

One theory regarding memory is that verbal material is remembered as a function of the degree to which it was processed when it was initially presented. Eysenck (1974) randomly assigned 50 younger subjects and 50 older (between 55 and 65 years old) to one of five learning groups. The Counting group was asked to read through a list of words and count the number of letters in each word (low level processing). The Rhyming group was asked to read each word and think of a word that rhymed with it. The Adjective group was asked to give an adjective that could reasonably be used to modify each word in the list. The Imagery group was instructed to form vivid images of each word (deepest level of processing). None of these four groups was told they would later be asked to recall the items. Finally, the Intentional group was asked to memorize the words for later recall. After the subjects had gone through the list of 27 items three times they were asked to write down all the words they could remember.

```
> memory <- read.table("memory.txt", header=T, sep="\t")
> attach(memory)

> memory.aov<-aov(Words~age*process)
> anova(memory.aov)
```

	Df	Sum Sq	Mean Sq	F value	Pr(>F)	
age	1	240.25	240.25	29.9356	3.981e-07	***
process	4	1514.94	378.74	47.1911	< 2.2e-16	***
age:process	4	190.30	47.58	5.9279	0.0002793	***
Residuals	90	722.30	8.03			

```
> boxplot(Words ~ age*process)
> interaction.plot(process,age, Words)
```

