**Supplementary Information**

Supplementary Table 1

*Participants Disqualification Criteria*

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| --- | --- | --- | --- |
| Experiment | Go cue | Sample Size (Excluded) | Number of Disqualified Participants |
| Exp. 1:  Snacks | Auditory | 19 (12) | 9 - Training a  3 - Apparatus b |
| Exp. 2:  Fractals | Auditory | 25 (3) | 2 - Apparatus  1 - Intransitive ranking |
| Exp. 3:  Positive IAPS | Auditory | 27 (0) |  |
| Exp. 4:  Negative IAPS | Auditory | 28 (5) | 1 - Participant requested to stop  4 - Training |
| Exp. 5:  Snacks | Visual | 25 (1) | 1 - Training a |
| Exp. 6:  Snacks | Auditory Aversive | 25 (4) | 3 - Apparatus  1 - Avoided probe choices of low-value items |
| Exp. 7:  Faces | Auditory | 25 (1) | 1 - Training |
| Exp. 8:  Fractals | Auditory | 25 (2) | 1- Apparatus  1- Training |
| Exp. 9:  Positive IAPS | Visual | 29 (3) | 1 - Participant requested to stop  2 - Training |
| Exp. 10:  Negative IAPS | Visual | 27 (3) | 3 - Training |

*Note.* A total of 35 participants were disqualified from analysis due to reasons mentioned above.

a The most common cause of disqualification was behavior during training. Participant that during training phase stopped responding to the Go cue for prolonged periods of time. This exclusion criteria was adopted from previous cue-approach published work 11,12. In Experiment 1, this criterion was applied post-hoc, which resulted in a relatively smaller number of participants.

b Another frequent reason for disqualification was due to technical problems with the apparatus running the experiment.



*Supplementary Figure 1.* Sorting and pair matching procedure.

1a. In the first experimental design (used in Experiments 1-4), items were rank ordered based on initial preferences evaluation procedure, and classified as high-value (ranks 7:22) and low-value items (39:54). 1b. Eight high and eight low-value items were associated with the cue and response during training (assigned to be Go items). In the probe phase, all eight Go items were paired with similar-value No-Go items, forming 64 (8×8) unique pairs in each value category. 1c. In a second experimental design (used in Experiments 5-10) similar rank ordering was conducted. Items were classified as high-value (7:18) and low-value items (43:54). 1d. Six high-value and six low-value items assigned to be Go items during training. In the probe phase, all six Go items were paired with similar initial value No-Go items, forming 36 (6×6) unique pairs in each value category. Condition assignments for Go and No-Go items were counterbalanced across participants in both experimental designs.

**%% Neutral auditory cue**

% features:

wave = sin(1:0.25:1000);

freq = 22254;

% Play the sound

sound(wave,freq);

**%% Aversive auditory cue**

% features:

wave = cot(1:0.25:7541);

freq = 100544;

% Play the sound

sound(wave,freq);

*Supplementary Code.* Neutral and aversive auditory cues, implemented in MATLAB.

In Experiments 1-4 and 7-8 a neutral auditory cue of 180-ms was produced using a sinus wave function. To induce aversive auditory cue in Experiment 6, a longer duration of 300-ms cotangent wave function was used.