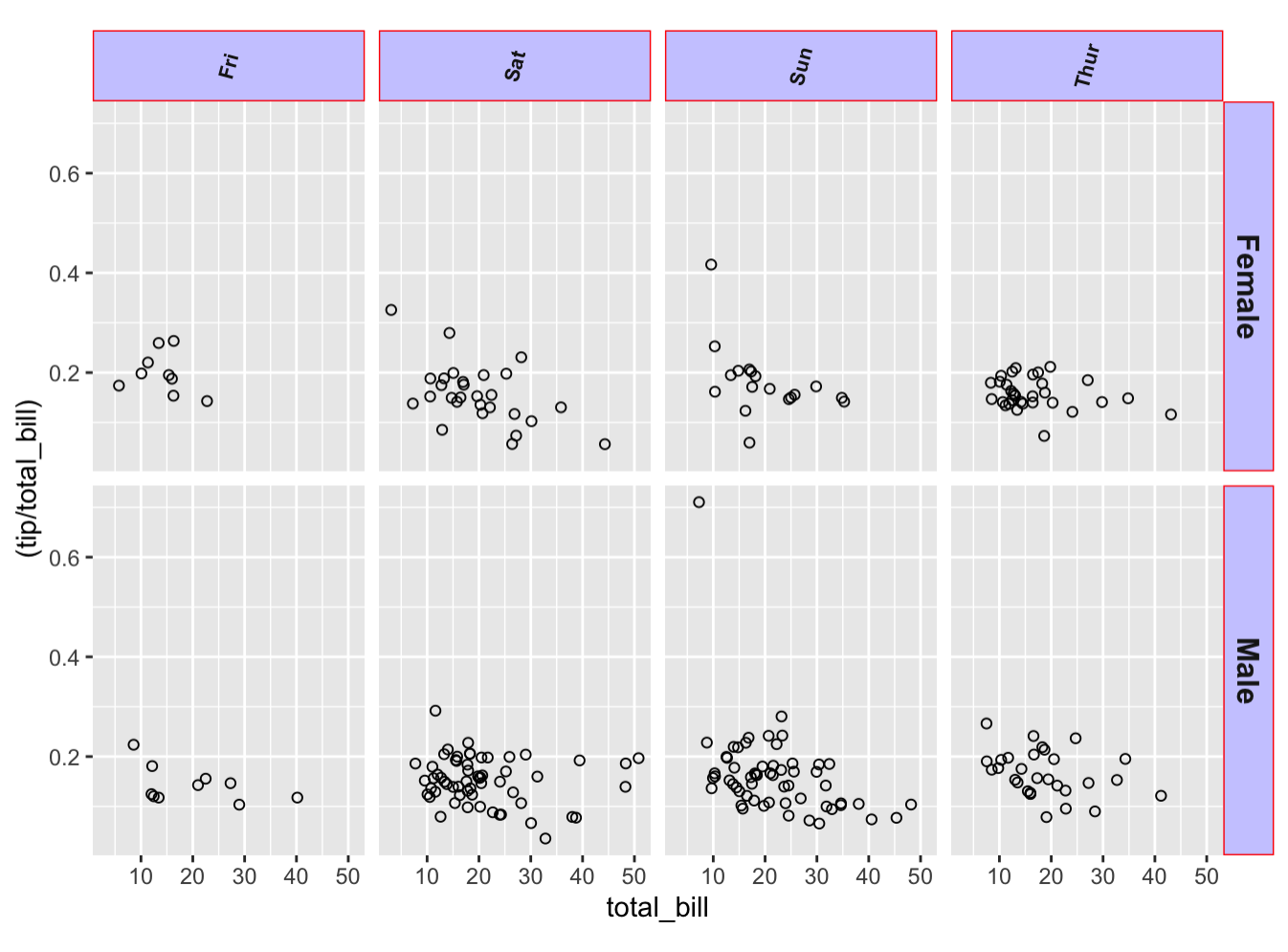


Facet Wrap

```
# Divide by day, going horizontally and wrapping with 2 columns
scatter_plot + facet_wrap( ~ day, ncol=2)
```



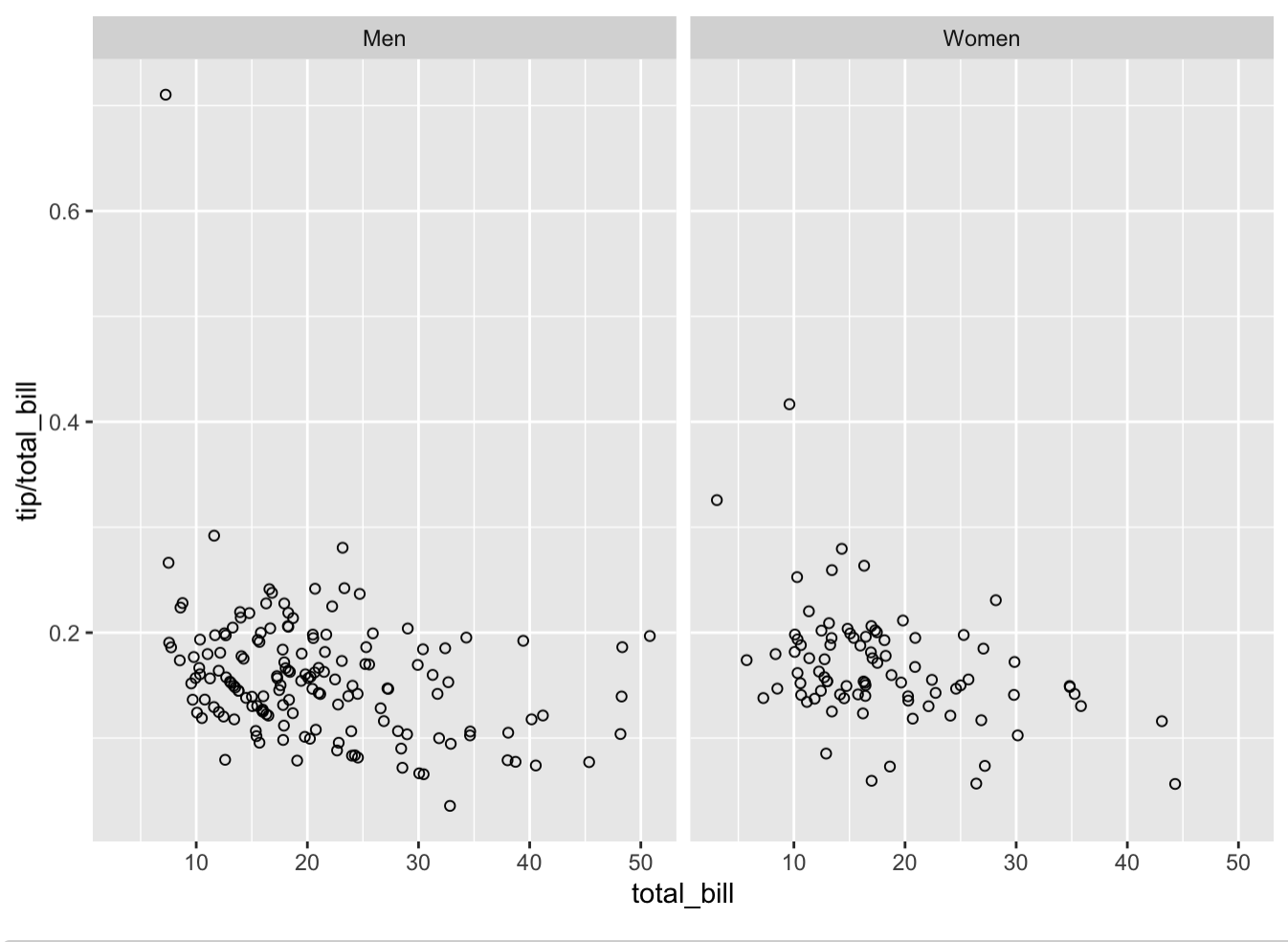

```
## sex -> vertical and day -> horizontal)
fig3 = scatter_plot + facet_grid(sex ~ day) +
            theme(
                strip.text.x = element_text(size=8, angle=75, face='bold'),
                strip.text.y = element_text(size=12, face='bold'),
                strip.background = element_rect(color='red', fill='#CCCCFF')
            )

fig3
```



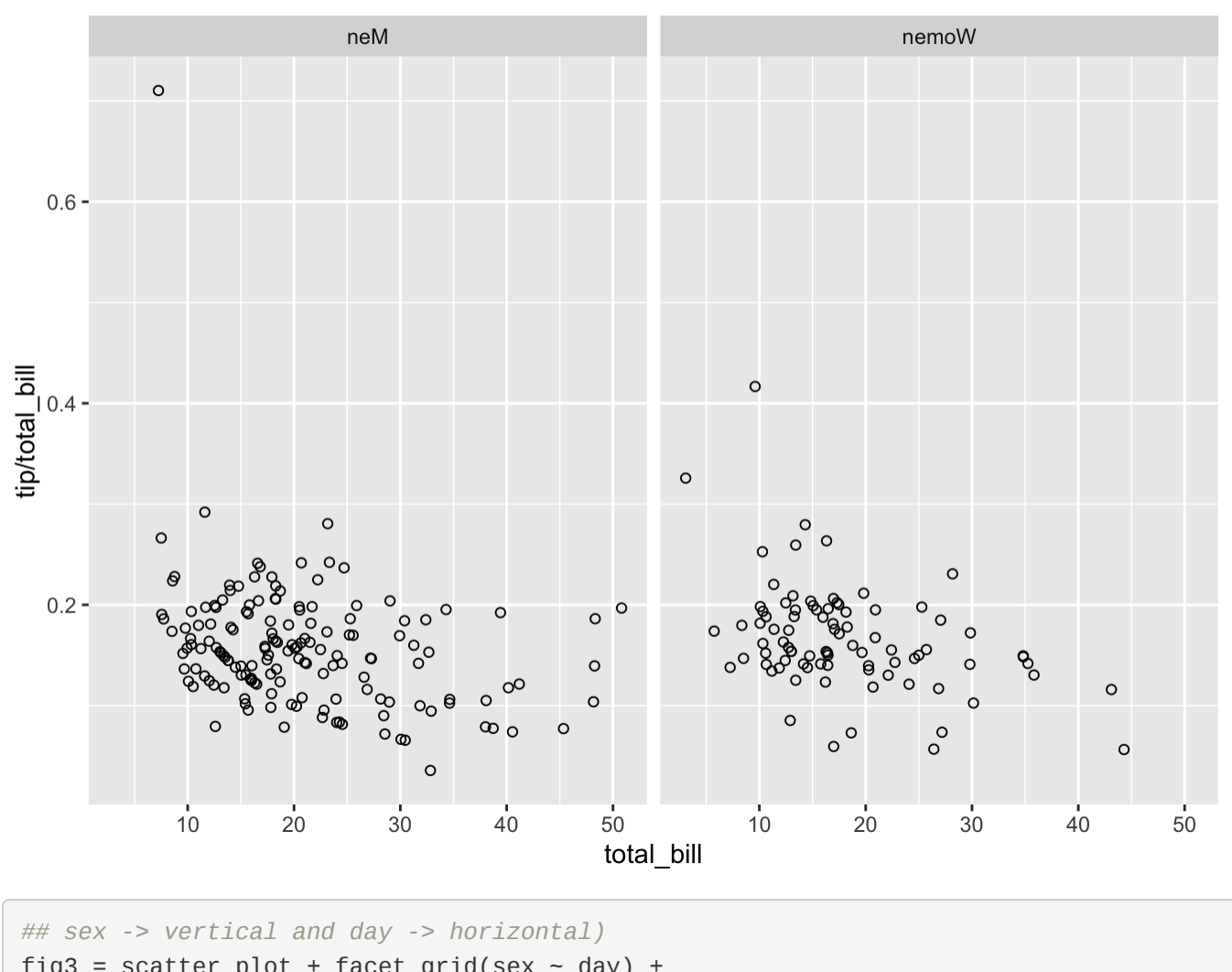

```
## Renaming Male, Female == Men, Women
df = tips
df = mutate(df, sex = ifelse(sex == 'Male', "Men", "Women"))
```

Reversing the string

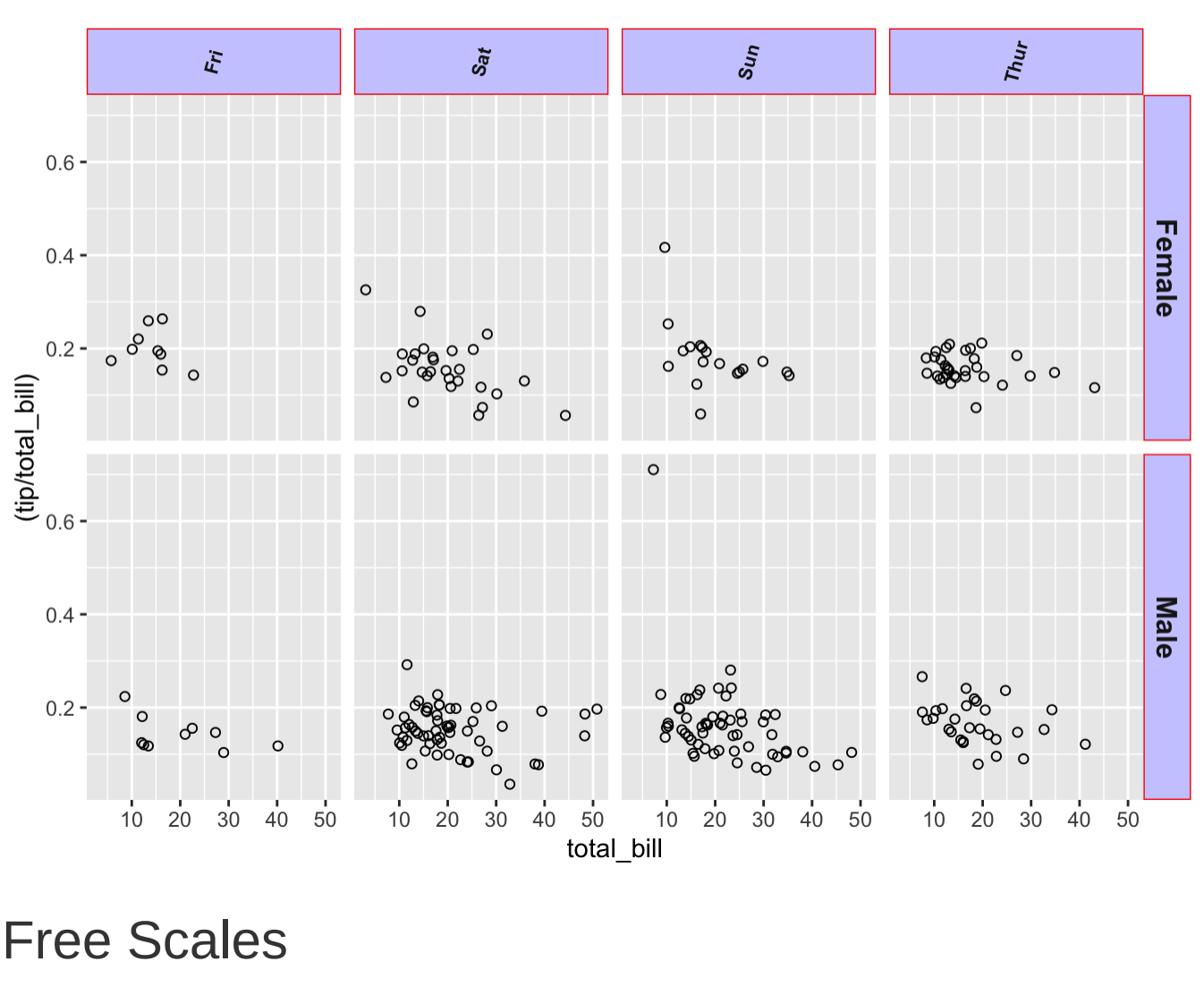
```
sp2 <- ggplot(df, aes(x=total_bill, y=tip/total_bill)) + geom_point(shape=1)
sp2 + facet_grid(. ~ sex)
```




```
# Reverse each strings in a character vector
reverse <- function(strings) {
    strings <- strsplit(strings, "")
    vapply(strings, function(x) {
        paste(rev(x), collapse = "")
    }, FUN.VALUE = character(1))
}
sp2 + facet_grid(. ~ sex, labeller=labeller(sex = reverse))
```

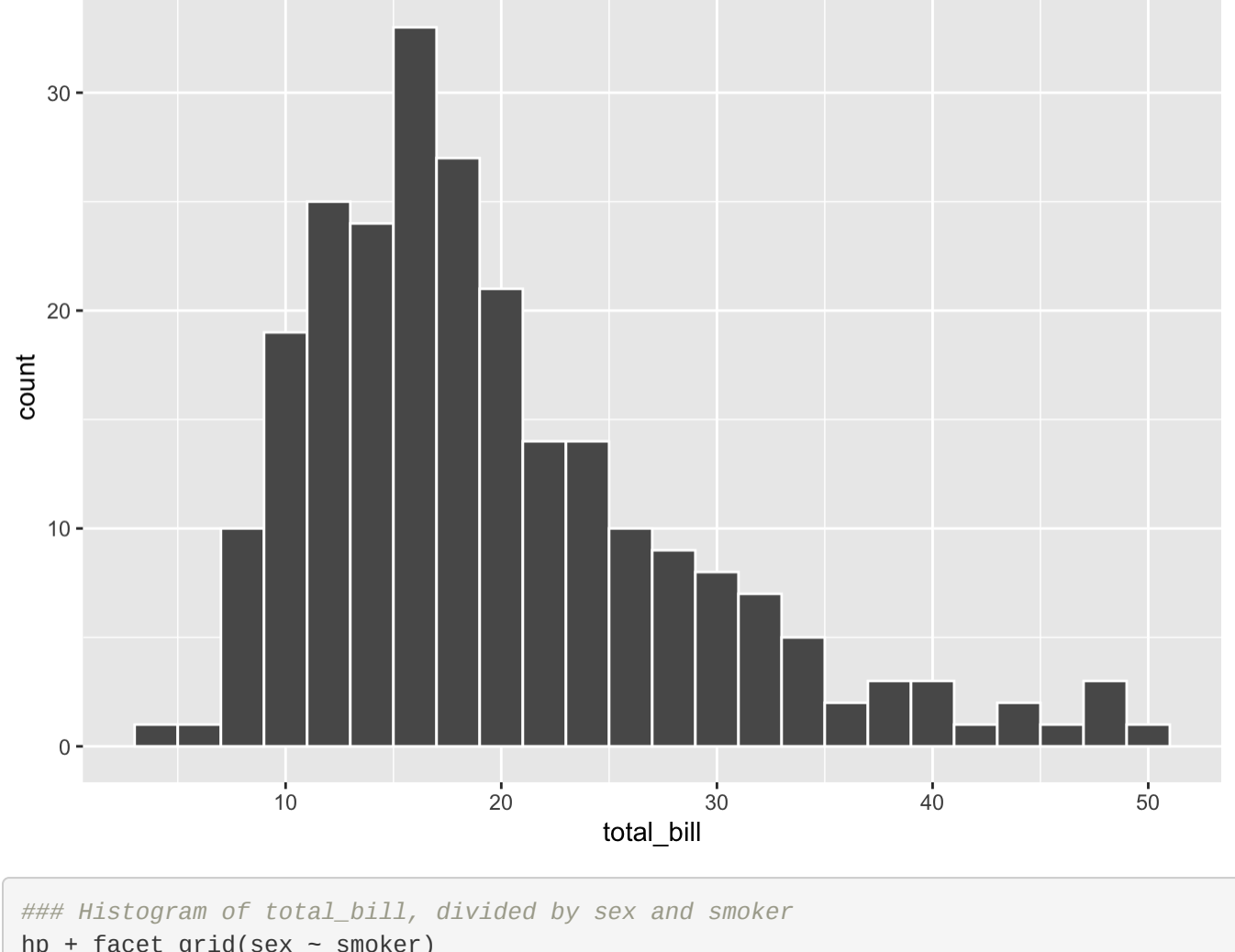



```
## sex -> vertical and day -> horizontal)
fig3 = scatter_plot + facet_grid(sex ~ day) +
            theme(
                strip.text.x = element_text(size=8, angle=75, face='bold'),
                strip.text.y = element_text(size=12, face='bold'),
                strip.background = element_rect(color='red', fill='#CCCCFF')
            )
fig3
```

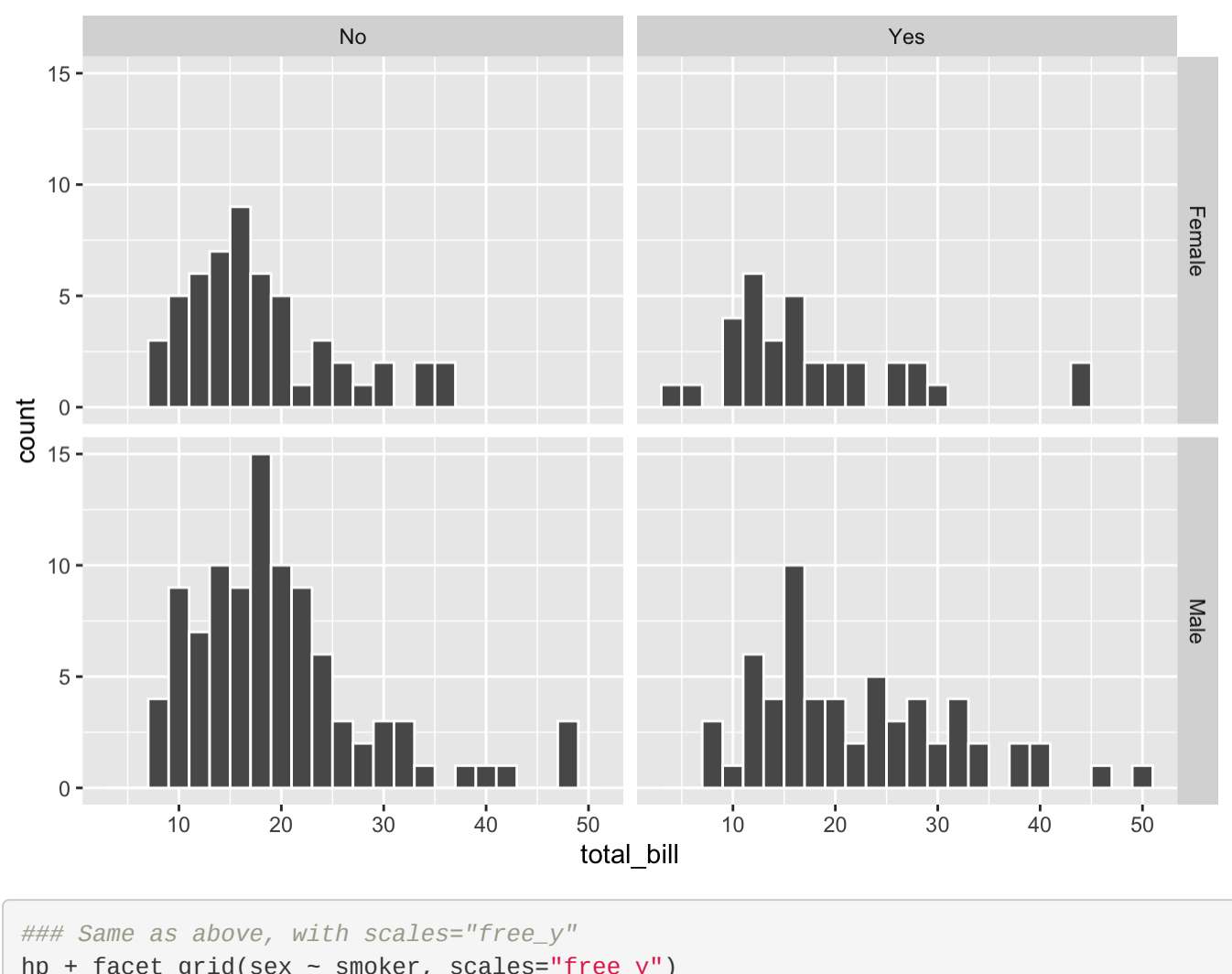


Free Scales

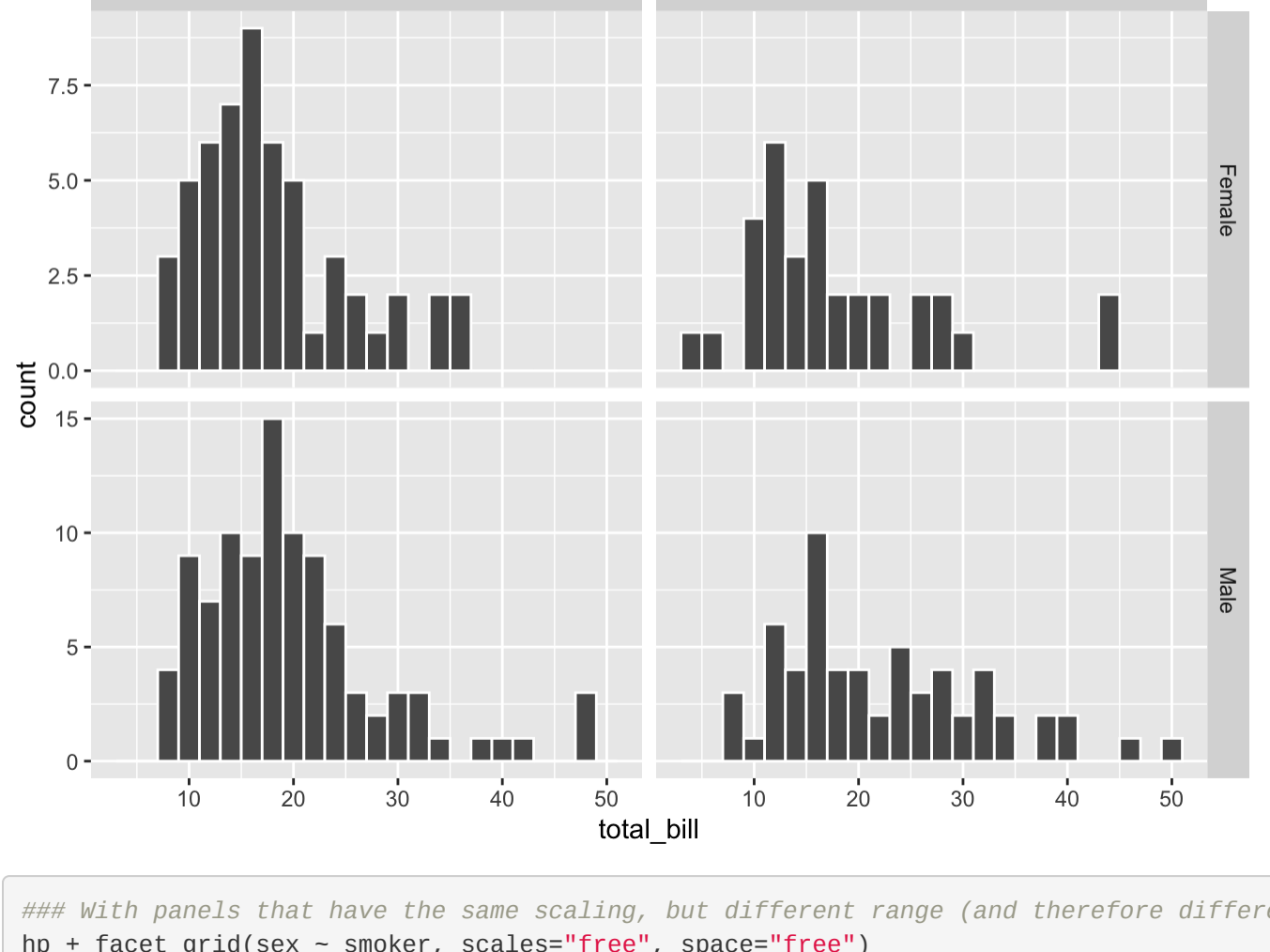
```
### A histogram of bill sizes
hp <- ggplot(tips, aes(x=total_bill)) + geom_histogram(binwidth=2,colour="white")
hp
```




```
### Histogram of total_bill, divided by sex and smoker
hp + facet_grid(sex ~ smoker)
```




```
### Same as above, with scales="free_y"
hp + facet_grid(sex ~ smoker, scales="free_y")
```




```
### With panels that have the same scaling, but different range (and therefore different physical sizes)
hp + facet_grid(sex ~ smoker, scales="free", space="free")
```