# Gergely Daróczi

# Unified plots

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This document demonstrates the features of unifying plots in pander. First, if you do not want to deal with styling each of your images, just activate it: evalsOptions('graph.unify', TRUE).

*Note*: please install lattice and ggplot2 on your computer prior to trying to run all examples of this document.

### **Options**

There are a bunch of options you might want to check out, these are:

- graph.nomargin
- graph.fontfamily
- graph.fontcolor
- graph.fontsize
- graph.grid
- graph.grid.minor
- $\bullet \ \ \, graph.grid.color$
- graph.grid.lty
- graph.boxes
- graph.legend.position
- graph.background
- graph.panel.background
- graph.colors
- graph.color.rnd
- graph.axis.angle
- graph.symbol

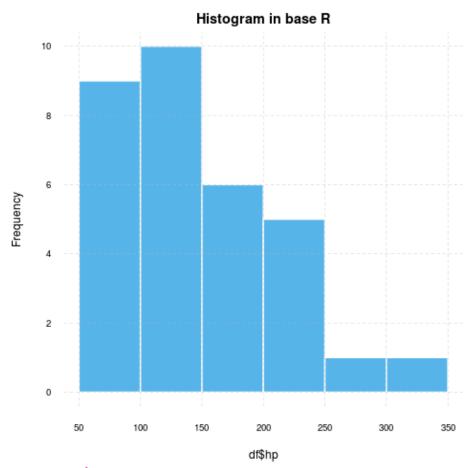
Find more details on pander's homepage.

# Default options

Not touching the above ones, let us check out how different plots look like by calling base R graphing function, lattice or ggplot2!

### Histogram

### Base R plot



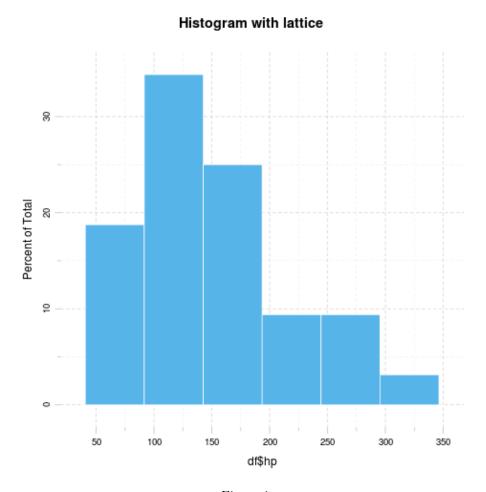
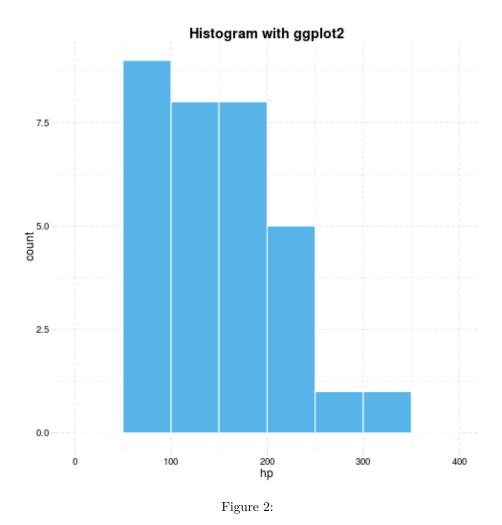


Figure 1:

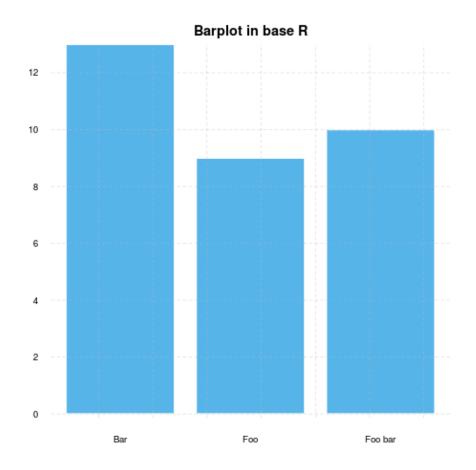
### ggplot2



<sup>&</sup>lt;sup>1</sup>Applying default formatting to image is somehow compromised (the result could differ from what you specified in panderOptions). Hints: printing lattice/ggplot2 is not needed and tweaking base plots with par might have some side-effects!

# Barplot

### Base R plot



WARNING<sup>2</sup>

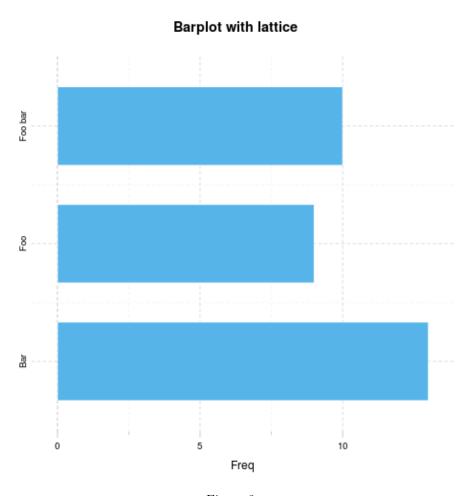


Figure 3:

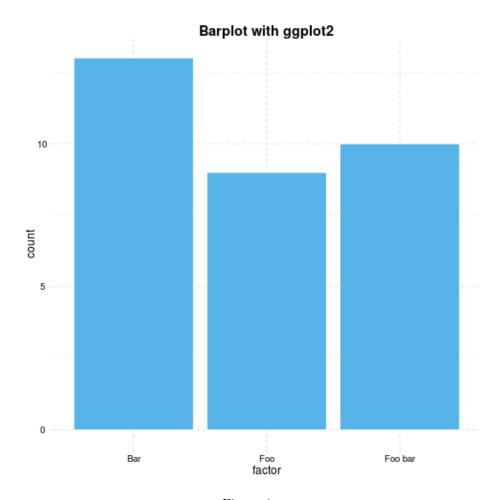
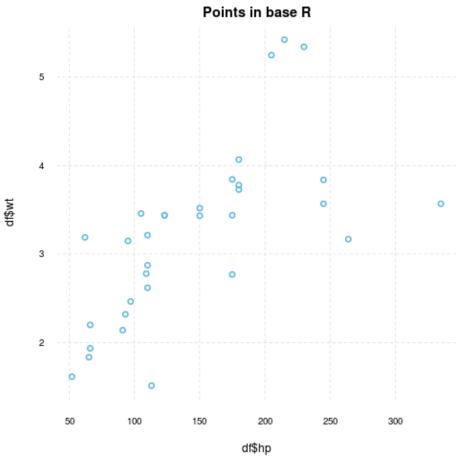


Figure 4:

ggplot2

**Points** 

Base R plot



### WARNING<sup>3</sup>

<sup>&</sup>lt;sup>2</sup>Applying default formatting to image is somehow compromised (the result could differ from what you specified in panderOptions). Hints: printing lattice/ggplot2 is not needed and tweaking base plots with par might have some side-effects!

<sup>&</sup>lt;sup>3</sup>Applying default formatting to image is somehow compromised (the result could differ from what you specified in panderOptions). Hints: printing lattice/ggplot2 is not needed and tweaking base plots with par might have some side-effects!

### Points with lattice

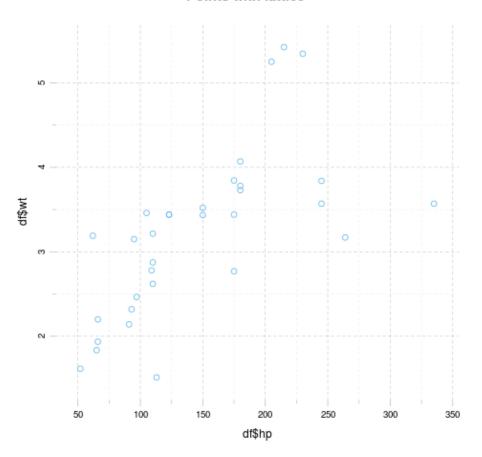


Figure 5:

### ggplot2

### Grouped plot

### Base R plot

I have no idea how to do that besides manually adding points.

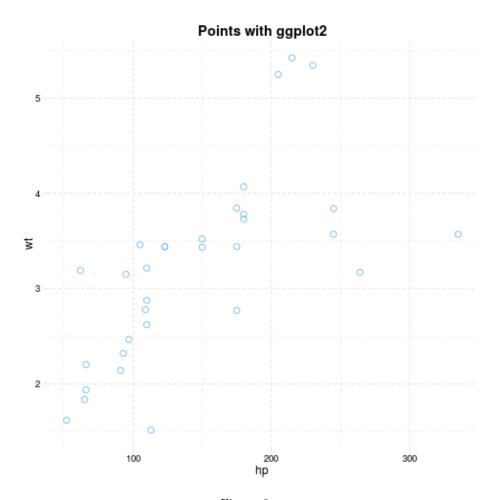


Figure 6:

# Grouped plot with lattice

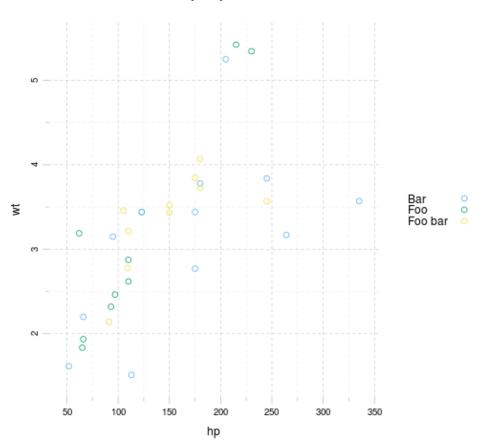


Figure 7:

### ggplot2

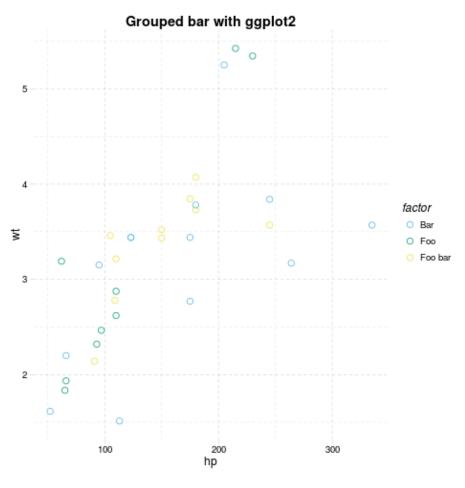


Figure 8:

### Facets

### Base R plot

I have no idea how to do that besides par(mfrow=c(foo, bar)).

# Faceted barplot with lattice

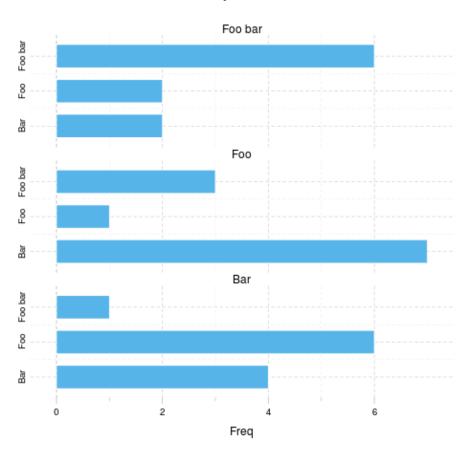


Figure 9:

### ggplot2

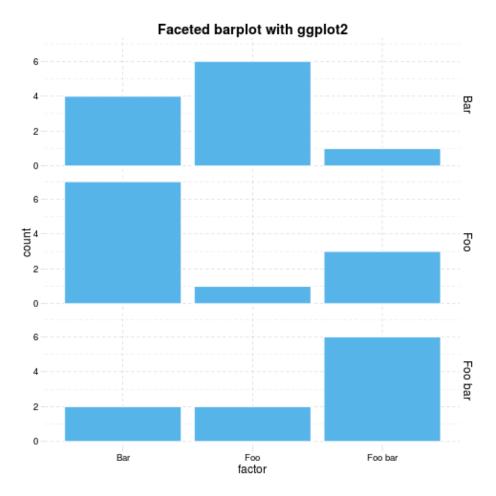
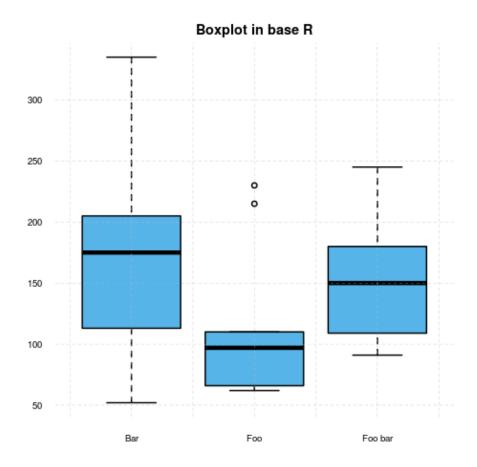


Figure 10:

# Boxplot

### Base R plot



WARNING<sup>4</sup>

# Boxplot with lattice 8 100 150 200 250 300 350 df\$hp

Figure 11:

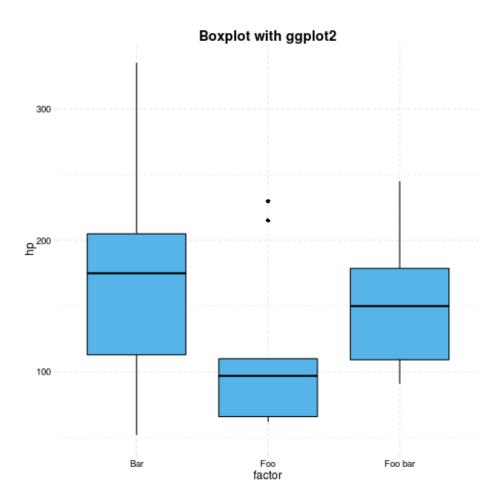
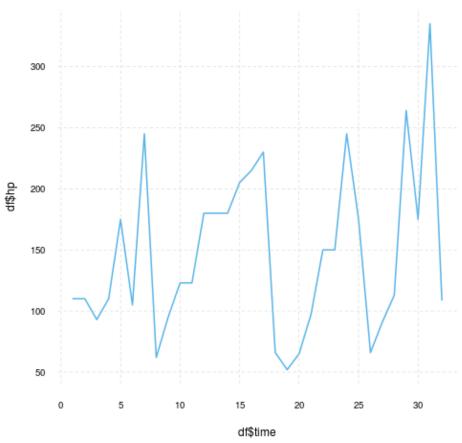


Figure 12:

ggplot2

Lines

Base R plot



### WARNING<sup>5</sup>

<sup>&</sup>lt;sup>4</sup>Applying default formatting to image is somehow compromised (the result could differ from what you specified in panderOptions). Hints: printing lattice/ggplot2 is not needed and tweaking base plots with par might have some side-effects!

<sup>5</sup>Applying default formatting to image is somehow compromised (the result could differ

<sup>&</sup>lt;sup>5</sup>Applying default formatting to image is somehow compromised (the result could differ from what you specified in panderOptions). Hints: printing lattice/ggplot2 is not needed and tweaking base plots with par might have some side-effects!

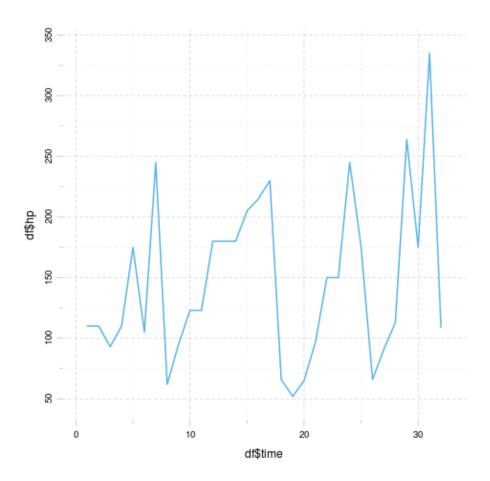


Figure 13:

### ggplot2

# Custom options

Below you can find some images generated by the exact same commands but with some modified  ${\tt panderOptions}$ :

```
panderOptions('graph.fontfamily', "Comic Sans MS")
panderOptions('graph.fontsize', 18)
```

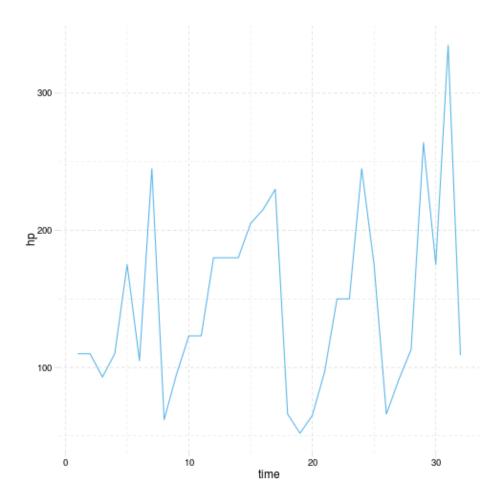


Figure 14:

```
panderOptions('graph.fontcolor', 'blue')
panderOptions('graph.grid.color', 'blue')
panderOptions('graph.axis.angle', 3)
panderOptions('graph.boxes', T)
panderOptions('graph.legend.position', 'top')
panderOptions('graph.colors', rainbow(5))
panderOptions('graph.grid', FALSE)
panderOptions('graph.symbol', 22)
```

### Histogram

### Base R plot

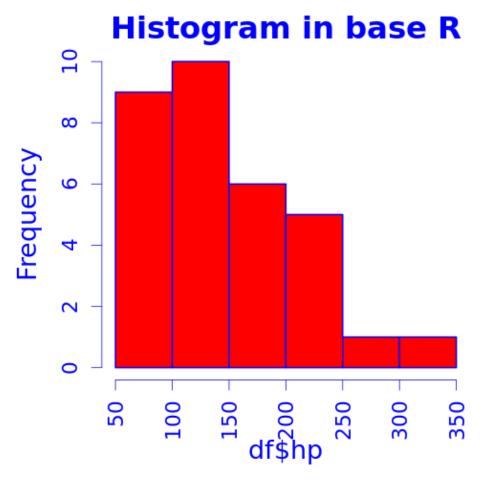


Figure 15:

# Histogram with lattice

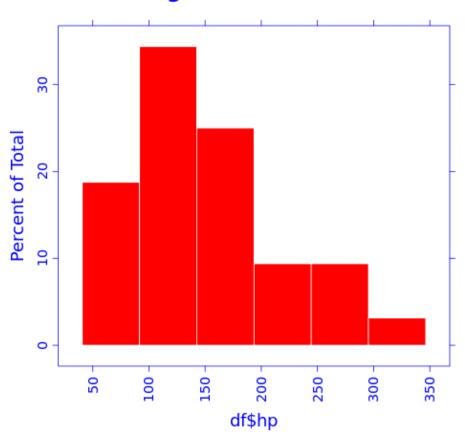


Figure 16:

### ggplot2

### Barplot

### Base R plot

Yeah, the "Foo bar" label is cropped. We need a custom mar option here:

But wait, we lost the color! Right: unfortunately coloring base R plots is really hackish, pander is adding the col attribute to the calls. If you start to tweak par in a chunk, you should prepare to some unwanted side-effects. Solution:

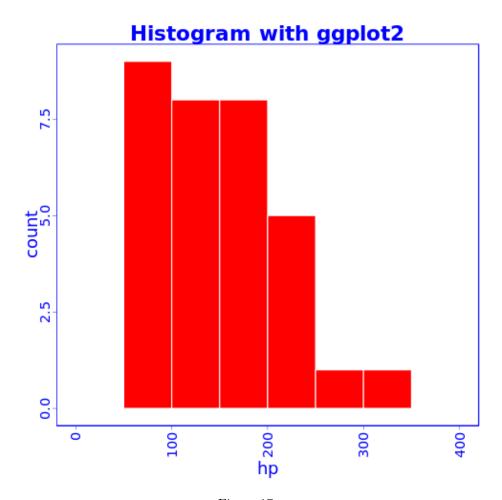


Figure 17:

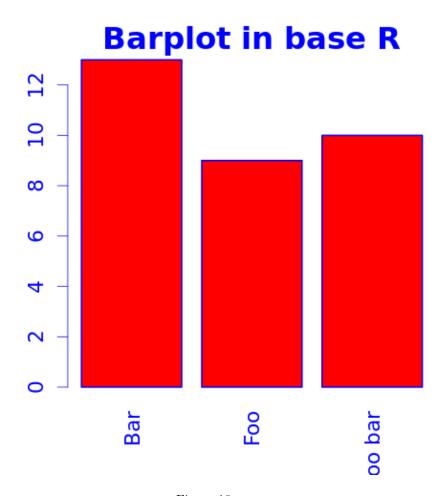


Figure 18:

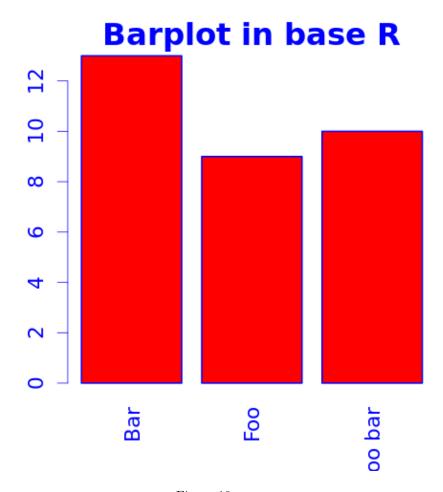


Figure 19:

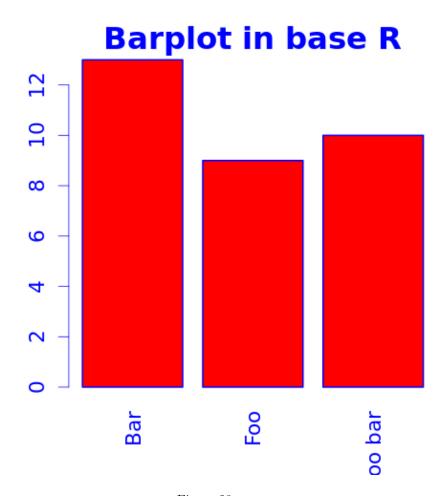


Figure 20:

# **Barplot with lattice**

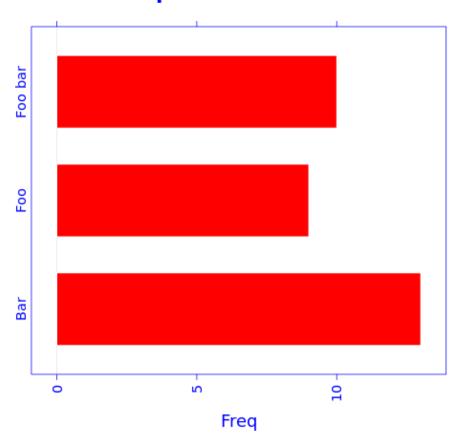


Figure 21:

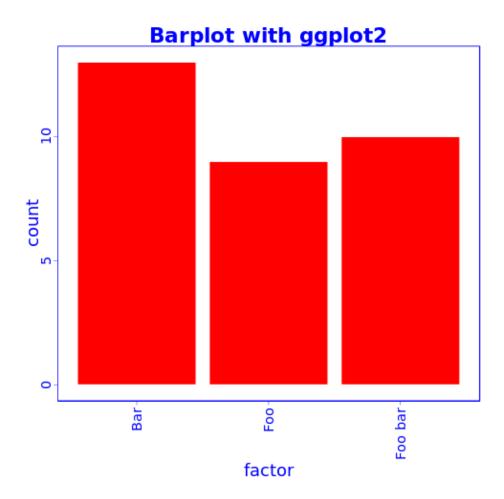


Figure 22:

# Points in base R

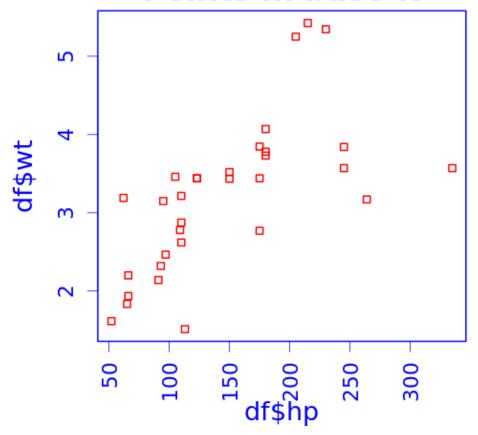


Figure 23:

## **Points with lattice** o o 밉 \_ \_ \_ \_ 8 100 - 220 200 300 150 df\$hp

Figure 24:

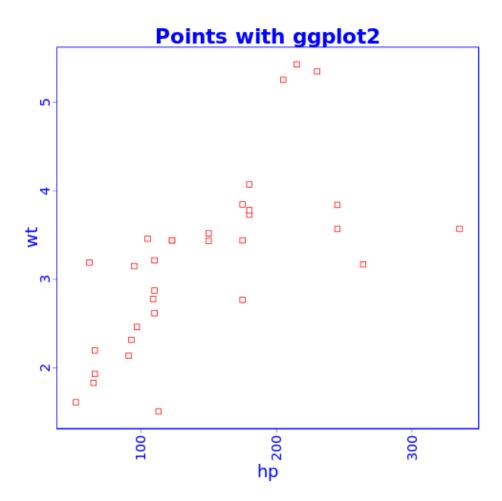


Figure 25:

ggplot2
Points
Base R plot
lattice
$\operatorname{ggplot} 2$
Grouped plot
Base R plot
I have no idea how to do that besides manually adding points.
lattice
$\operatorname{ggplot} 2$
Facets
Base R plot
I have no idea how to do that besides par(mfrow=c(foo, bar)).

# Grouped plot with lattice Bar Foo Foo bar o o M۲ hp

Figure 26:

# **Grouped bar with ggplot2**

factor Bar Foo Foo bar

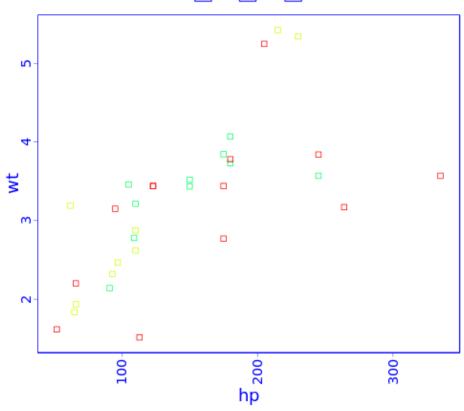


Figure 27:

# Faceted barplot with lattice

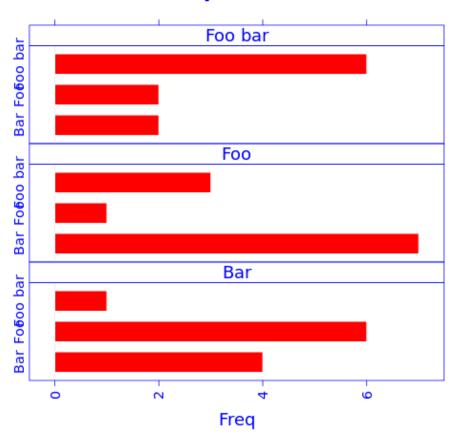


Figure 28:

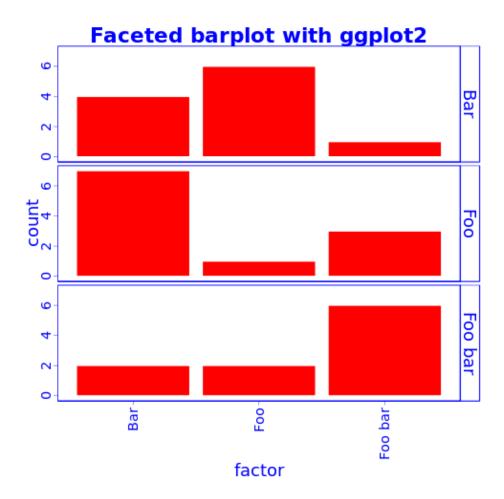


Figure 29:

# Boxplot in base R | Pool | Po

Figure 30:

# **Boxplot with lattice**

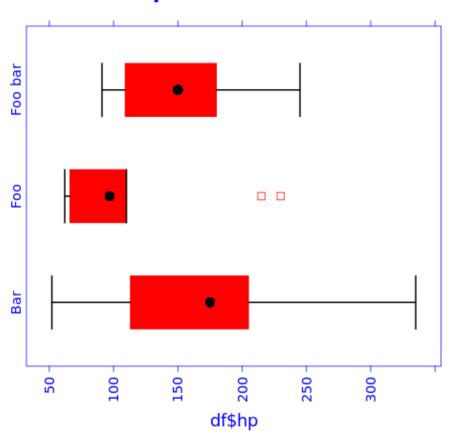


Figure 31:

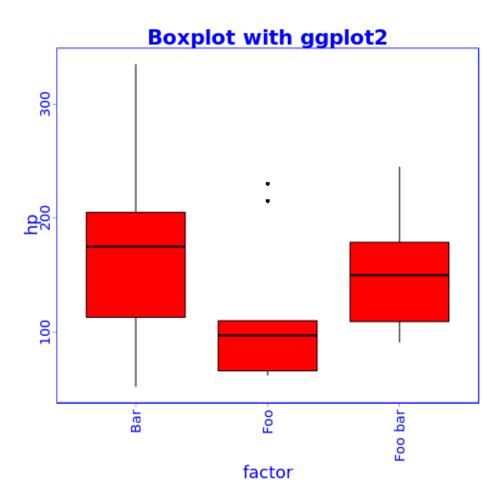


Figure 32:

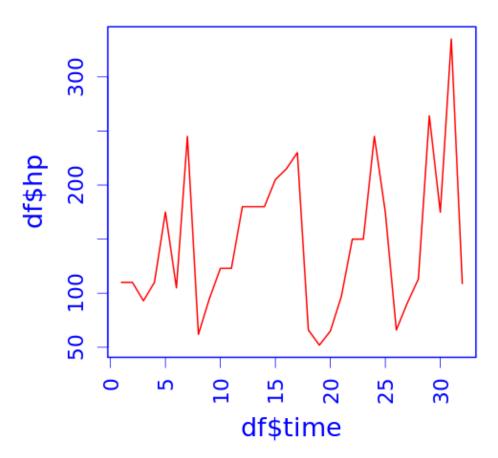


Figure 33:

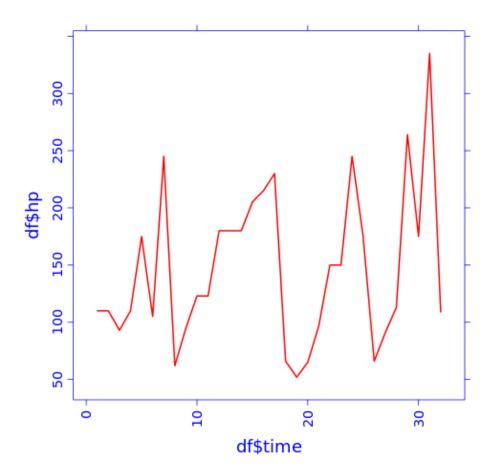


Figure 34:

ggplot2

Boxplot

Base R plot

lattice

ggplot2

Lines

Base R plot

lattice

ggplot2

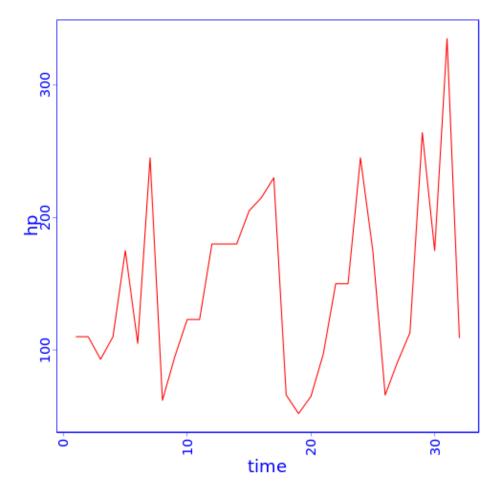


Figure 35: