

r4ds Ex 3.6.1

MW

2019/05/14

3.6.1

1

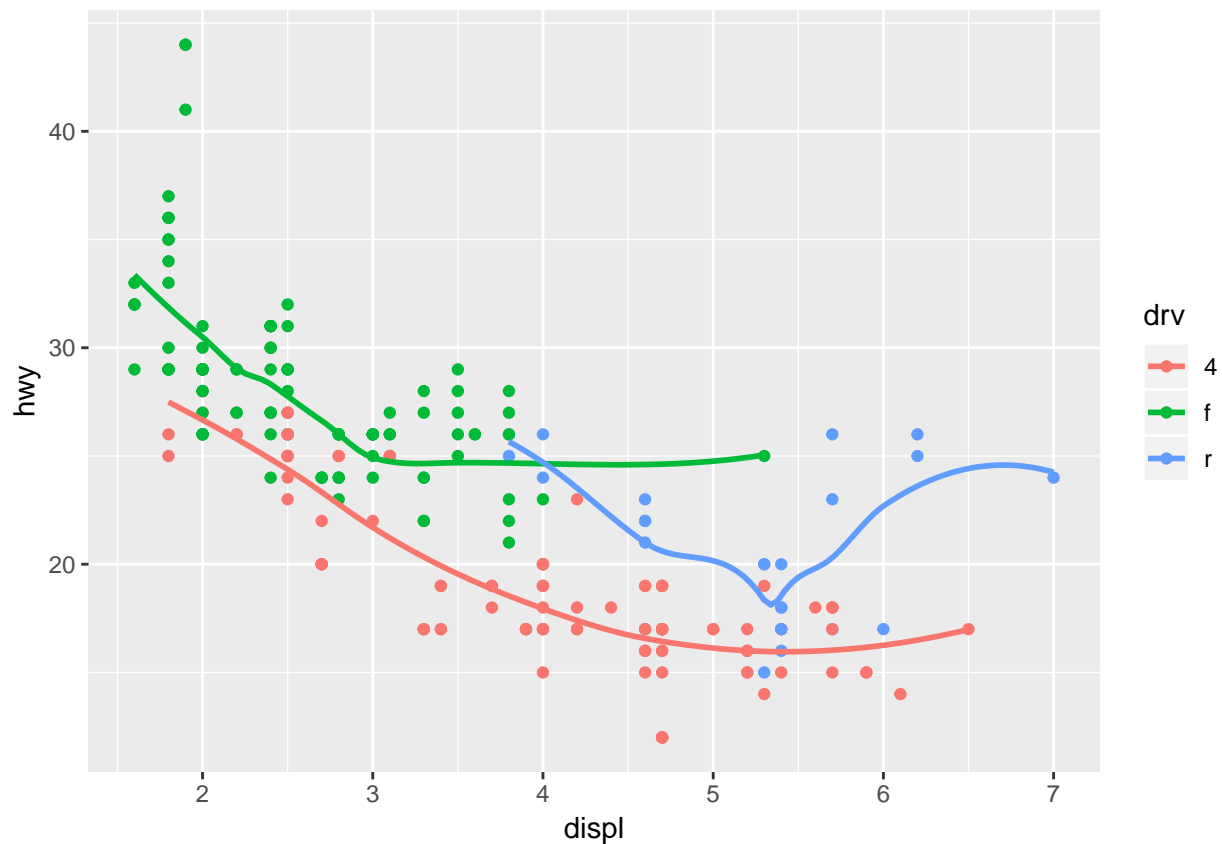
Line chart: `geom_line()` Boxplot: `geom_boxplot()` Histogram: `geom_histogram()` Area chart: `geom_area`

2

x-axis: `displ` y-axis: `hwy` colored by `drv` smooth line; standard error: none fitting by `drv`

```
ggplot(data=mpg, mapping=aes(x=displ, y=hwy, color=drv)) +  
  geom_point() +  
  geom_smooth(se=FALSE)
```

`geom_smooth()` using method = 'loess' and formula 'y ~ x'



3

`show.legend=FALSE` means to hide the legend box.

4

se argument determine confidence interval around smooth. By default, it shows 95% confidence interval.

5

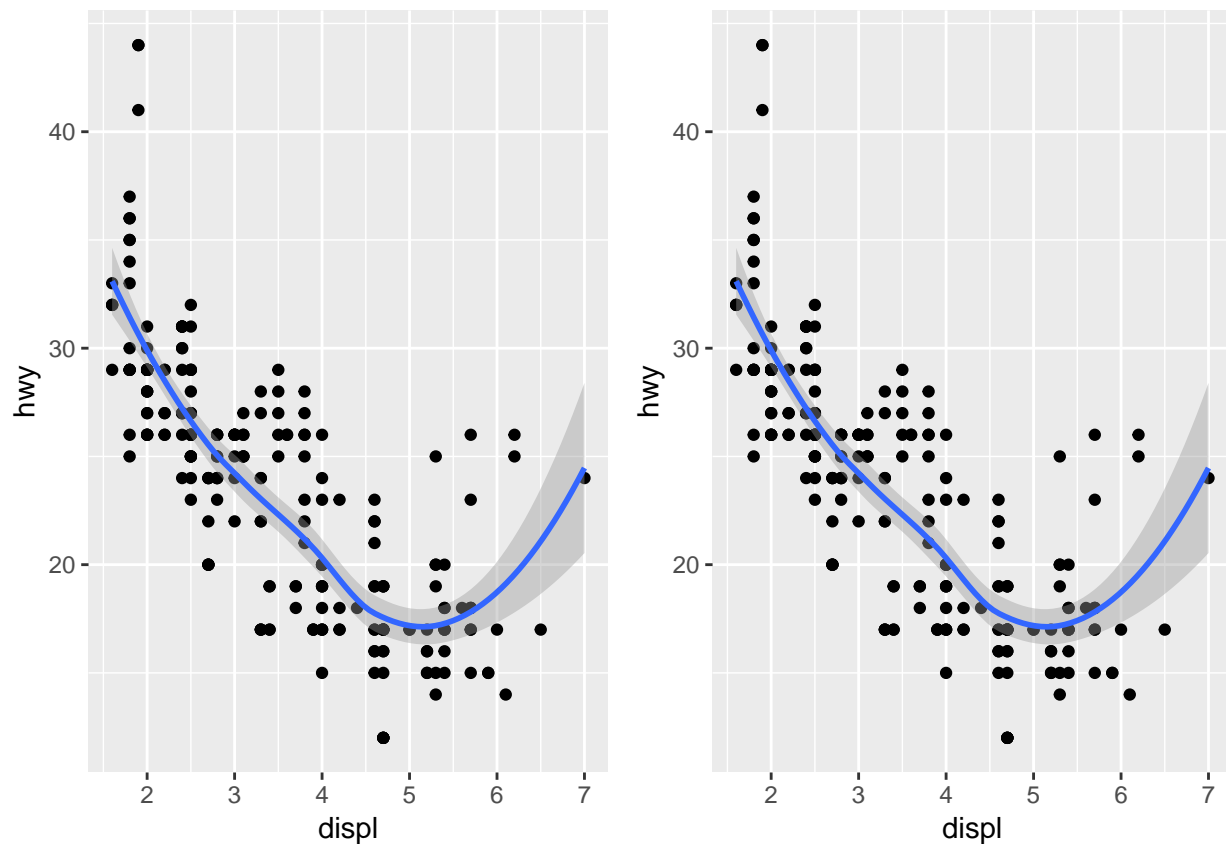
```
#install.packages("gridExtra")
library(gridExtra)
a <- ggplot(data=mpg, mapping=aes(x=displ, y=hwy)) +
  geom_point() +
  geom_smooth()

b <- ggplot() +
  geom_point(data=mpg, mapping=aes(x=displ, y=hwy)) +
  geom_smooth(data=mpg, mapping=aes(x=displ, y=hwy))

grid.arrange(a, b, nrow = 1)
```

`geom_smooth()` using method = 'loess' and formula 'y ~ x'

`geom_smooth()` using method = 'loess' and formula 'y ~ x'



These two plots are same, because `geom_` uses the first variables(`ggplot()`) unless each `geom_` specified dependency.

6

```
library(gridExtra)
```

```

a <- ggplot(data=mpg, aes(x=displ, y=hwy)) +
  geom_point() +
  geom_smooth(se=FALSE)

b <- ggplot(data=mpg) +
  geom_point(aes(x=displ, y=hwy)) +
  geom_smooth(aes(x=displ, y=hwy, group=drv), se=FALSE)

c <- ggplot(data=mpg) +
  geom_point(aes(x=displ, y=hwy, color=drv)) +
  geom_smooth(aes(x=displ, y=hwy, color=drv), se=FALSE)

d <- ggplot(data=mpg) +
  geom_point(aes(x=displ, y=hwy, color=drv)) +
  geom_smooth(aes(x=displ, y=hwy), se=FALSE)

e <- ggplot(data=mpg) +
  geom_point(aes(x=displ, y=hwy, color=drv)) +
  geom_smooth(aes(x=displ, y=hwy, linetype=drv), se=FALSE)

f <- ggplot(data=mpg) +
  geom_point(aes(x=displ, y=hwy, color=drv, fill=drv), color="white", pch=21)

grid.arrange(a, b, c, d, e, f, nrow = 3)

## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
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```

