



SPSS Tip 15.2

Robust one-way repeated-measures designs ||||

I'll break down the syntax line by line. First we grab the data from SPSS and put it in a data frame called *mySPSSdata*:

```
mySPSSdata = spssdata.GetDataFromSPSS(factorMode = "Labels")
```

Next, we define the name of the variable that represents the participant IDs. If you use this file on your own data, replace the word *celebrity* with the (case-sensitive) name of your own ID variable. Make sure the name is in straight quotes and don't edit anything else:

```
ID<-"celebrity"
```

Next, we list the variables that represent the levels of the repeated-measures predictor. If you use this file on your own data replace the words *stick*, *testicle*, etc. with the (case-sensitive) names from your own data file. Make sure the names are in straight quotes and don't edit anything else:

```
rmFactor<-c("stick", "testicle", "eye", "witchetty")
```

The next two lines convert your dataframe from wide format to long (Section 4.6.1) and then rename the participant ID variable to be *id* (which is done to save you needing to edit the final two commands). If you've set up *ID* and *rmFactor* correctly in the two lines above everything should go smoothly:

```
df<-melt(mySPSSdata, id.vars = ID, measure.vars = rmFactor)  
names(df)[names(df) == ID] <- "id"
```

The final two lines run the robust test (*rmanova*) and *post hoc* tests (*rmmcp*). Because I've used generic variable names that were set up before we got to this point, you don't need to edit these functions unless you want to change the trim (*tr = 0.2*) to something other than the default of 20%:

```
rmanova(df$value, df$variable, df$id, tr = 0.2)  
rmmcp(df$value, df$variable, df$id, tr = 0.2)
```

