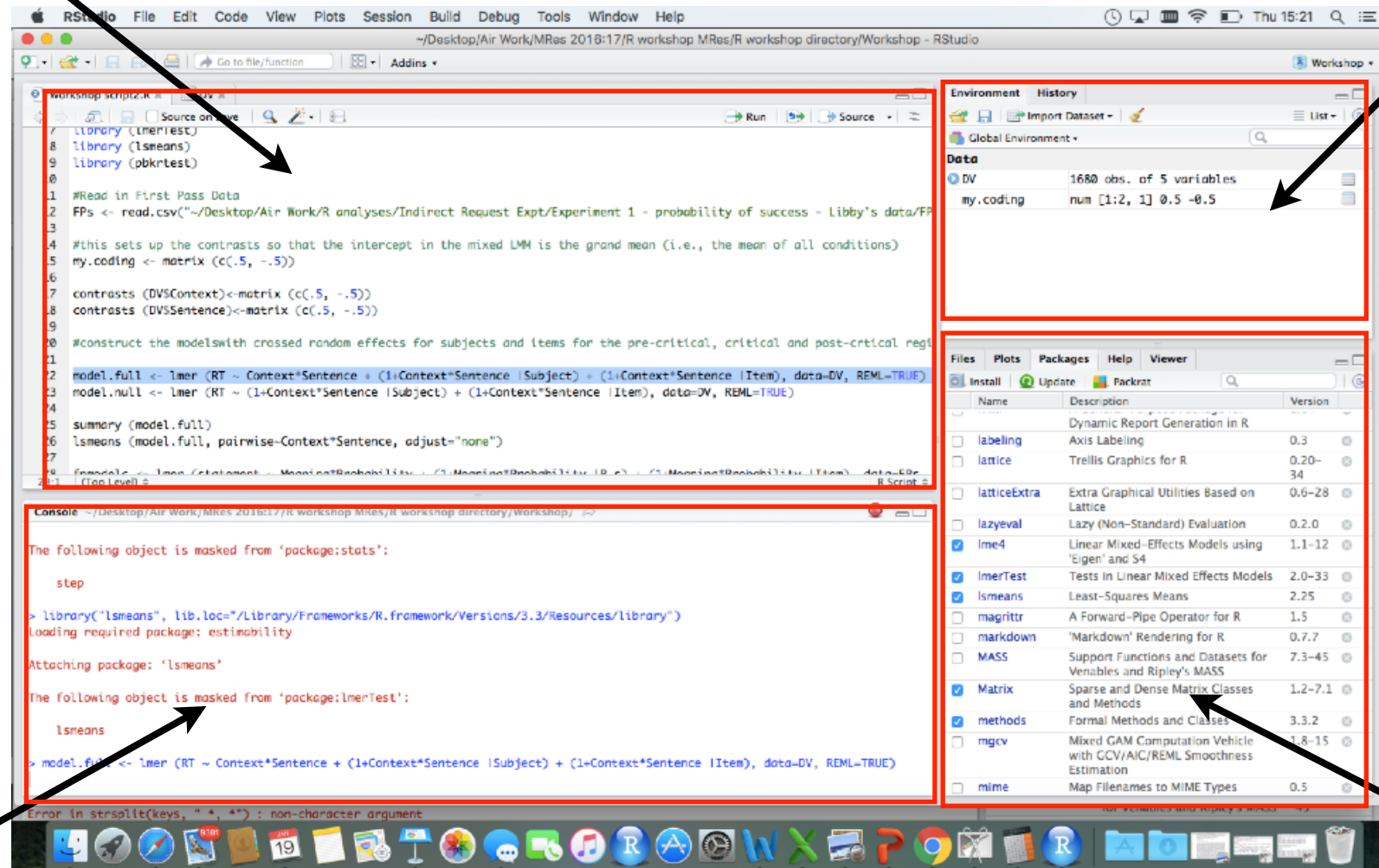


This is where you build your script and where data can be seen.

This contains information about your variables and open data sets.



This is where you type commands.

This lists the packages you have loaded, and has tabs for help, graphs etc.

Here is where  
you import your  
data.

The screenshot displays the RStudio environment. The main script editor on the left contains R code for loading packages, reading data from a CSV file, setting contrasts, and fitting a linear mixed-effects model. The Environment panel on the right, highlighted with a red box and an arrow, shows the 'Data' environment with two objects: 'DV' (1680 observations of 5 variables) and 'my.coding' (a numeric vector of length 1). The Console at the bottom shows the execution of the code, including package loading and model fitting. The Packages panel on the right lists installed and available packages.

```
1 library(lmerTest)
2 library(lsmmeans)
3 library(pbkrttest)
4
5 #Read in First Pass Data
6 FPs <- read.csv("~/Desktop/Air Work/MRes 2016:17/R workshop MRes/R workshop directory/Workshop - RStudio")
7
8 #this sets up the contrasts so that the intercept in the mixed LMM is the grand mean (i.e., the mean of all conditions)
9 my.coding <- matrix(c(.5, -.5))
10
11 contrasts(DV$Context)<-matrix(c(.5, -.5))
12 contrasts(DV$Sentence)<-matrix(c(.5, -.5))
13
14 #construct the models with crossed random effects for subjects and items for the pre-critical, critical and post-critical regi
15
16 model.full <- lmer(RT ~ Context*Sentence + (1|Context*Sentence |Subject) + (1|Context*Sentence |Item), data=DV, REML=TRUE)
17 model.null <- lmer(RT ~ (1+Context*Sentence |Subject) + (1+Context*Sentence |Item), data=DV, REML=TRUE)
18
19 summary(model.full)
20 lsmmeans(model.full, pairwise=Context*Sentence, adjust="none")
21
22 (model <- lmer(Statement ~ Meaning*Repeatability + (1|Meaning*Repeatability |R_c) + (1|Meaning*Repeatability |Item), data=FPs, REML=TRUE))
23 (Top Level)
```

Environment

Object	Class	Attributes
DV	data.frame	1680 obs. of 5 variables
my.coding	matrix	num [1:2, 1] 0.5 -0.5

Files Plots Packages Help Viewer

Name	Description	Version
labeling	Dynamic Report Generation in R	0.3
lattice	Axis Labeling	0.20-34
latticeExtra	Trellis Graphics for R	0.6-28
lazyeval	Extra Graphical Utilities Based on Lattice	0.2.0
lme4	Lazy (Non-Standard) Evaluation	1.1-12
lmerTest	Linear Mixed-Effects Models using 'Eigen' and S4	2.0-33
lsmmeans	Tests in Linear Mixed Effects Models	2.25
magrittr	Least-Squares Means	1.5
markdown	A Forward-Pipe Operator for R	0.7.7
MASS	'Markdown' Rendering for R	7.3-45
Matrix	Support Functions and Datasets for Venables and Ripley's MASS	1.2-7.1
methods	Sparse and Dense Matrix Classes and Methods	3.3.2
mgcv	Formal Methods and Classes	1.8-15
mime	Mixed GAM Computation Vehicle with GCV/AIC/REML Smoothness Estimation	0.5

Console

```
> library("lsmmeans", lib.loc="/Library/Frameworks/R.framework/Versions/3.3/Resources/library")
Loading required package: estimability
Attaching package: 'lsmmeans'
The following object is masked from 'package:lmerTest':
  lsmmeans
> model.full <- lmer(RT ~ Context*Sentence + (1+Context*Sentence |Subject) + (1+Context*Sentence |Item), data=DV, REML=TRUE)
```

Error in strsplit(keys, " ", \*\*): non-character argument