**Pavlovian Conditioning, Extinction, and Reinstatement Experiment**

INSTRUCTION

“You will be presented with a series of shapes on the computer screen. From time to time you will also hear a tone following the shapes.”

\*\*\*New screen

“Please pay attention to the shapes on computer screen and the tone via your headphones throughout the experiment.”

\*\*\*New screen

“When you see a shape on the screen, you will see the words “Rate Now” appear above the shape. When you see those words, press the Y button if you are certain that there will be a tone presented through the headphones following the shape.” (Y is to be programmed to the V key) (we will stick labels over the top)

\*\*\*New screen

“Press the N button if you are certain that there will NOT be a tone after the shape. “ (N is to be programmed to the B key) (we will stick labels over the top)

\*\*\*New screen

“Press the ? button if you are unsure if the tone will follow the shape or not.” (? Is to be programmed to the N key) (we will stick labels over the top)

\*\*\*New screen

“After each shape has disappeared, you will be asked to rate the degree of pleasantness of each shape using the following scale.”

-5          - 4       - 3        - 2        -1         0       +1         +2        +3        +4        +5

very                                                   neutral                                                  very

unpleasant                                                                                                 pleasant

\*\*\*New screen

“Now you will do a practice trial before starting

Press the SPACE Bar if you are ready”

PRACTICE TRIAL

One presentation of the yellow triangle trial only (i.e., no tone) (as per instruction below) including the “rate now” prompt during the trial and the pleasantness rating afterwards.

ACQUISITION PHASE

* 24 trials in total
* Each trial starts with a white fixation cross in the centre of the screen for 5 sec. Then one of the shapes described below will appear.
* There will be 12 trials of yellow triangle (8.5 cm wide and 10.5 cm high) presented in the centre of the screen with a black background. Each triangle will be presented on the screen for 10s.
* There will be 12 trials of pink trapezoid (8.5 cm wide and 10.5 cm high) presented in the centre of the screen with a black background. Each trapezoid will be presented for 10s. On the 8th second, a tone of metal fork scraping on a plate will be presented for 2s. Then trapezoid and the tone will offset together.
* The shapes will be presented in random order with the caveat that no more than two trials of either triangle or trapezoid are presented sequentially
* The first two trials are the triangle, followed by the trapezoid (with the tone). The order of the presentation is counterbalanced across participants (e.g. half of participants will get the triangle and then then trapezoid, another half will get the trapezoid first, followed by the triangle)
* During each of these trials, participants will be asked to respond by pressing one of the three different buttons (the 🡨 button for Yes certain the tone will follow, the button for Uncertain the tone will follow, and the 🡪 button for N Certain the tone will not follow. (**Expectancy Data**)
* After each trial, there will be a random waiting period of between 15 and 25 sec. During this waiting period an instruction will appear on the screen at 10 sec (“Please rate the degree of pleasantness of the shape you just saw – if it was the triangle, the triangle should be presented under the instruction. If it was the trapezoid, the trapezoid should appear under the instruction). The rating scale should be shown beneath the shape, ranging from -5 (very unpleasant) 0 (neutral) to +5 (very pleasant) (which corresponds to the 11 keys in the middle row of the keyboard (we will stick labels over the top). After their button press for their rating, the instruction screen will disappear and the rest of the random wait period continues until a white fixation cross appears in the centre of the black background for 5 sec heralding the next trial **(Evaluative Data)**

EXTINCTION PHASE

* 24 trials in total (12 trials of triangles, and 12 trials of trapezoid).
* All the procedures and output are the same as in the acquisition phase. HOWEVER, the trapezoid will NOT be followed by the tone anymore.

REINSTATEMENT PHASE

* Half of the participants will be presented with three trials of the Tone only presentation. Each trial of the Tone will be presented for 2s with interval of 2s from the offset of one trial to the onset of another trial.
* Another half of the participants will not be presented with any stimuli and left to think that they are waiting for the next phase of the experiment.

TEST PHASE

* 6 trials in total (3 trials of triangle and 3 trials of trapezoid but without the tone)
* All procedures and outputs are identical with extinction phase

OUTPUT

* ID of the subject
* ID for each trial for Phase (acquisition, extinction, test)
* ID for each trial for Shape (triangle. trapezoid)
* ID for each trial for Shape Trial Number (1-12)
* Each trial will have two output values the expectancy (Y, ?, N) and their evaluation (-5 through +5)

**Sample Output Data**

