

## These Matlab scripts & data files can be used to produce the figures from Garvert et al., eLife 2017

### Dependencies:

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- Matlab (we used 2014a but it should all work with previous versions)
- bioinformatics toolbox (for script graphallshortestpaths.m in different scripts, e.g. generate\_Fig3C.m)

### Data files:

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All neural data files come in the following format: subjects x runs x object trial t-1 x object trial t

**ROI1.mat:** parameter estimates extracted from entorhinal ROI1 (contrast used to define ROI: associated < non-associated)

**ROI2.mat:** parameter estimates extracted from entorhinal ROI2 (contrast used to define ROI: length 2 < length 3)

**ROI3.mat:** parameter estimates extracted from entorhinal ROI3 (contrast used to define ROI: Chadwick et al. peak coordinate)

**ROI4.mat:** parameter estimates extracted from entorhinal ROI depicted in Figure 4B

**ROI5.mat:** parameter estimates extracted from anatomically defined region of interest depicted in Figure 2 – figure supplement 1.

**IOFC.mat:** parameter estimates extracted from OFC ROI (contrast used to define ROI: associated < non-associated)

**subgenual.mat:** parameter estimates extracted from OFC ROI (contrast used to define ROI: associated < non-associated)

**visual.mat:** parameter estimates extracted from OFC ROI (contrast used to define ROI: main effect of object onset)

**RT.mat:** log-transformed and demeaned response times, format: subj x runs x object on trial t-1 x object on trial t

### behaviour.mat:

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- rt\_train: response times in the training blocks (subjects x training blocks)
- cr\_train: % correct in the training blocks (subjects x training blocks)
- rt\_object: response times of cover task during the scan for the seven different objects (subjects x runs x object)
- rt\_object: % correct of cover task during the scan for the seven different objects (subjects x runs x object)
- rt\_trans: Average response time across blocks for the different object transitions (subjects x object on trial t-1 x object on trial t)

**exp\_settings.mat:**

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- path\_dist: time: average number of objects during training between any pair of objects (subjects x object A x object B)
- transition\_count: number of times a transition between two objects was experienced during training (subjects x object A x object B). Note this contains transitions between all 12 objects on the full graph.