**1 – What type of study is this?**

This is an experimental study – conditions are randomized between and within subjects.

**2 – What are the independent variables?**

The independent variables are cue predictiveness (within subjects) and cue complexity, operationalised as the type of shapes used in the experiment (circles or sprites, between subjects).

Initially, two colours are predictive: one colour always needs a response of ‘A’, one needs a response of ‘Z’. The other two colours are non-predictive (i.e. the correct response depends on the other colour). Halfway through the experiment this changes to a probablisitic relationship – the predictive colours need the same response on 2/3 trials, and the opposite response on the other 1/3 trials.

Participants in the simple condition saw coloured circles while those in the complex condition saw coloured sprites with jagged edges.

**3 – What are the dependent variables?**Dependent variables are: **contingency learning,** which is operationalised by assessing accuracy of responses on the A/Z categorization task; and **response times** on the dot probe task.  
   
**4 – What is one potential confounding variable and how have you attempted to control for it?**  
Participants will enter the experiment with pre-existing biases about the colours of the stimuli we use. To control for any potential confound that may result from this, we randomise the role that colours play in the experiment across participants.  
  
**5 – What is one potential ethical issue? How have you addressed it?**  
Some participants might feel stress or disappointment at the start of the experiment if their performance is not good (too many errors). Although these feelings are just transitory for the most of participants, it can be an issue for participants with low self-esteem or mood disorders. In order to avoid any negative consequence, we will make it clear in the instructions at the beginning of the experiment that it is normal to commit some errors during the first few trials of the task.  
  
**6 – How did the researcher get from 1st year to conducting this research?**

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