

Code Style

With the people sitting next to you, see how many differences can you find in each of these examples. Discuss which difference you prefer and why. If you discover anything you'd like to emulate (or not!), write it in your personal style guide. We'll come together as a whole group to discuss each example in turn.

Example 1

```

in file todayswork.r                                in file analyze_height-2014-04-30.R

data <- read.csv("data.csv",sep="\t")  ### read and manipulate data -----
attach(data)                             d <- read.csv("height.csv", sep="\t")
height_for_each_person<-Feet/12+inches d <- within(d, {
V3 <- factor(V3)                            Height <- Feet / 12 + Inches
                                           Sex <- factor(Sex, levels=1:2,
mymodel=lm(height_for_each_person~V3+V4)                                           labels=c("M", "F"))
summary( mymodel )                            })
                                           ### data analysis -----
                                           model.height <- lm(Height ~ Sex + Age, data=d)
                                           summary(model.height)

```

Example 2

```

## my box-cox function                                ## the Box-Cox transformation
my.func <- function(a ,b) {                          ## x: the data to be transformed
  if( b==0 ) {                                       ## lambda: the Box-Cox parameter
    log( a )                                         ## output: the transformed data
  }                                                  myBoxCox <- function(x, lambda) {
  else                                              if (lambda == 0) {
    (a^b- 1)/b                                       log(x)
  } else {
}                                                  (x^lambda - 1) / lambda
}                                                  }
}

```

Example 3

```

dat <- read.csv("mydata.csv")
dat_byday <- split(dat, dat$day)
mean.and.sd <- function(x) {c(m=mean(x), sd=sd(x))}
day1.summary <- mean.and.sd(dat_byday$'1'$response)
DayTwoSummary <- mean.and.sd(dat_byday$'2'$response)

dat <- read.csv("mydata.csv")
dat.byday <- split(dat, dat$day)
getMeanAndSd <- function(x) {c(m=mean(x), sd=sd(x))}
day1.summary <- getMeanAndSd(dat.byday$'1'$response)
day2.summary <- getMeanAndSd(dat.byday$'2'$response)

```

Style Guide

“Good coding style is like using correct punctuation. You may think you can manage without it, but it sure makes things easier to read. As with styles of punctuation, there are many possible variations. [Well-known examples are by Hadley Wickham, Yihui Xie, and Google.] You don’t have to use [one of theirs]. However, you do need to have and to use a consistent style.” (from <http://adv-r.had.co.nz/Style.html>)

Consider your own personal style guide. What would you include in each topic?

file naming

variable naming (both in code and in data frames)

function naming

braces

indentation

commenting

Name: _____

Which element of the code style guide do you think will be most helpful to you?
