R: Presenting outputs

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CRAN Task View

CRAN Task View: Reproducible Research

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URL: https://CRAN.R-project.org/view=ReproducibleResearch

The goal of reproducible research is to tie specific instructions to data analysis and experimental data so that scholarship can be recreated, better understood and verified. Packages in R for this purpose can be split into groups for: literate programming, package reproducibility, code/data formatting tools, format convertors, and object caching.

Literate Programming

The primary way that R facilitates reproducible research is using a document that is a combination of content and data analysis code. The `Sweave` function (in the base R utils package) and the knitr package can be used to blend the subject matter and R code so that a single document defines the content and the analysis. The brew and R.rsp packages contain alternative approaches to embedding R code into various markups.

The resources for literate programming are best organized by the document type/markup language:

LaTeX

Both `Sweave` and knitr can process LaTeX files. lazyWeave can create LaTeX documents from scratch.

Object Conversion Functions:

- *summary tables/statistics* : Hmisc, NMOF, papeR, quantreg, rapport, reporttools, sparktex, tables, xtable, ztable
- *tables/cross-tabulations* : compareGroups, Hmisc, lazyWeave, knitLatex, knitr, reporttools, ztable
- *graphics* : animation, Hmisc, `grDevices:::pictex`, sparktex, tikzDevice
- *statistical models/methods* : apsrtable, memisc, quantreg, r2lh, rms, stargazer, suRtex, TeachingSampling, texreg, xtable, ztable
- *bibtex* : bibtex and RefManageR
- *others* : latex2exp converts LaTeX equations to `plotmath` expressions.

Miscellaneous Tools

- Hmisc contains a function to correctly escape special characters. resumer creates resumes. Standardized exams can be created using the exams package.

HTML

The knitr package can process HTML files directly. `Sweave` can also work with HTML by way of the R2HTML package. Kmisc and lazyWeave can create HTML format documents from scratch.

Object Conversion Functions:

- *summary tables/statistics* : stargazer
- *tables/cross-tabulations* : compareGroups, DT, formattable, htmlTable, HTMLUtils, hwriter, Kmisc, knitr, lazyWeave, SortableHTMLTables, texreg, ztable
- *statistical models/methods* : r2lh, rapport, stargazer, xtable
- *others* : knitcitations, RefManageR

Figure 1:

Scatter plot: add points of different colours and symbols

class: small-code

Scatter plot: add points of different colours and symbols

```
points(x, y = NULL, type = "p", ...)
```

```
x <- rnorm(10, sd=5, mean=20)
y <- 2.5*x - 1.0 + rnorm(10, sd=9, mean=0)
plot(x,y,xlab="Independent", ylab="Dependent", main="Random Stuff")

x1 <- runif(8,15,25)
y1 <- 2.5*x1 - 1.0 + runif(8,-6,6)
??

x2 <- runif(8,15,25)
y2 <- 2.5*x2 - 1.0 + runif(8,-6,6)
??
```

Scatter plot: legend

'legend(x, y = NULL, legend, fill = NULL, col = par("col"), border = "black", lty, lwd, pch, angle = 45, density = NULL, bty = "o", bg = par("bg"), box.lwd = par("lwd"), box.lty = par("lty"), box.col = par("fg"), pt.bg = NA, cex = 1, pt.cex = cex, pt.lwd = lwd, xjust = 0, yjust = 1, x.intersp = 1, y.intersp = 1, adj = c(0, 0.5), text.width = NULL, text.col = par("col"), text.font = NULL, merge = do.lines && has.pch, trace = FALSE, plot = TRUE, ncol = 1, horiz = FALSE, title = NULL, inset = 0, xpd, title.col = text.col, title.adj = 0.5, seg.len = 2)'

```
plot(x,y,xlab="Independent",ylab="Dependent",main="Random Stuff")
points(x1,y1,col=2,pch=3)
points(x2,y2,col=4,pch=5)
???
```

Simple fitted lines

```
abline(a = NULL, b = NULL, h = NULL, v = NULL, reg = NULL,        coef = NULL, untf =
FALSE, ...)
```

```
lm(formula, data, subset, weights, na.action,    method = "qr", model = TRUE, x = FALSE,
y = FALSE, qr = TRUE,    singular.ok = TRUE, contrasts = NULL, offset, ...)
```

```
lowess(x, y = NULL, f = 2/3, iter = 3, delta = 0.01 * diff(range(x)))
```

```
x <- rnorm(10,sd=5,mean=20)
y <- 2.5*x - 1.0 + rnorm(10,sd=9,mean=0)
x2 <- runif(8,15,25)
y2 <- 2.5*x2 - 1.0 + runif(8,-6,6)

plot(x,y,xlab="Independent",ylab="Dependent",main="Random Stuff")
points(x1,y1,col=2,pch=3)
```


0:
10:
20:
A: A
1:
11:
21:
a: a
2:
12:
22:
B: B
3:
13:
23:
b: b
4:
14:
24:
S: S
5:
15:
25:
`: `
6:
16:
@: @
. : .
7:
17:
+: +
,: ,
8:
18:
%: %
?: ?
9:
19:
#: #
*: *

Figure 2:

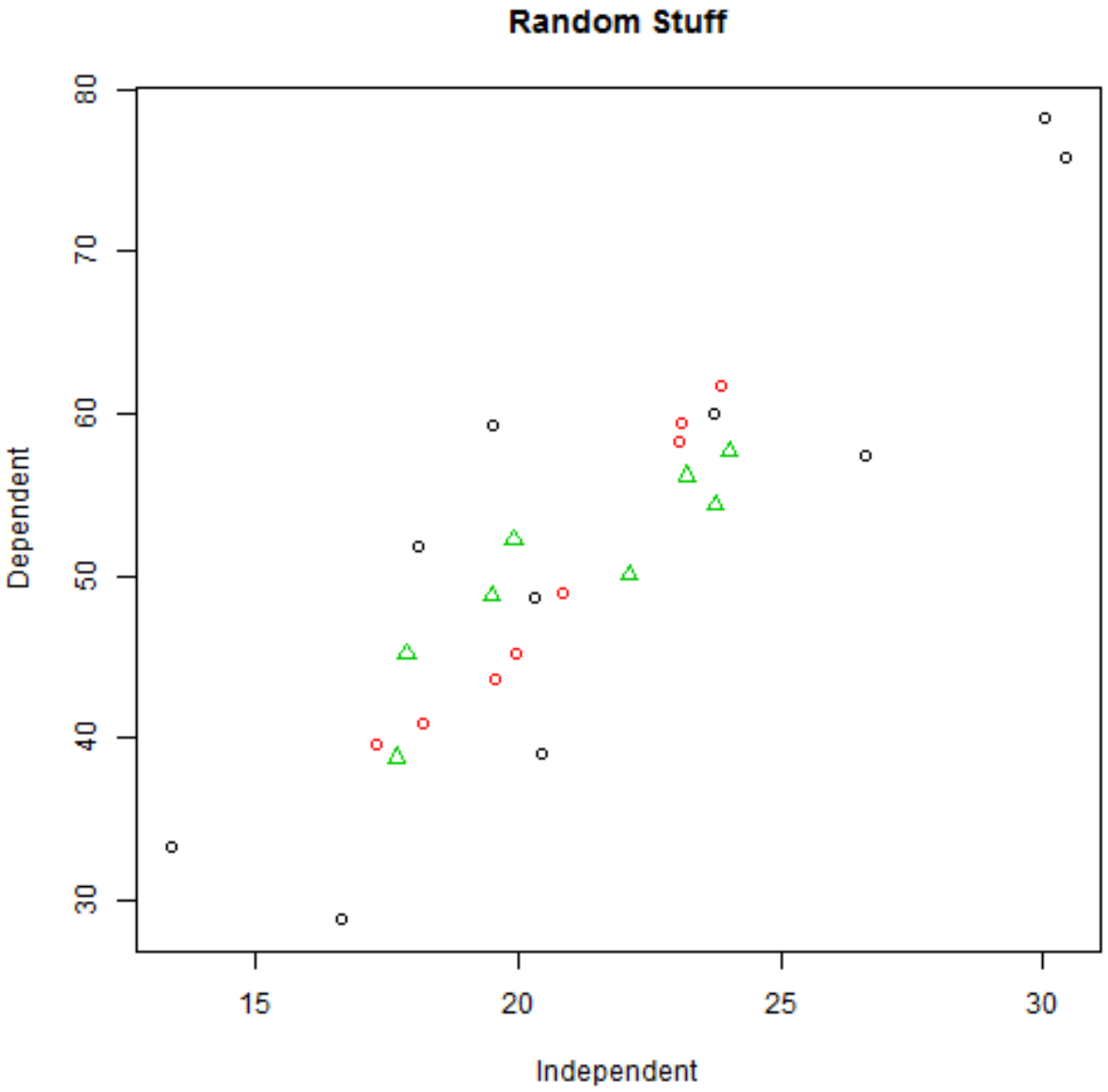

Figure 3: plot of chunk unnamed-chunk-2

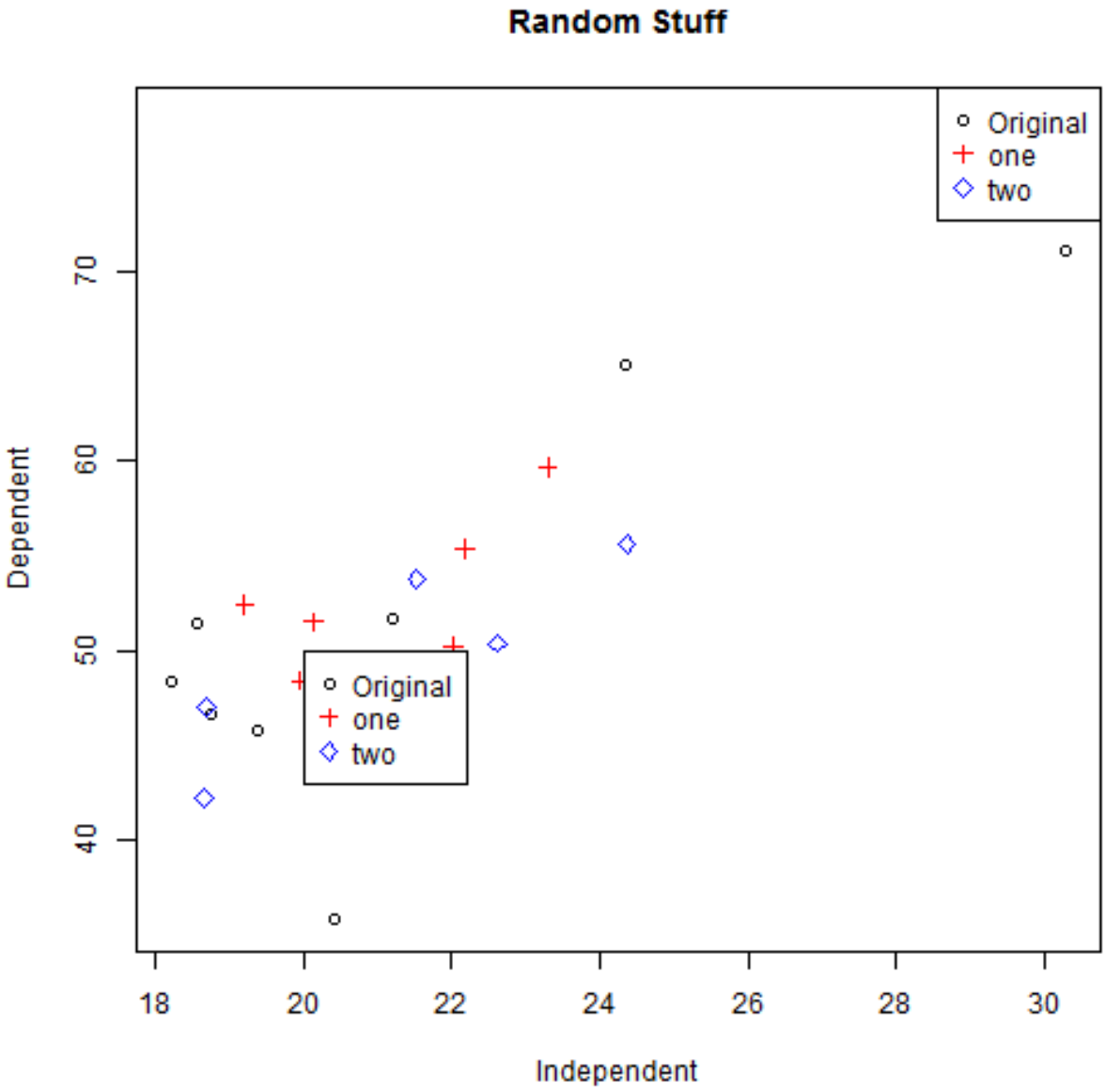

Figure 4: plot of chunk unnamed-chunk-5

```
points(x2,y2,col=4,pch=5)
legend(25,80,c("Original","one","two"),col=c(1,2,4),pch=c(1,3,5))

???
```

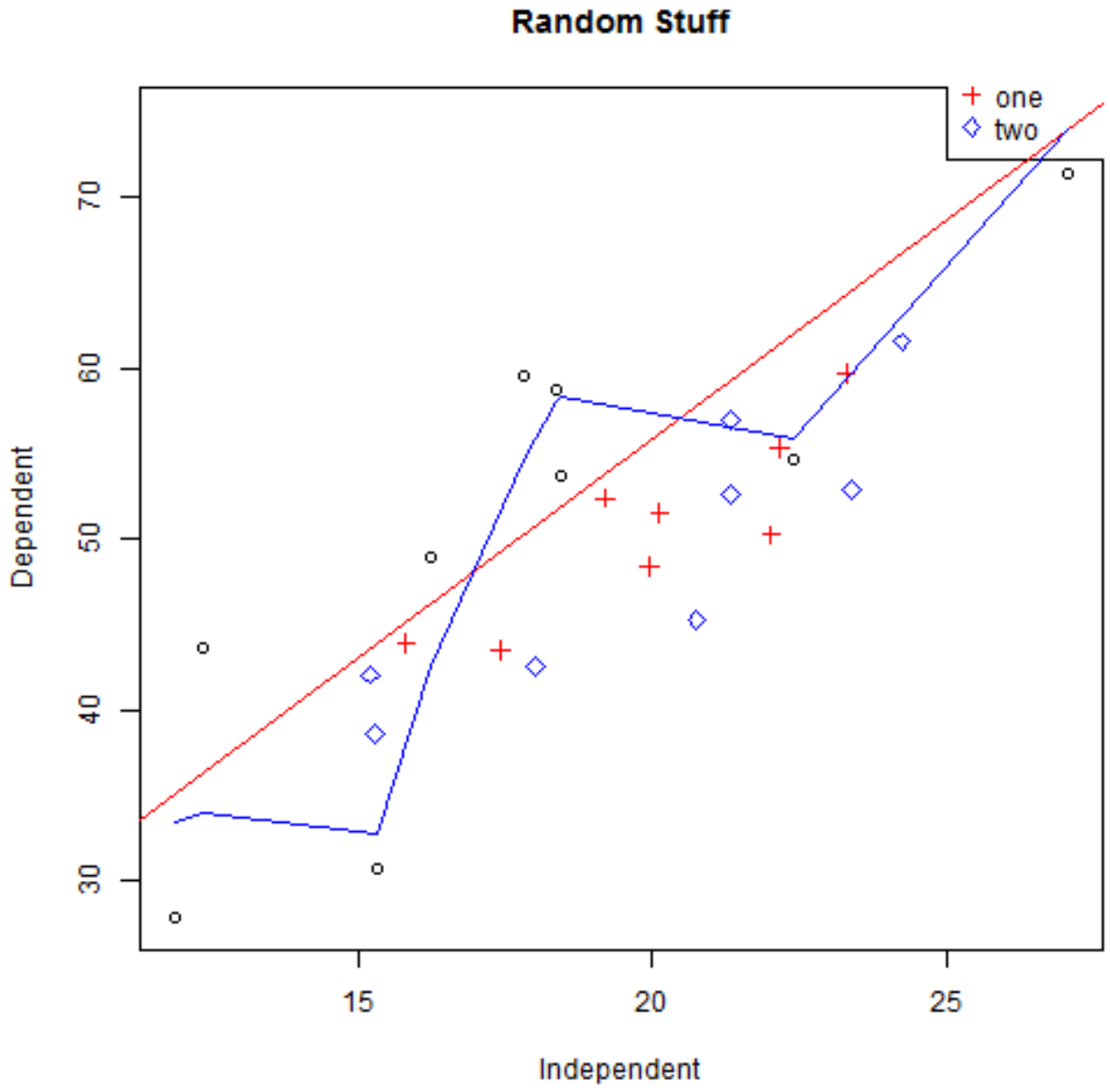

Figure 5: plot of chunk unnamed-chunk-8

With error lines

```
arrows(x0, y0, x1 = x0, y1 = y0, length = 0.25, angle = 30,        code = 2, col = par("fg"),
lty = par("lty"),        lwd = par("lwd"), ...)
```

```
plot(x,y,xlab="Independent",ylab="Dependent",main="Random Stuff")
xHigh <- x
yHigh <- y + abs(rnorm(10,sd=3.5))
xLow <- x
yLow <- y - abs(rnorm(10,sd=3.1))
???
```

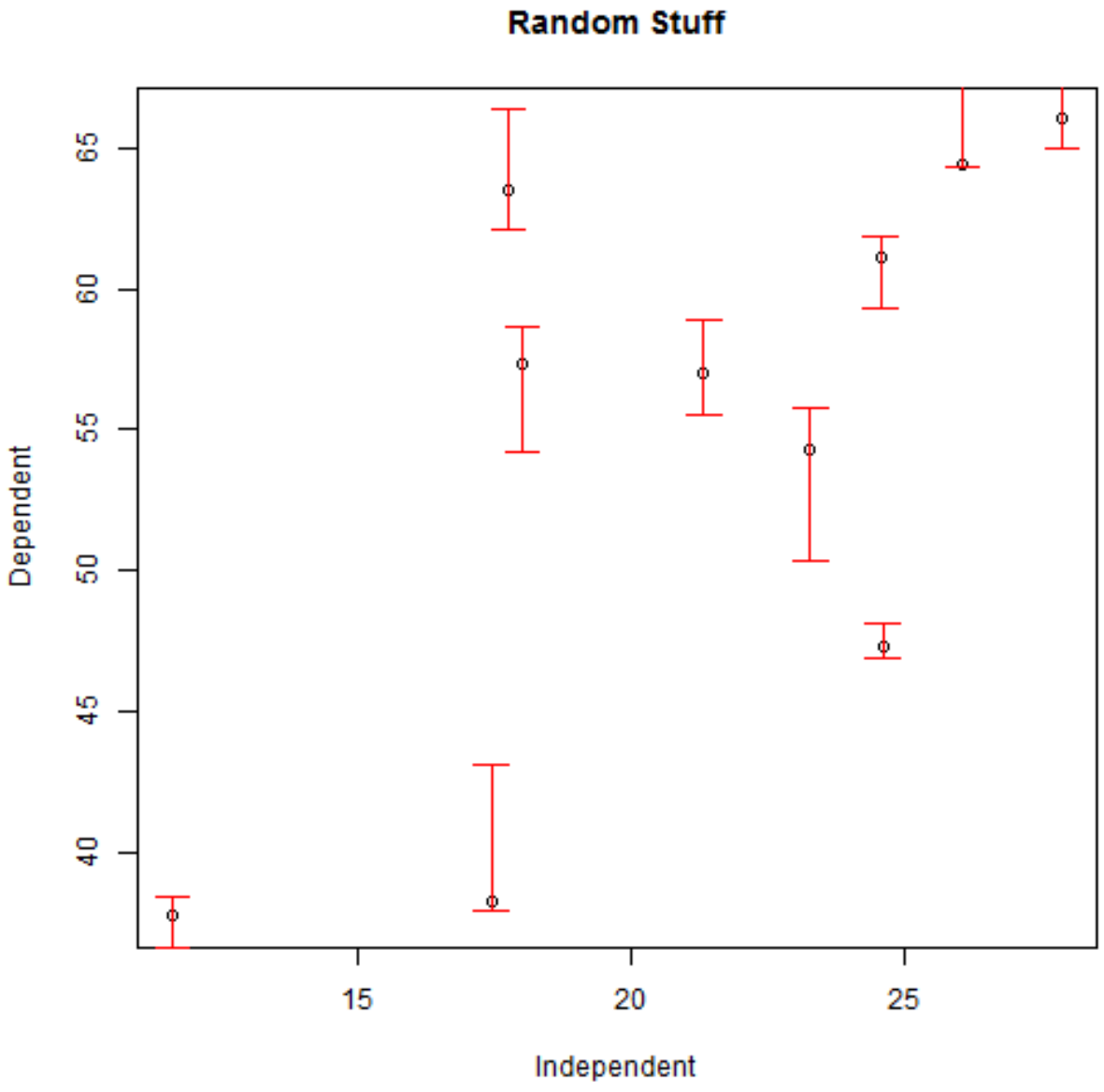

Figure 6: plot of chunk unnamed-chunk-11

Adding jitter

```
numberWhite <- ??
numberChipped <- ??

par(mfrow=c(1,2))
plot(numberWhite,numberChipped,xlab="Number White Marbles Drawn",
ylab="Number Chipped Marbles Drawn",main="Pulling Marbles")
plot(jitter(numberWhite),jitter(numberChipped),xlab="Number White Marbles Drawn",
ylab="Number Chipped Marbles Drawn",main="Pulling Marbles With Jitter")
```

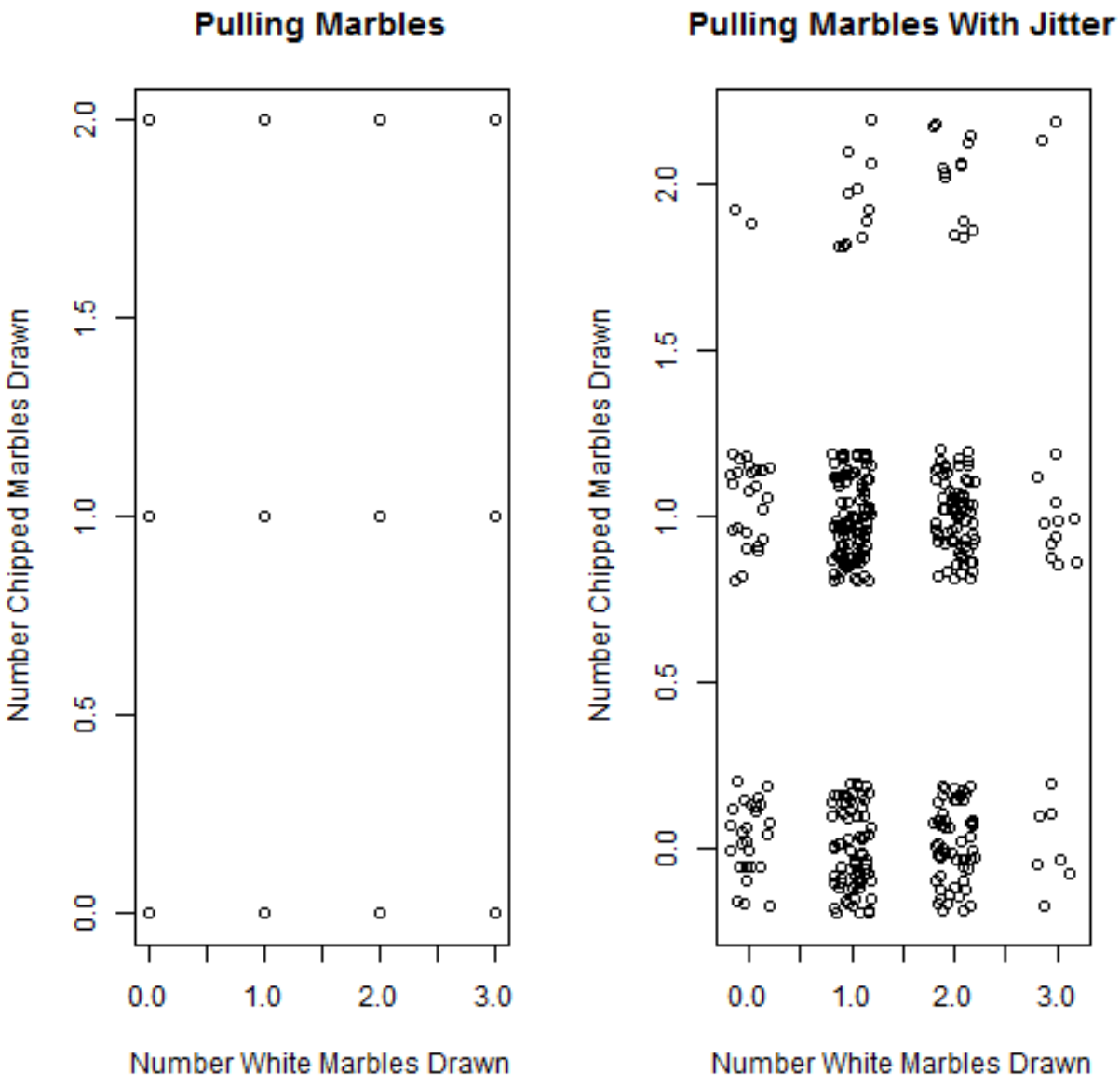

Figure 7: plot of chunk unnamed-chunk-14

Mosaic plots

```
table(...,       exclude = if (useNA == "no") c(NA, NaN),       useNA = c("no", "ifany",
"always"),       dnn = list.names(...), deparse.level = 1)
```

```
mosaicplot(??, main="sixth plot")
```

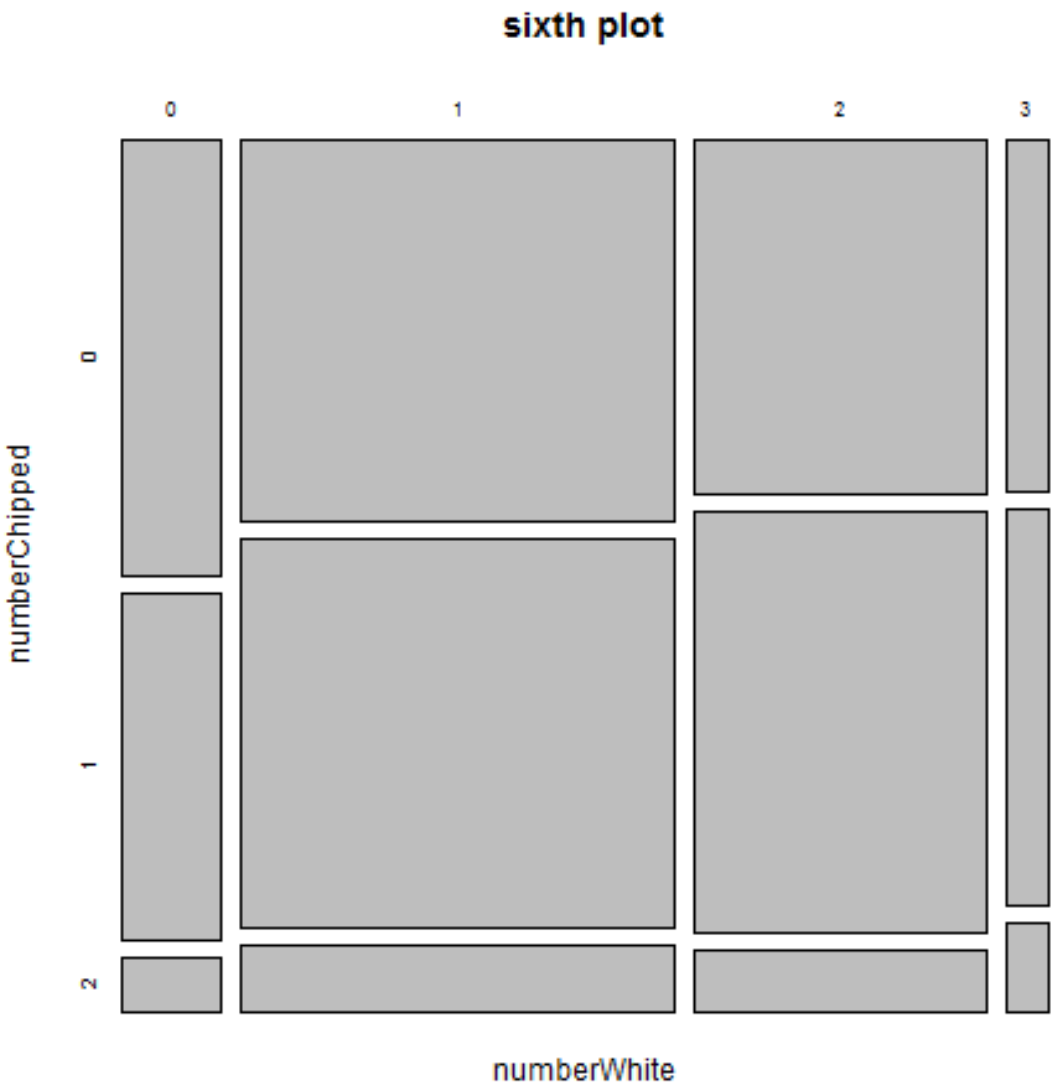

Figure 8: plot of chunk unnamed-chunk-17

Pair-wise scatter plots

```
uData <- rnorm(20)
vData <- rnorm(20,mean=5)
wData <- uData + 2*vData + rnorm(20,sd=0.5)
xData <- -2*uData+rnorm(20,sd=0.1)
yData <- 3*vData+rnorm(20,sd=2.5)

pairs(?)
```

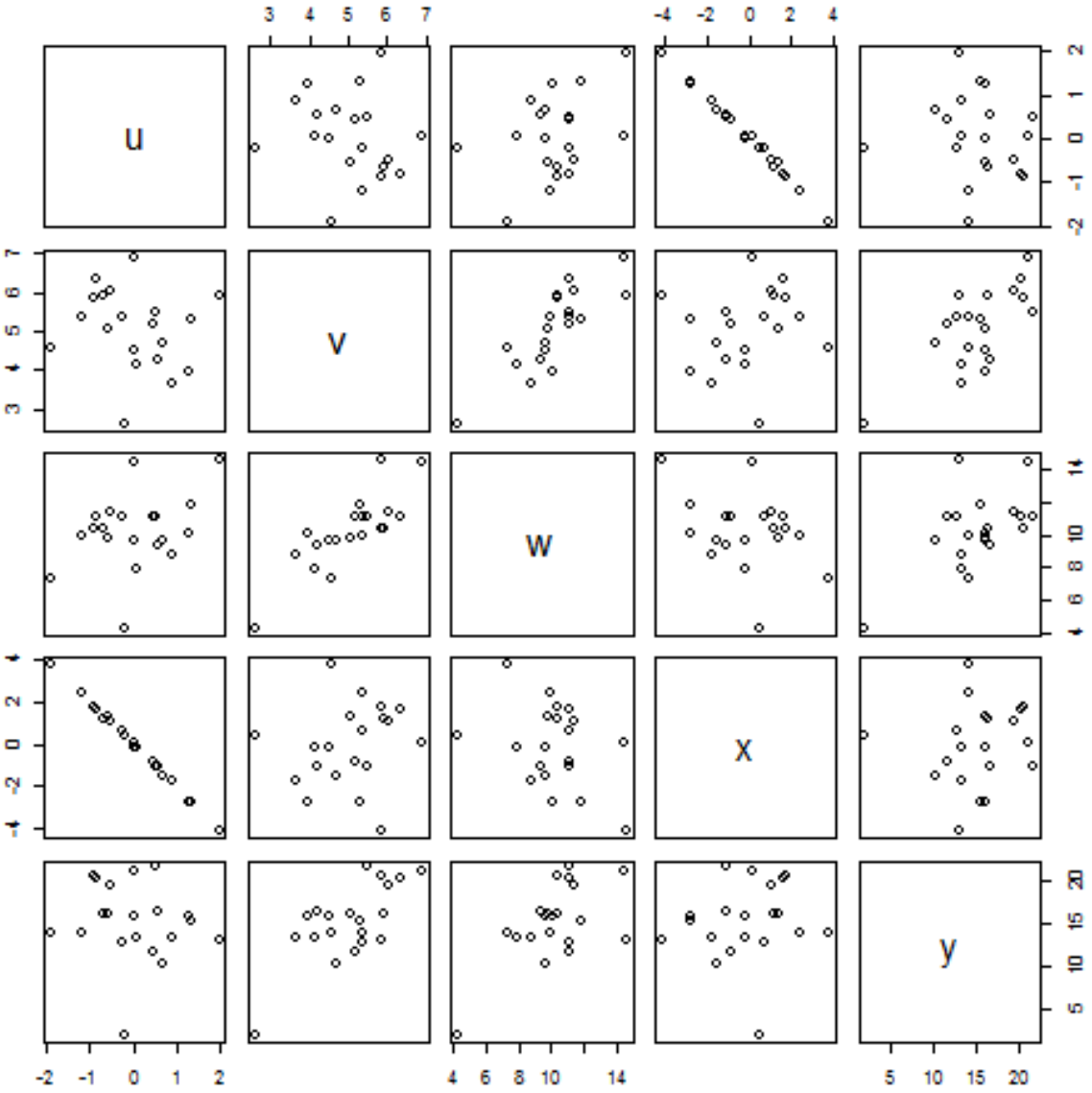

Figure 9: plot of chunk unnamed-chunk-20

Shaded areas

```
polygon(x, y = NULL, density = NULL, angle = 45,         border = NULL, col = NA, lty =
par("lty"),         ..., fillOddEven = FALSE)
```

```
stdDev <- 0.75; x <- seq(-5,5,by=0.01); y <- dnorm(x,sd=stdDev)
right <- qnorm(0.95,sd=stdDev)
plot(x,y,type="l",xaxt="n",ylab="p",xlab=expression(paste('Assumed Distribution of',bar(x))),axes=FALSE
axis(1,at=c(-5,right,0,5), pos = c(0,0),labels=c(expression(' '),expression(bar(x)[cr]),expression(mu[0]
axis(2)
xReject <- seq(right,5,by=0.01);  yReject <- dnorm(xReject,sd=stdDev)
polygon(???, col='red')
```

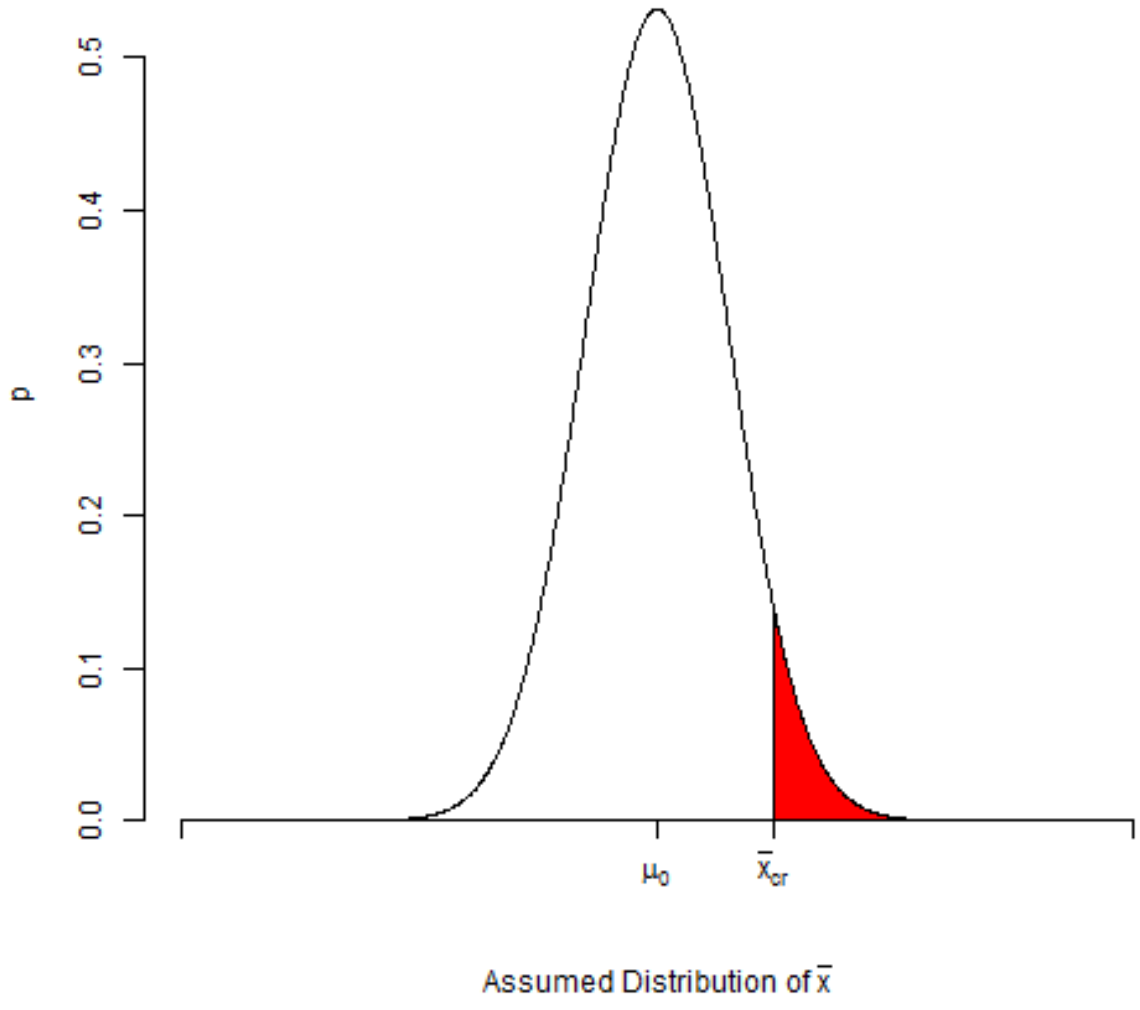

Figure 10: plot of chunk unnamed-chunk-23

Different types of lines

```
par(..., no.readonly = FALSE)
```

```
x <- c(1:5); y <- x
par(pch=22, col="red")
par(mfrow=c(2,4))
opts = ???
for(i in 1:length(opts)){
heading = paste("type=",opts[i])
plot(x, y, type="n", main=heading)
lines(x, y, type=opts[i])
}
```

Barplot

```
barplot(height, width = 1, space = NULL,         names.arg = NULL, legend.text = NULL,
beside = FALSE,         horiz = FALSE, density = NULL, angle = 45,         col = NULL,
border = par("fg"),         main = NULL, sub = NULL, xlab = NULL, ylab = NULL,         xlim
= NULL, ylim = NULL, xpd = TRUE, log = "",         axes = TRUE, axisnames = TRUE,         cex.axis
= par("cex.axis"), cex.names = par("cex.axis"),         inside = TRUE, plot = TRUE,
axis.lty = 0, offset = 0,         add = FALSE, args.legend = NULL, ...)
```

```
numberWhite <- rhyper(30,4,5,3)
numberWhite <- as.factor(numberWhite)

???
```

```
numberWhite
 0  1  2  3
 5 12 12  1
```

plotly

plotly website here

ggplot2: structure

```
ggplot(data = <default data set>,        aes(x = <default x axis variable>,           y
= <default y axis variable>,           ... <other default aesthetic mappings>),        ...
<other plot defaults>) +        geom_<geom type>(aes(size = <size variable for this
geom>,                       ... <other aesthetic mappings>),                  data =
<data for this point geom>,                  stat = <statistic string or function>,
position = <position string or function>,                  color = <"fixed color specification">,
<other arguments, possibly passed to the _stat_ function) +   scale_<aesthetic>_<type>(name
= <"scale label">,                     breaks = <where to put tick marks>,                     labels
= <labels for tick marks>,                       ... <other options for the scale>) +
theme(plot.background = element_rect(fill = "gray"),         ... <other theme elements>)
```

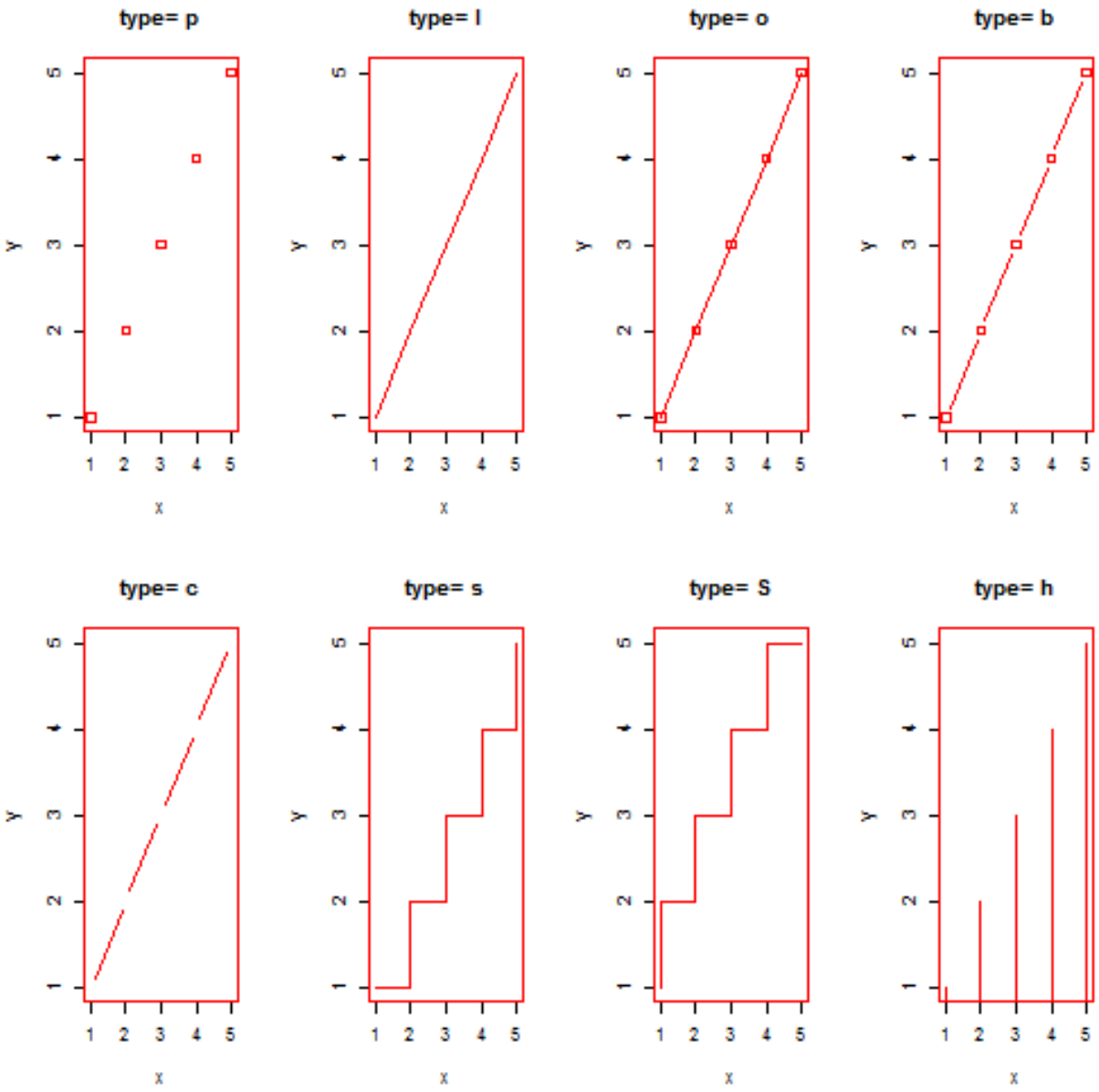

Figure 11: plot of chunk unnamed-chunk-26

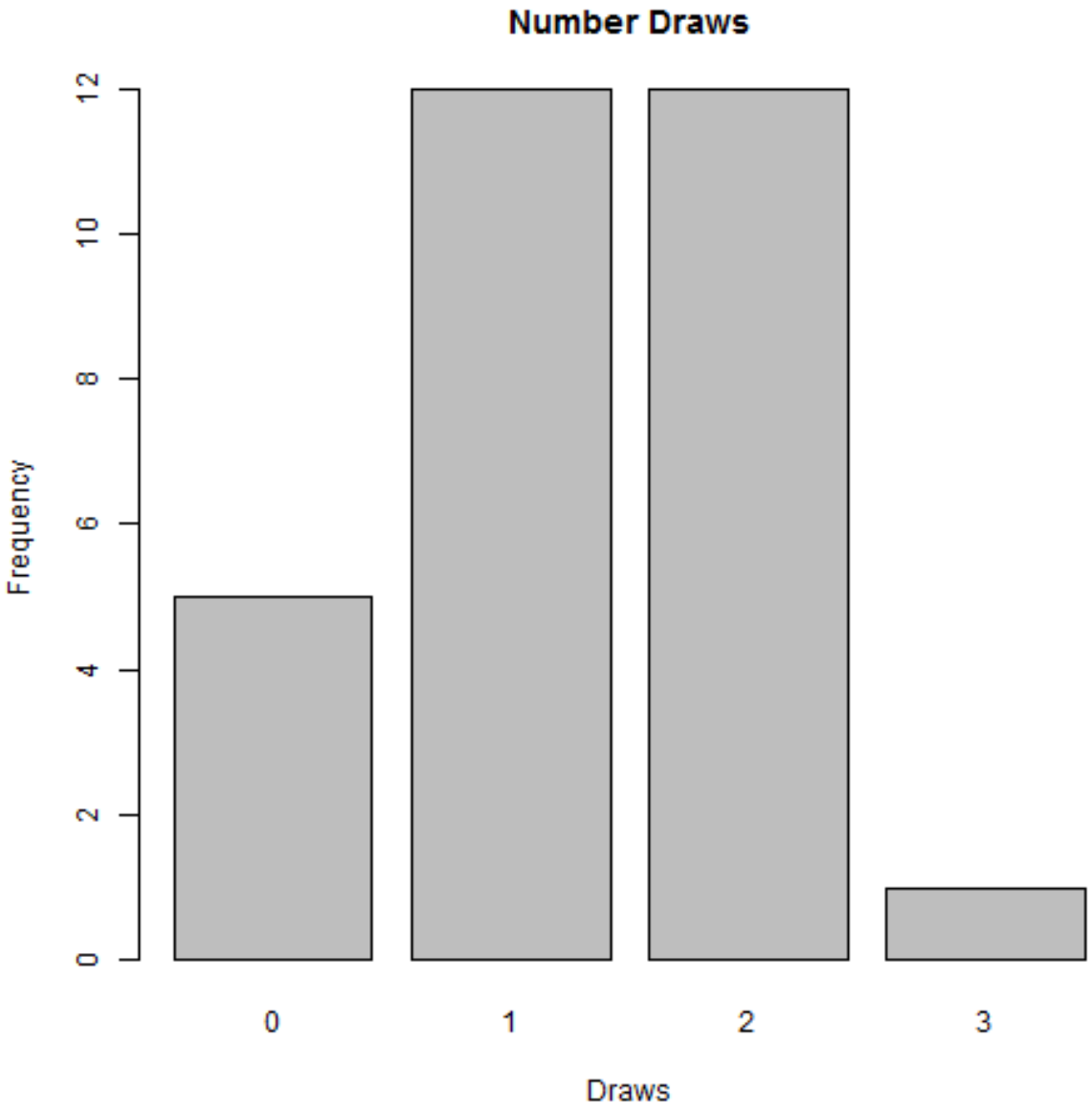

Figure 12: plot of chunk unnamed-chunk-29

qplot: overlapping densities

```
qplot(x, y = NULL, ..., data, facets = NULL, margins = FALSE,   geom = "auto", xlim =
c(NA, NA), ylim = c(NA, NA), log = "",   main = NULL, xlab = deparse(substitute(x)),
ylab = deparse(substitute(y)), asp = NA, stat = NULL, position = NULL)
```

```
library(ggplot2)
data("mtcars")
mtcars$gear <- factor(mtcars$gear,levels=c(3,4,5), labels=c("3gears","4gears","5gears"))
mtcars$am <- factor(mtcars$am,levels=c(0,1), labels=c("Automatic","Manual"))
mtcars$cyl <- factor(mtcars$cyl,levels=c(4,6,8), labels=c("4cyl","6cyl","8cyl"))

qplot(mpg,
      data = ??,
      geom = ??,
      fill = ??,
      alpha = ??,
      main = "Distribution of Gas Milage", xlab="Miles Per Gallon", ylab="Density")
```

qplot: facets and points

```
library(ggplot2)
data("mtcars")
mtcars$gear <- factor(mtcars$gear,levels=c(3,4,5), labels=c("3gears","4gears","5gears"))
mtcars$am <- factor(mtcars$am,levels=c(0,1), labels=c("Automatic","Manual"))
mtcars$cyl <- factor(mtcars$cyl,levels=c(4,6,8), labels=c("4cyl","6cyl","8cyl"))

qplot(??,
      ??,
      data=mtcars, shape=, color=, facets=gear~cyl, size=I(3), xlab="Horsepower", ylab="Miles per Gallo
```

hist vs geom_histogram

Rgraphics tutorial here

```
par(mfrow=c(2,1))
hist(diamonds$carat)
hist(diamonds$carat, breaks = 500)
```

ggplot2: Box plot and points with legend

```
plot(carat ~ clarity,
     data=subset(diamonds, cut == "Good"))
points(carat ~ clarity, col="red",
       data=subset(diamonds, cut == "Ideal"))
legend(0,3,
       c("Good", "Ideal"), title="cut",
```

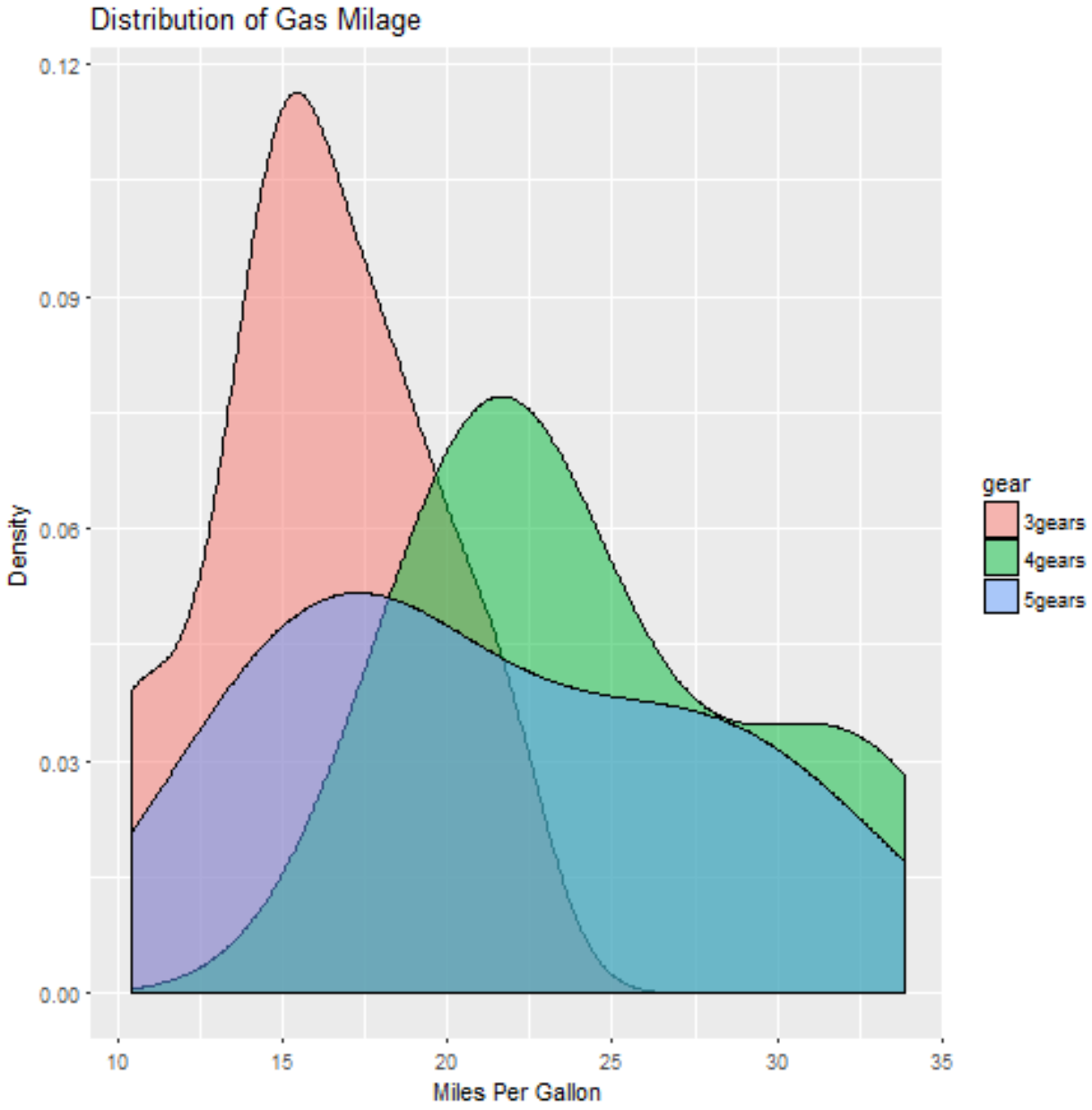

Figure 13: plot of chunk unnamed-chunk-32

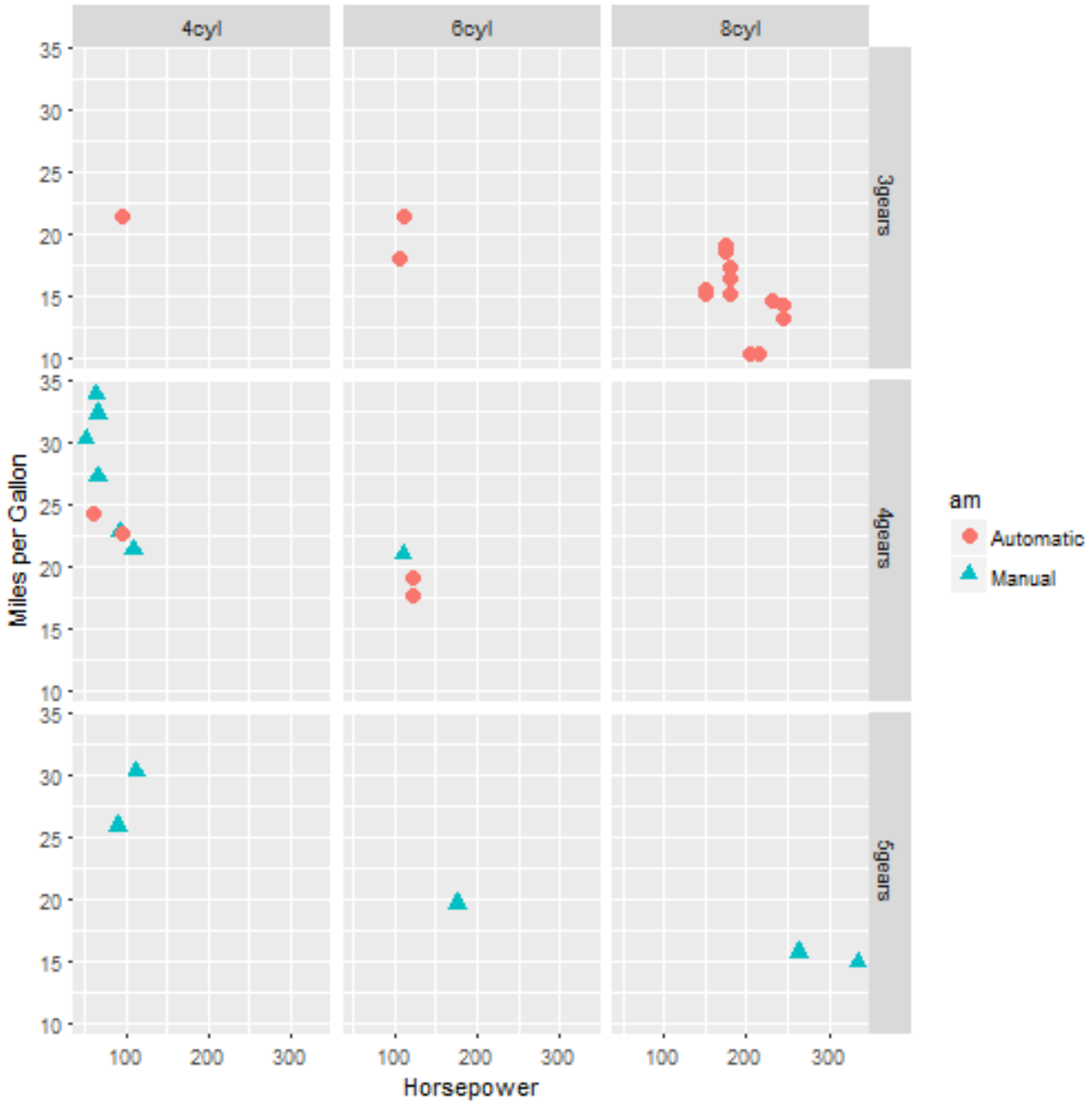

Figure 14: plot of chunk unnamed-chunk-35

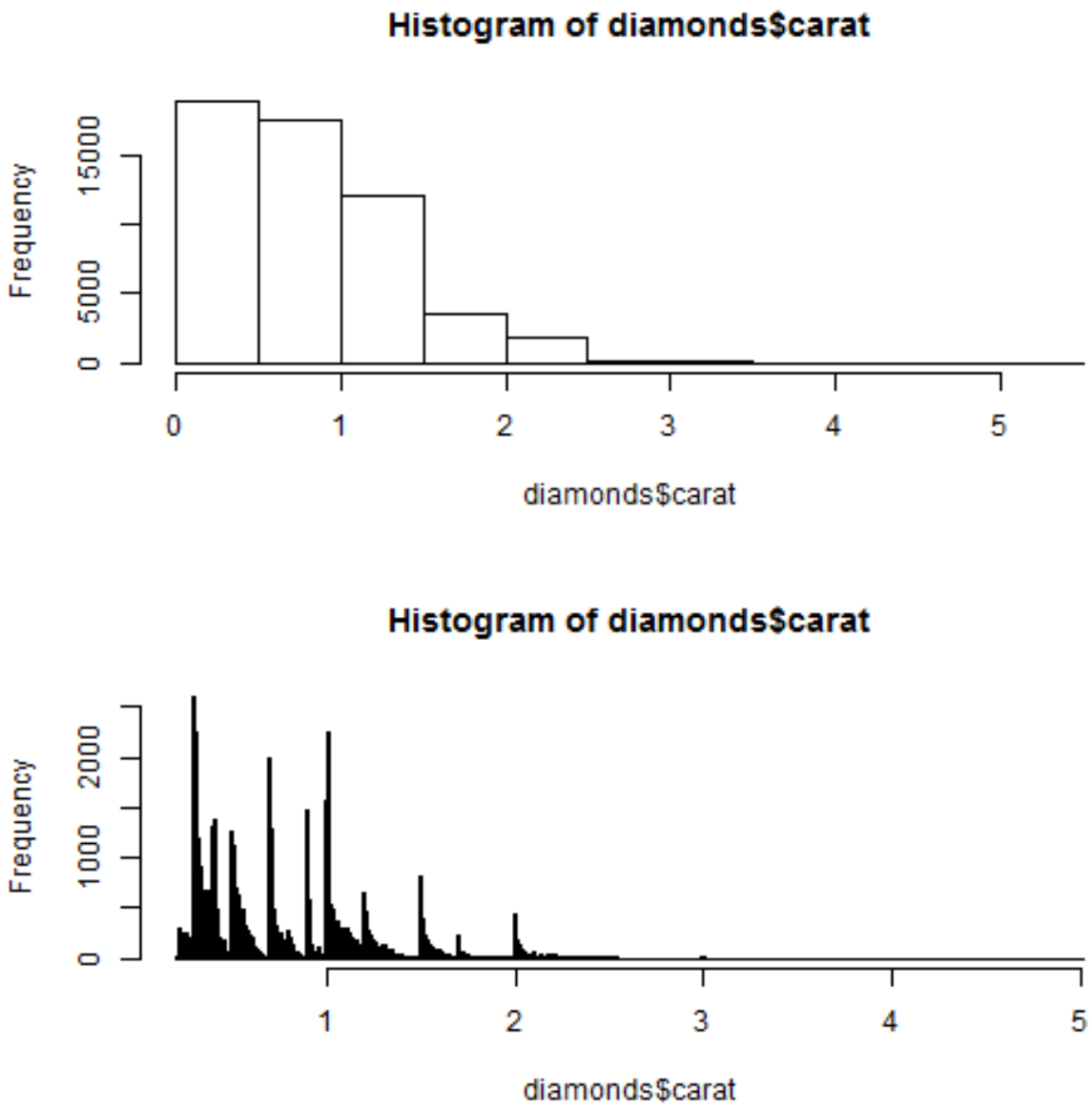

Figure 15: plot of chunk unnamed-chunk-37

```
       col=c("black", "red"),
       pch=c(1, 1))
```

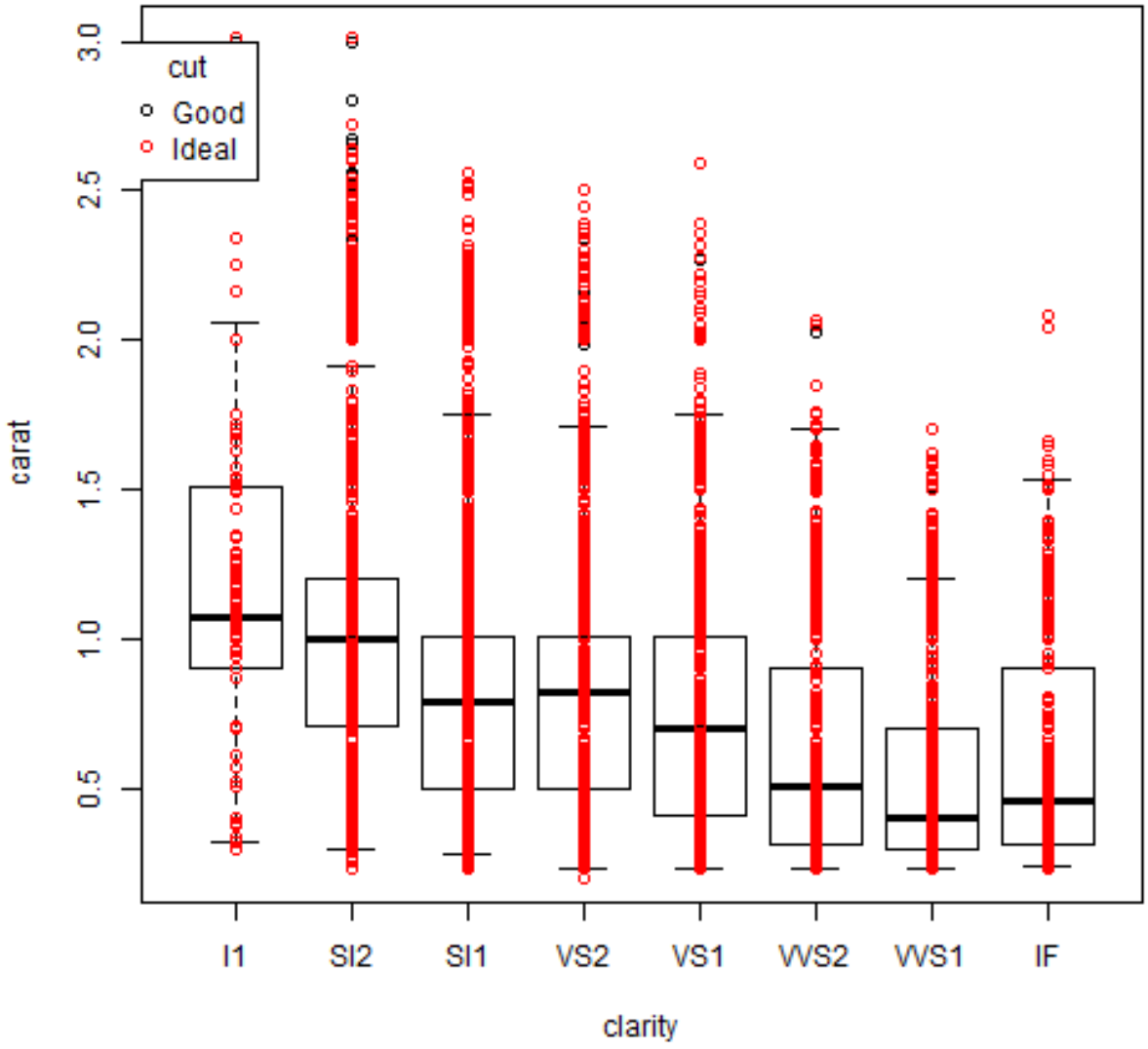

Figure 16: plot of chunk unnamed-chunk-39

ggplot2

```
ggplot(subset(diamonds, cut %in% c("Good", "Ideal")),
       aes(x=clarity,
           y=carat,
```

```
          color=cut))+
  geom_point()
```

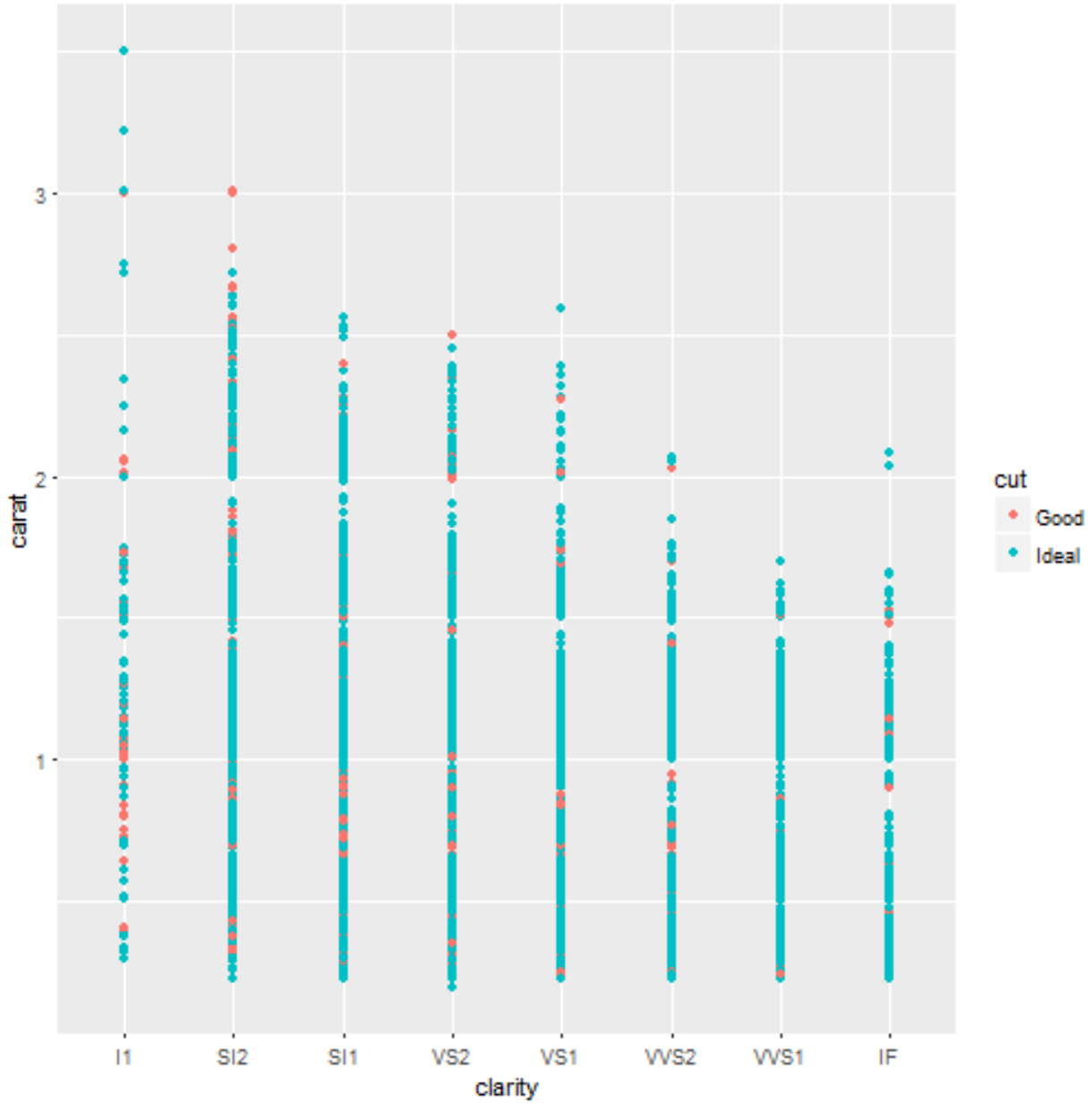

Figure 17: plot of chunk unnamed-chunk-40

Symbols

```
## A look at all 25 symbols
df2 <- data.frame(x = 1:5 , y = 1:25, z = 1:25)
s <- ggplot(df2, aes(x = x, y = y))
s + geom_point(aes(shape = z), size = 4) + scale_shape_identity()
```

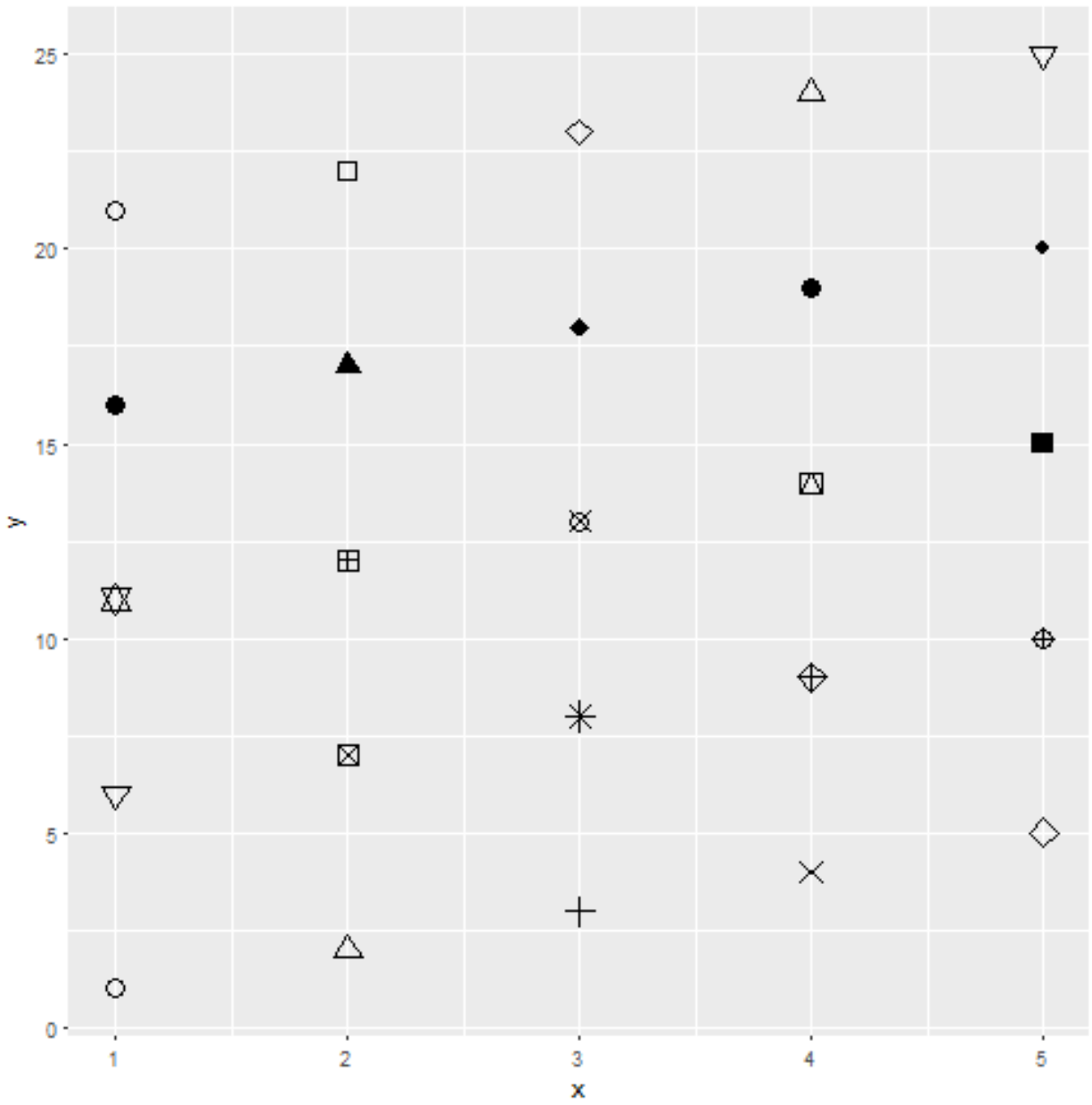

Figure 18: plot of chunk unnamed-chunk-41

```
## While all symbols have a foreground colour, symbols 19-25 also take a
## background colour (fill)
```

Symbols (2)

```
s + geom_point(aes(shape = z), size = 4, colour = "Red") +
  scale_shape_identity()
```

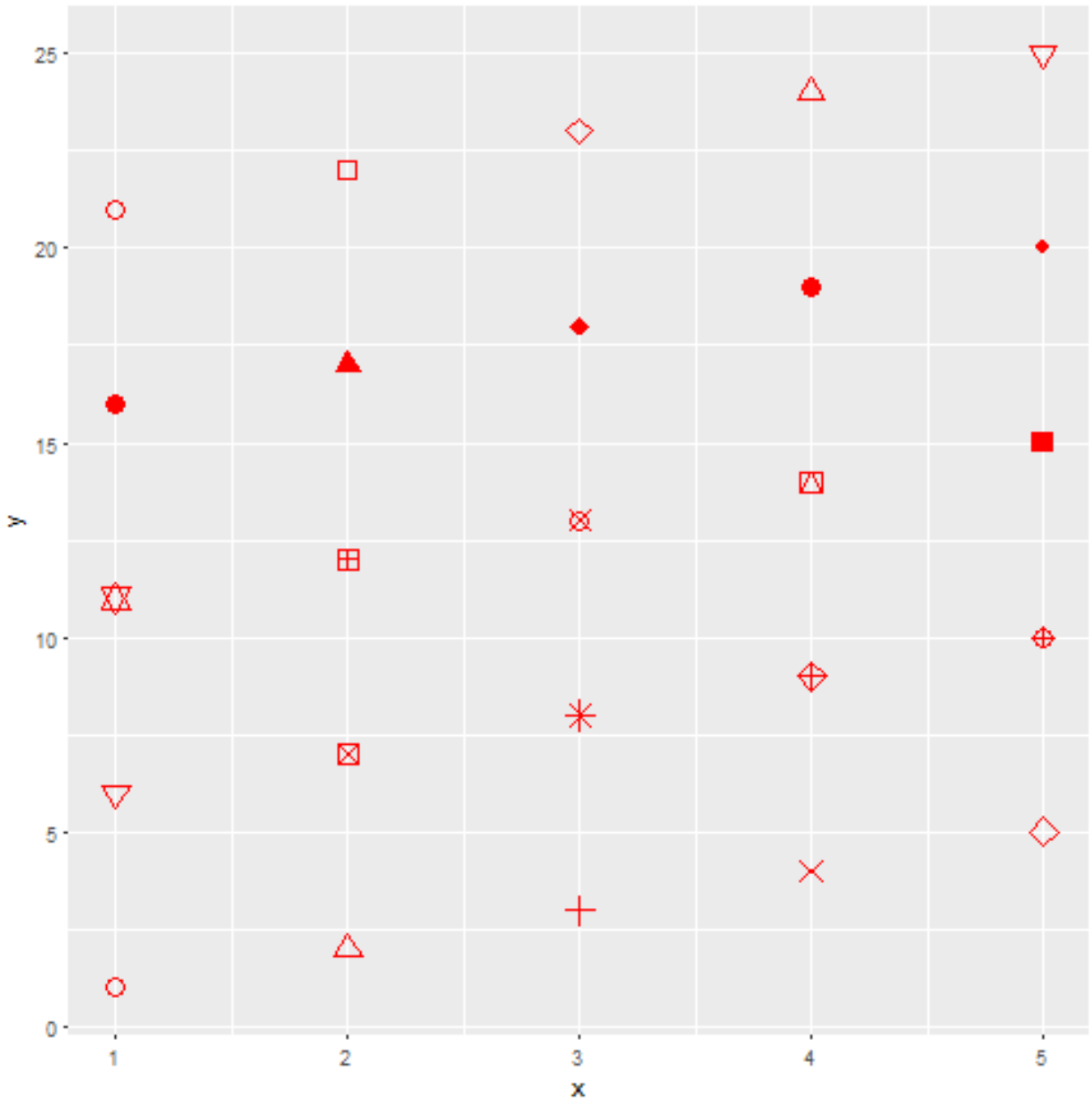

Figure 19: plot of chunk unnamed-chunk-42

Symbols (3)

```
s + geom_point(aes(shape = z), size = 4, colour = "Red", fill = "Black") +
  scale_shape_identity()
```

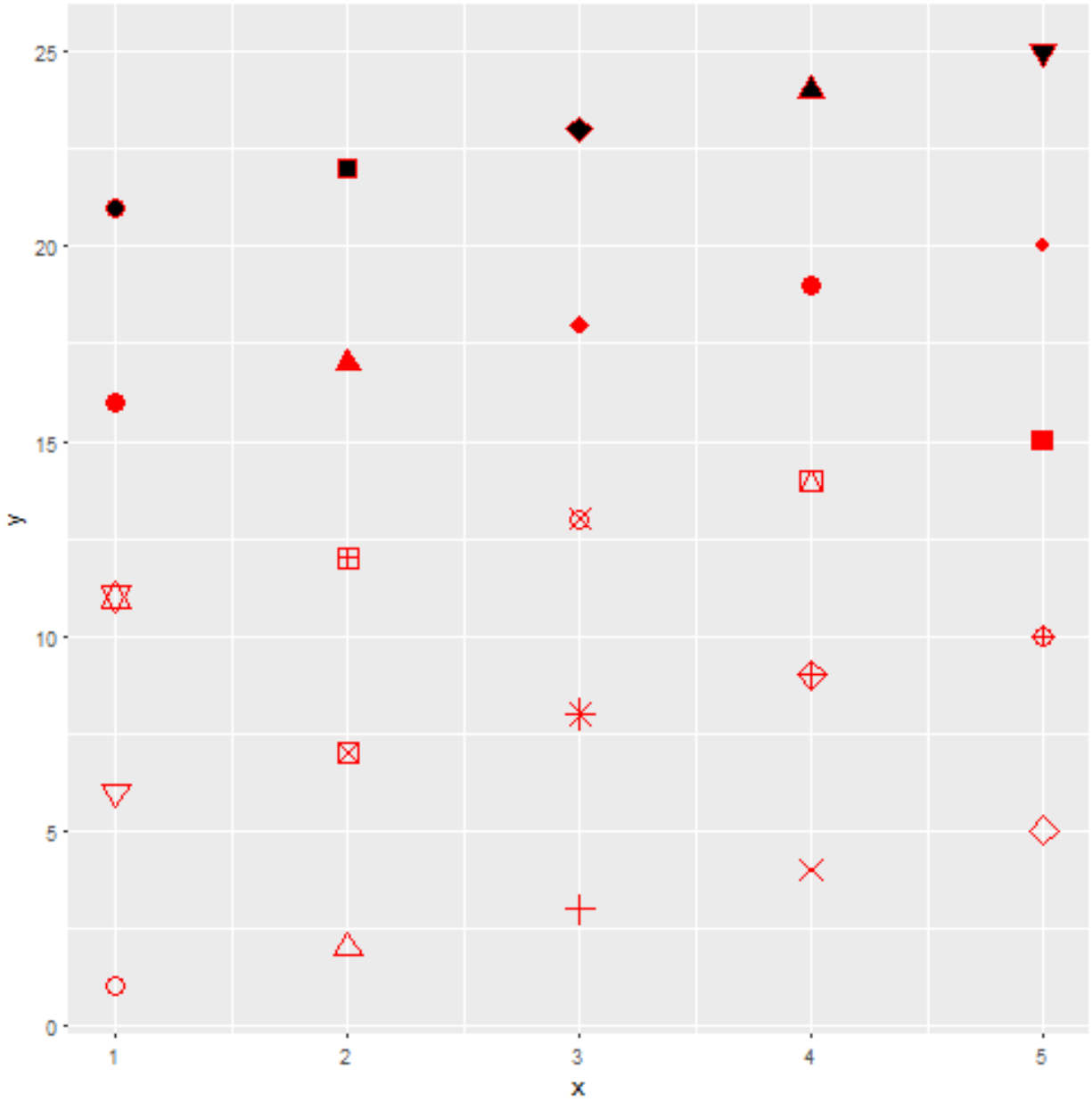

Figure 20: plot of chunk unnamed-chunk-43

ColorBrewer2

ColorBrewer2

Manipulate

manipulate examples

Options()

- Sets and reports options. Lots of them.
-
- `digits` from 3.1415927 using `options(digits = 2)` to 3.14
- Report value using e.g. `getOption("digits")`
-
- `scipen()`

```
R> ran2 <- c(1.810032e+09, 4)
R> options("scipen"=-100, "digits"=4)
R> ran2
[1] 1.81e+09 4.00e+00
R> options("scipen"=100, "digits"=4)
R> ran2
[1] 1810032000
```

Kable::

```
library(knitr)
kable(head(iris), format = "latex")
```

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa

```
kable(head(iris), format = "html")
```

Sepal.Length

Sepal.Width

Petal.Length

Petal.Width

Species

5.1

3.5

1.4

0.2

setosa

4.9

3.0

1.4

0.2

setosa

4.7

3.2

1.3

0.2

setosa

4.6

3.1

1.5

0.2

setosa

5.0

3.6

1.4

0.2

setosa

5.4

3.9

1.7

0.4

setosa

printr::

```
x = matrix(rnorm(40), 5)

dimnames(x) = list(NULL, head(LETTERS, ncol(x)))

knitr::kable(x, digits = 2,
             caption = "A table produced by printr.")
```

A	B	C	D	E	F	G	H
0.65	-2.14	0.43	0.09	-0.69	-1.74	-1.05	0.12
-0.60	1.00	-1.08	-0.16	1.53	1.77	0.36	-1.18

A	B	C	D	E	F	G	H
-0.59	0.39	0.36	1.67	0.43	0.33	1.69	-0.08
0.07	-0.31	-0.25	0.28	1.41	-1.87	-1.87	-0.74
-1.51	-0.74	-2.01	-1.20	-0.03	0.23	0.28	0.90

Tables

```
library(xtable)

options(xtable.floating = FALSE)
options(xtable.timestamp = "")

data(tli)

xtable(tli[1:10, ])
```

```
% latex table generated in R 3.3.3 by xtable 1.8-2 package
%
\begin{tabular}{rrlllr}
  \hline
 & grade & sex & disadvg & ethnicty & tlimth \\
  \hline
1 &   6 & M & YES & HISPANIC &  43 \\
  2 &   7 & M & NO & BLACK &  88 \\
  3 &   5 & F & YES & HISPANIC &  34 \\
  4 &   3 & M & YES & HISPANIC &  65 \\
  5 &   8 & M & YES & WHITE &  75 \\
  6 &   5 & M & NO & BLACK &  74 \\
  7 &   8 & F & YES & HISPANIC &  72 \\
  8 &   4 & M & YES & BLACK &  79 \\
  9 &   6 & M & NO & WHITE &  88 \\
  10 &   7 & M & YES & HISPANIC &  87 \\
   \hline
\end{tabular}
```

GLMs

```
fm3 <- glm(disadvg ~ ethnicty*grade, data = tli, family = binomial)
xtable(fm3)
```

```
% latex table generated in R 3.3.3 by xtable 1.8-2 package
%
\begin{tabular}{rrrrr}
  \hline
 & Estimate & Std. Error & z value & Pr($>$$|$z$|$) \\
  \hline
(Intercept) & 3.1888 & 1.5966 & 2.00 & 0.0458 \\
  ethnictyHISPANIC & -0.2848 & 2.4808 & -0.11 & 0.9086 \\
  ethnictyOTHER & 212.1701 & 22122.7093 & 0.01 & 0.9923 \\
```

```
  ethnictyWHITE & -8.8150 & 3.3355 & -2.64 & 0.0082 \\
  grade & -0.5308 & 0.2892 & -1.84 & 0.0665 \\
  ethnictyHISPANIC:grade & 0.2448 & 0.4357 & 0.56 & 0.5742 \\
  ethnictyOTHER:grade & -32.6014 & 3393.4687 & -0.01 & 0.9923 \\
  ethnictyWHITE:grade & 1.0171 & 0.5185 & 1.96 & 0.0498 \\
   \hline
\end{tabular}
```

Flat tables

```
data(mtcars)
mtcars$cyl <- factor(mtcars$cyl, levels = c("4","6","8"),
labels = c("four","six","eight"))
tbl <- ftable(?, row.vars = c(2, 4), dnn = c("Cylinders", "V/S", "Transmission", "Gears"))
tbl
xftbl <- xtableFtable(tbl)
print.xtableFtable(xftbl)
```

```
          Cylinders    four     six    eight
          Transmission    0  1   0  1     0  1
V/S Gears
0   3                   0  0   0  0    12  0
    4                   0  0   0  2     0  0
    5                   0  1   0  1     0  2
1   3                   1  0   2  0     0  0
    4                   2  6   2  0     0  0
    5                   0  1   0  0     0  0
```

```
% latex table generated in R 3.3.3 by xtable 1.8-2 package
%
\begin{tabular}{lll |rrrrrr}
  \hline
     &       & Cylinders    & \multicolumn{1}{l}{ four} & \multicolumn{1}{l}{   } & \multicolumn{1}{l}{
      &       & Transmission & \multicolumn{1}{l}{    0} & \multicolumn{1}{l}{  1} & \multicolumn{1}{l}
  V/S & Gears &              & \multicolumn{1}{l}{     } & \multicolumn{1}{l}{   } & \multicolumn{1}{l}
   \hline
0   & 3     &              &    0 &  0 &   0 &  0 &    12 &  0 \\
      & 4     &              &    0 &  0 &   0 &  2 &     0 &  0 \\
      & 5     &              &    0 &  1 &   0 &  1 &     0 &  2 \\
  1   & 3     &              &    1 &  0 &   2 &  0 &     0 &  0 \\
      & 4     &              &    2 &  6 &   2 &  0 &     0 &  0 \\
      & 5     &              &    0 &  1 &   0 &  0 &     0 &  0 \\
   \hline
\end{tabular}
```

Flat tables

```
data(mtcars)
mtcars$cyl <- factor(mtcars$cyl, levels = c("4","6","8"),
labels = c("four","six","eight"))
```

```
tbl <- ftable(mtcars$cyl, mtcars$vs, mtcars$am, mtcars$gear, row.vars = c(2, 4), dnn = c("Cylinders", "
tbl
```

```
          Cylinders    four    six    eight
          Transmission    0  1   0  1     0  1
V/S Gears
0   3                     0  0   0  0    12  0
    4                     0  0   0  2     0  0
    5                     0  1   0  1     0  2
1   3                     1  0   2  0     0  0
    4                     2  6   2  0     0  0
    5                     0  1   0  0     0  0
```

```
xftbl <- xtableFtable(tbl)
print.xtableFtable(xftbl)
```

```
% latex table generated in R 3.3.3 by xtable 1.8-2 package
%
\begin{tabular}{lll |rrrrrr}
  \hline
     &       & Cylinders    & \multicolumn{1}{l}{ four} & \multicolumn{1}{l}{   } & \multicolumn{1}{l}{
      &       & Transmission & \multicolumn{1}{l}{    0} & \multicolumn{1}{l}{  1} & \multicolumn{1}{l}
  V/S & Gears &              & \multicolumn{1}{l}{     } & \multicolumn{1}{l}{   } & \multicolumn{1}{l}
   \hline
0   & 3     &              &    0 &  0 &   0 &  0 &    12 &  0 \\
      & 4     &              &    0 &  0 &   0 &  2 &     0 &  0 \\
      & 5     &              &    0 &  1 &   0 &  1 &     0 &  2 \\
  1   & 3     &              &    1 &  0 &   2 &  0 &     0 &  0 \\
      & 4     &              &    2 &  6 &   2 &  0 &     0 &  0 \\
      & 5     &              &    0 &  1 &   0 &  0 &     0 &  0 \\
   \hline
\end{tabular}
```

Markdown tables

```
library(pander)
pandoc.table(tli)
```

```
-------------------------------------------
 grade   sex   disadvg   ethnicty   tlimth
------- ----- --------- ---------- --------
   6      M      YES     HISPANIC     43

   7      M      NO       BLACK       88

   5      F      YES     HISPANIC     34

   3      M      YES     HISPANIC     65

   8      M      YES      WHITE       75

   5      M      NO       BLACK       74
```

```
   6      F      NO       BLACK       82

   4      M      NO       WHITE       69

   3      F      YES     HISPANIC     17

   3      M      NO      HISPANIC     37

   7      M      NO       WHITE       83

   6      M      YES     HISPANIC     78

   6      F      NO       WHITE       84
-----------------------------------------
```

```
pandoc.table(tli, style="rmarkdown")
```

grade	sex	disadvg	ethnicty	tlimth
6	M	YES	HISPANIC	43
7	M	NO	BLACK	88
5	F	YES	HISPANIC	34
6	F	NO	WHITE	91
5	F	NO	WHITE	50
7	M	NO	WHITE	83
4	F	YES	BLACK	58
4	M	YES	HISPANIC	85
7	F	NO	WHITE	52
5	M	NO	WHITE	86
4	F	YES	BLACK	79
8	M	NO	WHITE	48
5	M	NO	WHITE	91
3	M	YES	HISPANIC	89
7	F	NO	WHITE	91
5	F	YES	WHITE	79
7	M	NO	WHITE	83
6	M	YES	HISPANIC	78
6	F	NO	WHITE	84

Other HTML table

```
library("htmlTable")
htmlTable(tli)
```

grade

sex

disadvg

ethnicty

tlimth

1

6

M

YES

HISPANIC

43

2

7

M

NO

BLACK

88

99

6

M

YES

HISPANIC

78

100

6

F

NO

WHITE

84

```
library(hwriter)
hwrite(tli, border=0)
```

```
[1] "<table border=\"0\">\n<tr>\n<td>grade</td><td>sex</td><td>disadvg</td><td>ethnicty</td><td>tlimth<
```

R and Word

- `rtf::`

```
library(rtf)
output <- "rtf_vignette.doc"
rtf <- RTF(output,width=8.5,height=11,font.size=10,omi=c(1,1,1,1))
done(rtf)
```

make new section

```
addHeader(rtf,title="Section Header", subtitle="This is the subheading or section text.")
```

add paragraph

```
addParagraph(rtf,"This is a new self-contained paragraph.\n")
```

```
addNewLine(rtf)
addParagraph(rtf,"Normal, \\b this is bold\\b0, normal.\n")
addParagraph(rtf,"Normal, {\\b\\i bold-italic}, normal.\n")
```

add a table

```
tab <- as.data.frame(head(iris)) # create a data.frame
colnames(tab)<-gsub("\\."," ",colnames(tab)) # format column names
addTable(rtf,tab,font.size=9,row.names=FALSE,NA.string="-")
```

R and Word (2)

add plot

```
addPlot(rtf,plot.fun=plot,width=6,height=6,res=300, iris[,1],iris[,2])
```

```
addPageBreak(rtf, width=8.5, height=11, omi=c(1,1,1,1))
addSessionInfo(rtf)
done(rtf)
```

rtf output

ReporteRs::

- http://davidgohel.github.io/ReporteRs/index.html

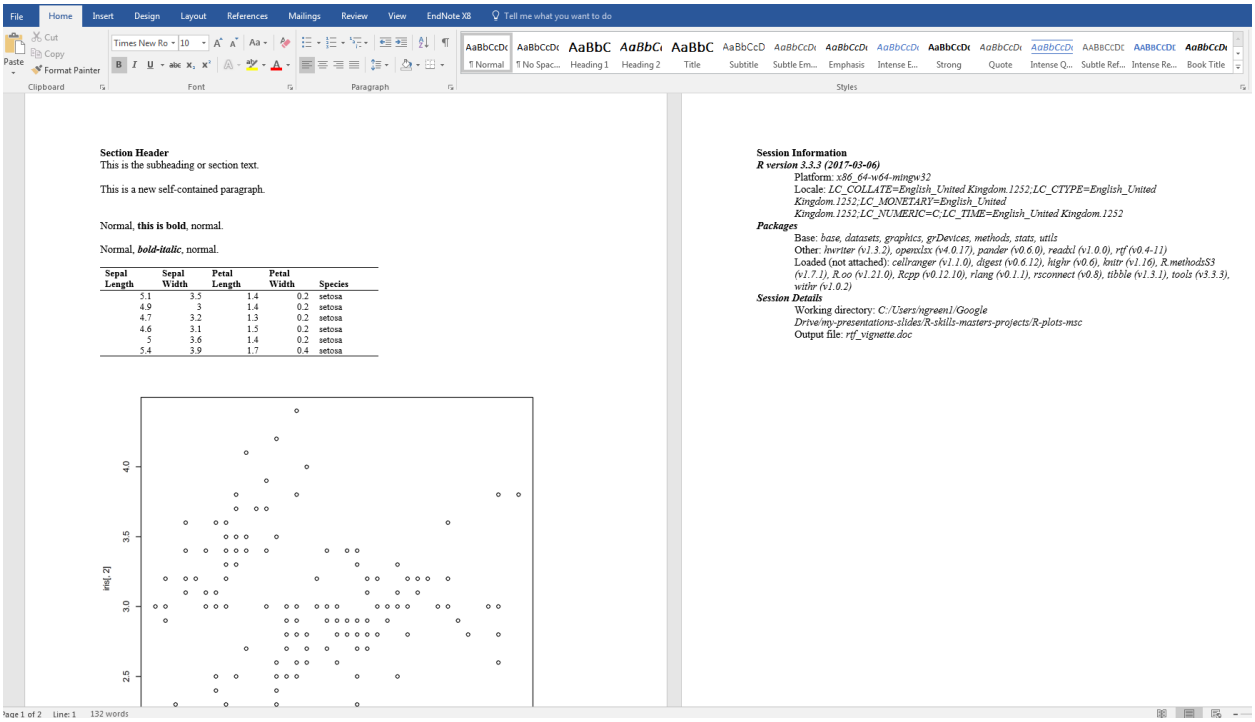
File
Home
Insert
Design
Layout
References
Mailings
Review
View
EndNote X8
Tell me what you want to do
Cut
Copy
Format Painter
Paste
Clipboard
Font
Paragraph
Styles
Section Header
This is the subheading or section text.
This is a new self-contained paragraph.
Normal, this is bold, normal.
Normal, bold-italic, normal.
Sepal Length
Sepal Width
Petal Length
Petal Width
Species
5.1 3.5 1.4 0.2 setosa
4.9 3 1.4 0.2 setosa
4.7 3.2 1.3 0.2 setosa
4.6 3.1 1.5 0.2 setosa
5 3.6 1.4 0.2 setosa
5.4 3.9 1.7 0.4 setosa
iris[, 2]
4.0
3.5
3.0
2.5
Session Information
R version 3.3.3 (2017-03-06)
Platform: x86_64-w64-mingw32
Locale: LC_COLLATE=English_United Kingdom.1252;LC_CTYPE=English_United Kingdom.1252;LC_MONETARY=English_United Kingdom.1252;LC_NUMERIC=C;LC_TIME=English_United Kingdom.1252
Packages
Base: base, datasets, graphics, grDevices, methods, stats, utils
Other: hwriter (v1.3.2), openxlsx (v4.0.17), pander (v0.6.0), readxl (v1.0.0), rtf (v0.4-11)
Loaded (not attached): cellranger (v1.1.0), digest (v0.6.12), highr (v0.6), knitr (v1.16), R.methodsS3 (v1.7.1), R.oo (v1.21.0), Rcpp (v0.12.10), rlang (v0.1.1), rsconnect (v0.8), tibble (v1.3.1), tools (v3.3.3), utf8 (v1.0.2)
Session Details
Working directory: C:/Users/ngreen1/Google Drive/my-presentations-slides/R-skills-masters-projects/R-plots-msc
Output file: rtf_vignette.doc
Page 1 of 2
Line: 1
132 words

Figure 21: