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
- 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

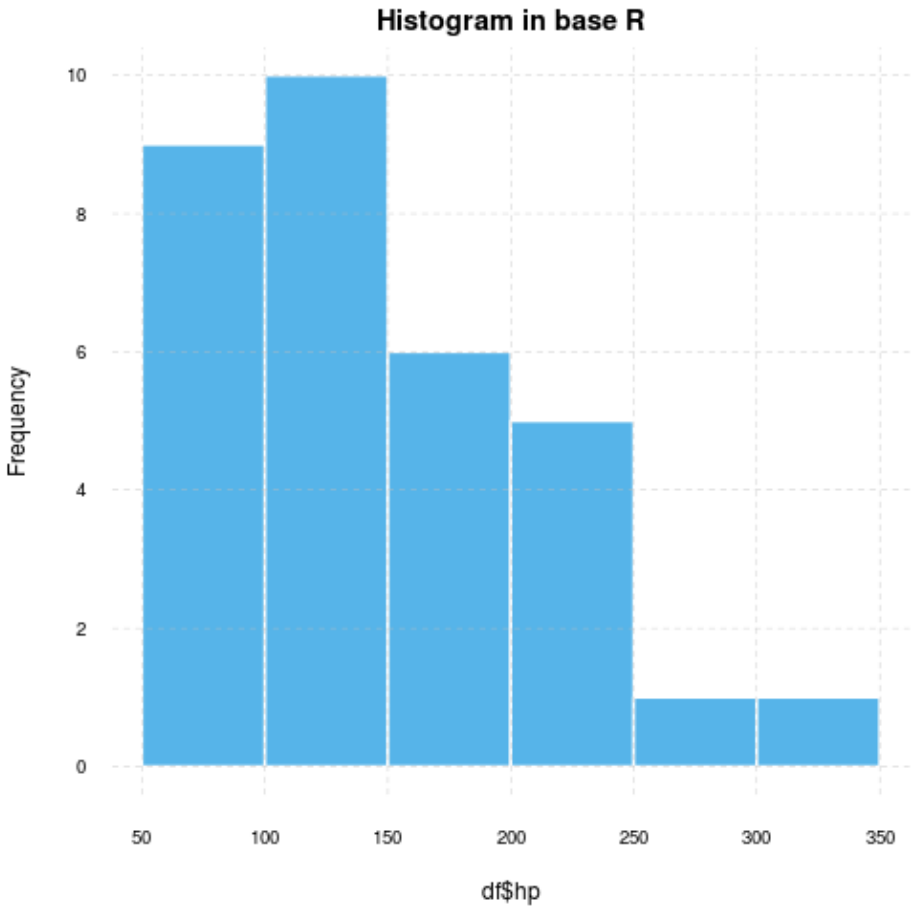
Find more details on `pander`'s homepage.

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



WARNING[1]

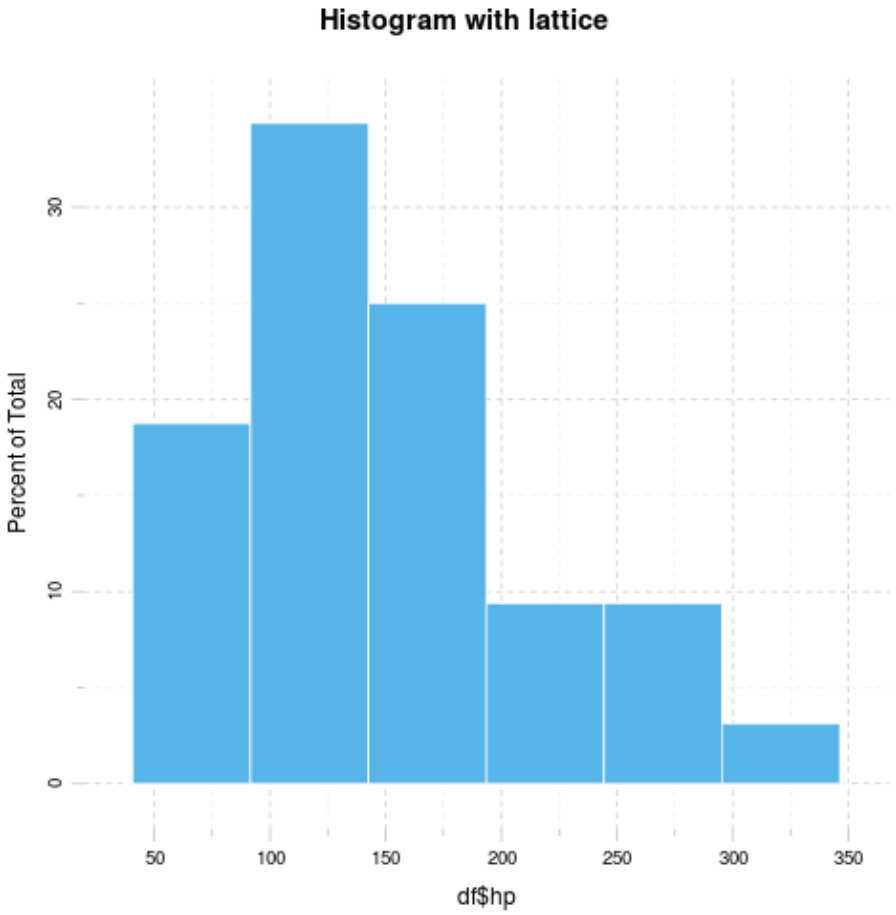

Histogram with lattice
Percent of Total
0
10
20
30
50
100
150
200
250
300
350
df$hp

Figure 1:

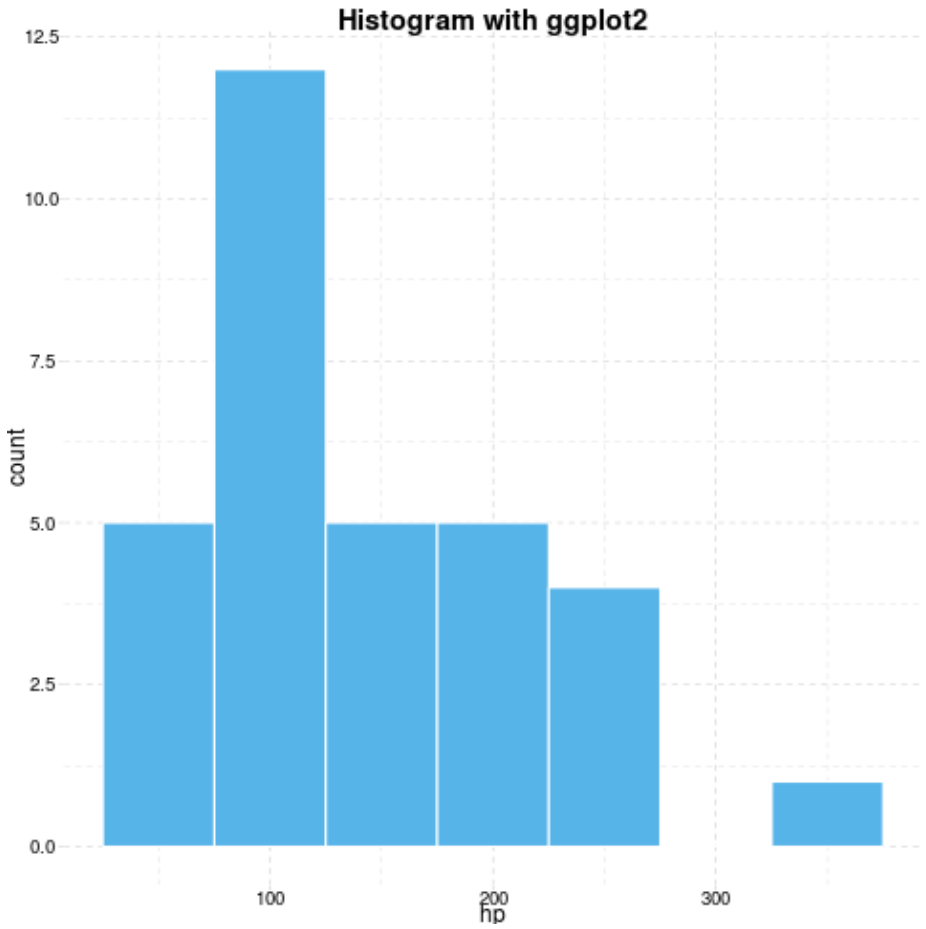

Histogram with ggplot2
12.5
10.0
7.5
5.0
2.5
0.0
count
100
200
300
hp

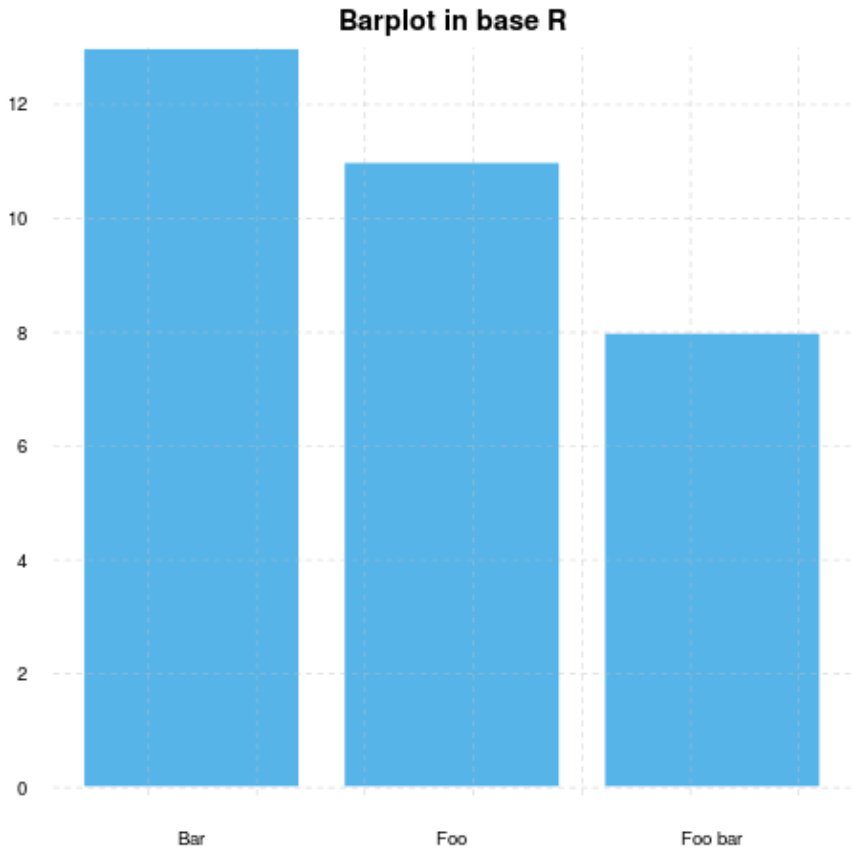
Figure 2:

lattice

ggplot2

Barplot

Base R plot



WARNING[2]

[1] 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!

[2] 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!

lattice

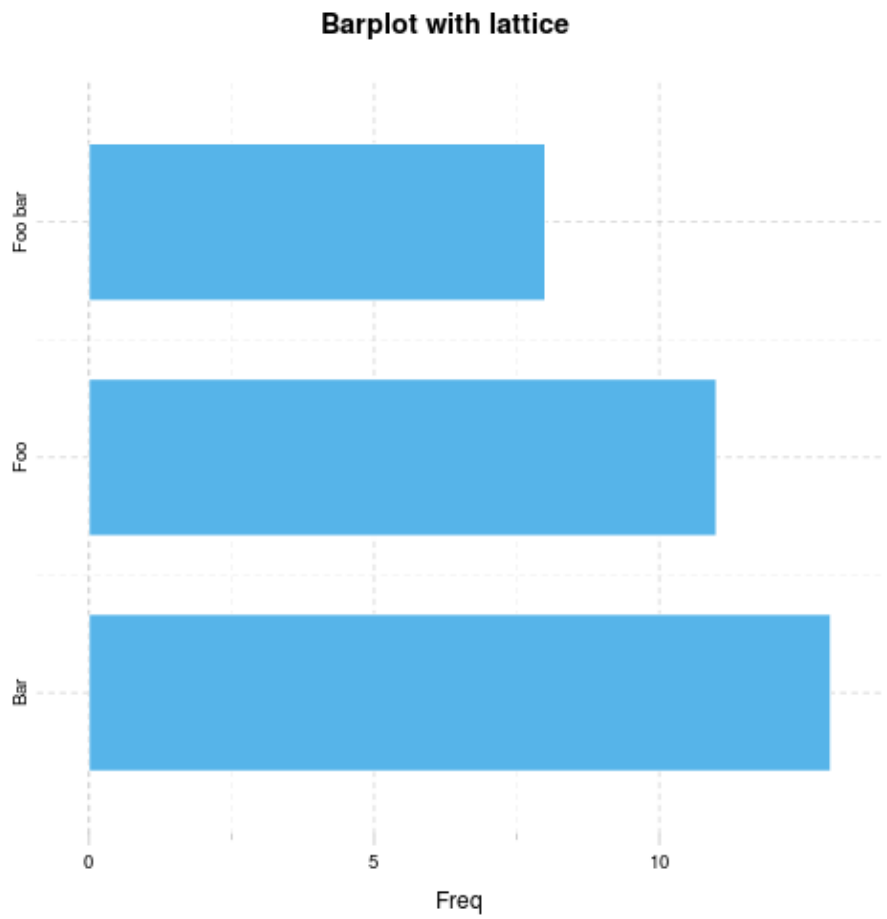


Figure 3:

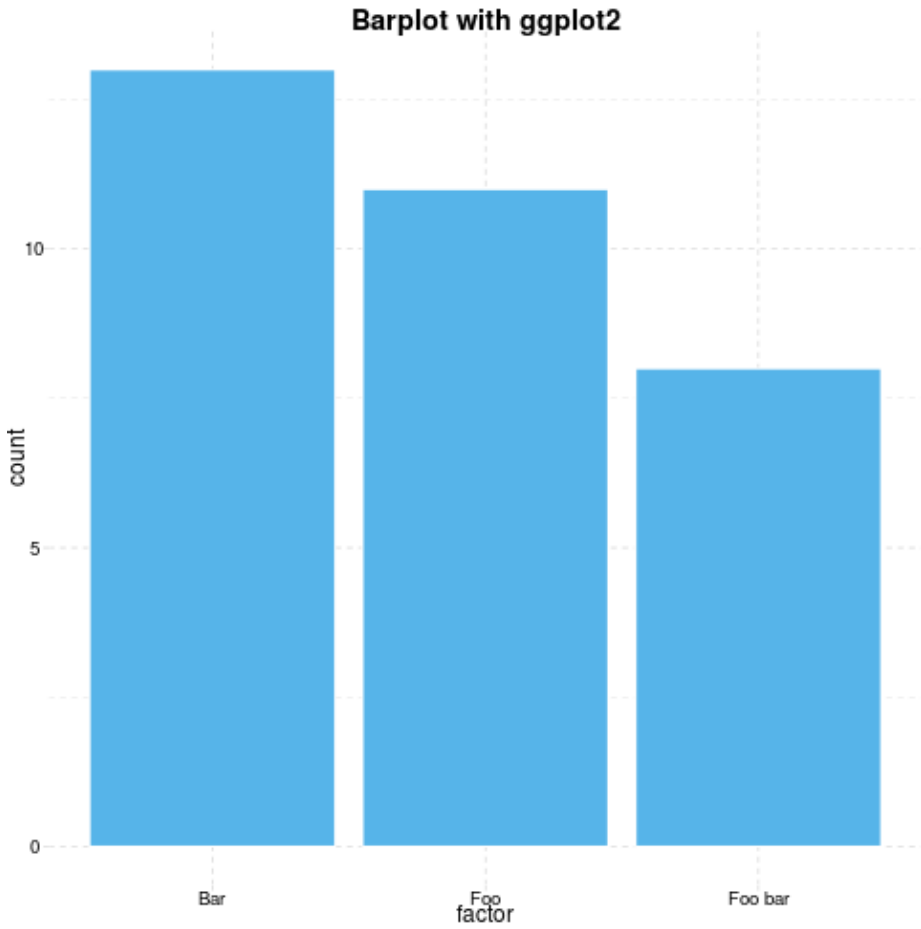
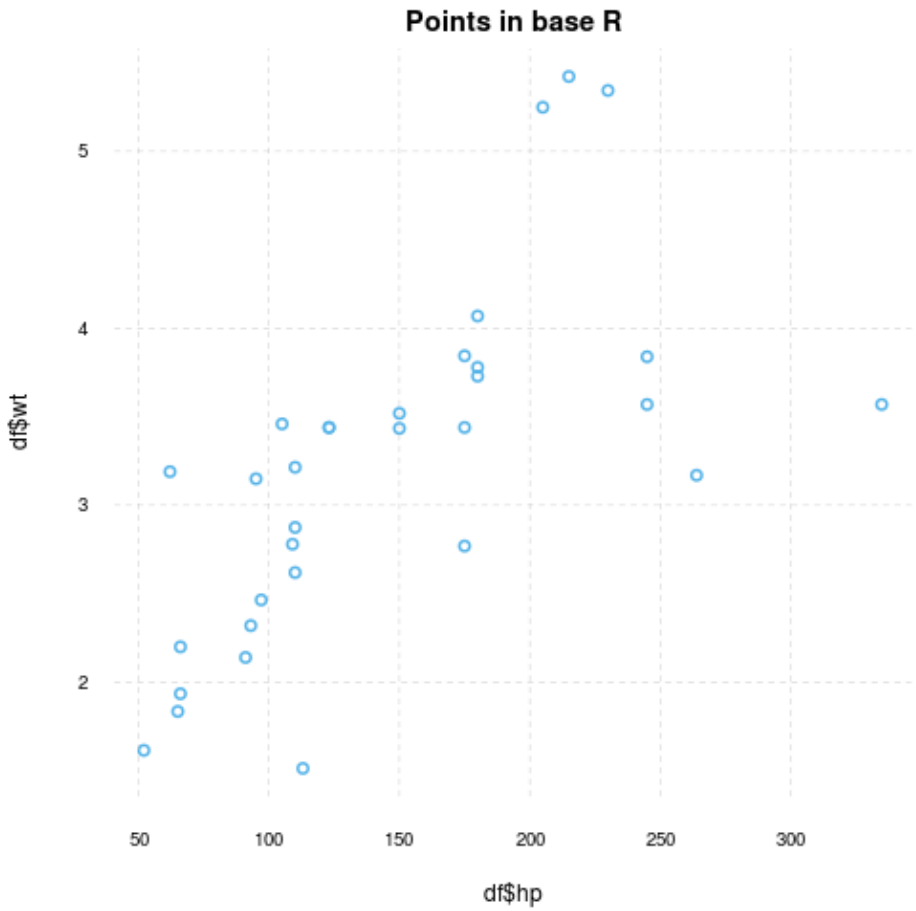


Figure 4:

ggplot2

Points

Base R plot



WARNING[3]

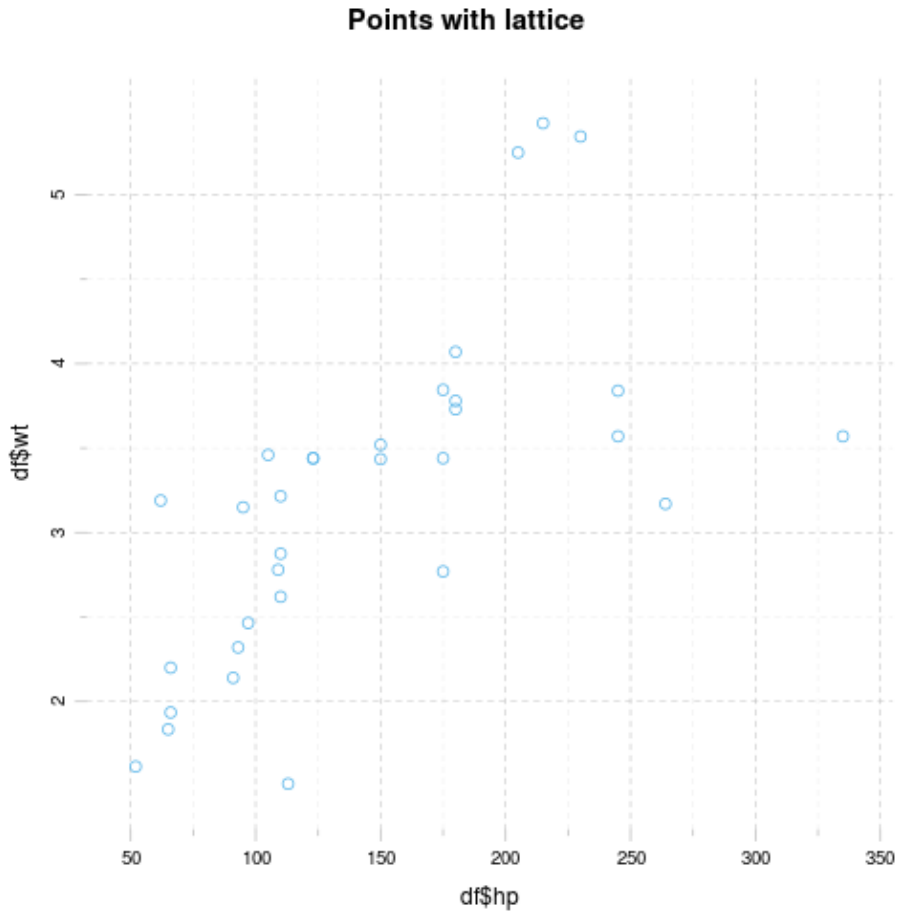


Figure 5:

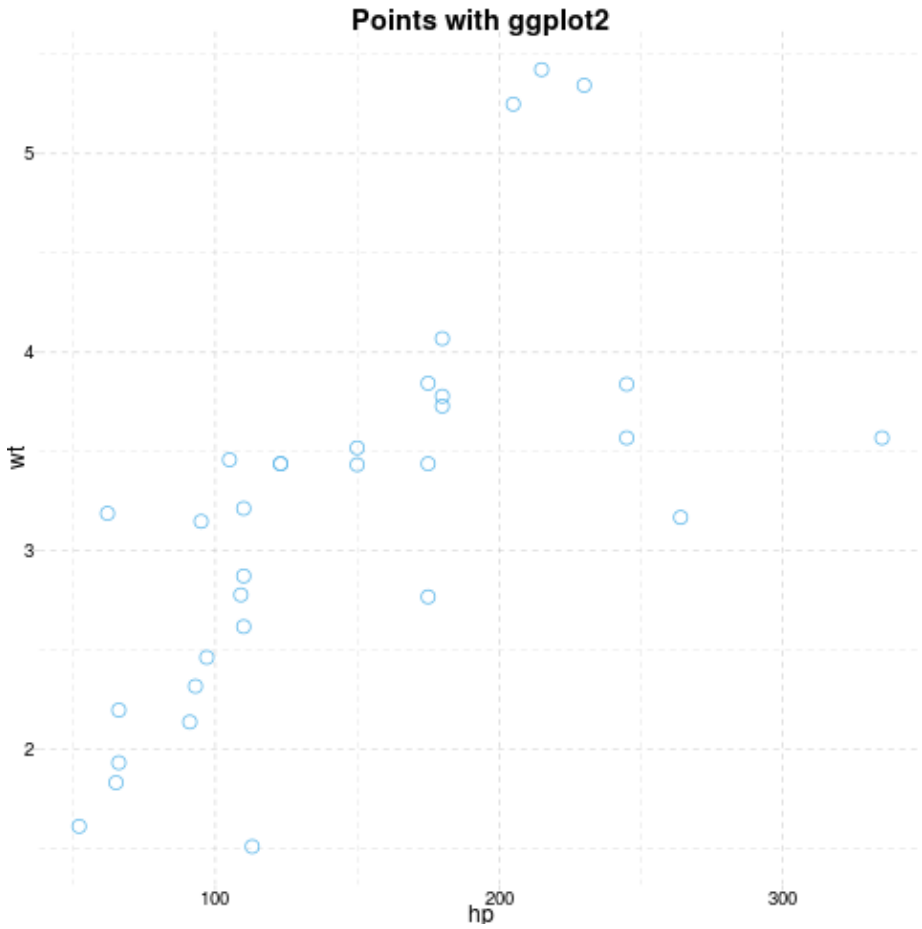


Figure 6:

lattice

ggplot2

Grouped plot

Base R plot

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

lattice

ggplot2

Facets

Base R plot

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

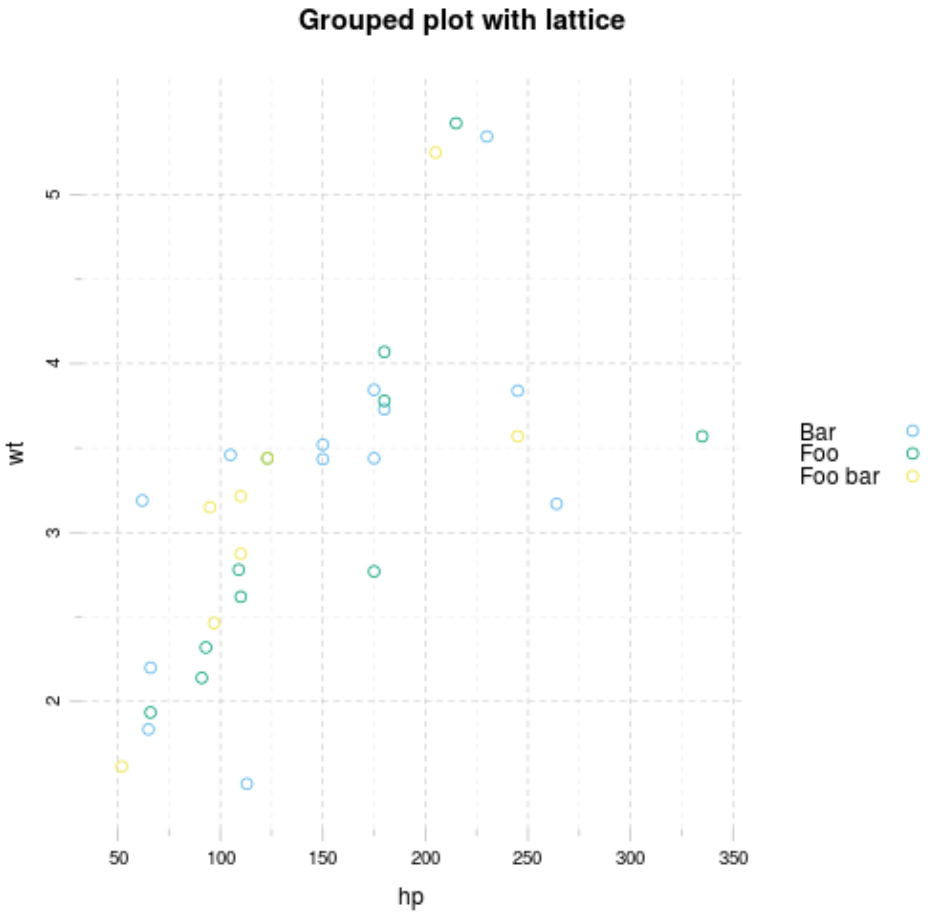

Grouped plot with lattice
wt
hp
2
3
4
5
50
100
150
200
250
300
350
Bar
Foo
Foo bar

Figure 7:

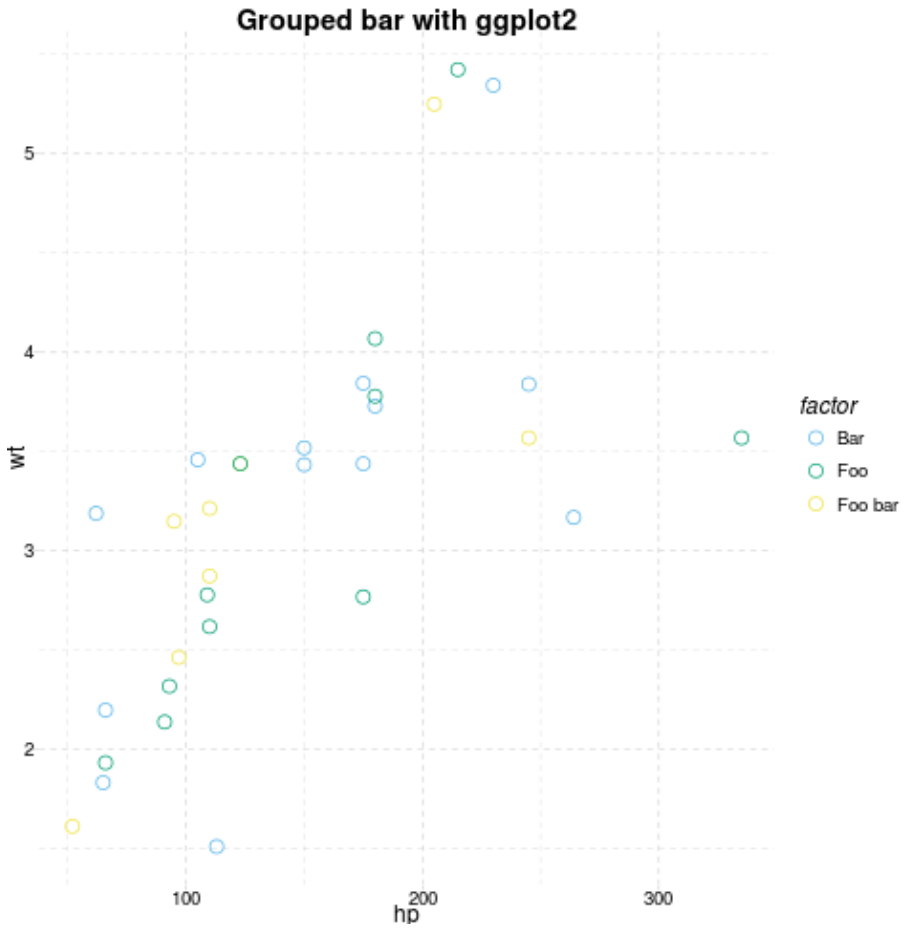

Grouped bar with ggplot2
wt
hp
5
4
3
2
100
200
300
factor
Bar
Foo
Foo bar

Figure 8:

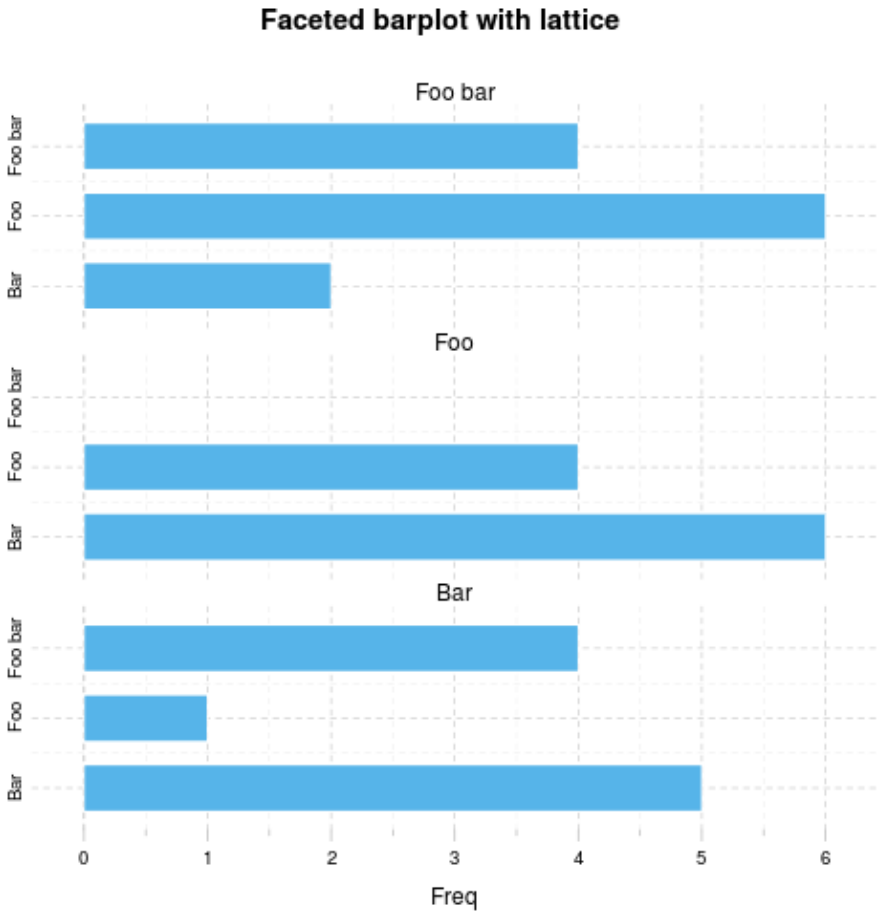

Faceted barplot with lattice
Foo bar
Foo bar
Foo
Bar
Foo
Foo bar
Foo
Bar
Bar
Foo bar
Foo
Bar
0
1
2
3
4
5
6
Freq

Figure 9:

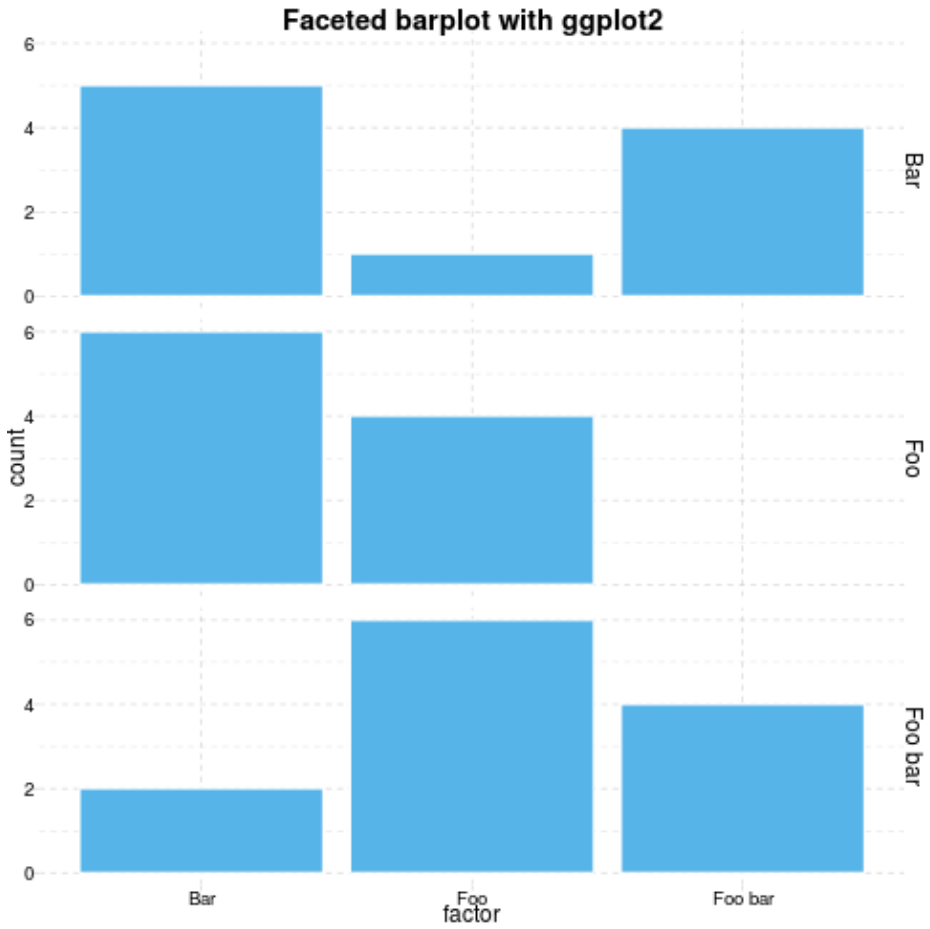

Faceted barplot with ggplot2
count
factor
Bar
Foo
Foo bar
0
2
4
6

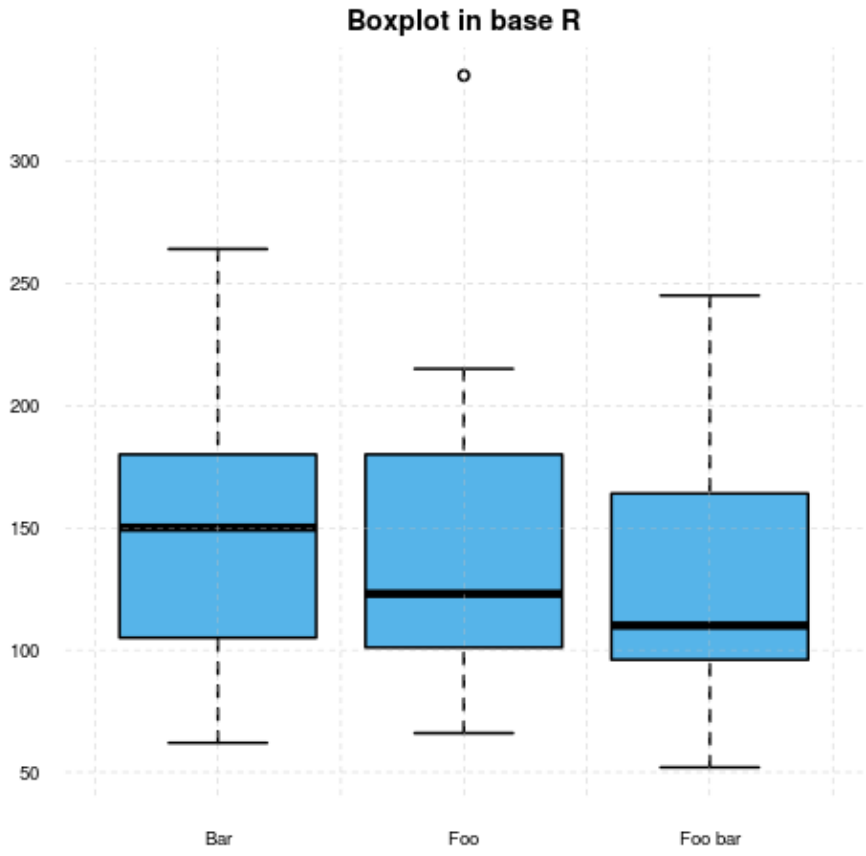
Figure 10:

lattice

ggplot2

Boxplot

Base R plot



WARNING[4]

[3] 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!

[4] 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!

lattice

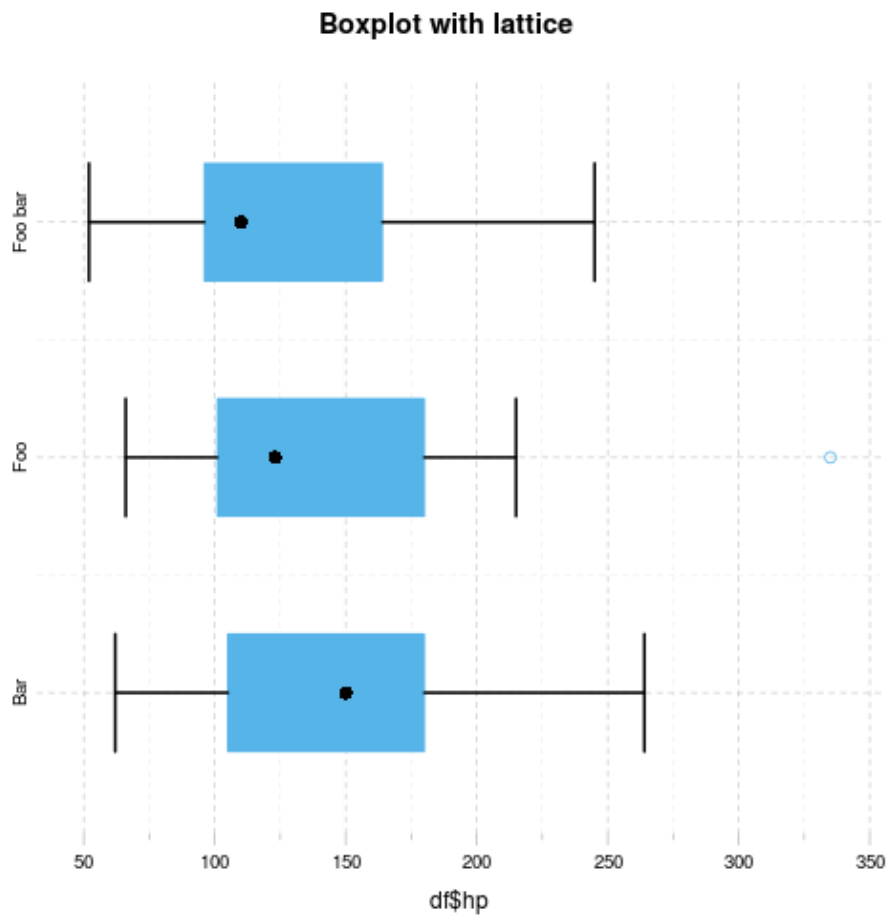


Figure 11:

ggplot2

Lines

Base R plot

ERROR[5]

[5]:1:1: unexpected '/' 1: / ^

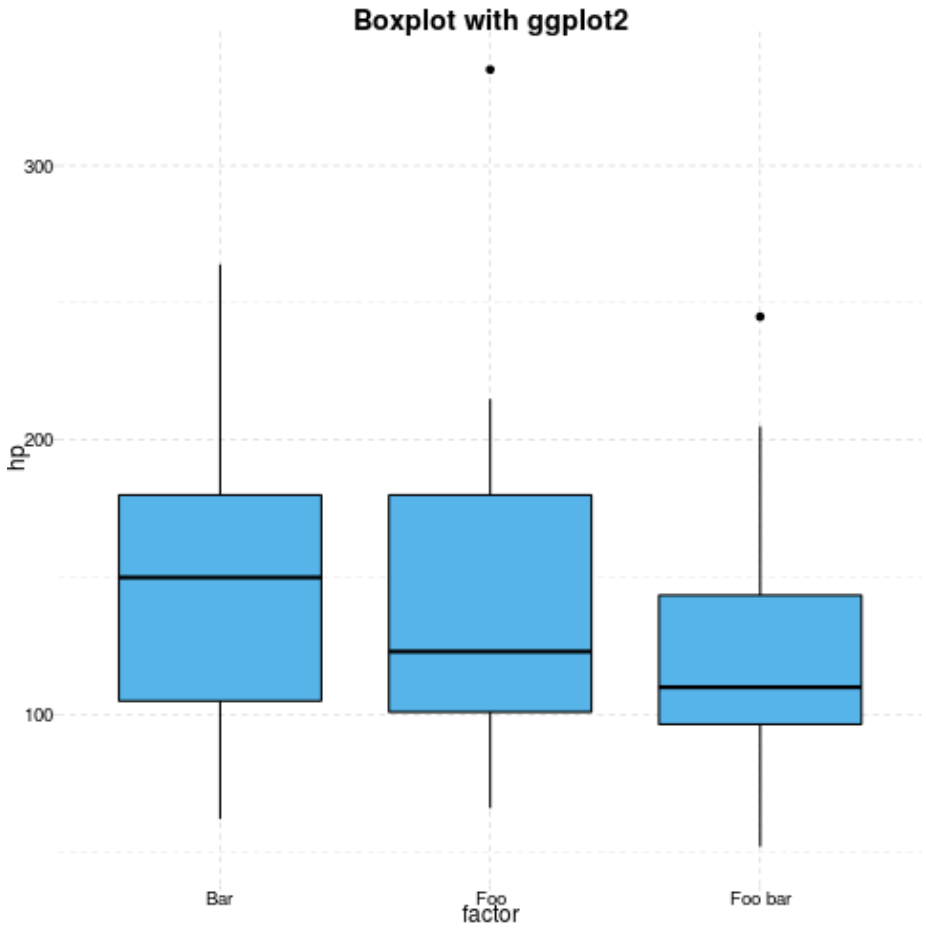


Figure 12:

lattice

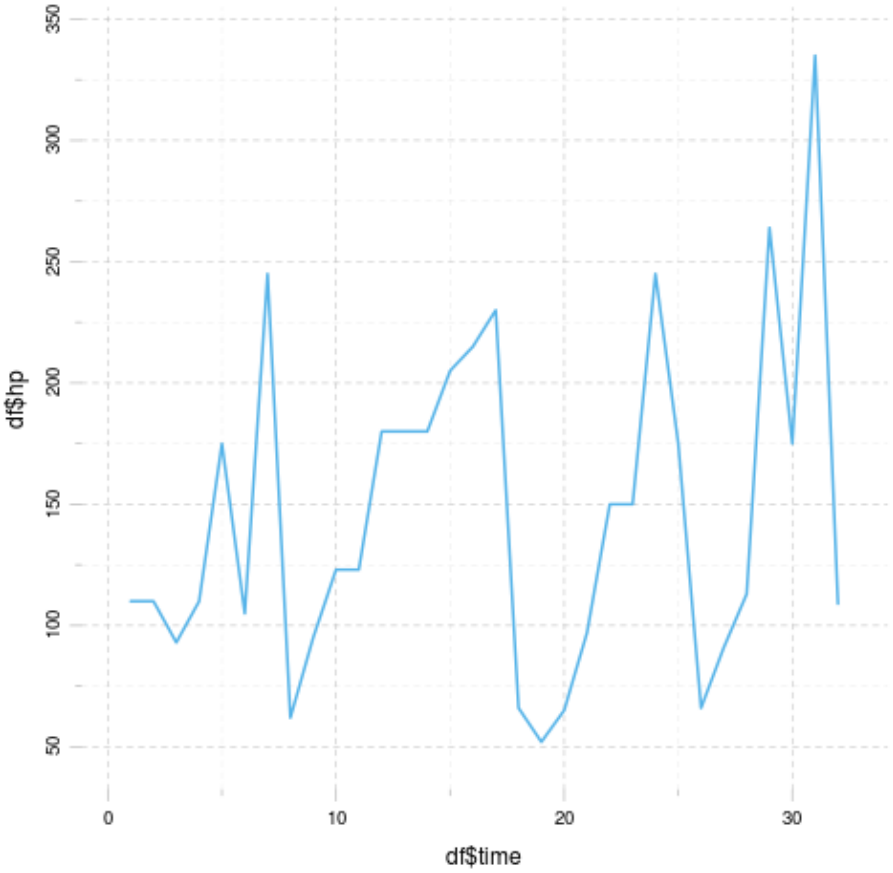


Figure 13:

ggplot2

Custom options

Below you can find some images generated by the exact same commands but with some modified `panderOptions`:

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

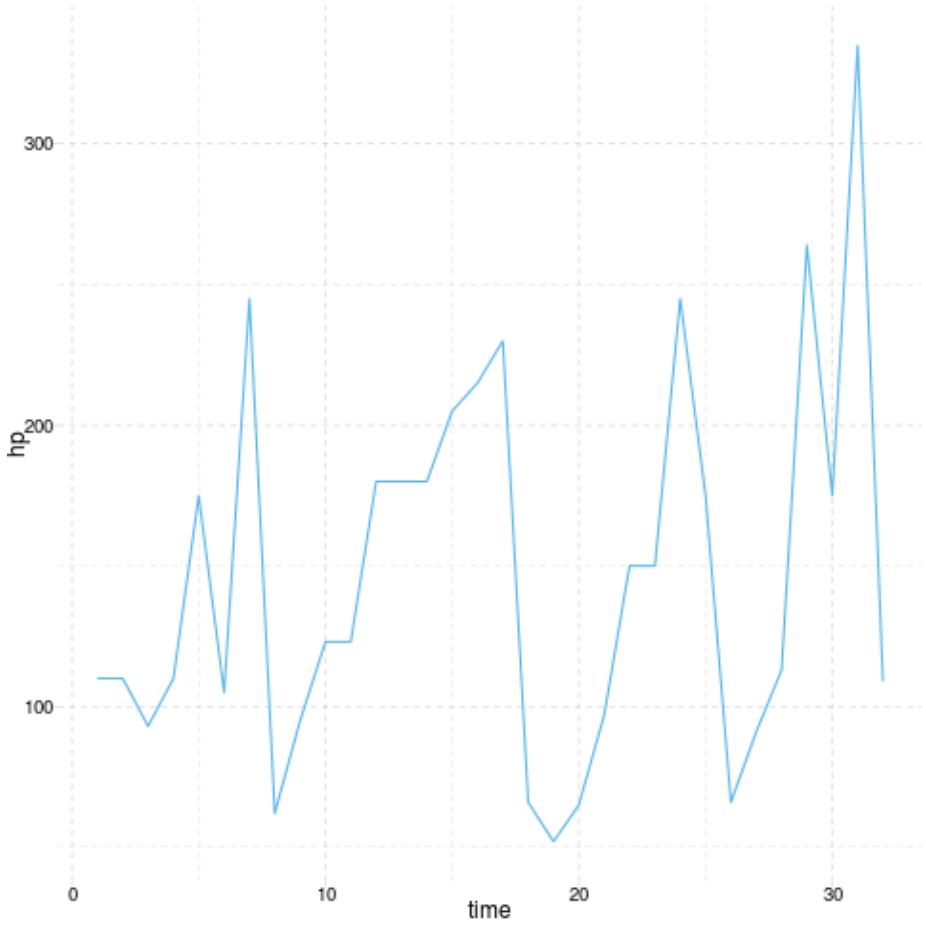


Figure 14:

```
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

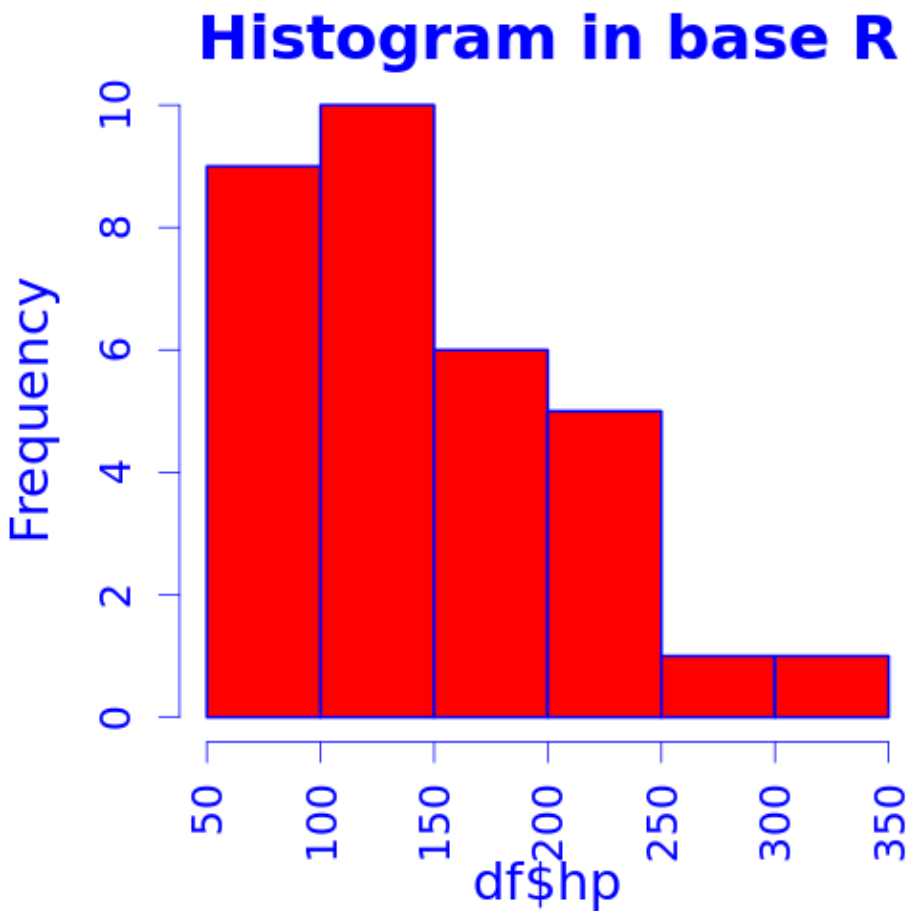


Figure 15:

lattice

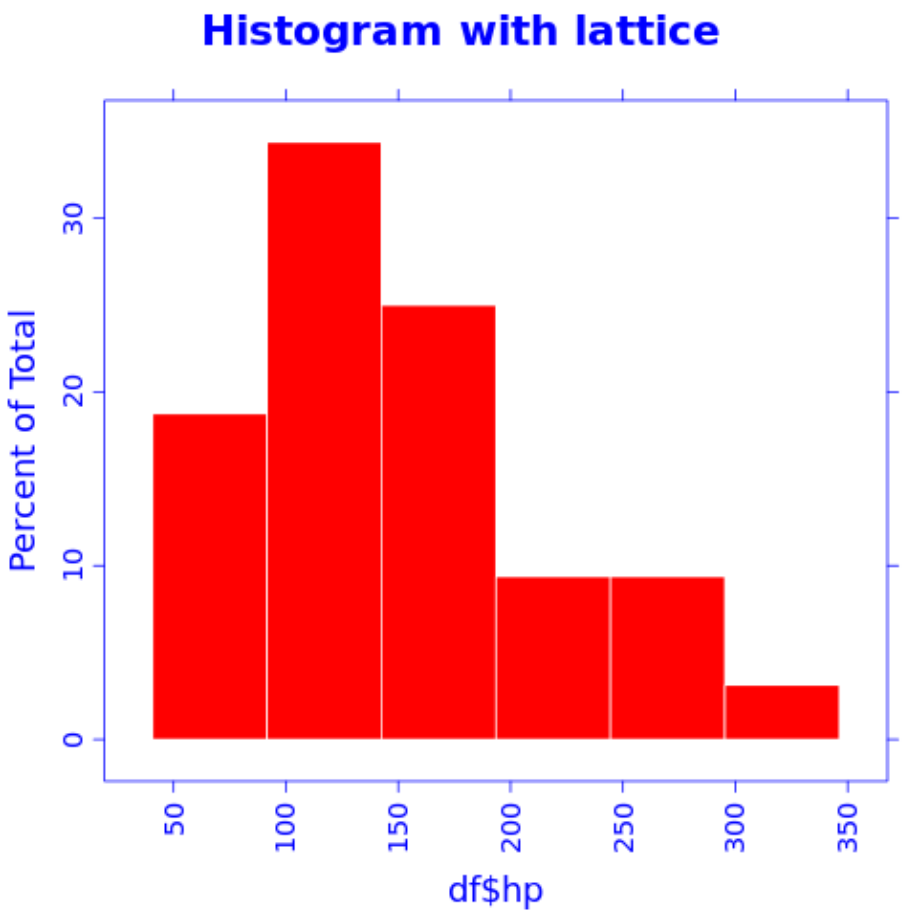


Figure 16:

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:

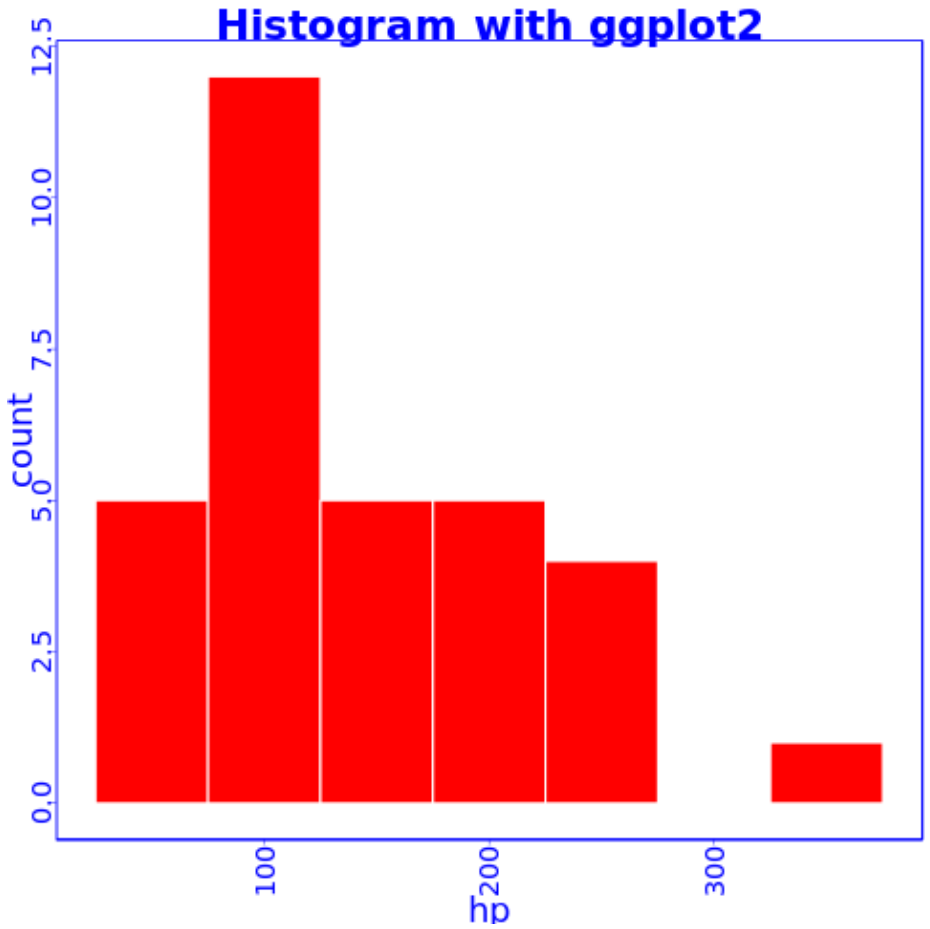

Histogram with ggplot2
count
0.0
2.5
5.0
7.5
10.0
12.5
100
200
300
hp

Figure 17:

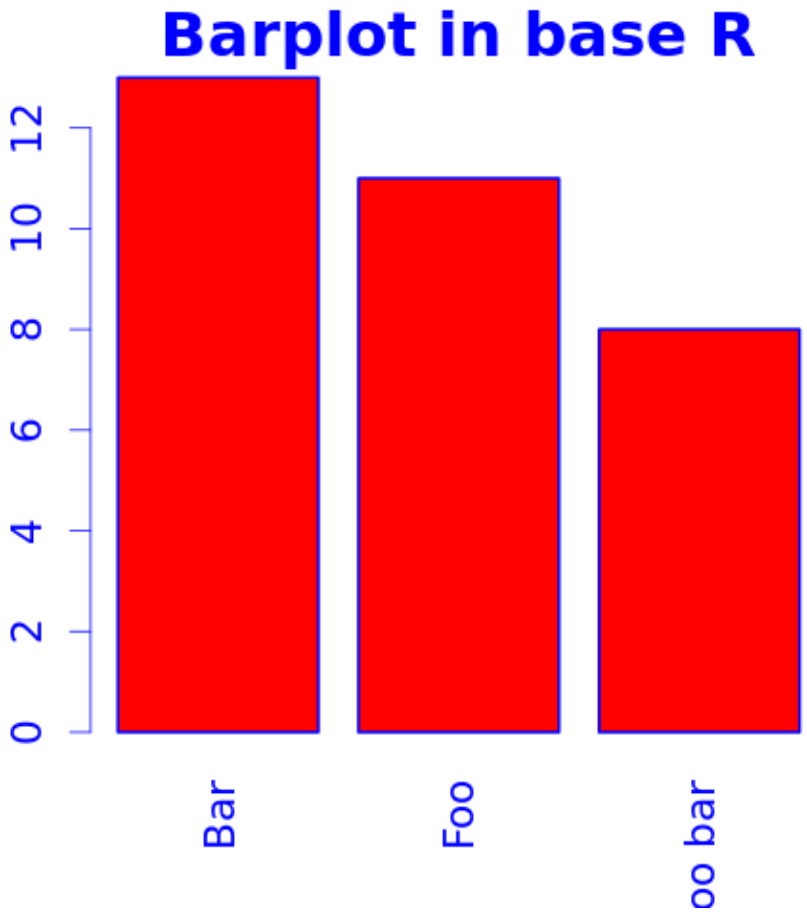


Figure 18:

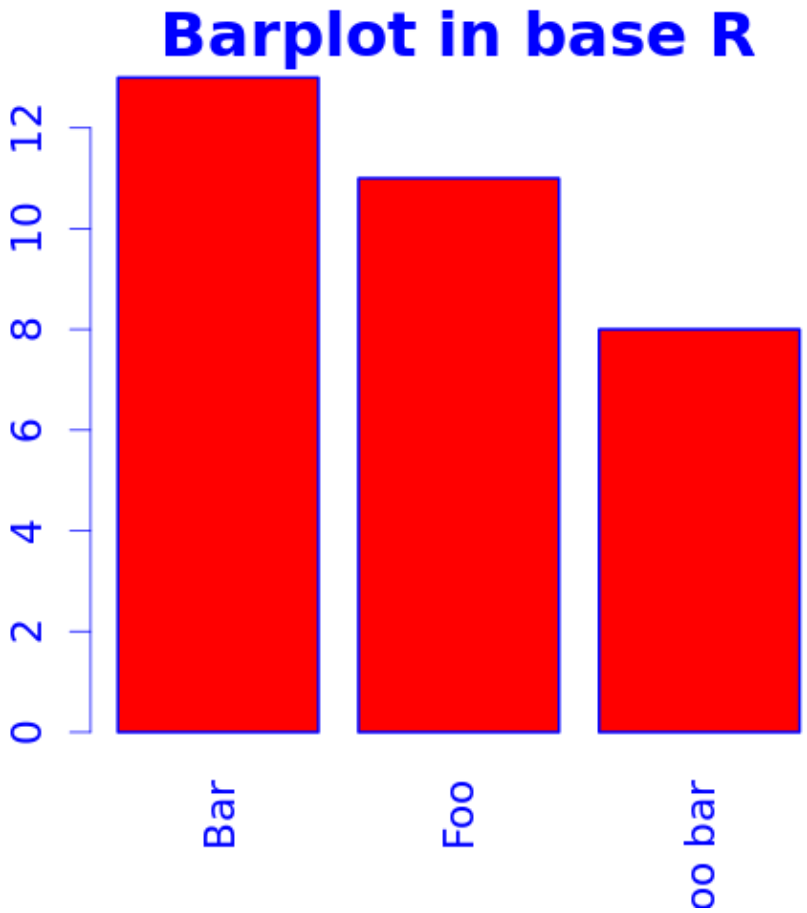


Figure 19:

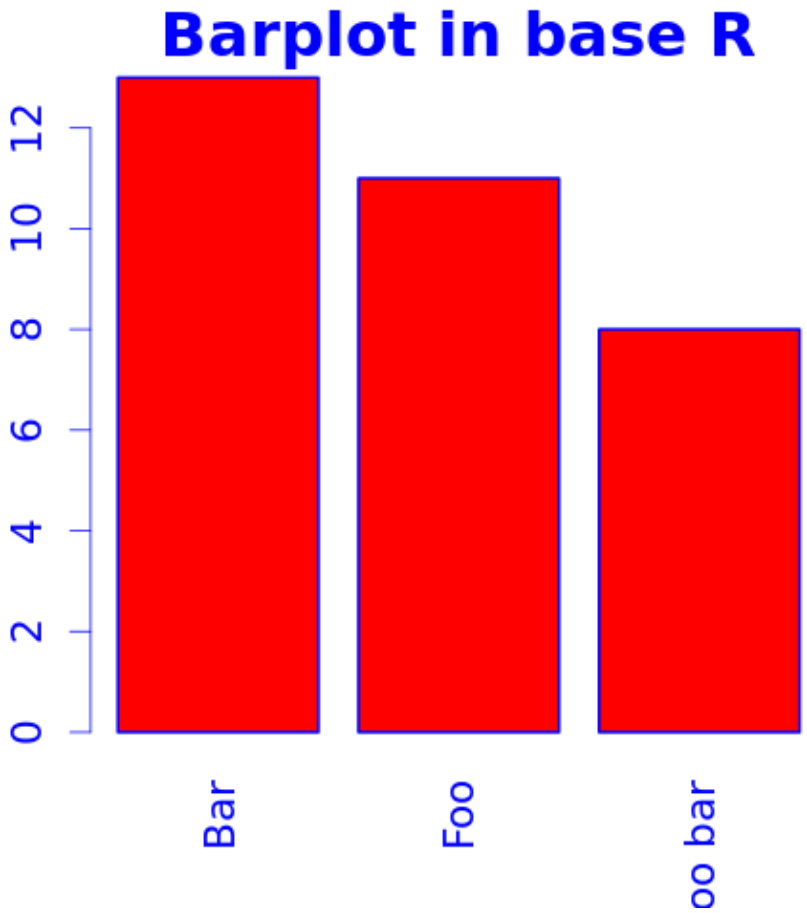


Figure 20:

lattice

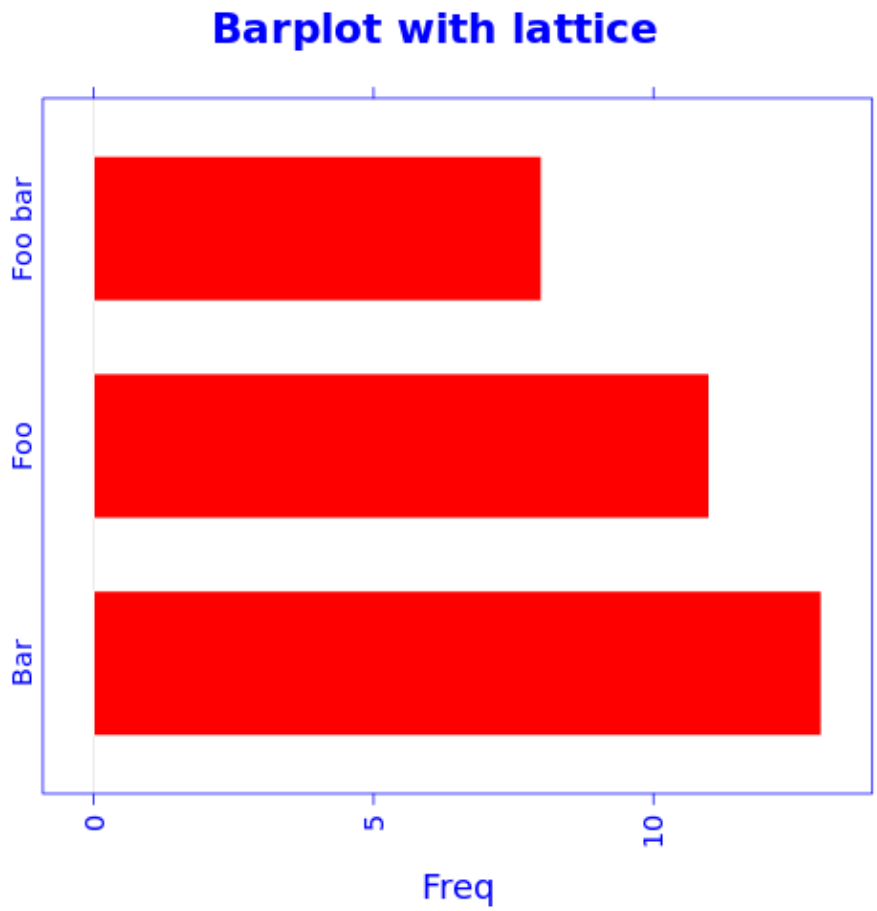


Figure 21:

ggplot2

Points

Base R plot

ERROR[6]

[6]:1:1: unexpected '/' 1: / ^

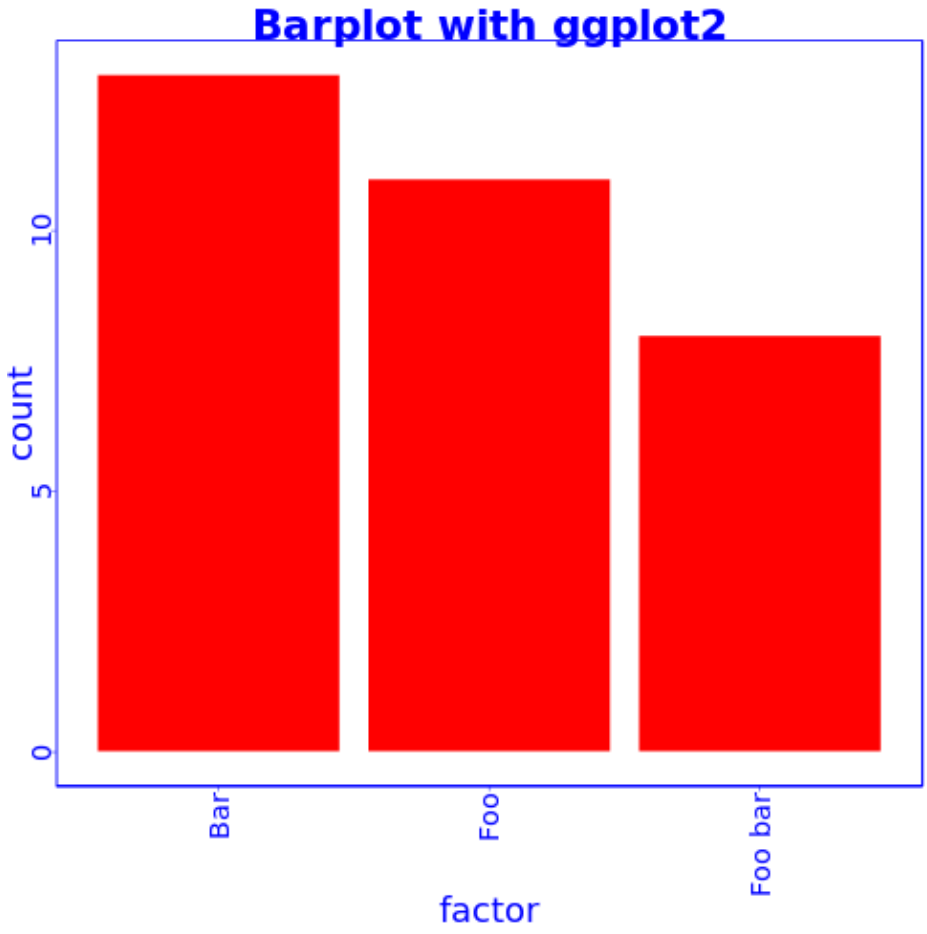


Figure 22:

lattice

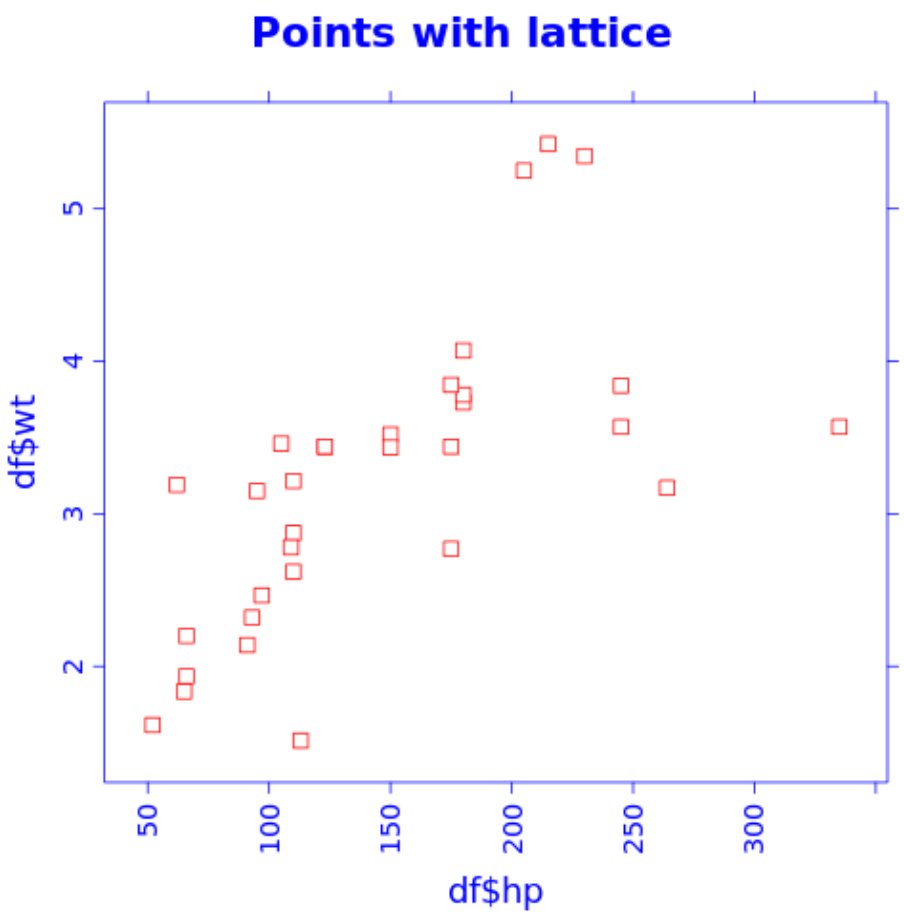


Figure 23:

ggplot2

Grouped plot

Base R plot

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

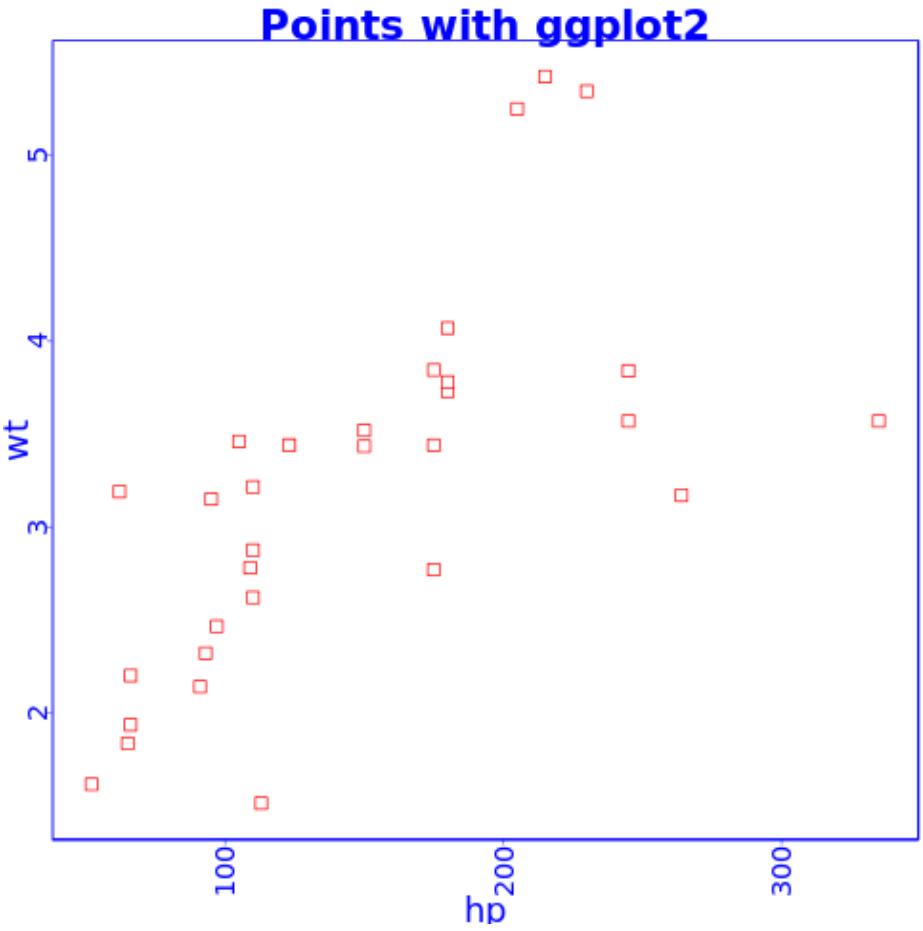


Figure 24:

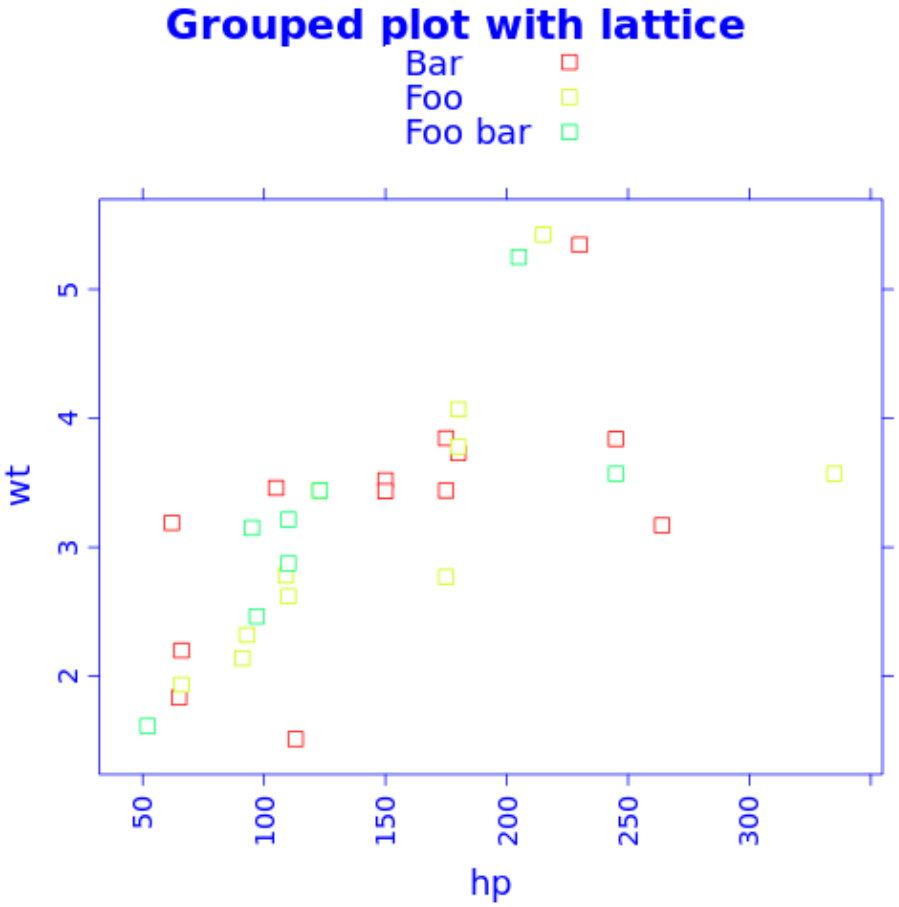

Grouped plot with lattice
Bar
Foo
Foo bar
wt
hp
2
3
4
5
50
100
150
200
250
300

Figure 25:

lattice

ggplot2

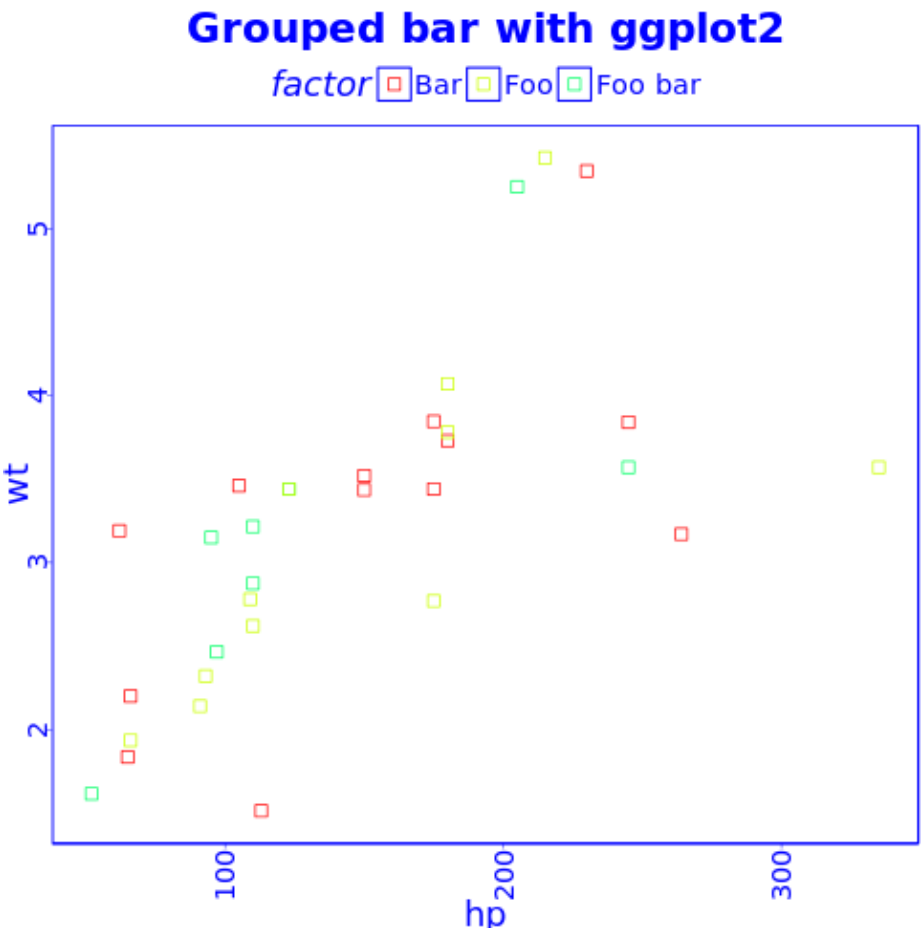


Figure 26:

Facets

Base R plot

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

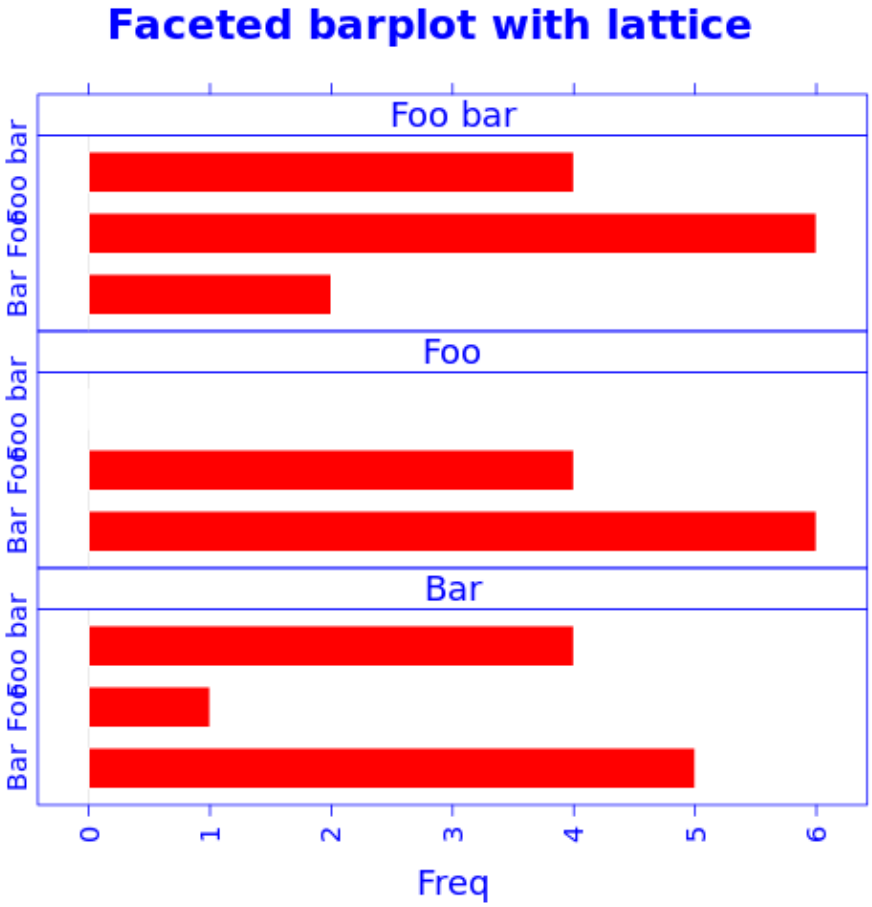

Faceted barplot with lattice
Foo bar
Foo
Bar
Bar Foo bar
Bar Foo bar
Bar Foo bar
0
1
2
3
4
5
6
Freq

Figure 27:

lattice

ggplot2

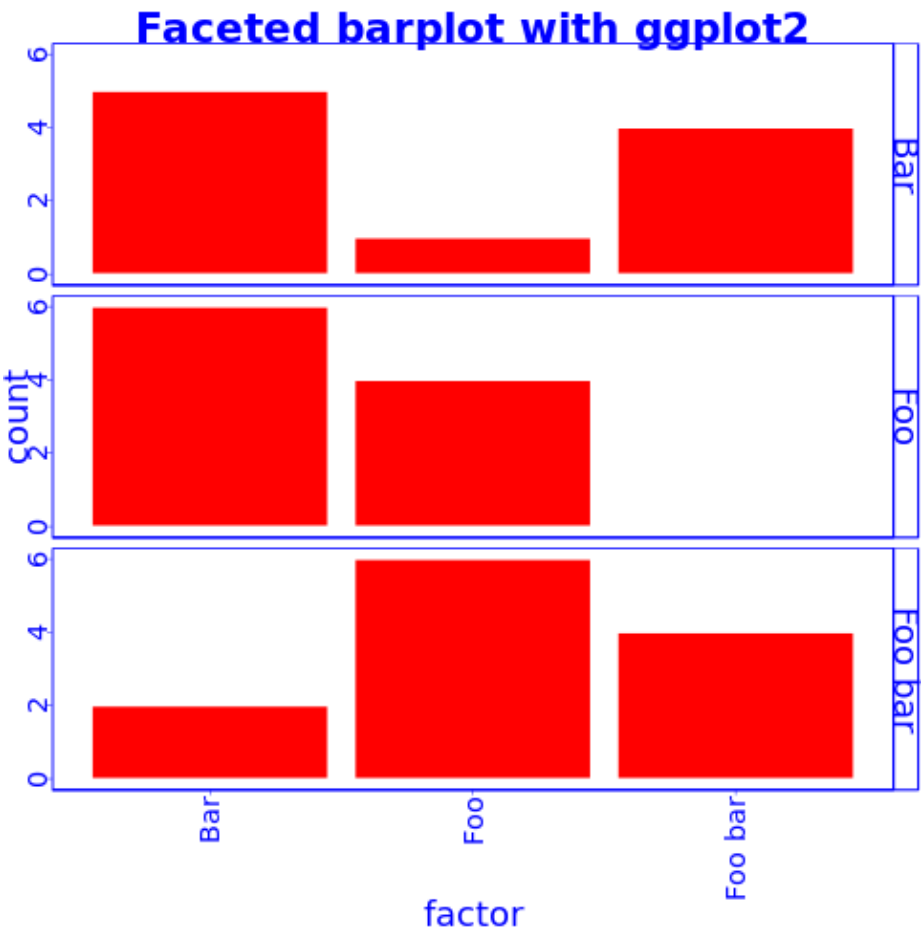


Figure 28:

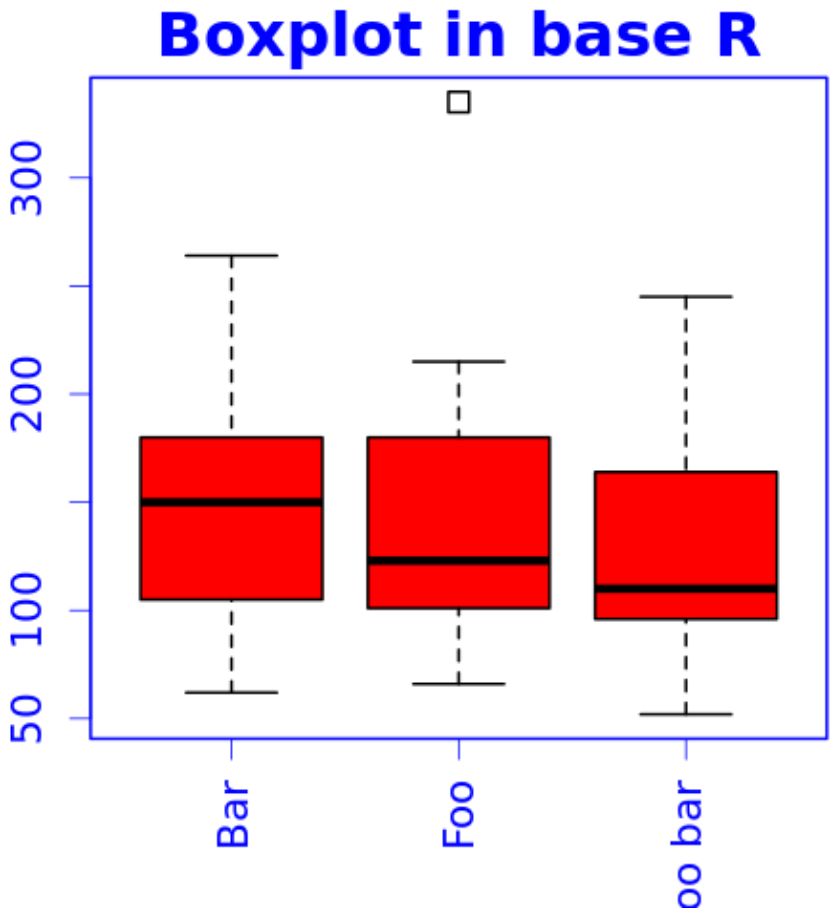


Figure 29:

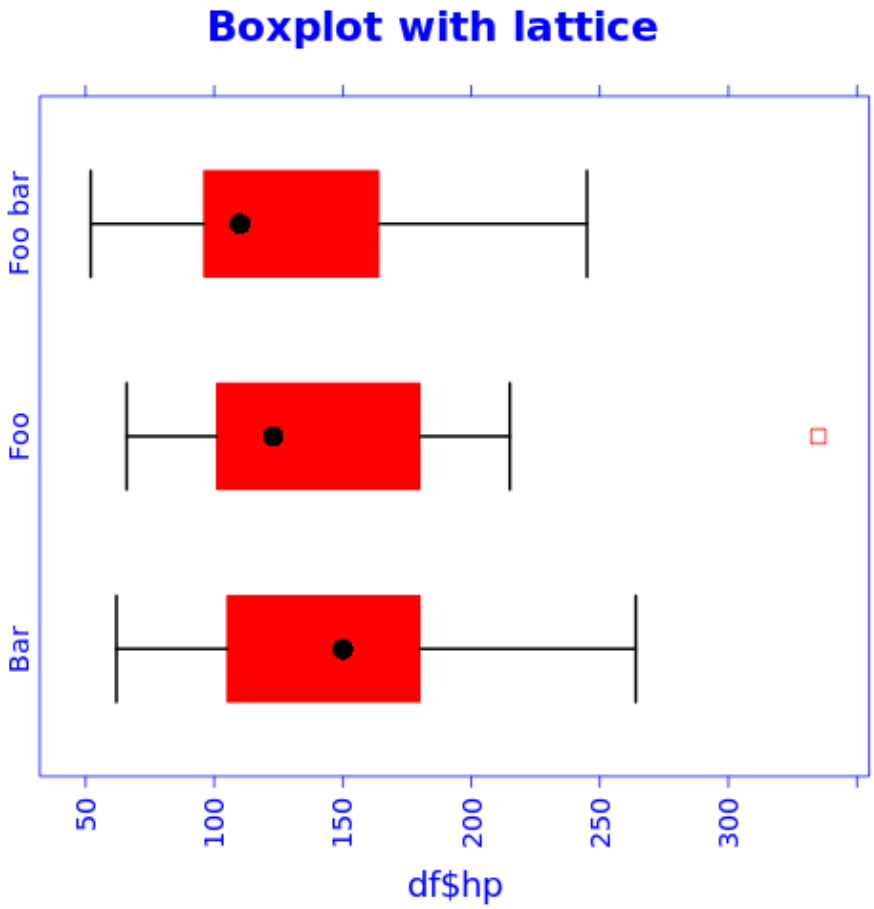

Boxplot with lattice
Foo bar
Foo
Bar
50
100
150
200
250
300
df$hp

Figure 30:

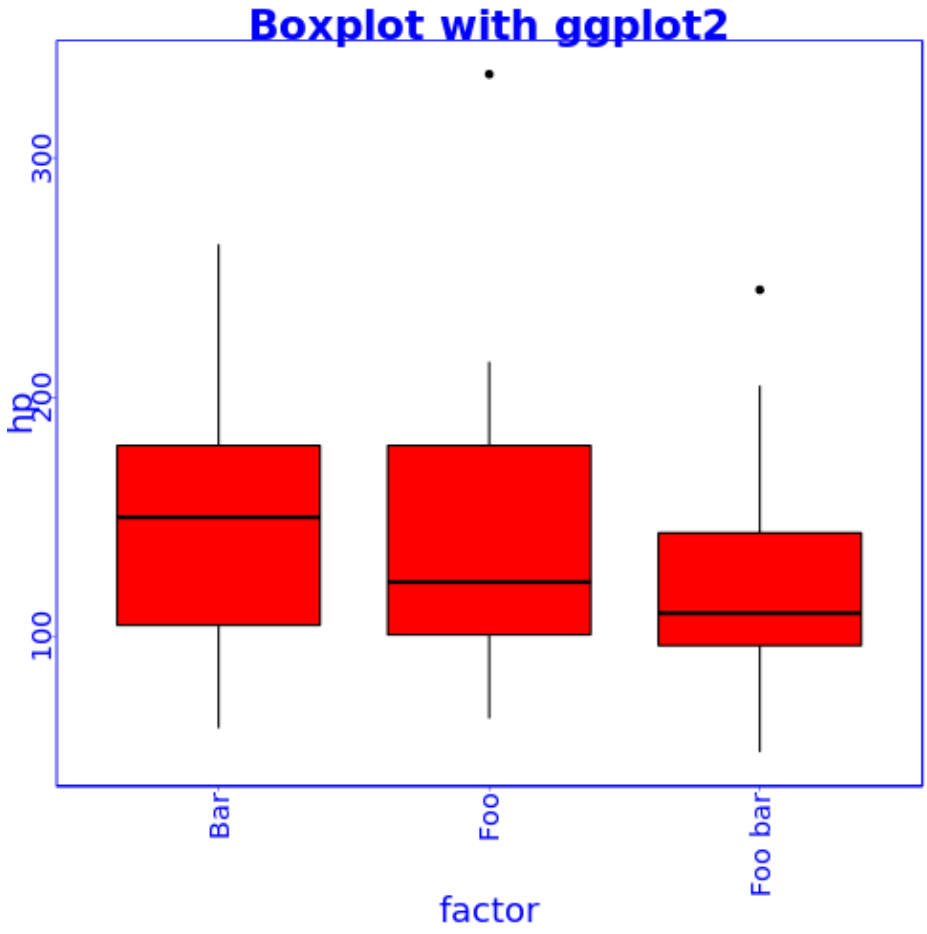


Figure 31:

Boxplot

Base R plot

lattice

ggplot2

Lines

Base R plot

ERROR[7]

lattice

ggplot2

[7]:1:1: unexpected '/' 1: / ^

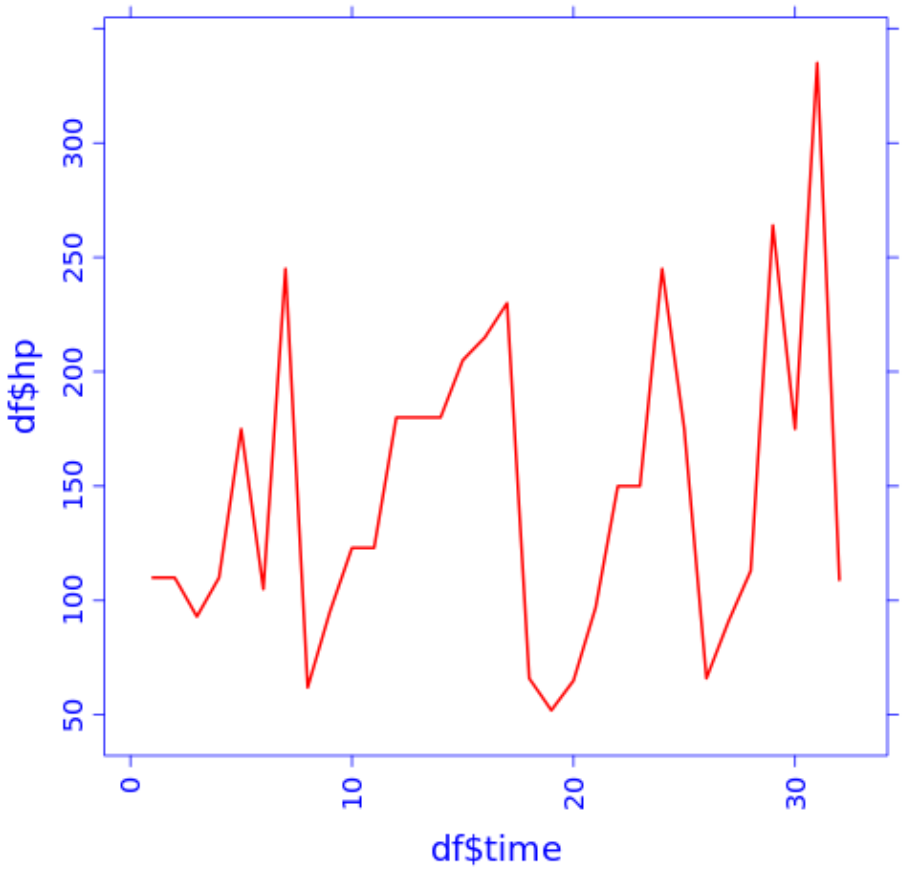


Figure 32:

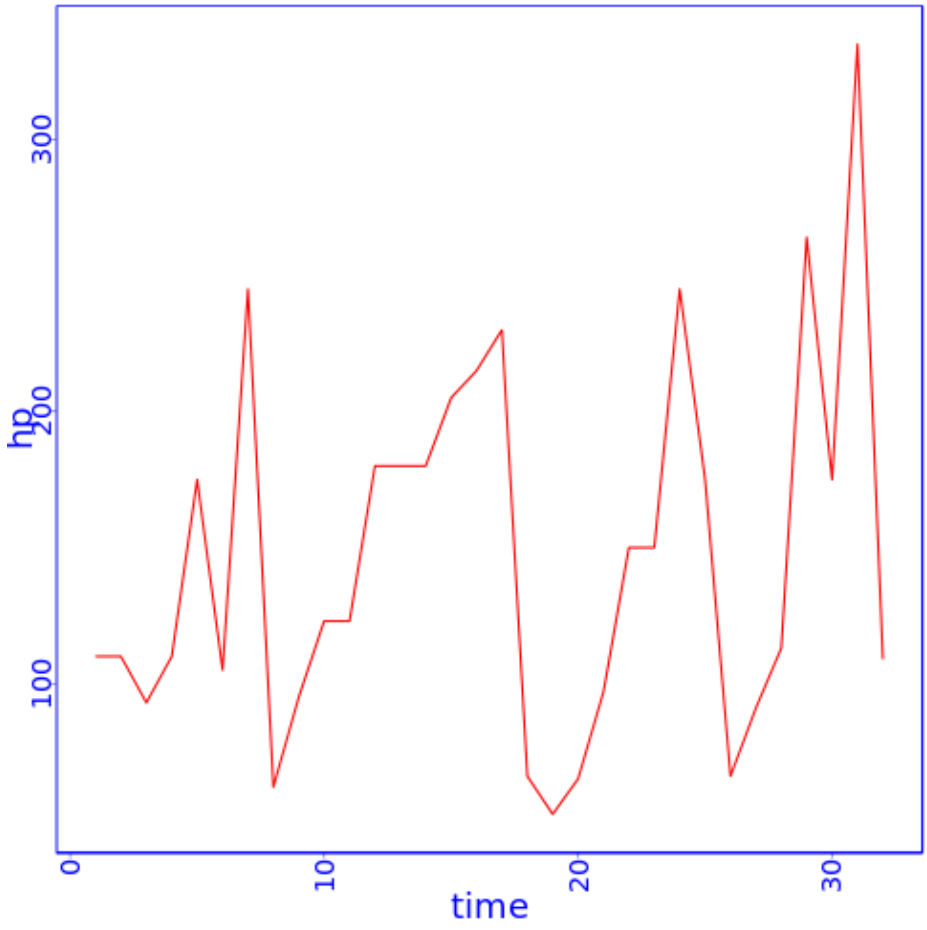


Figure 33: