# Lab 4: Pseudohomophones lecturer’s notes

## License

These lab classes were developed at the University of Nottingham as part of the first year course in BSc (Hons) Psychology, with support from the Higher Education Association Psychology Network (HEA-PN). The materials provided here may be distributed freely, but please acknowledge the University of Nottingham and the HEA if you use them.

## Lab class 4: Pseudo-homophones

This class develops a more complex experiment with the students using PsychoPy

## Learning objectives for this class

* More precise specification of stimuli
  + Computer frames instead of seconds/ms
  + Degrees to be monitor-independent

## Basic structure

* Talk pt 1: Pseudohomophones
* Talk pt 2: Create the experiment
* Break
* Run the study (requires attention)
* Talk pt 3: Analysis

## Slides pt 1

This talk does confuse students because it keeps changing direction (there was an effect, then it was shown to be an artefact, then it was shown to be real…). On the other hand, it hopefully points out that no answer is final?!

Summary of findings:

Rubenstein et al (1971) finds pseudohomophone effect

Martin (1982) shows it might be due to word shape

Underwood et al (1998) show that, with training, shape doesn’t matter

… now with a forced choice task?

## Slides pt 2

Also self-explanatory, including screenshots for creating the entire experiment. Students need to be split into Group A and Group B, with different ‘training’ conditions. Some are going to be exposed to pseudohomophones during the training and some aren’t because the theory is that this might make a difference to the occurrence of the pseudohomophone effect.

## Slides pt 3

Get students to copy the .*psydat* file into the *network* directory for batch analysis. While that is running get them to try in Excel to calculate their own average RT for the pseudo-homophone and normal word for practice using excel. They shouldn’t need instructions but have teaching assistants ready to help.

*Contrary to the prediction from Underwood’s study, this experiment tends to show no difference between training conditions, but shows a pseudohomophone effect for both groups! Possibly the RT/2AFC design is now precise enough to show more subtle effects than some previous studies (e.g. Martin, 1982).*

SPSS analyses:

1. males and females

(ANALYSE> DESCRIPTIVES> FREQUENCIES)

1. Mean age:

(ANALYSE> DESCRIPTIVES> DESCRIPTIVES)

1. t-test (independent-samples) – does training cause a bigger difference in scores?

(ANALYSE> COMPARE MEANS> INDEPENDENT t-test/ )

Move “Condition” to the GROUPING VARIABLE and set group1=0, group2=1.

Move DIFF to dependent variable

**t-test shows no difference?**

1. One-sample t-test to show that in fact **both** groups were above 0