

# R 中坐标轴截断的不同实现方式

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## 1 plotrix 包

R 语言作图——坐标轴截断画图

利用 `gap.barplot()` 进行绘制，将 `gap` 参数设置为 90, 420 进行 y 轴截断，可加入参数 `axis.break()` 对截断形状进行修改

```
library(plotrix)
```

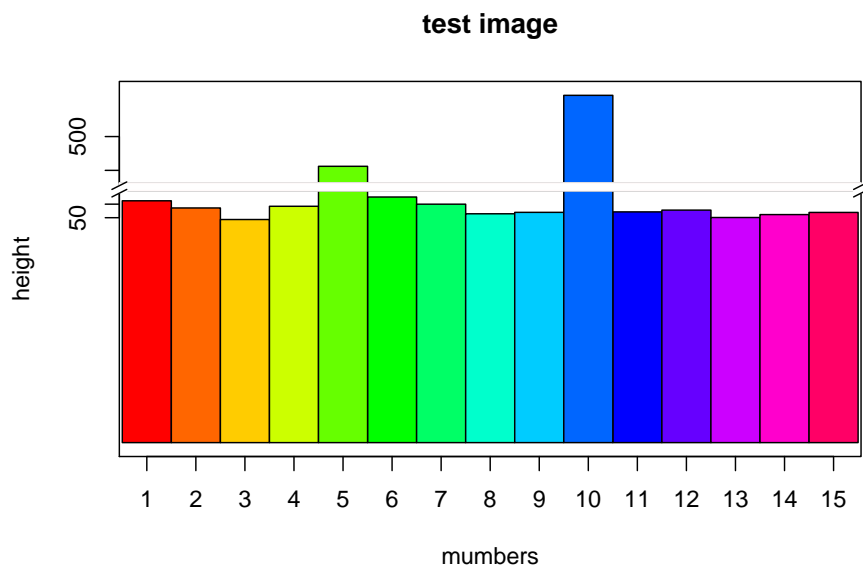
```
## Warning: package 'plotrix' was built under R version 3.6.3
```

```
w <- c(75, 64.4, 47.3, 66.9, 456, 80.6, 70, 55.8, 57.9, 561, 58.6, 61.2, 50.3, 54.6, 57.9)
x <- c(1:15)
```

```
gap.barplot(w,gap=c(90,420),xaxlab=x,ytics=c(50,70,450,500),col=rainbow(15),xlab ="mumb",ylab="mumb")
```

```
## ylim -282.7 231
```

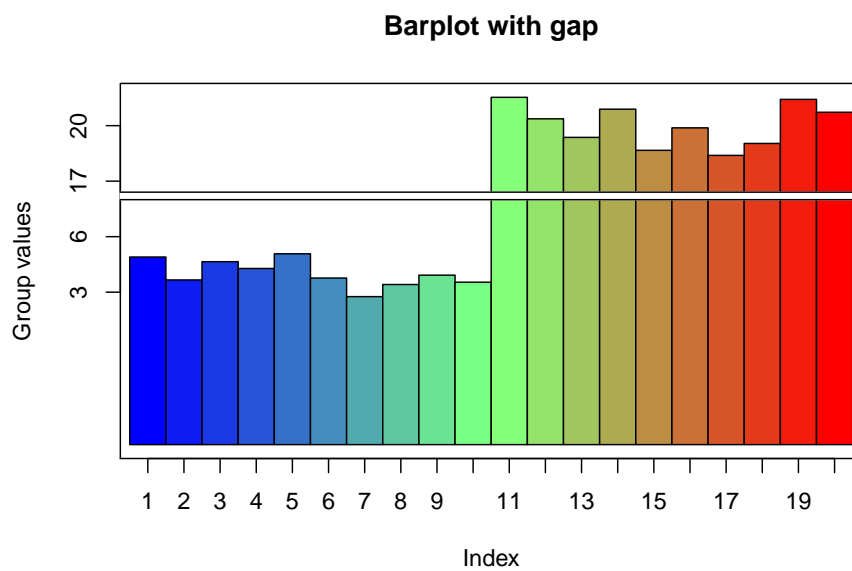
```
axis.break(2,90,breakcol="snow",style="gap")##去掉中间的那两道横线;
axis.break(2,90*(1+0.02),breakcol="black",style="slash")##在左侧Y轴把gap位置换成slash;
axis.break(4,90*(1+0.02),breakcol="black",style="slash")##在右侧Y轴把gap位置换成slash;
```



- 其他案例

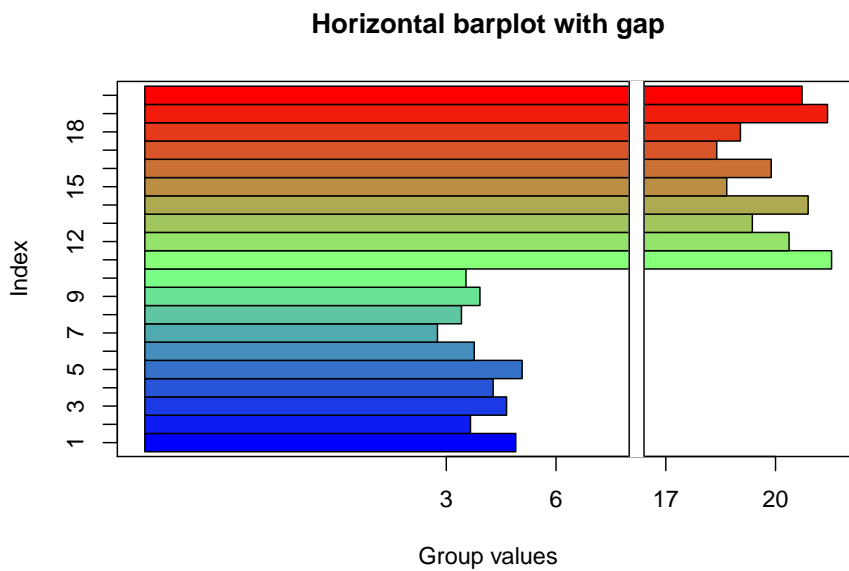
```
twogrp<-c(rnorm(10)+4,rnorm(10)+20)
gap.barplot(twogrp,gap=c(8,16),xlab="Index",ytics=c(3,6,17,20),
  ylab="Group values",main="Barplot with gap")
```

```
## ylim -5.241 13.53
```



```
gap.barplot(twogrp,gap=c(8,16),xlab="Index",ytics=c(3,6,17,20),  
  ylab="Group values",horiz=TRUE,main="Horizontal barplot with gap")
```

```
## ylim -5.241 13.53
```

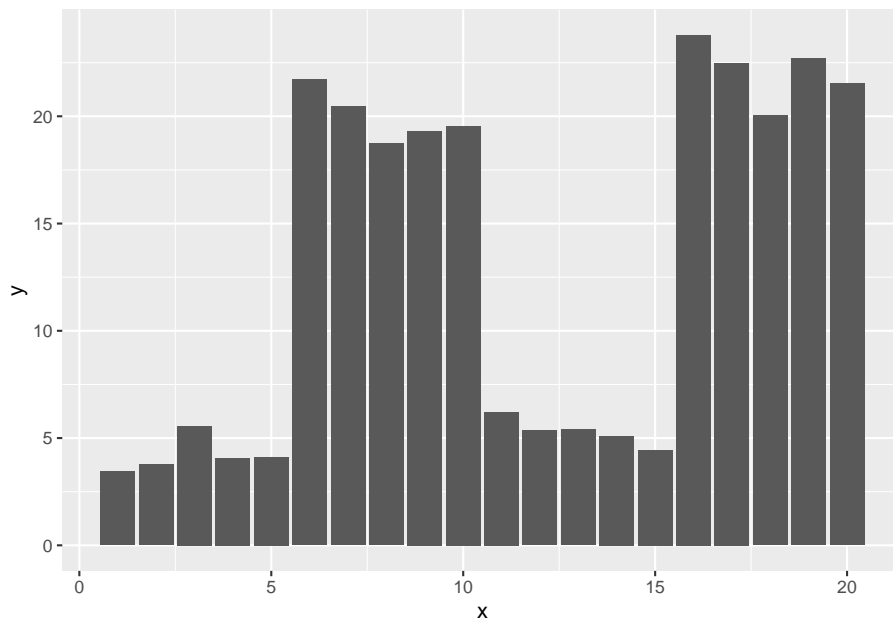


## 2 ggplot 包

ggplot 坐标轴截断

```
library(ggplot2)
set.seed(123)
d <- data.frame(
  x = 1:20,
  y = c(rnorm(5) + 4, rnorm(5) + 20, rnorm(5) + 5, rnorm(5) + 22)
)

ggplot(d, aes(x, y)) + geom_col()
```



```
library(dplyr)

breaks = c(7, 17)
d$type <- NA
d$type[d$y < breaks[1]] = "small"
d$type[d$y > breaks[2]] = "big"

d <- filter(d, type == 'big') %>%
  mutate(type = "small", y = breaks[1]) %>%
  bind_rows(d)

mymin = function(y) ifelse(y <= breaks[1], 0, breaks[2])
p <- ggplot(d, aes(x, y)) +
  geom_rect(aes(xmin = x - .4, xmax = x + .4, ymin = mymin(y), ymax = y)) +
  facet_grid(type ~ ., scales = "free") +
  theme(strip.text=element_blank())#去除text
p
```

