

# Miscellaneous R notes

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1. **installing packages without administrative privileges:** The following commands install R packages (in this case the `plotrix`, `gplots`, `gtools` and `gdata` packages) into a working folder and then attach them. First go to the file menu, and **Change dir** to your Desktop or My Documents or something. Then:

```
> desktop = getwd()
> options(repos = "http://cran.us.r-project.org")
> install.packages("plotrix", destdir = desktop, lib = desktop)
> library(plotrix, lib = desktop)
> install.packages("gplots", destdir = desktop, lib = desktop)
> install.packages("gtools", destdir = desktop, lib = desktop)
> install.packages("gdata", destdir = desktop, lib = desktop)
> library(gtools, lib = desktop)
> library(gdata, lib = desktop)
> library(gplots, lib = desktop)
```

2. **Dealing with times in R (lab 2):** use the `times()` function in the `chron` library to convert character vectors or factor to times. e.g.:

```
> timevec1 = c("11:00:00", "11:25:30", "15:30:20")
> times1 = times(timevec1)
```

If you have times with no seconds component, use something like `timevec1=paste(timevec1,":00",sep=` to add seconds before you try to convert.

3. **More on reshaping data:**

```
> set.seed(1001)
> mydata = data.frame(indiv = rep(1:3, c(3, 4, 5)), sex = factor(c(rep("F",
+       7), rep("M", 5))), day = c(1:3, 1:4, 1:5), dist = runif(12))
```

Reshaping data (as Caro says) introduces NA values:

```
> r1 = reshape(mydata, direction = "wide", idvar = "indiv", timevar = "day",
+       v.names = "dist")
> r1
```

	indiv	sex	dist.1	dist.2	dist.3	dist.4	dist.5
1	1	F	0.98568878	0.4126285	0.4295392	NA	NA
4	2	F	0.41917224	0.4265066	0.8877976	0.006096034	NA
8	3	M	0.08121576	0.2886574	0.7653421	0.442924182	0.1383630

Tabulate number of individual females in this format:

```
> table(r1$sex)
```

```
F M
2 1
```

There may be a better way to do this but I haven't thought of it yet ...

```
> splitdata = split.data.frame(mydata, mydata$indiv)
> firstlines = lapply(splitdata, function(x) x[1, ])
> recombined = do.call("rbind", firstlines)
```