

# Gergely Daróczy

## 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.bboxes`
- `graph.legend.position`
- `graph.background`
- `graph.panel.background`
- `graph.colors`
- `graph.color.rnd`
- `graph.axis.angle`
- `graph.symbol`

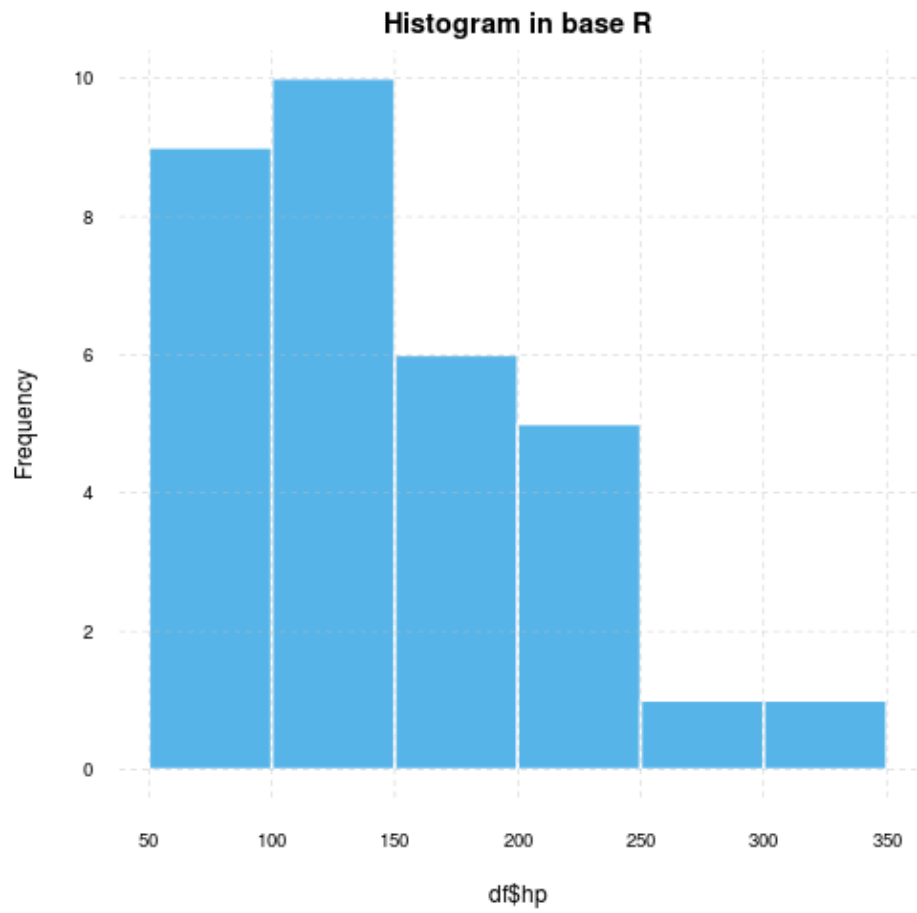
Find more details on **pander**'s homepage.

## 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<sup>1</sup>

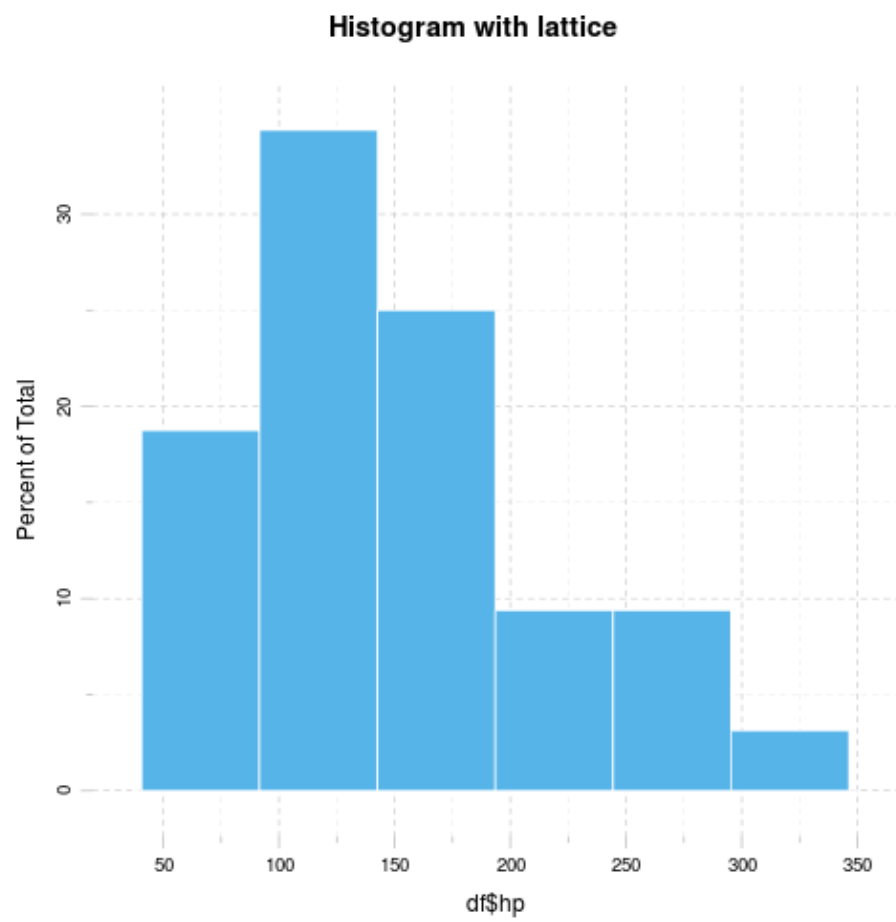


Figure 1:

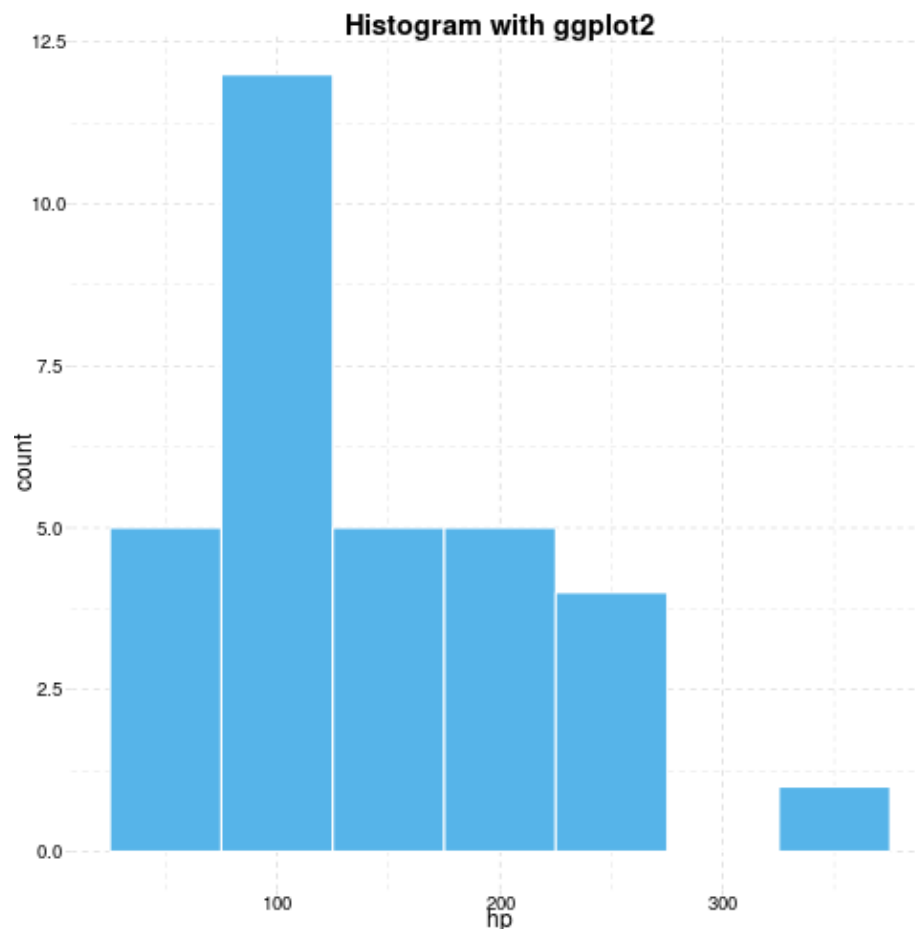


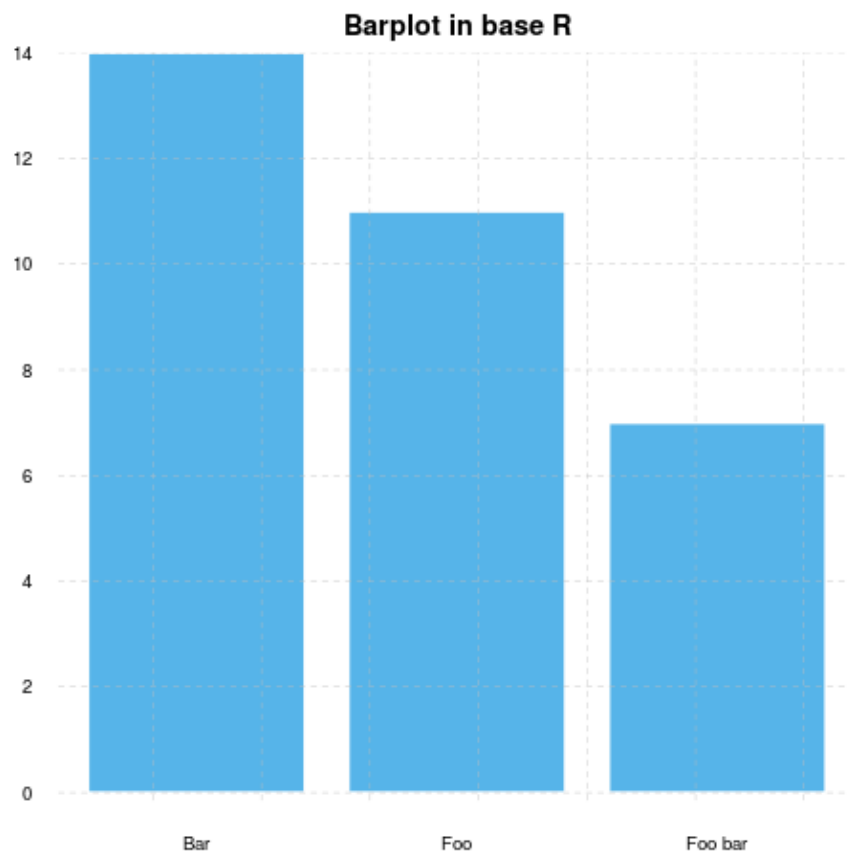
Figure 2:

`lattice`

`ggplot2`

Barplot

Base R plot



## **WARNING<sup>2</sup>**

<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!

<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!

lattice

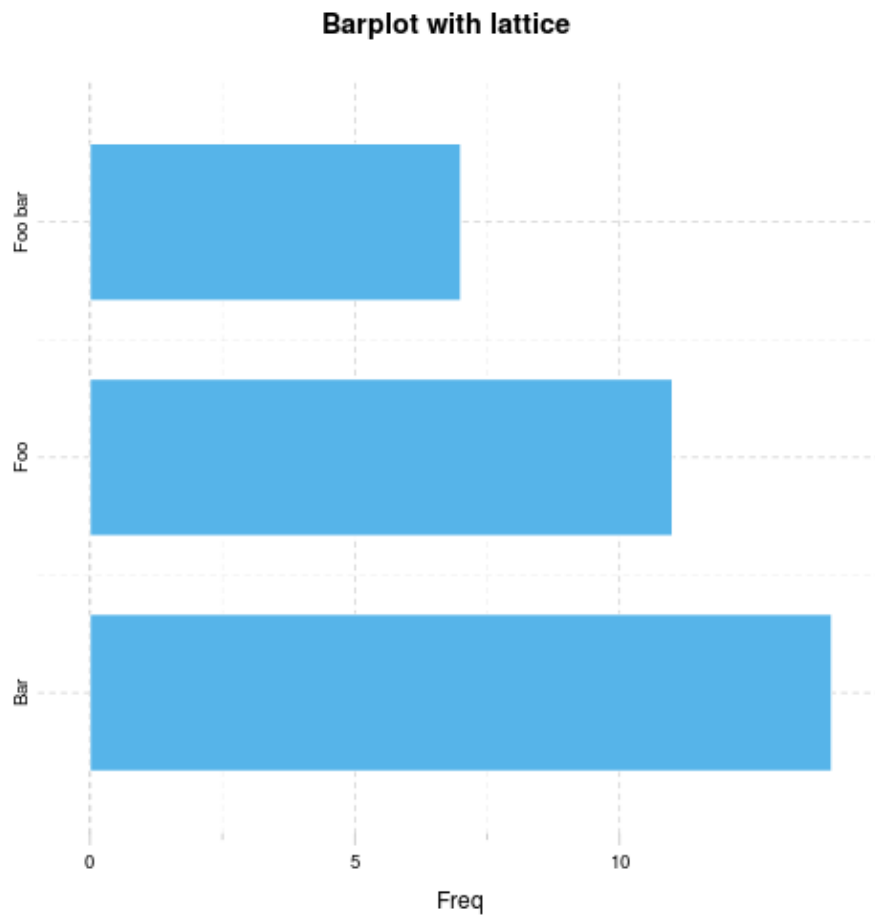


Figure 3:



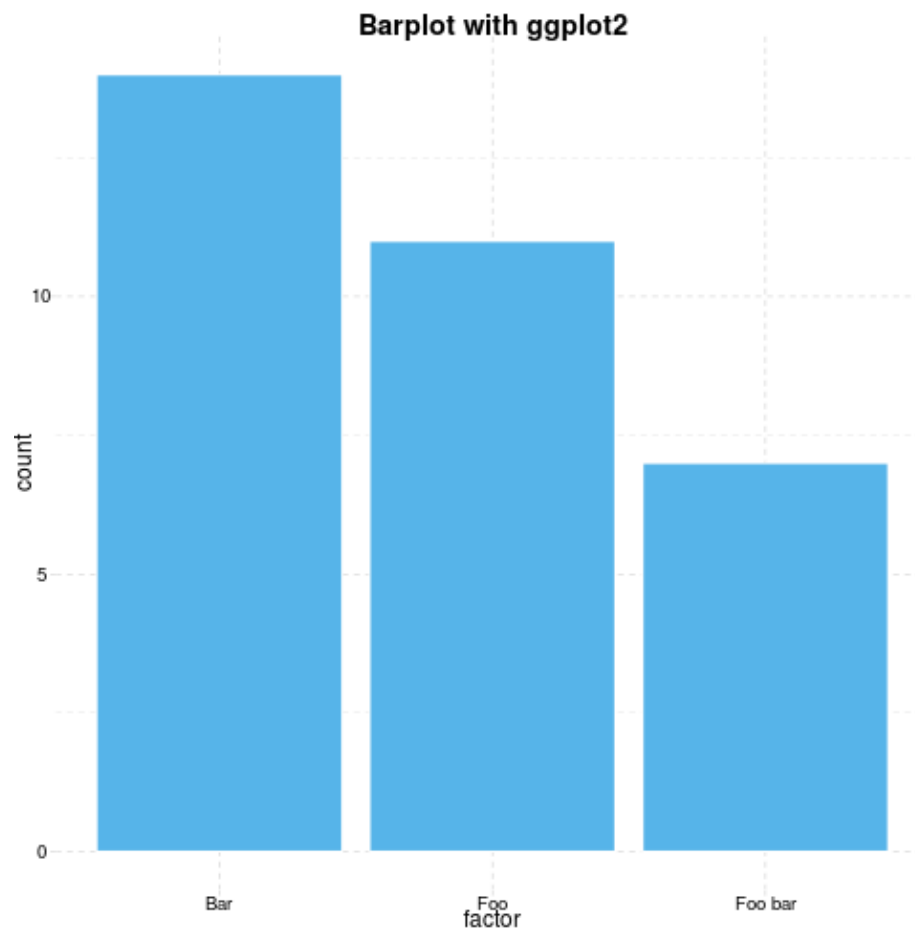
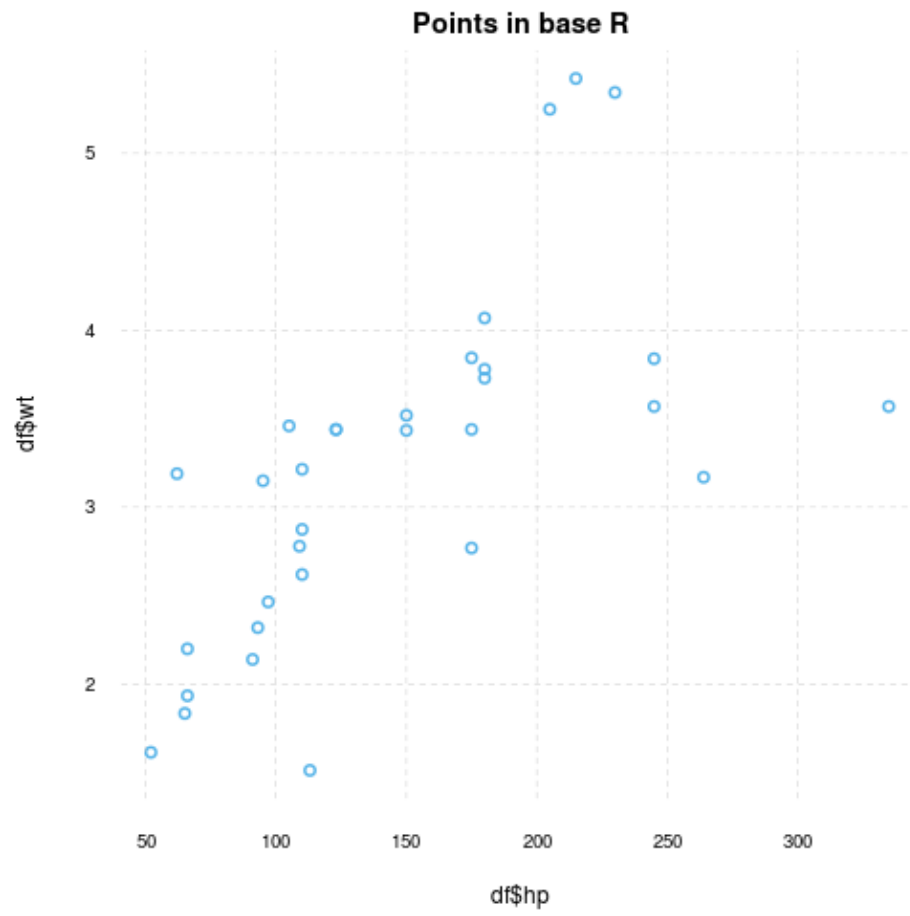


Figure 4:

ggplot2

Points

Base R plot



WARNING<sup>3</sup>

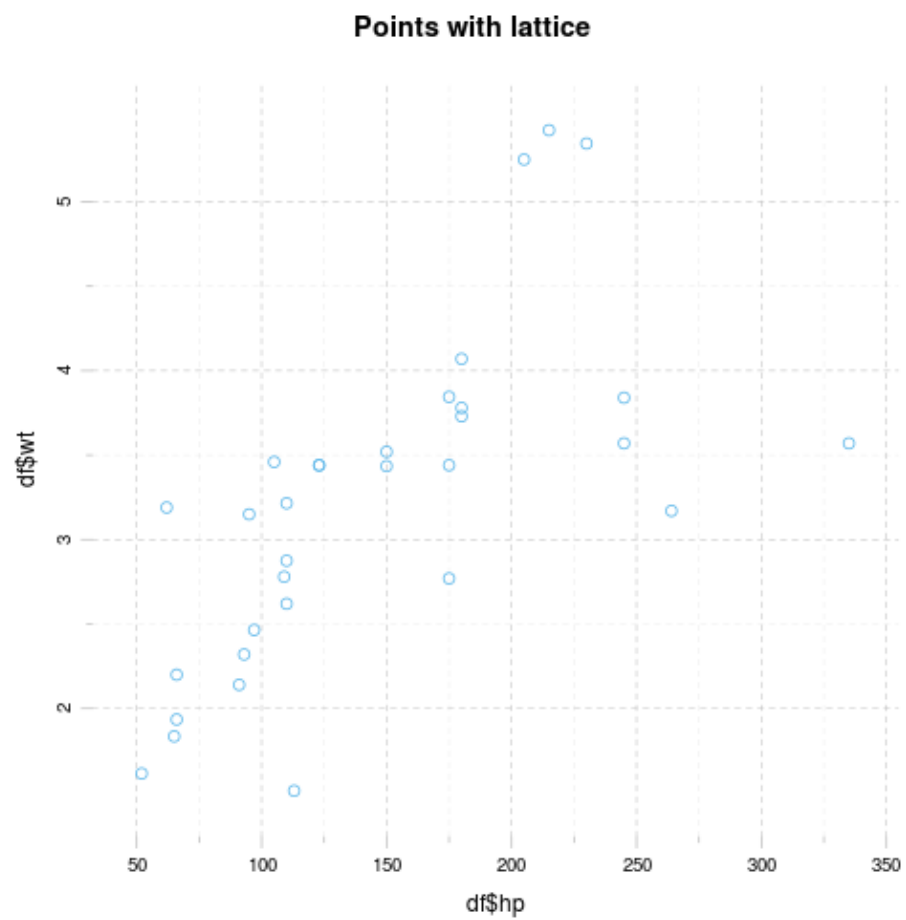


Figure 5:



**lattice**

**ggplot2**

**Grouped plot**

**Base R plot**

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

**lattice**

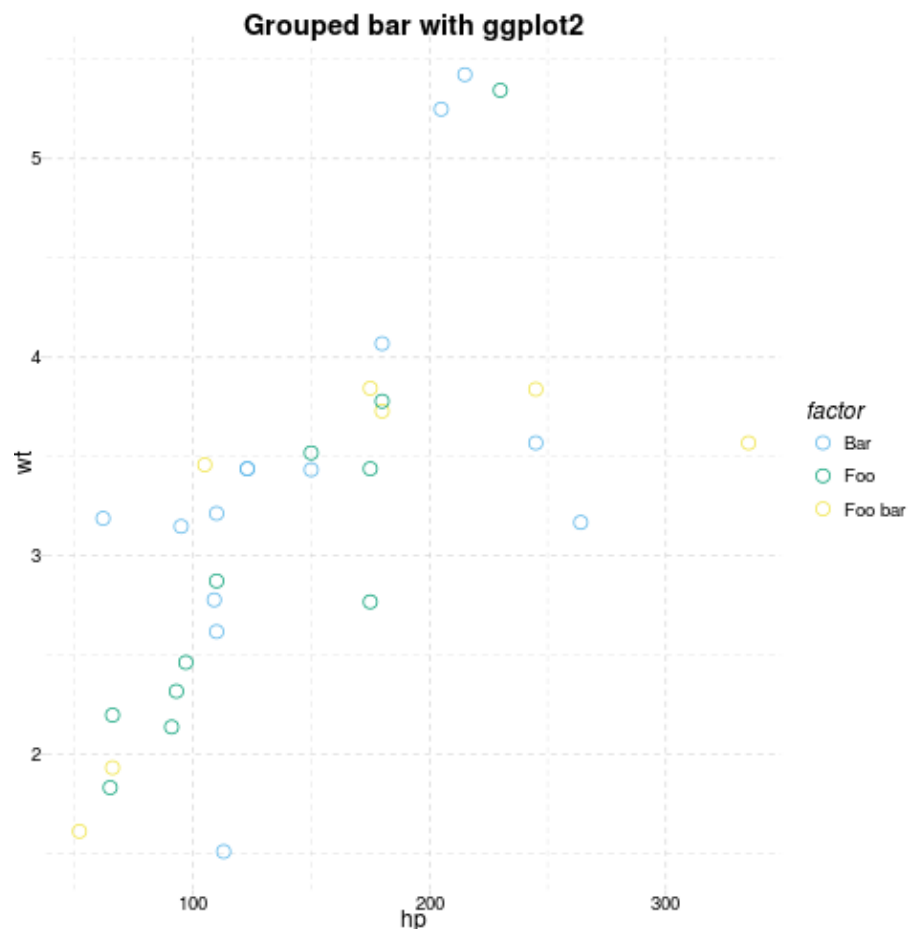
**ggplot2**

**Facets**

**Base R plot**

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





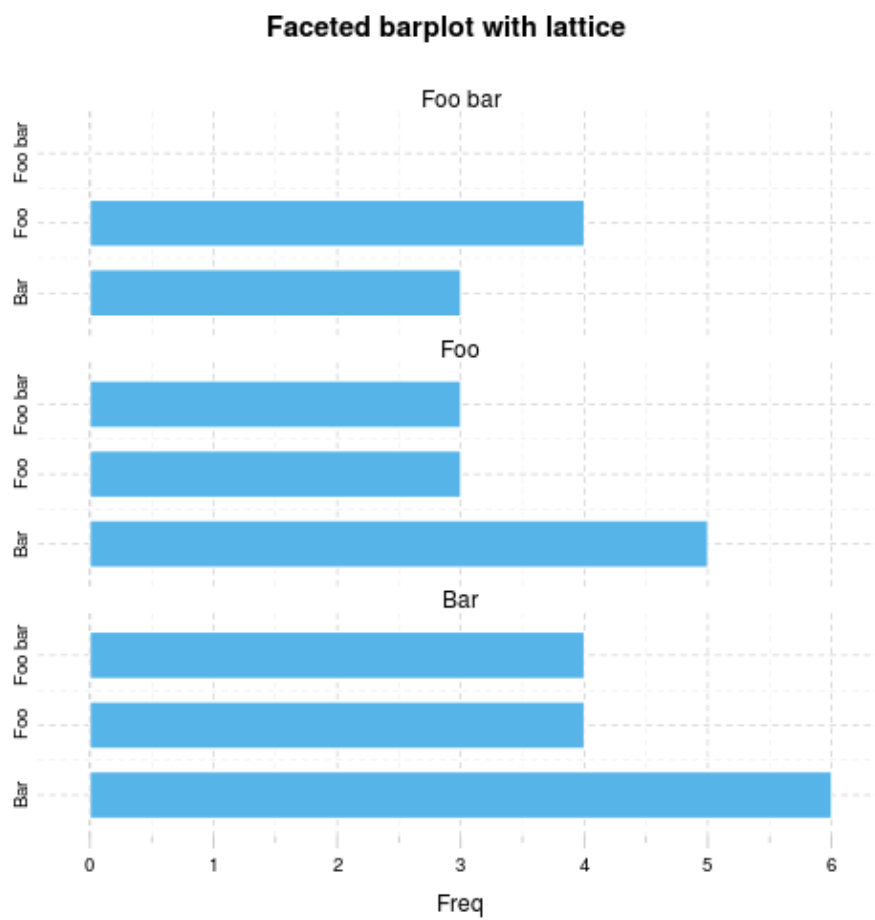


Figure 9:



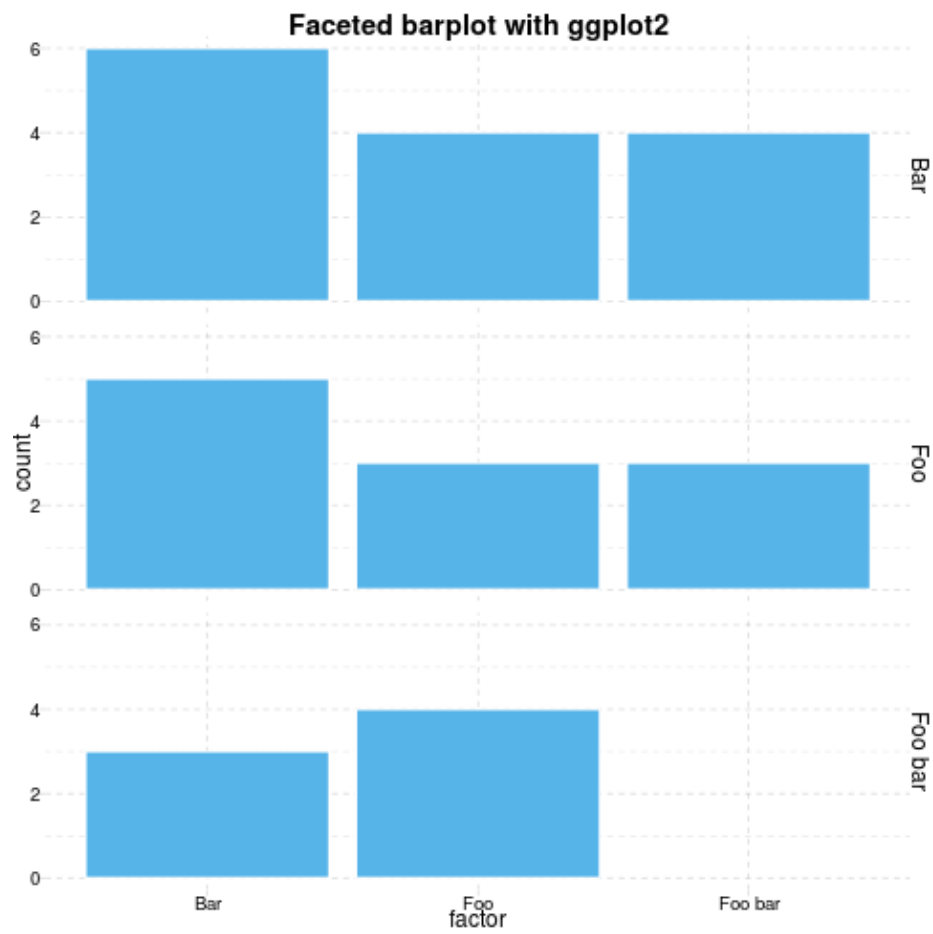


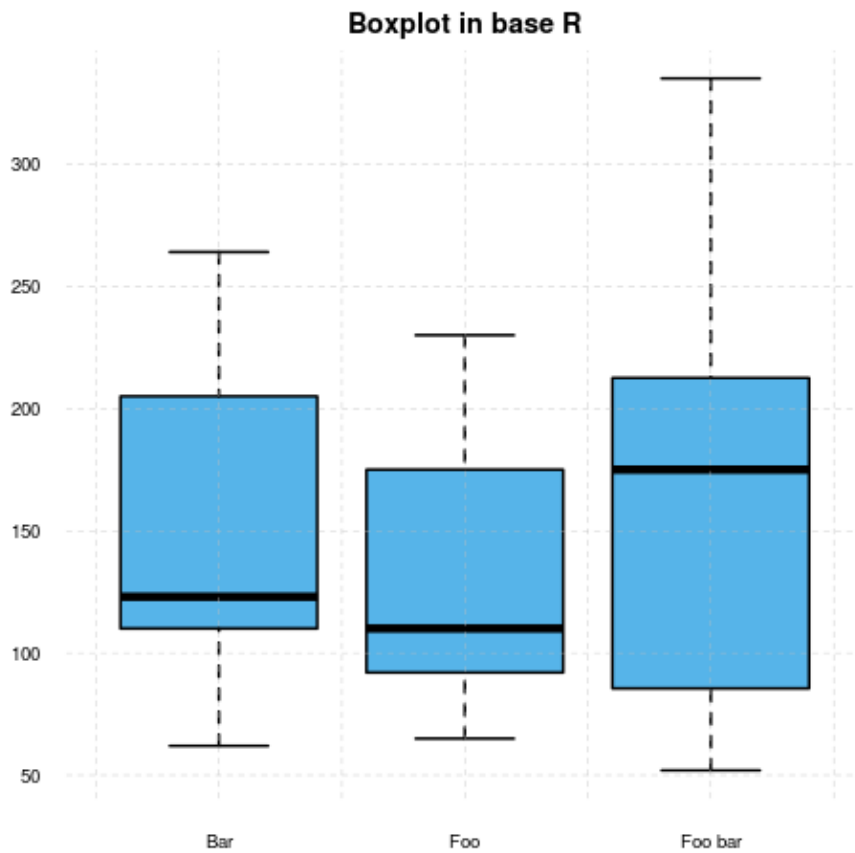
Figure 10:

`lattice`

`ggplot2`

Boxplot

Base R plot



#### **WARNING<sup>4</sup>**

<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!

<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!

lattice

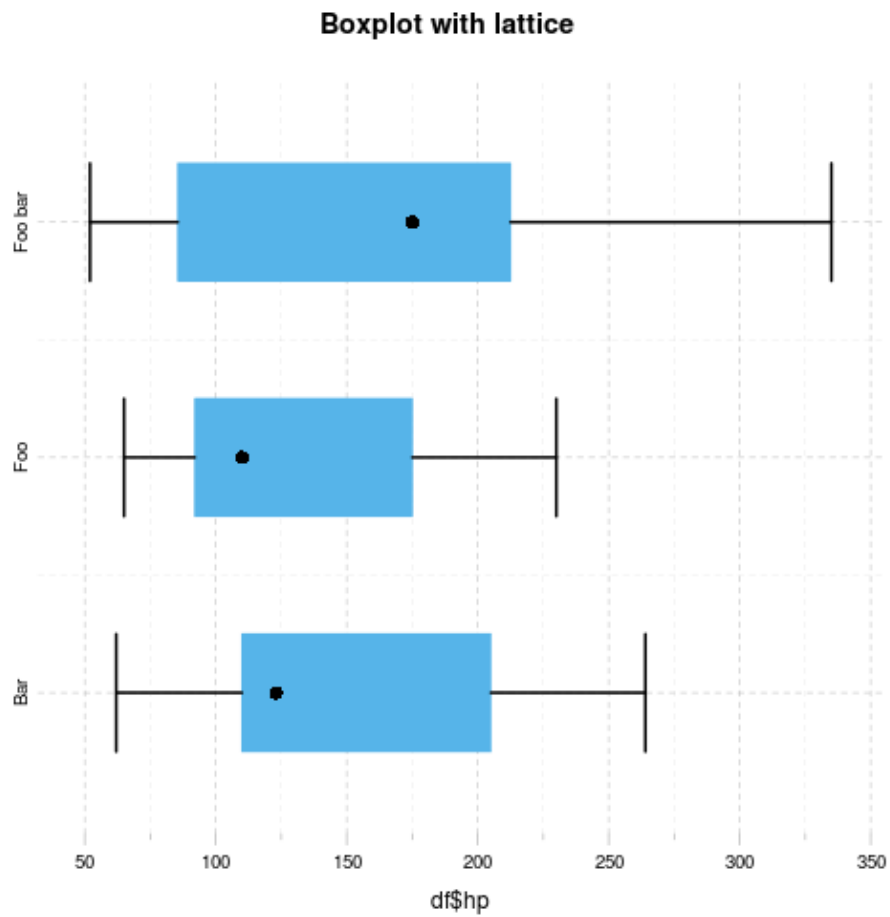


Figure 11:

ggplot2

Lines

Base R plot

ERROR<sup>5</sup>

---

<sup>5</sup>:1:1: unexpected '/' 1: / ^

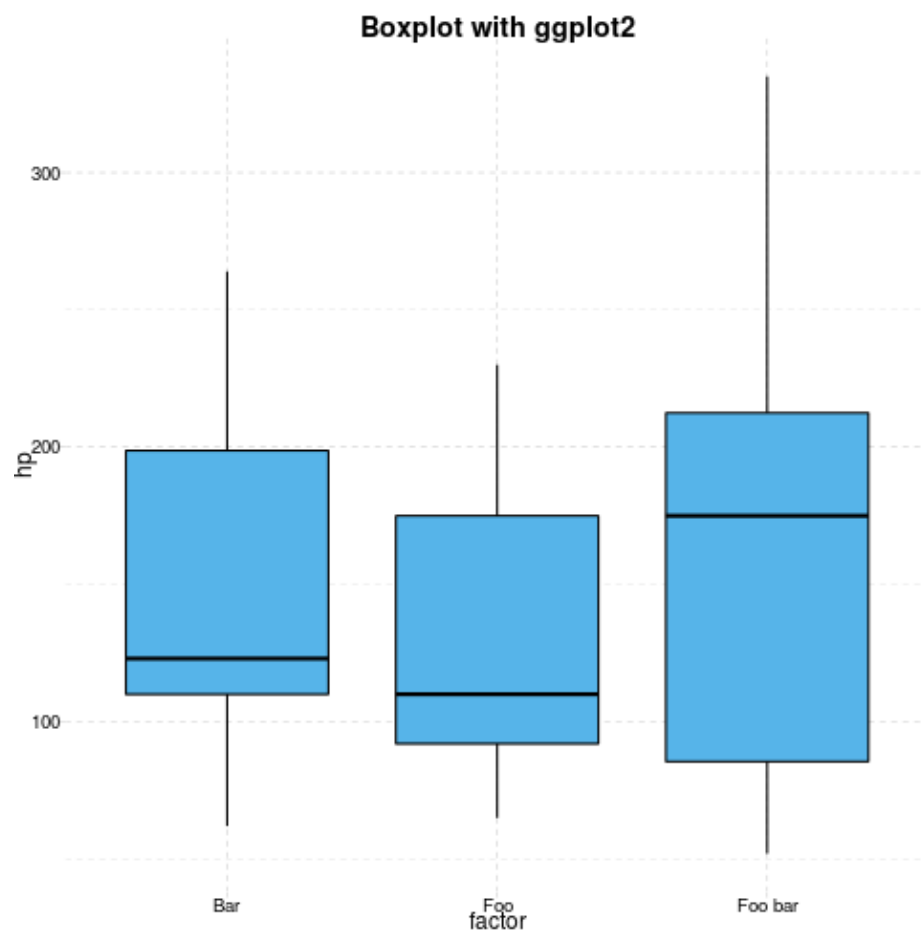


Figure 12:

lattice

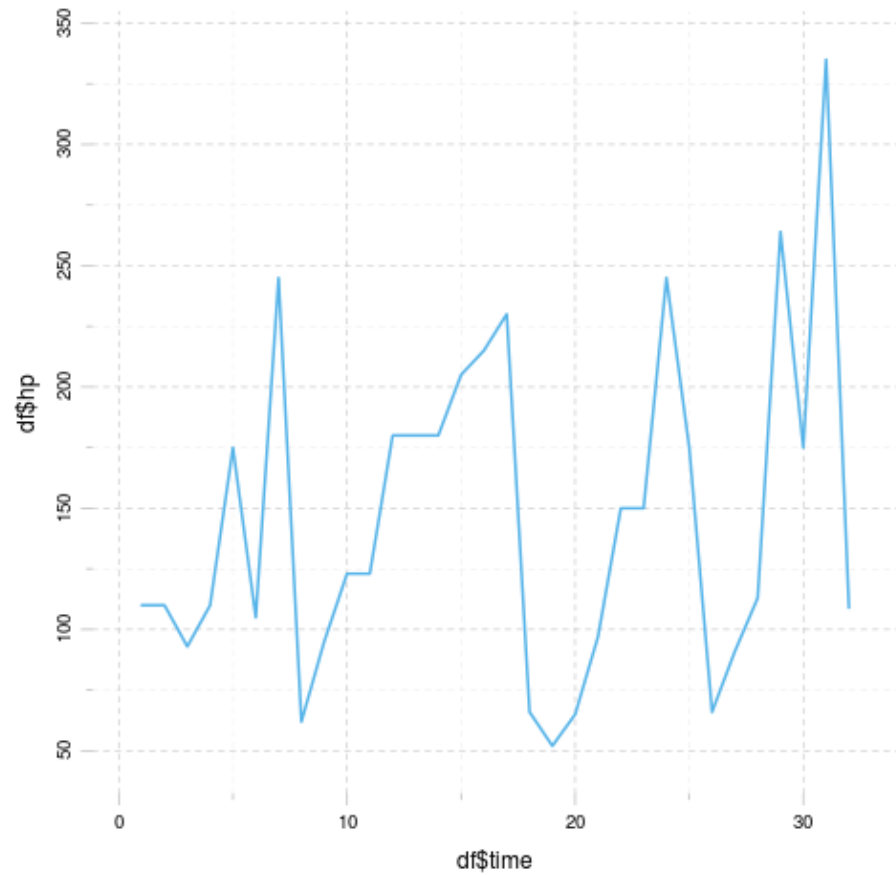


Figure 13:

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)
```

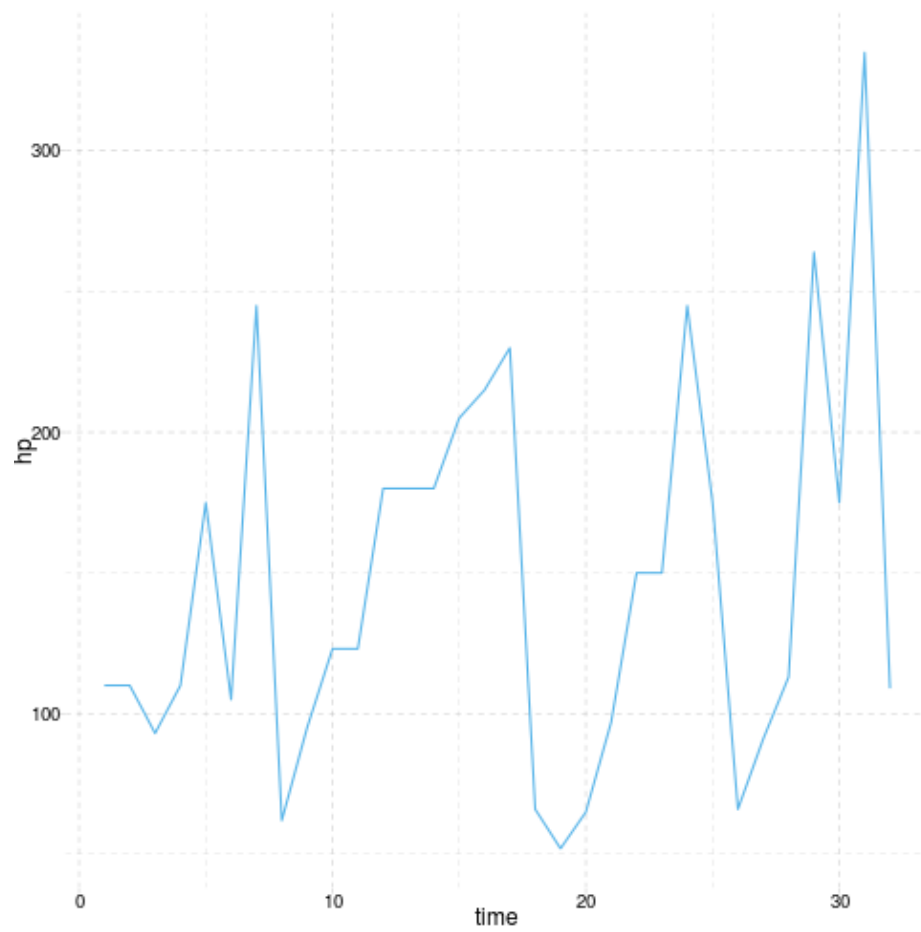


Figure 14:

```

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

```

## Histogram

Base R plot

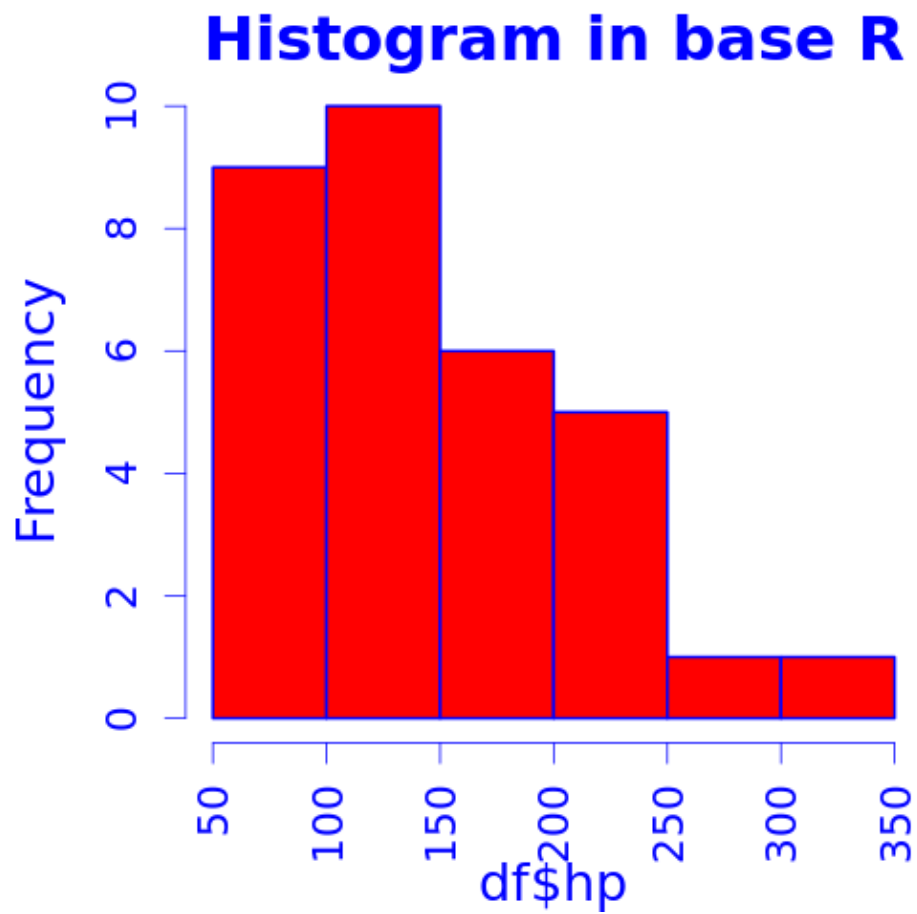


Figure 15:

`lattice`

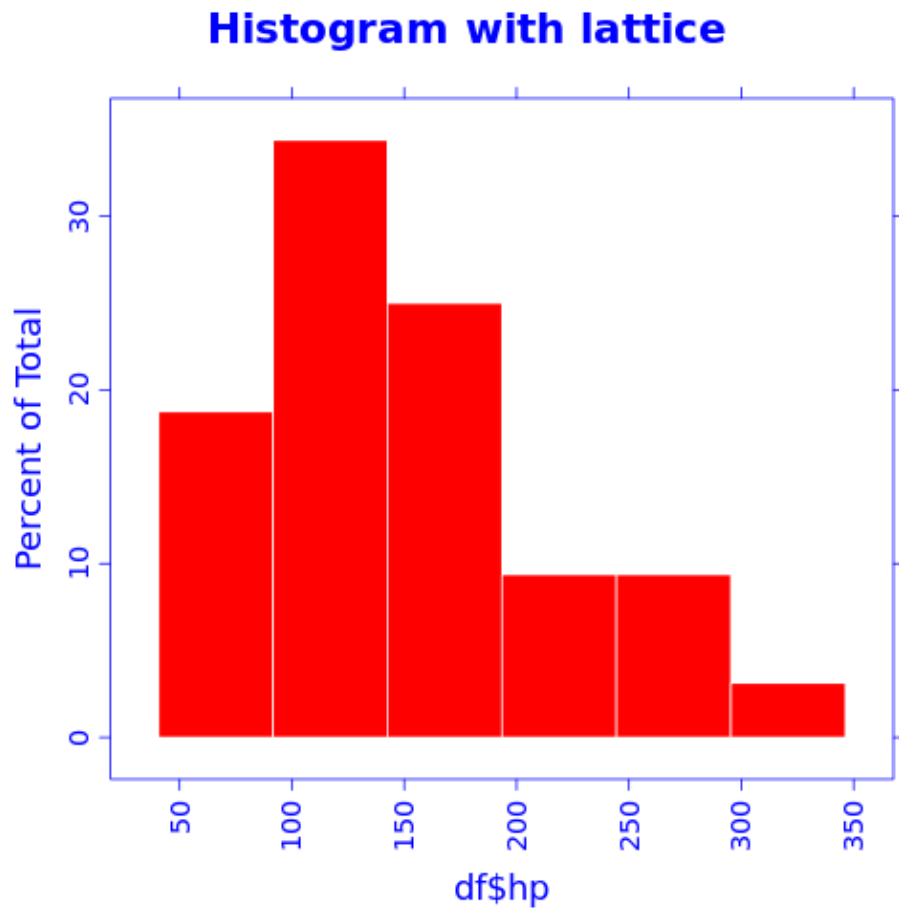


Figure 16:

`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:



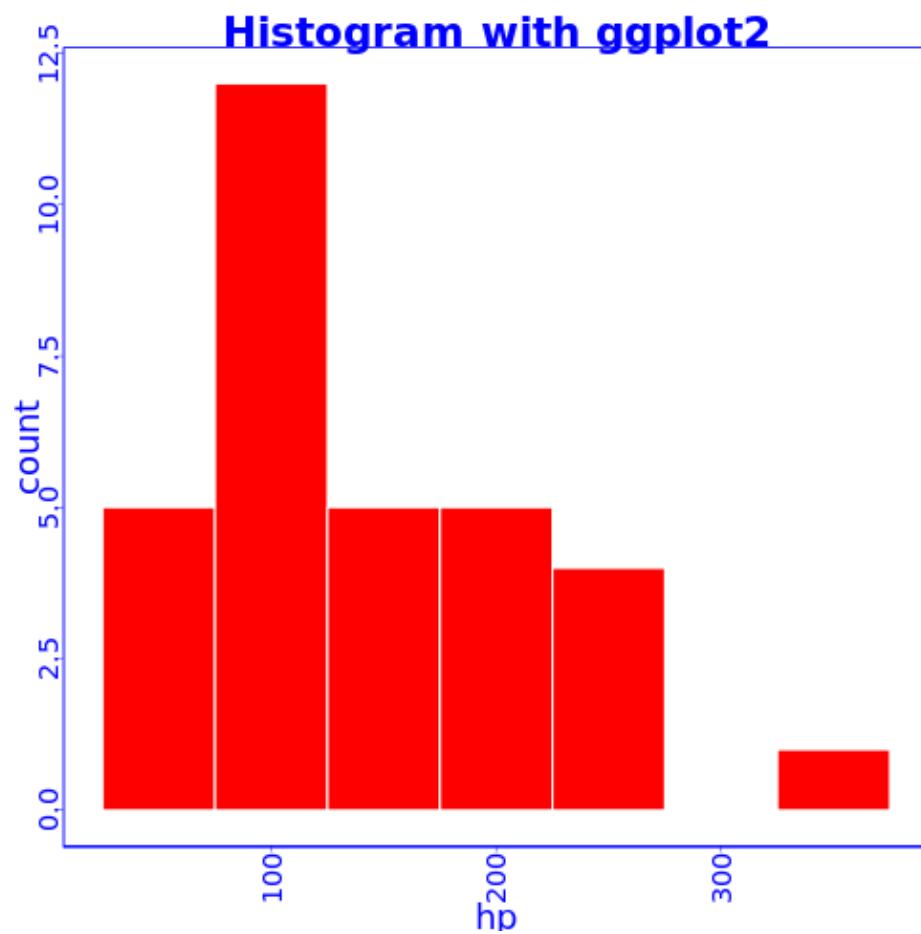


Figure 17:

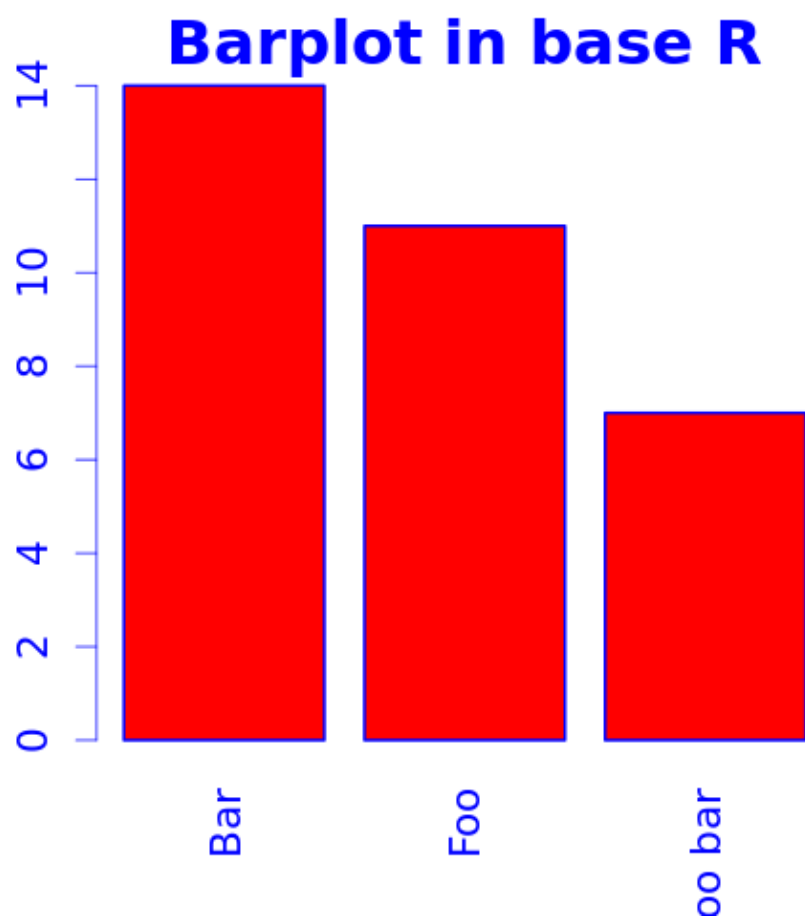


Figure 18:

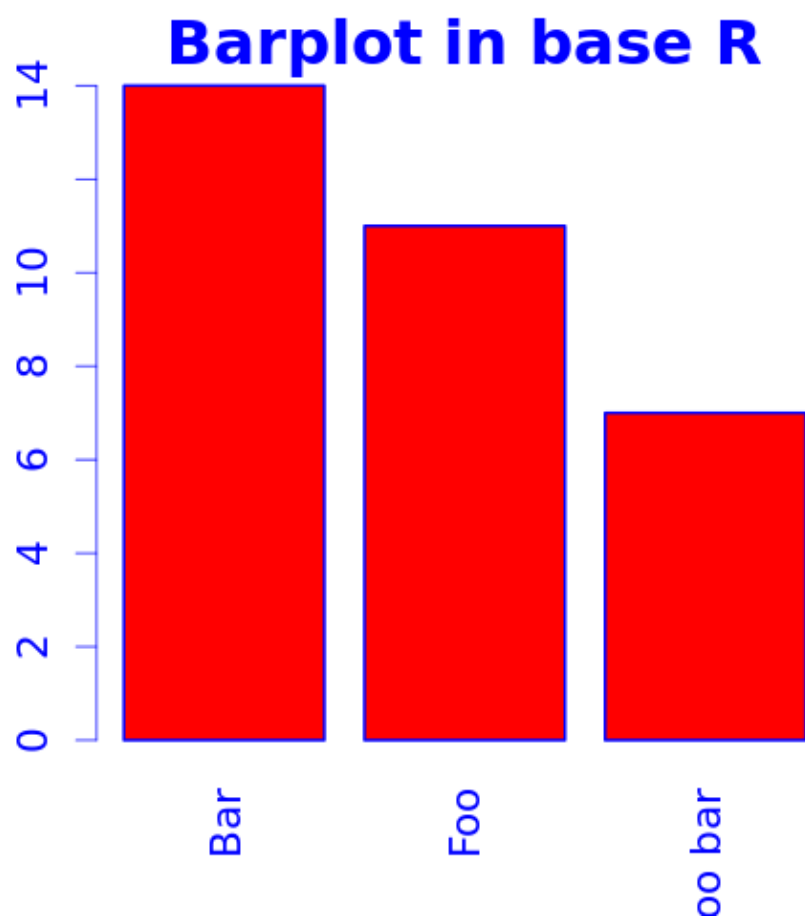


Figure 19:

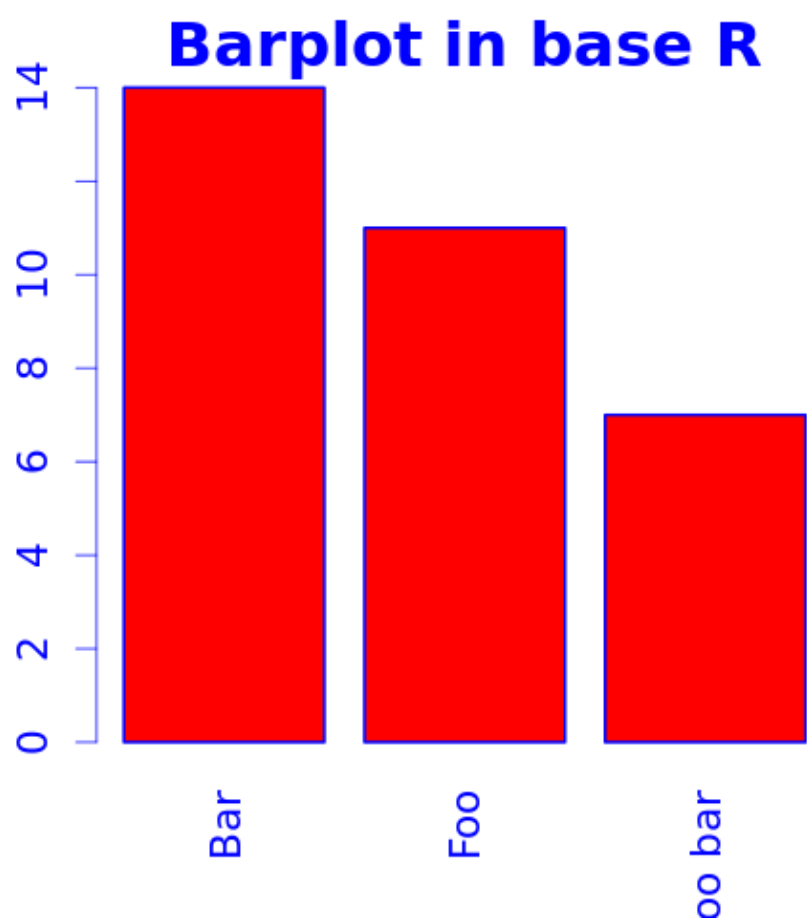


Figure 20:

lattice

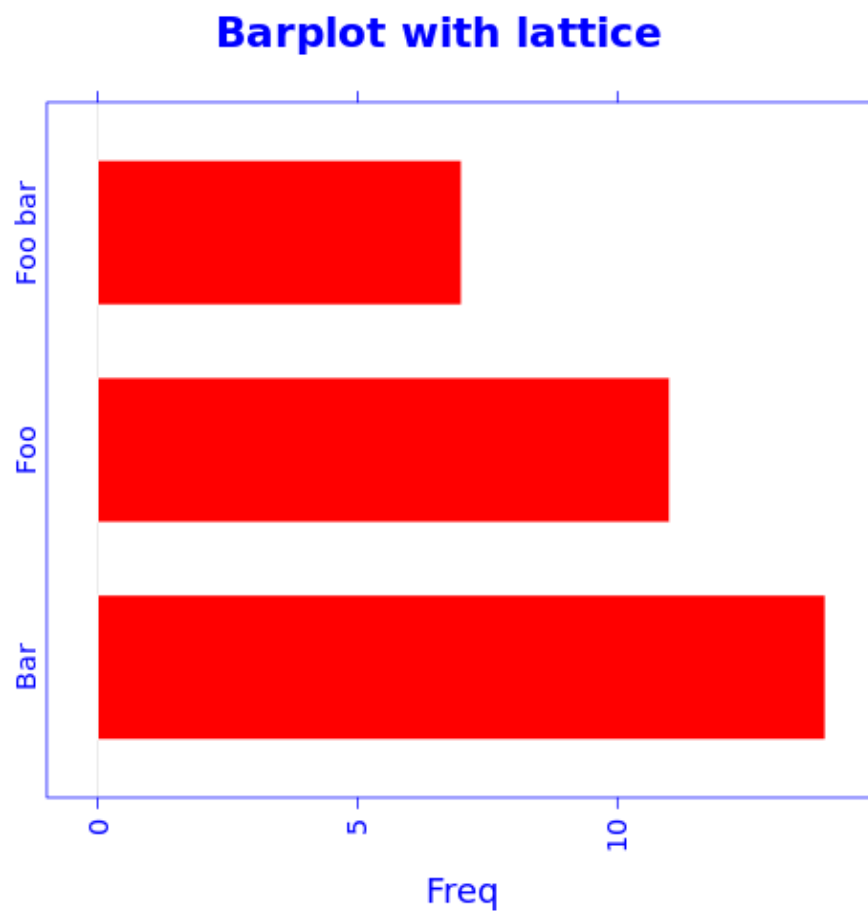


Figure 21:

ggplot2

Points

Base R plot

**ERROR**<sup>6</sup>

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<sup>6</sup>:1:1: unexpected '/' 1: / ^

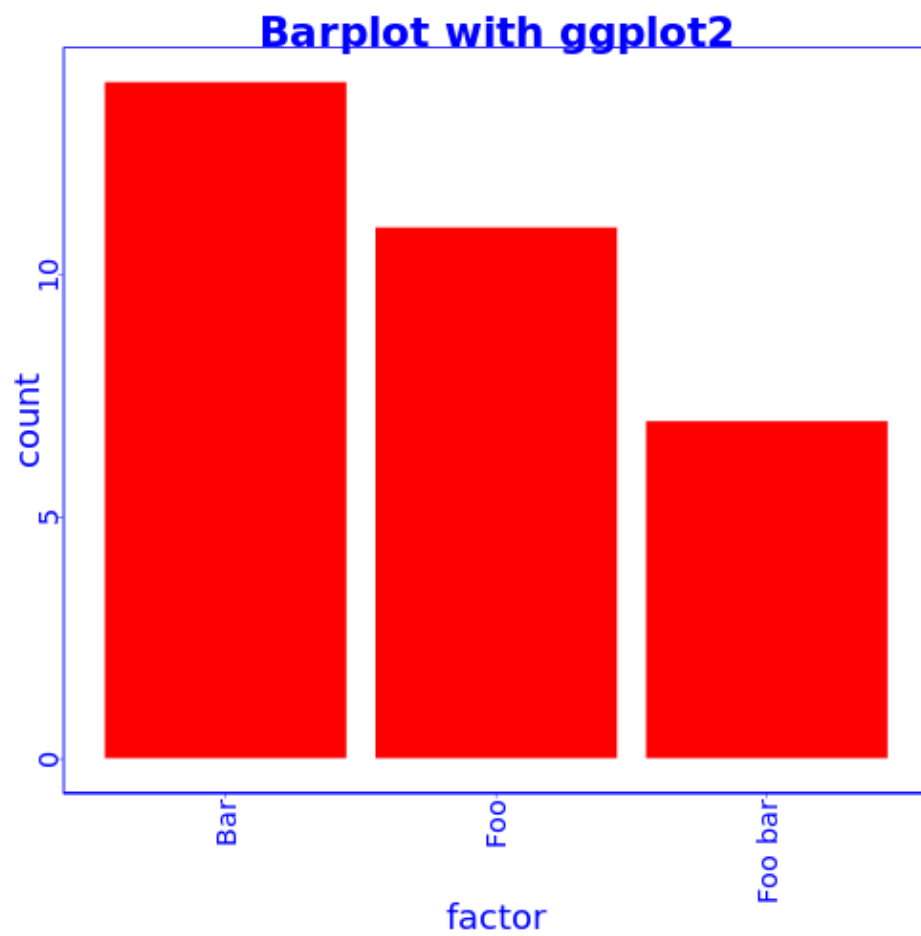


Figure 22:

lattice

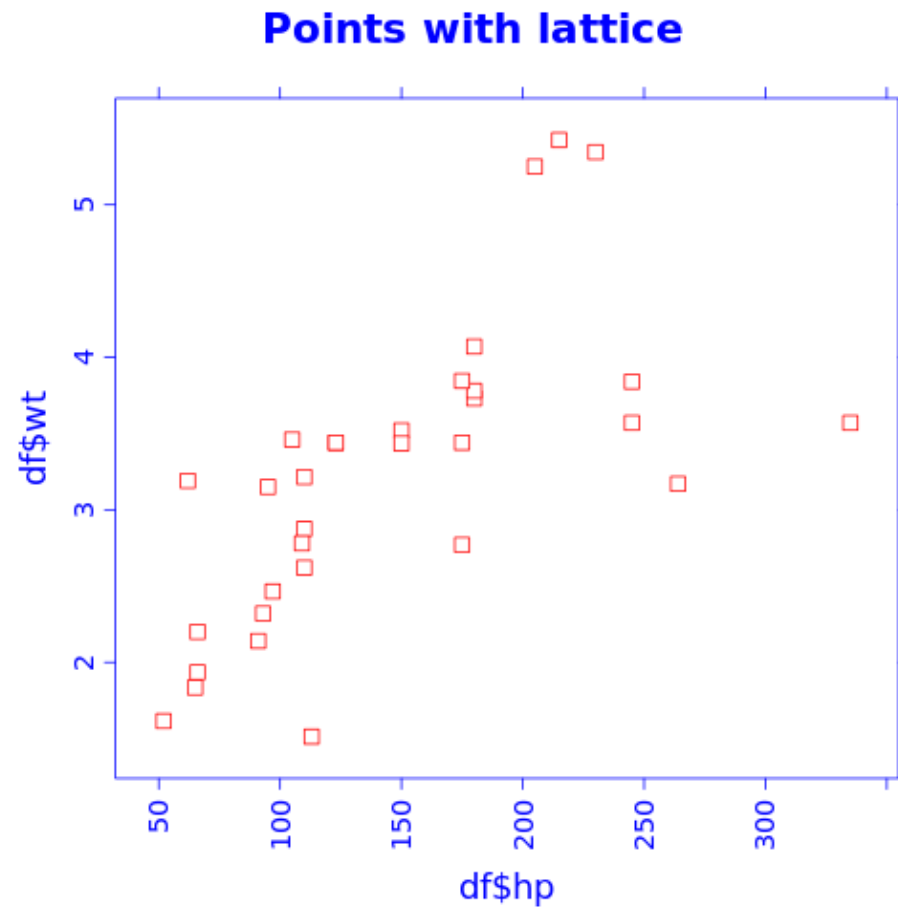


Figure 23:

ggplot2

Grouped plot

Base R plot

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

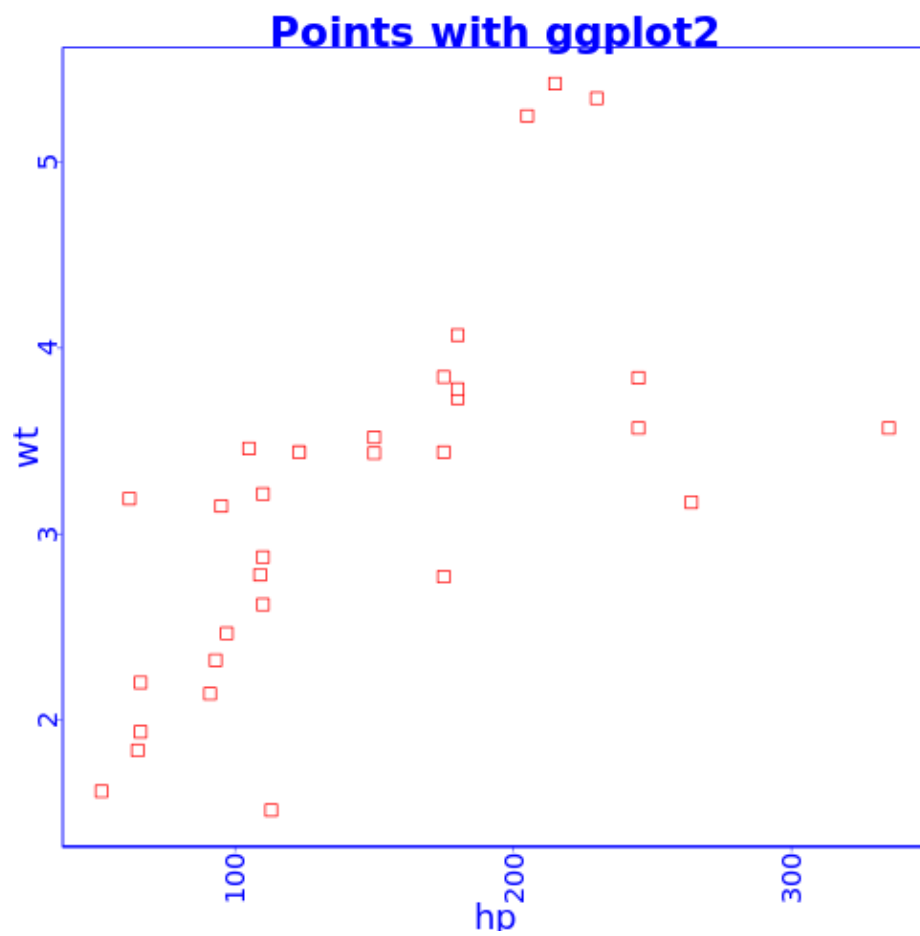


Figure 24:



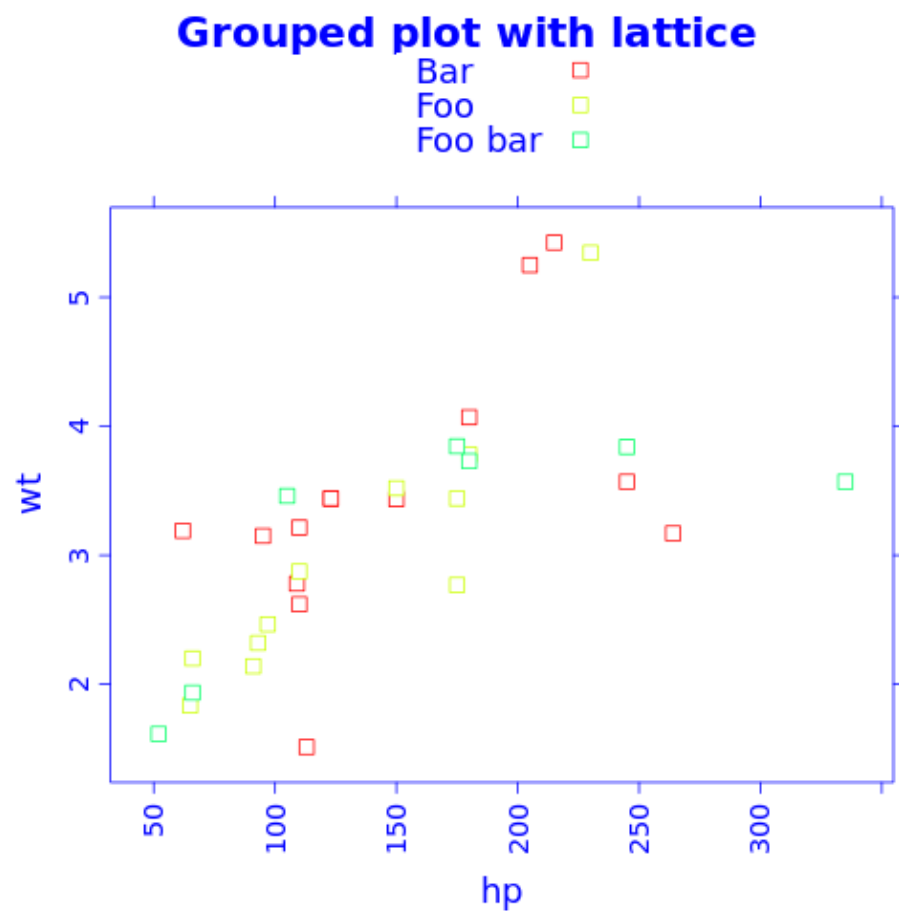


Figure 25:

lattice

ggplot2

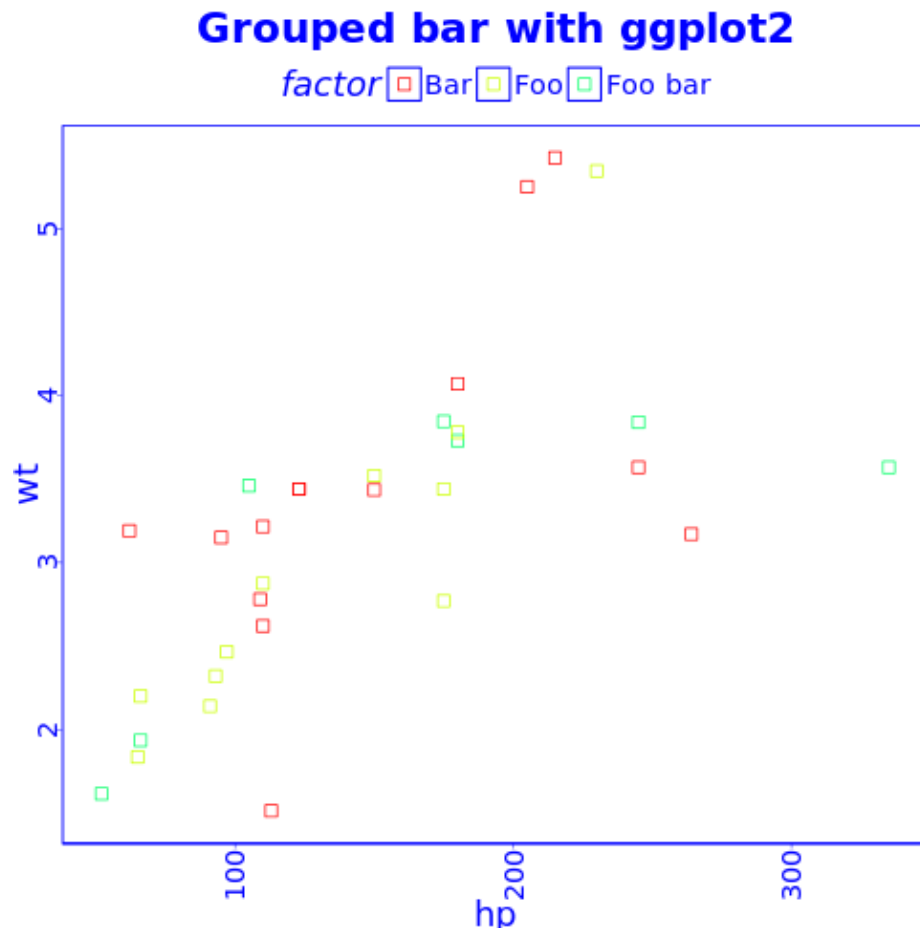


Figure 26:

Facets

Base R plot

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

## Faceted barplot with lattice

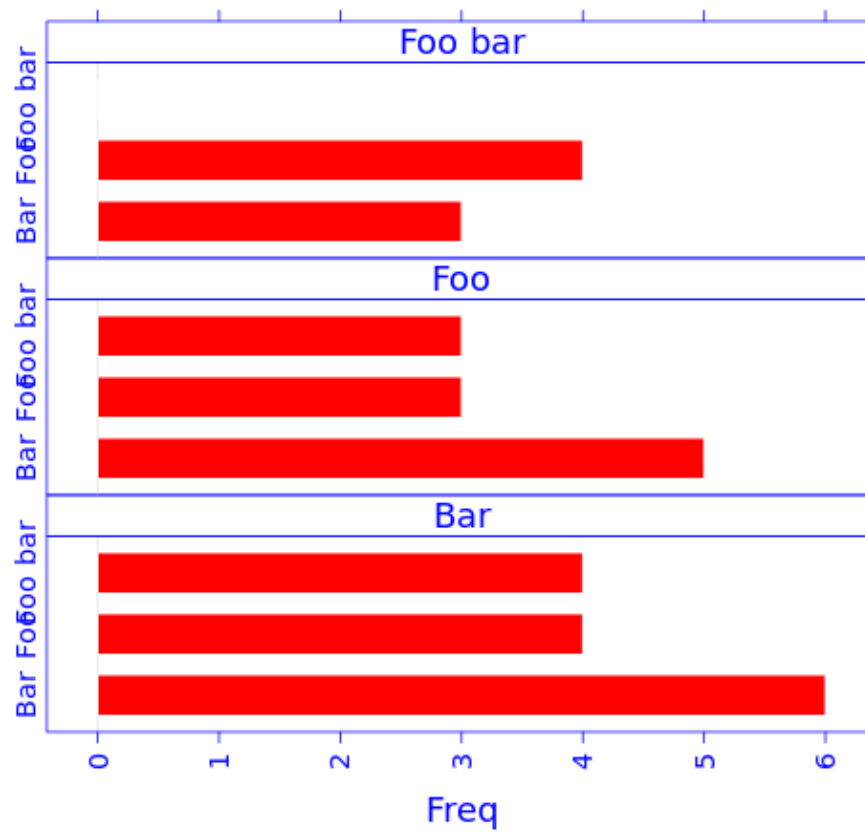


Figure 27:

lattice

ggplot2

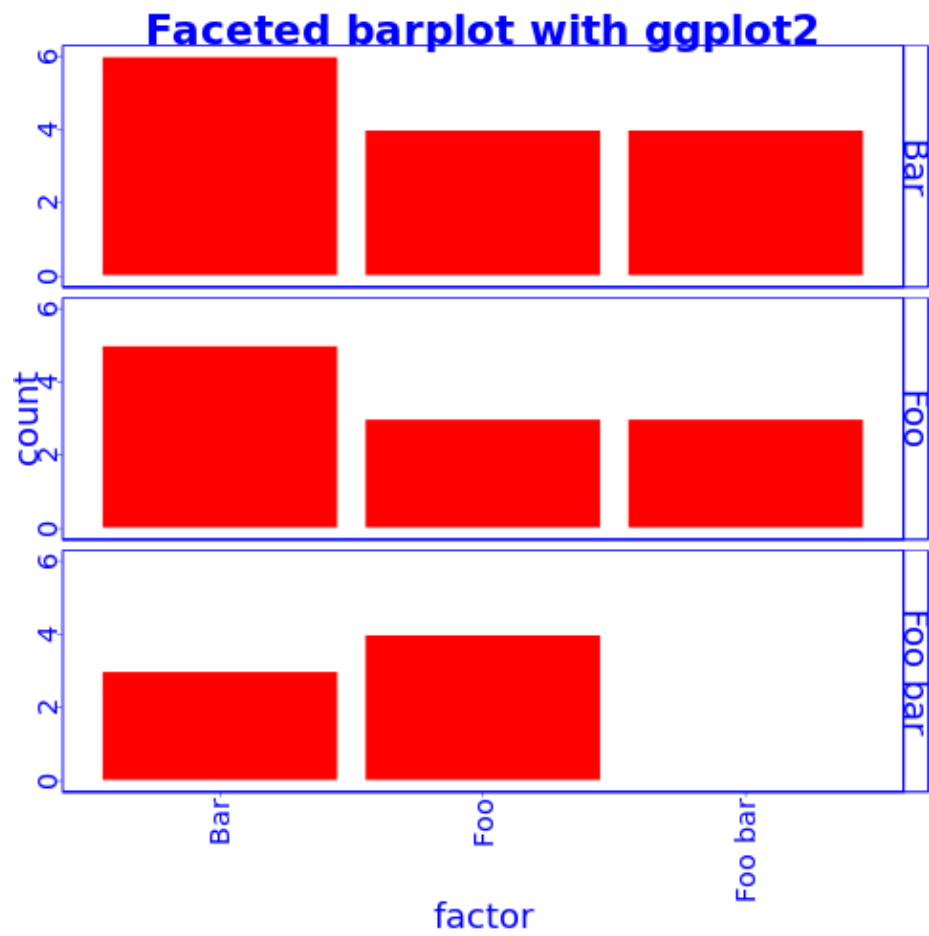


Figure 28:

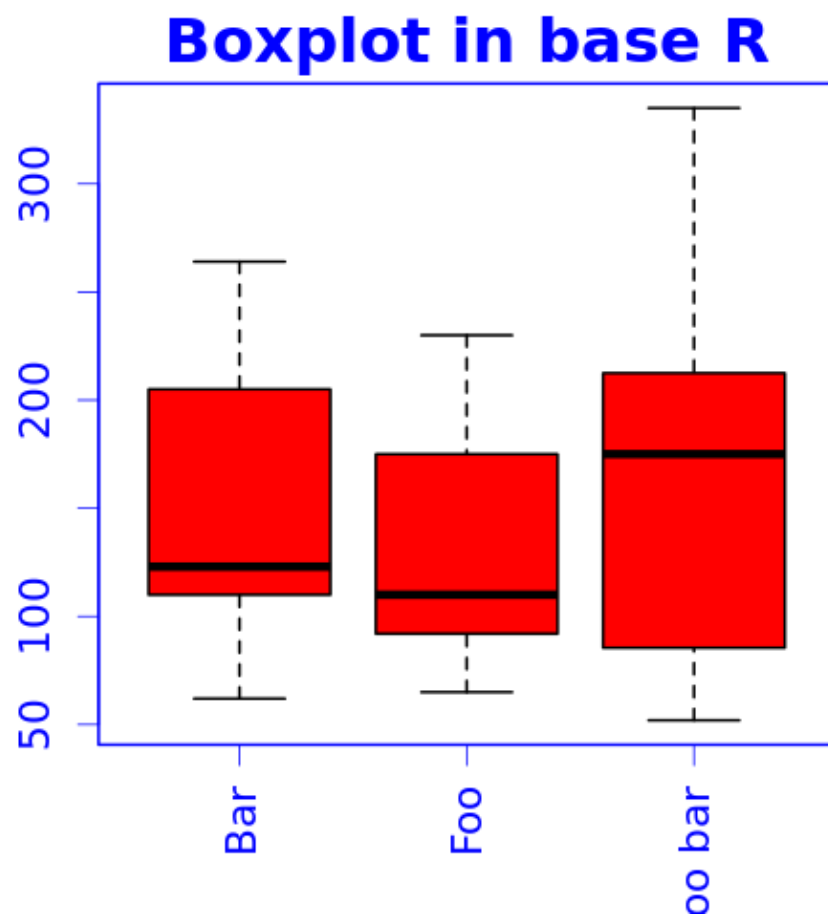


Figure 29:

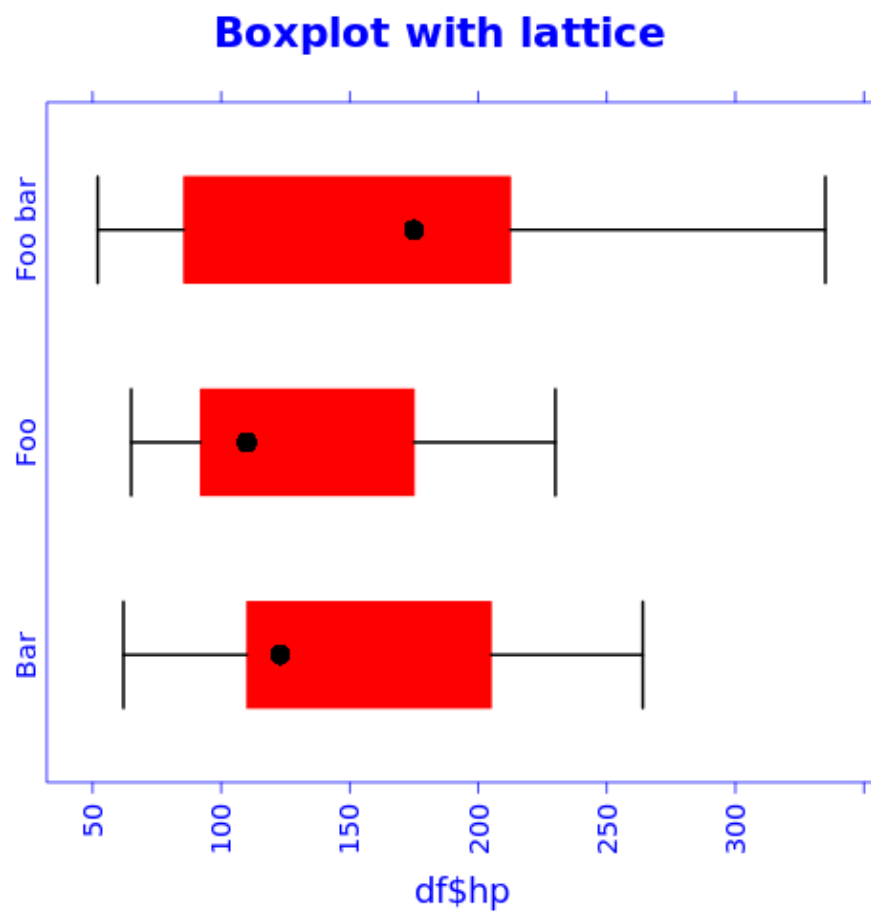


Figure 30:

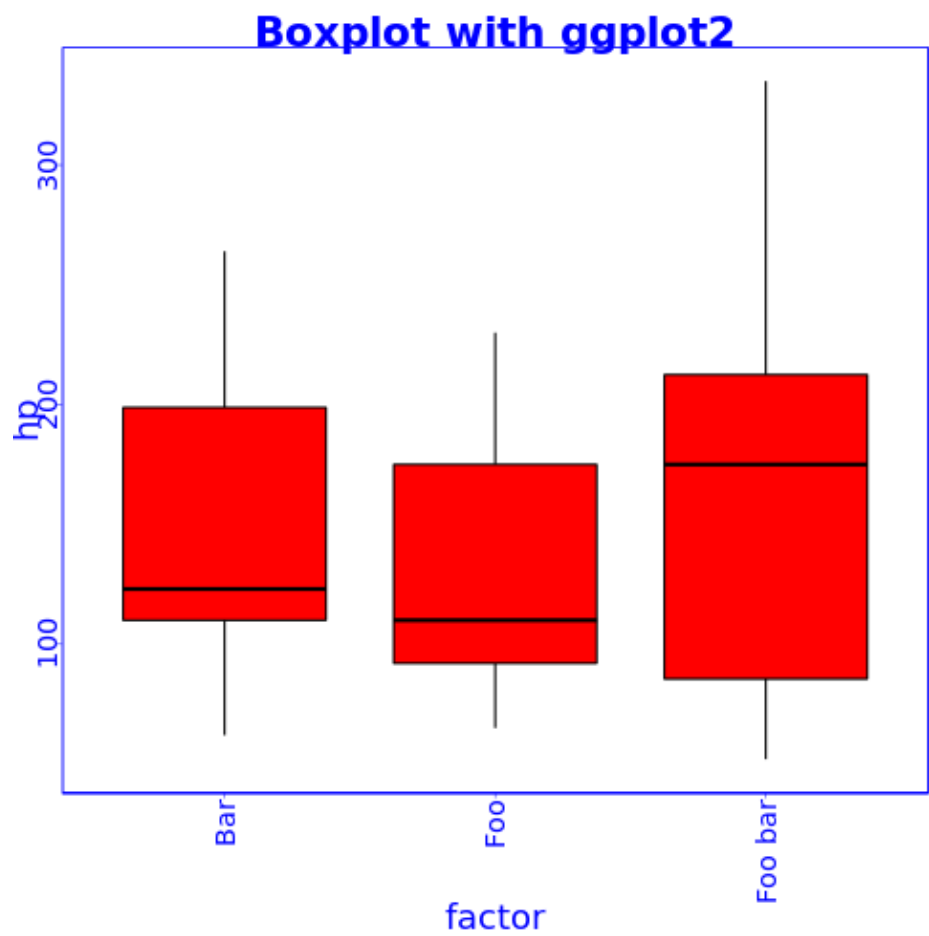


Figure 31:

## Boxplot

Base R plot

lattice

ggplot2

## Lines

Base R plot

ERROR<sup>7</sup>

lattice

ggplot2

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<sup>7</sup>:1:1: unexpected ‘/’ 1: / ^



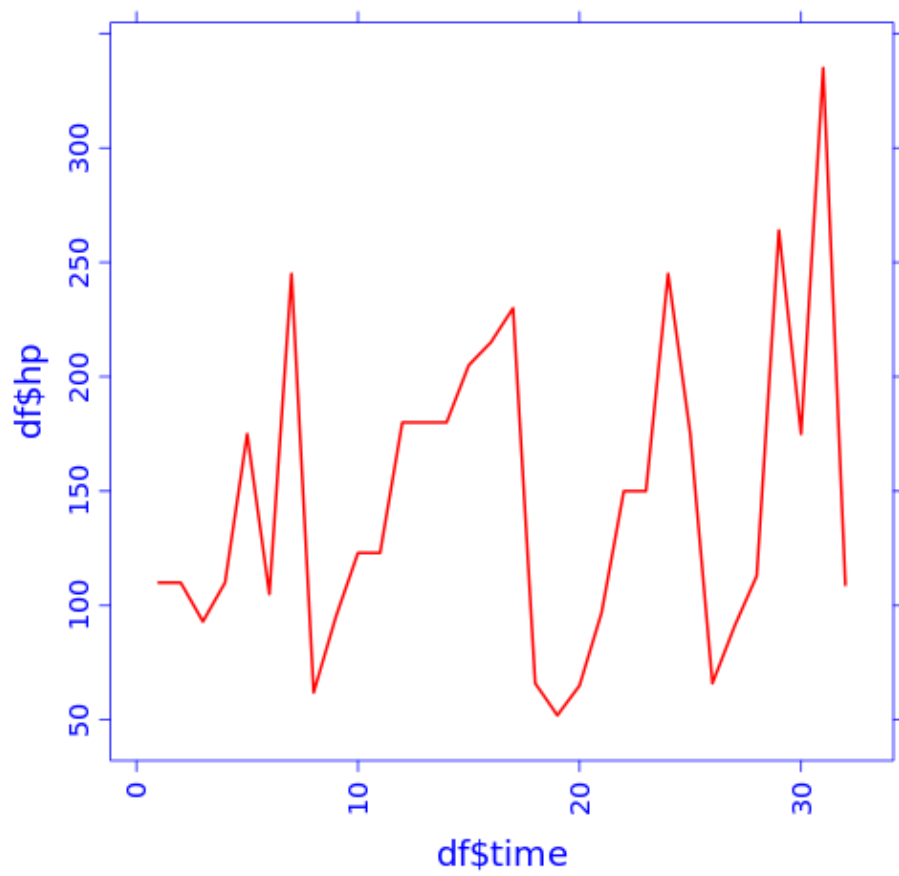


Figure 32:

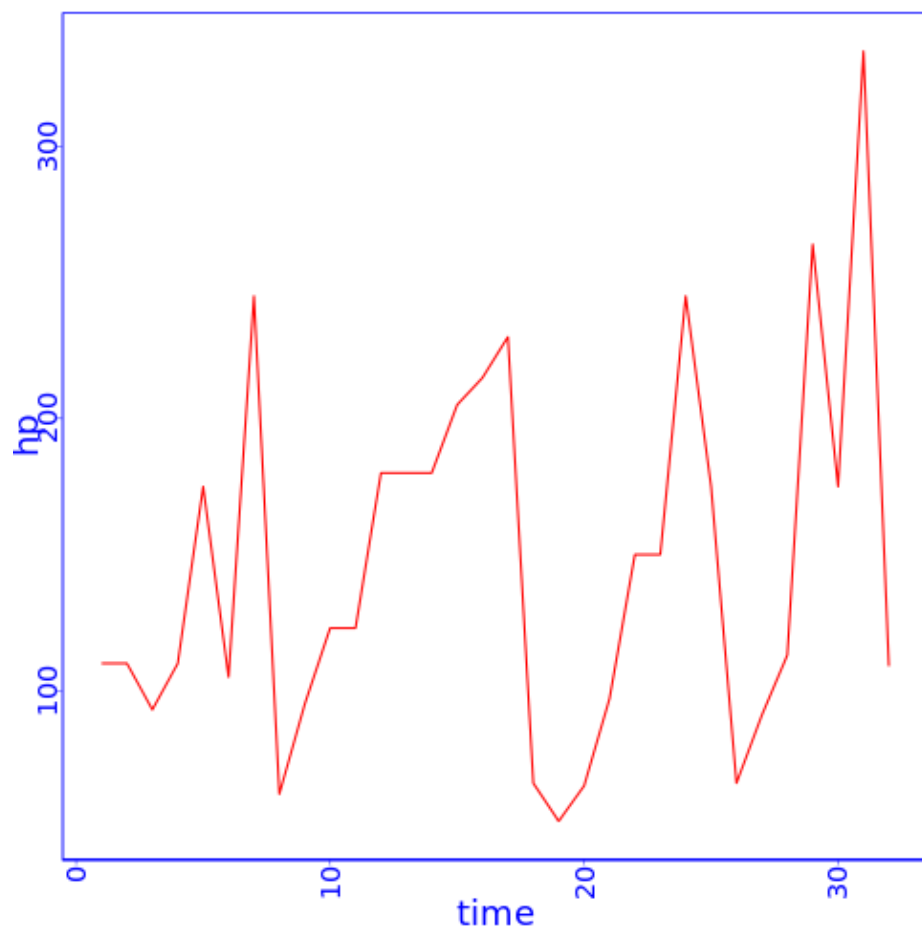


Figure 33: