

### **Abbreviations used in the scripts for data analysis:**

sub / SUB

ori = orientation

freq = frequent orientation [either left ( $<180^\circ$ ) or right tilted ( $>180^\circ$ ) Gabor orientations]

infreq = infrequent

vertic = vertical ( $180^\circ$ ), coded with 1

left = left tilted Gabor, coded with 2

right = right tilted Gabor, coded with 3

RT / rt = reaction time

avRT = RTs in which the switch condition comprised all possible switch trials

ACC / acc = accuracy (1-error rate)

AL = awareness level (1-4)

### **Analysis Guide**

Folders “sub001-009” and “sub010-sub017” contain the behavioral data obtain in the orientation discrimination task. There are separate files for each subject and each run that were included in the final analysis. All data was stored in Python’s pickle format that is used for data serialization which refers to converting an object in memory to a byte stream. This character stream can then be retrieved and de-serialized back to a Python object. The analysis scripts unpickle (de-serialized) the files for reading and create a dictionary containing all relevant information collected during the experimental session. All scripts were written in Python 2.7 but work smoothly in Python 3.0.

For analysis of RT data use “RT\_analysis\_mg\_beh\_mg.py”.

Use “Accuracies&SDTM\_beh\_ana\_beh\_mg.py” to calculate accuracies and signal detection measures.

To conduct the control analysis mentioned in the paper and supplementary material, use “pre\_traget\_RT\_analysis\_beh\_mg.py” (removes trials prior to an orientation changes rated as partially or almost fully aware) and “random\_sample\_RT\_analysis\_mg\_beh.py” to calculate RTs where the number of unaware switch trials was matched with the number randomly sampling an equal number of partially and almost fully aware switch trials

