

11_Facets

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1. Splitting Data into Subplots with Facets

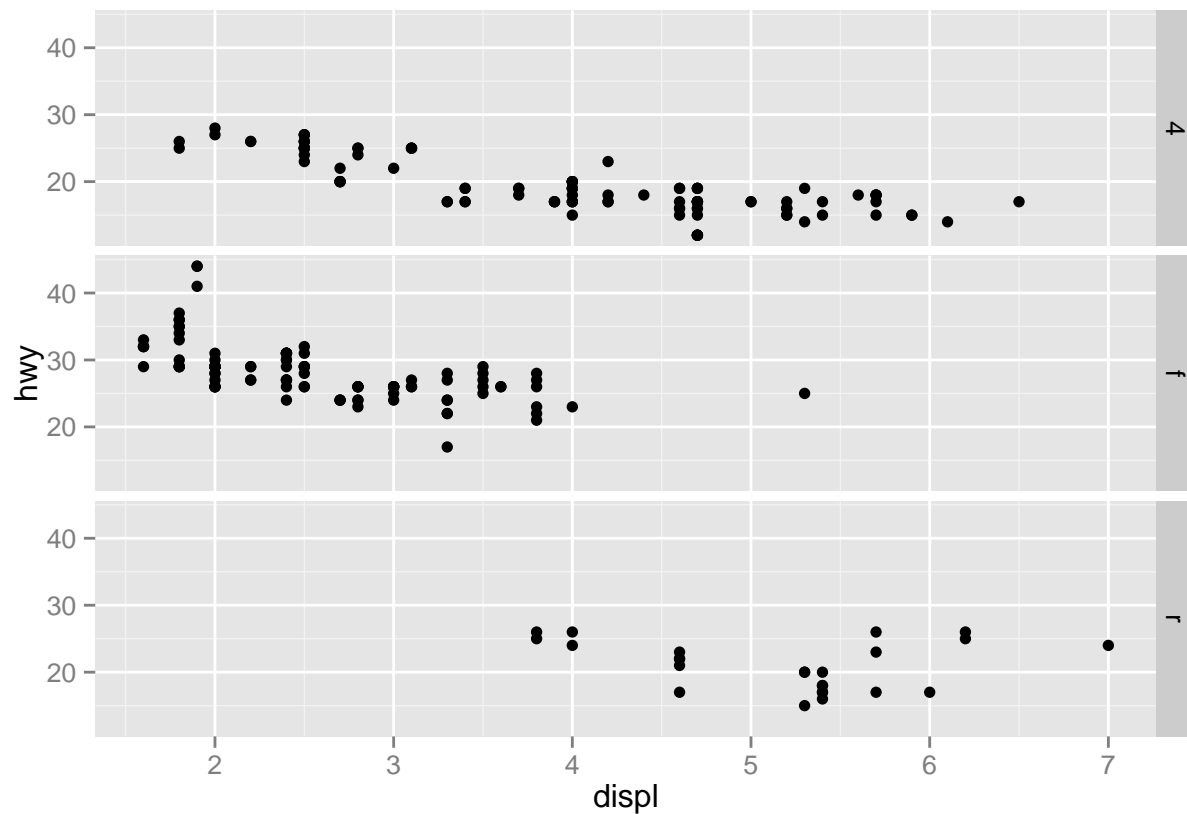
Use `facet_grid()` or `facet_wrap()`, and specify the variables on which to split.

```
library(ggplot2)
library(gcookbook) # For the data set

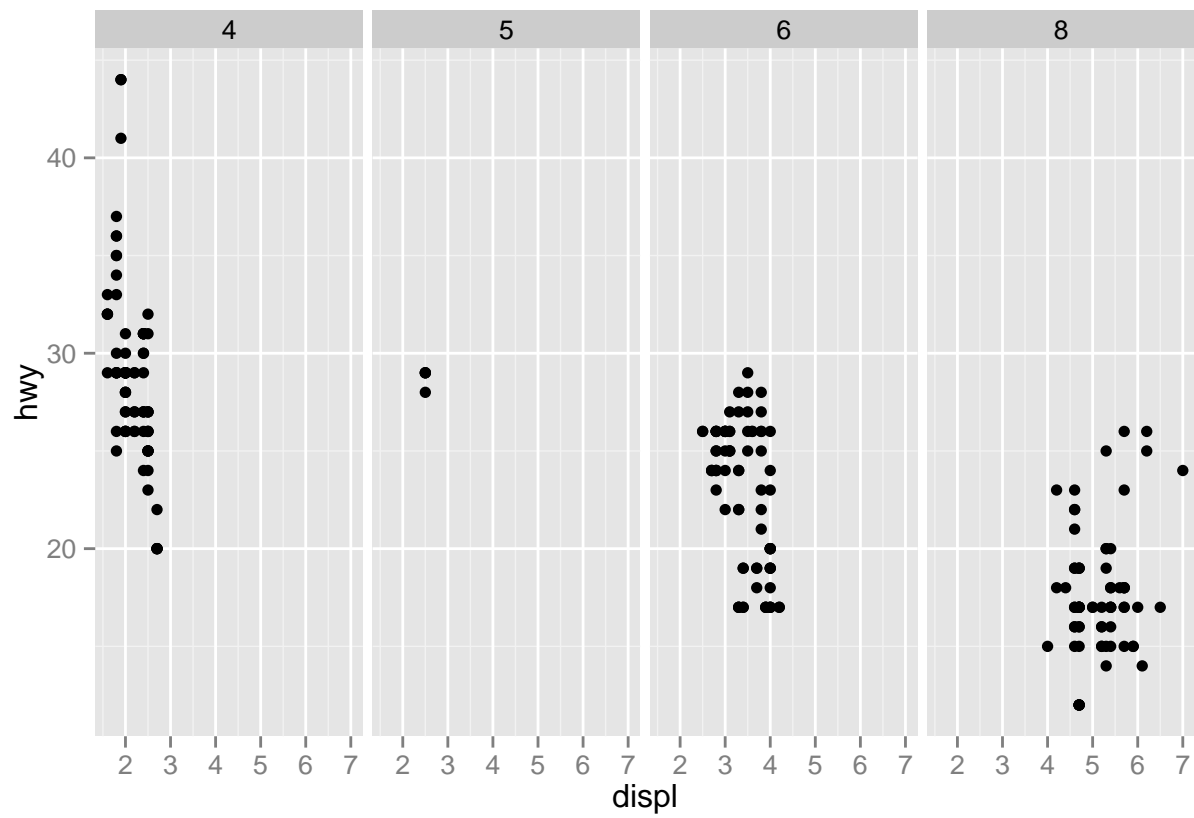
library(plyr)

# The base plot
p <- ggplot(mpg, aes(x = displ, y = hwy)) +
  geom_point()

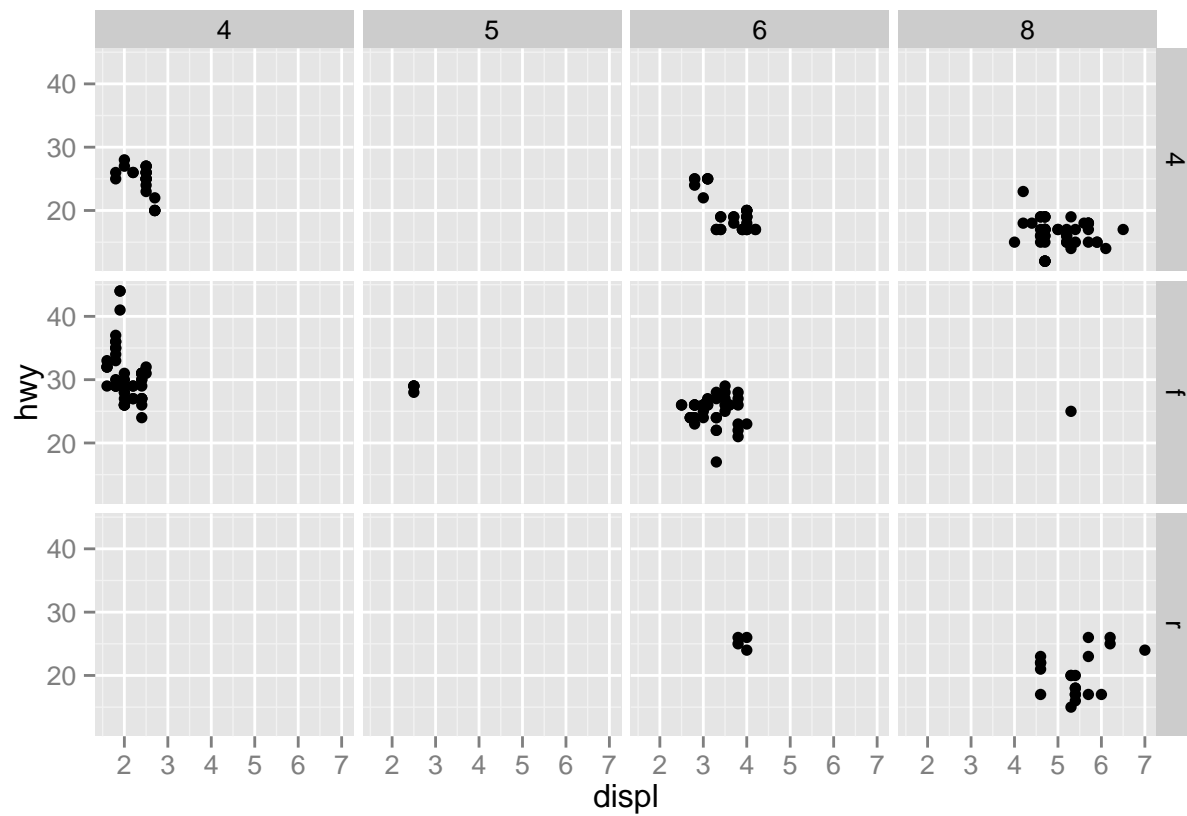
# Faceted by drv, in vertically arranged subpanels
p + facet_grid(drv ~ .)
```



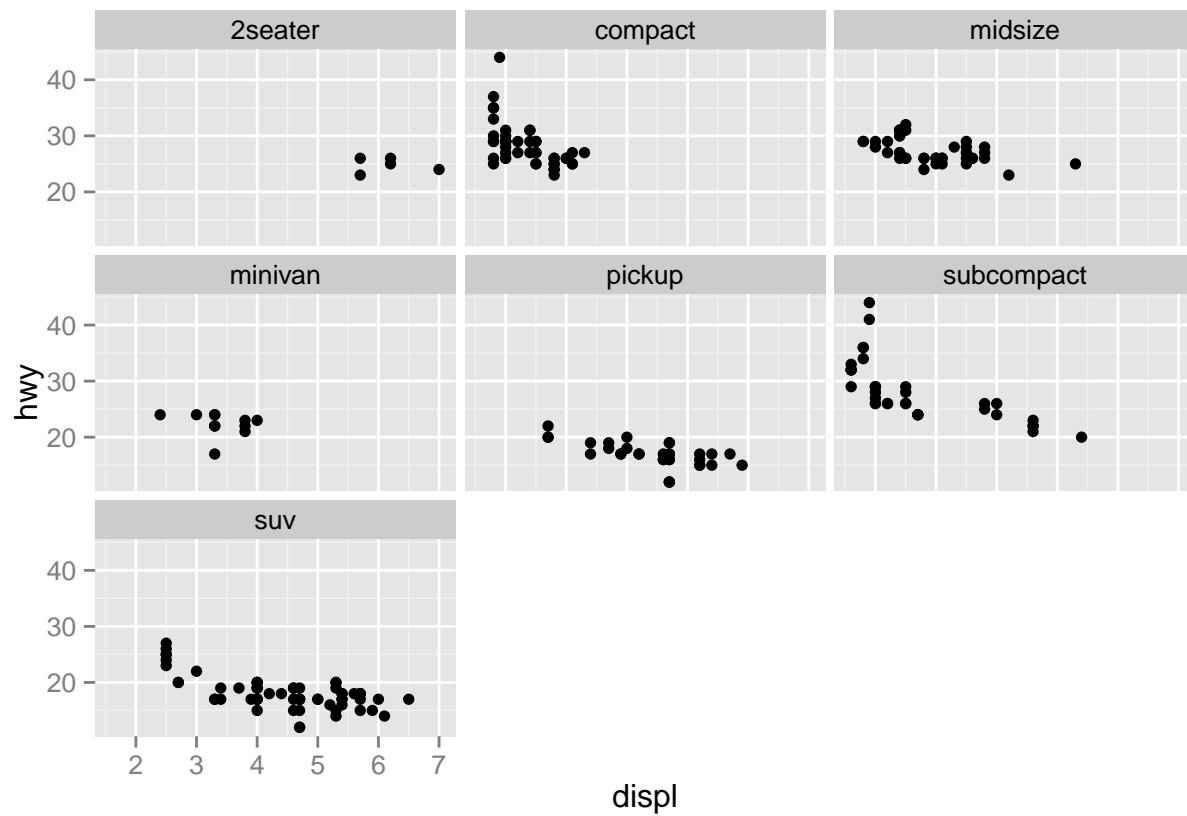
```
# Faceted by cyl, in horizontally arranged subpanels
p + facet_grid(. ~ cyl)
```



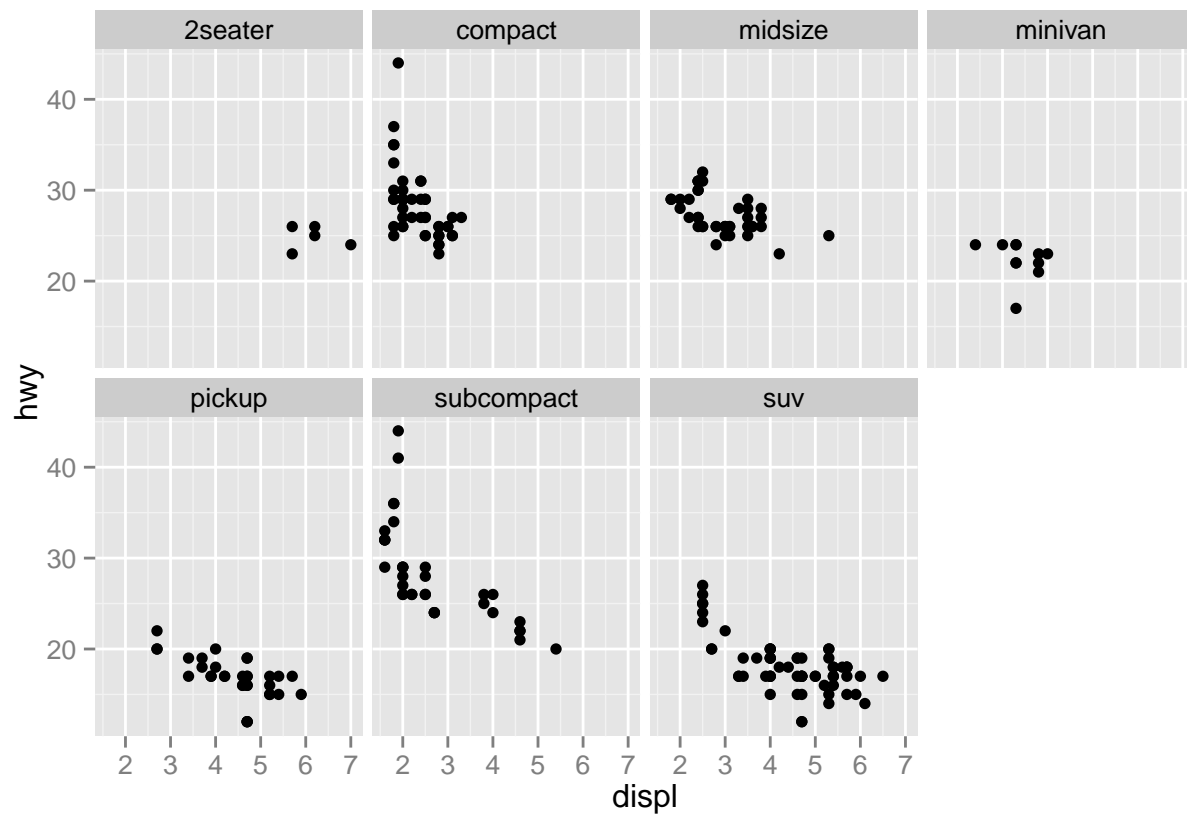
```
# Split by drv (vertical) and cyl (horizontal)
p + facet_grid( drv ~ cyl)
```



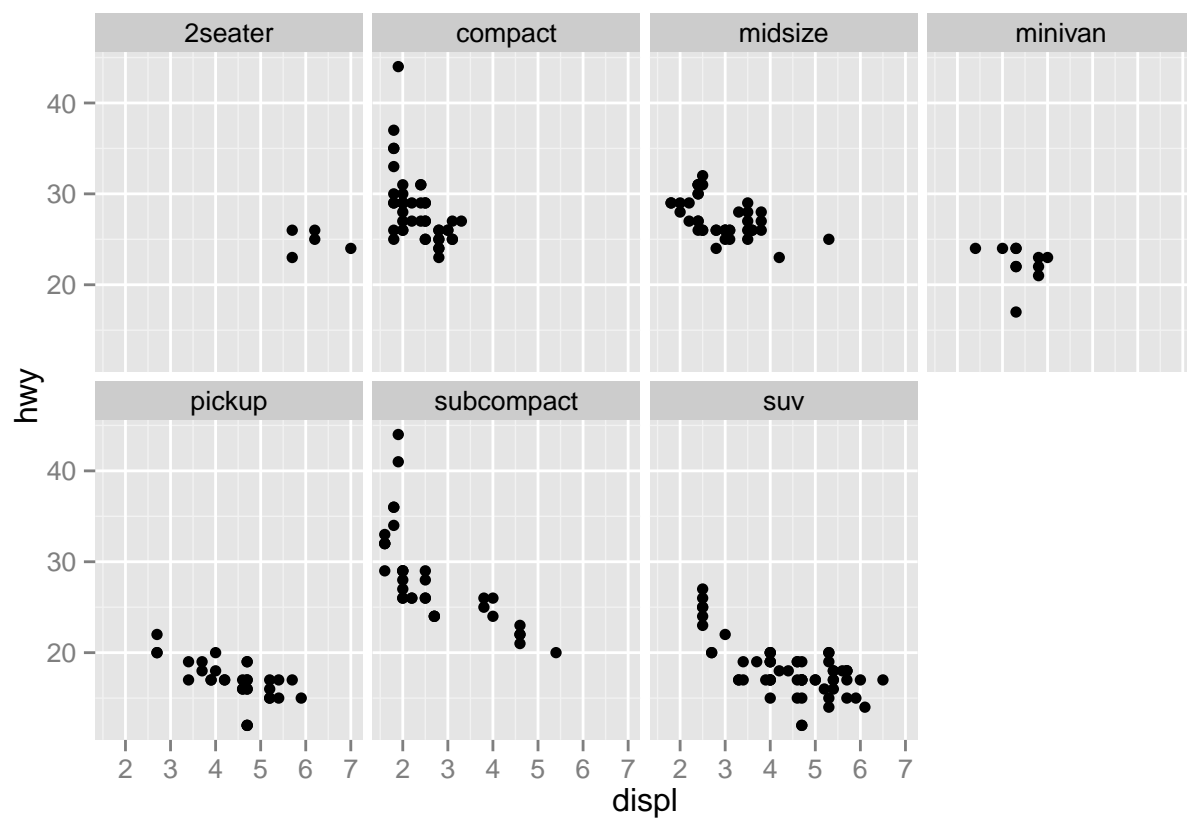
```
# With facet_wrap(), the subplots are laid out horizontally and wrap around, like words on a page
# Facet on class
# Note there is nothing before the tilde
p + facet_wrap( ~ class)
```



```
# These will have the same result: 2 rows and 4 cols
p + facet_wrap( ~ class, nrow = 2)
```



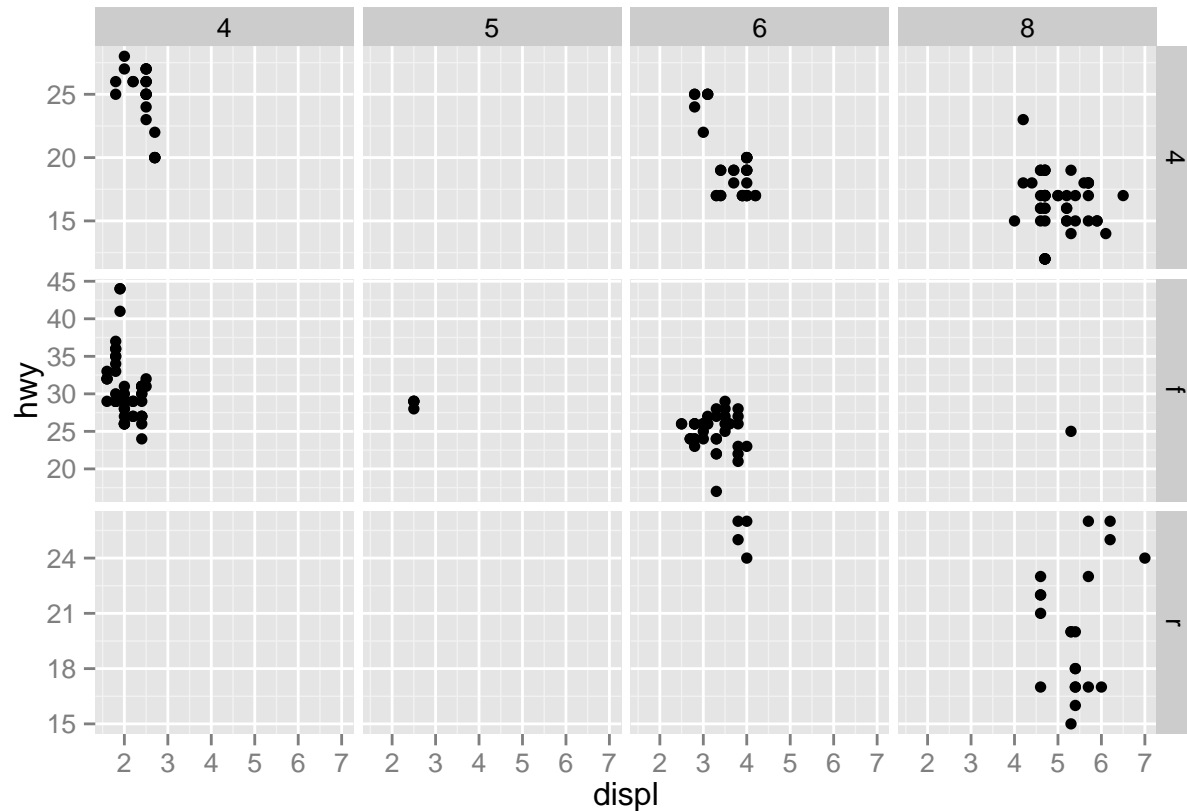
```
p + facet_wrap( ~ class, ncol = 4)
```



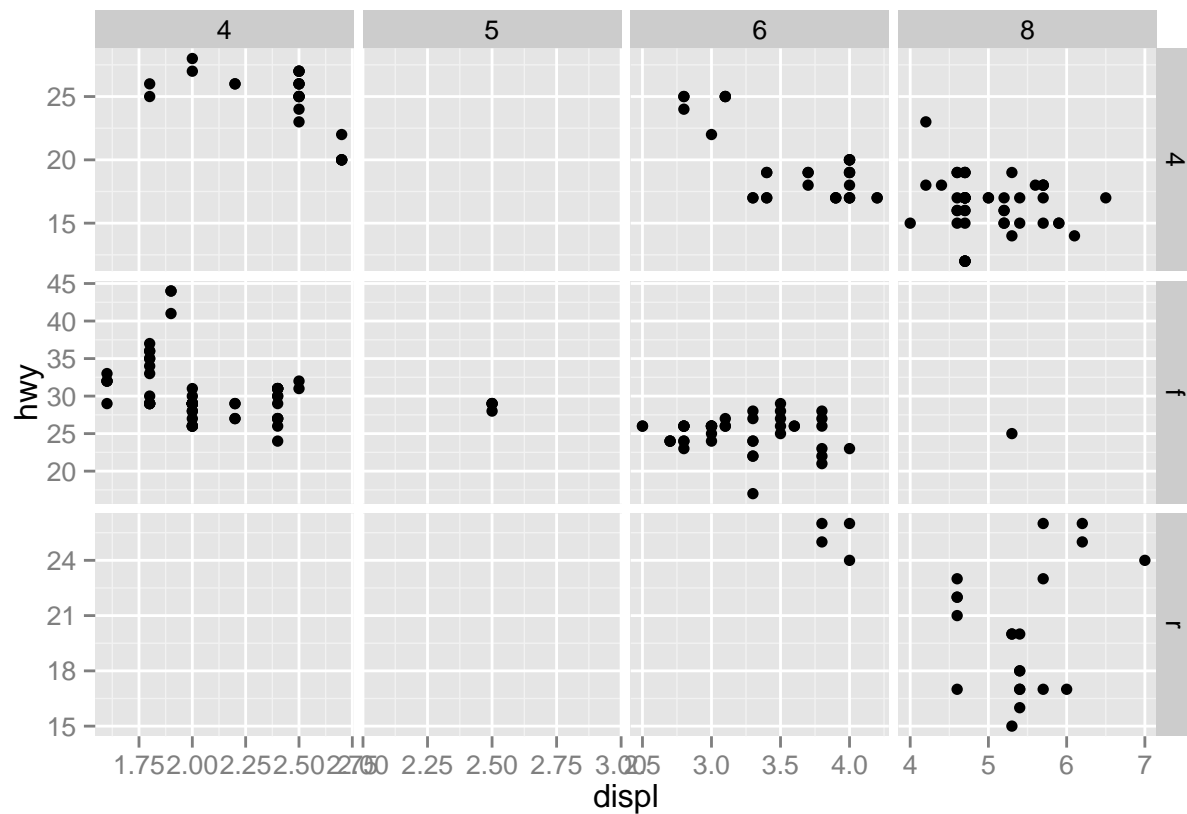
2. Using Facets with Different Axes

```
# The base plot
p <- ggplot( mpg, aes( x = displ, y = hwy)) +
  geom_point()

# With free y scales
p +
  facet_grid( drv ~ cyl, scales = "free_y")
```



```
# With free x and y scales
p +
  facet_grid( drv ~ cyl, scales = "free")
```

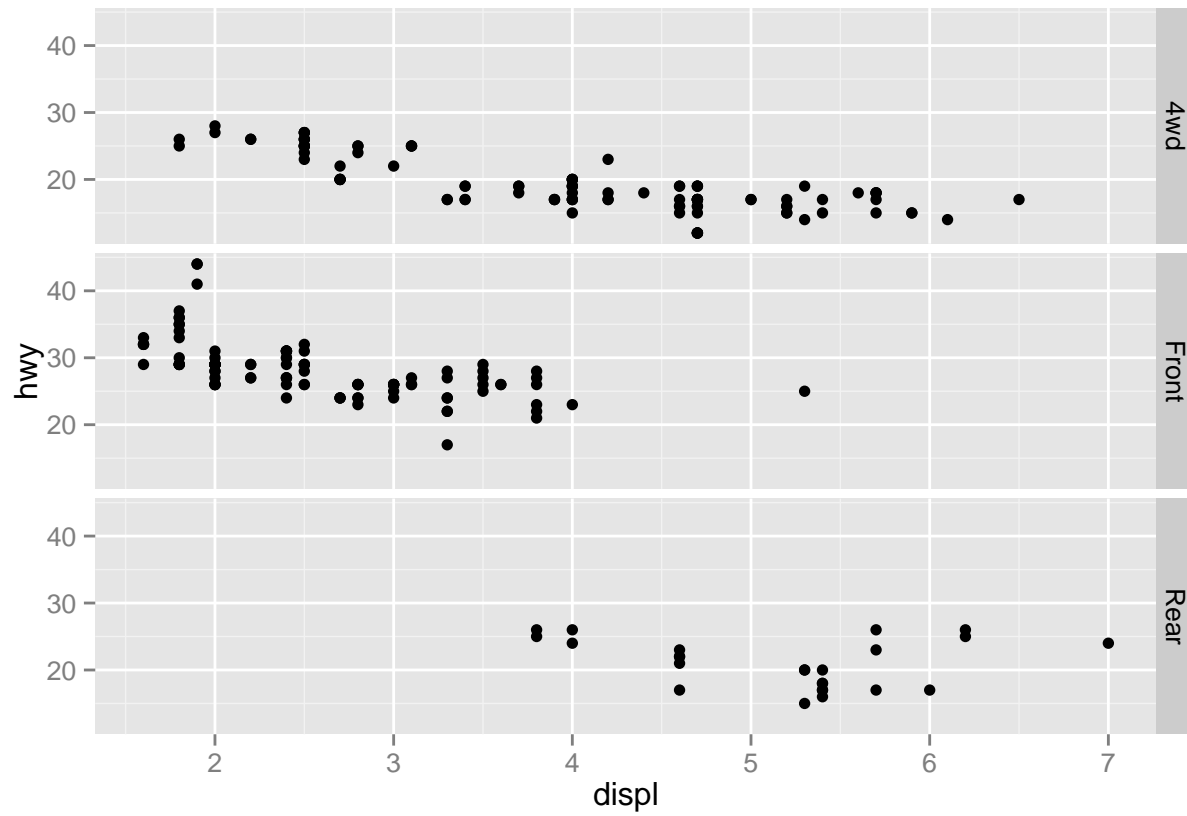


3. Changing the Text of Facet Labels

```
# Make a copy of the original data
mpg2 <- mpg

# Rename 4 to 4wd, f to Front, r to Rear
levels(mpg2$drv)[ levels(mpg2$drv) == "4" ] <- "4wd"
levels(mpg2$drv)[ levels(mpg2$drv) == "f" ] <- "Front"
levels(mpg2$drv)[ levels(mpg2$drv) == "r" ] <- "Rear"

# Plot the new data
ggplot(mpg2, aes(x = displ, y = hwy)) +
  geom_point() + facet_grid(drv ~ .)
```



4. Changing the Appearance of Facet Labels and Headers

```
ggplot( cabbage_exp, aes( x = Cultivar, y = Weight)) +
  geom_bar( stat = "identity") +
  facet_grid(. ~ Date) +
  theme( strip.text = element_text( face = "bold", size = rel( 1.5)), strip.background = element_rect( f
```