

Mere exposure facilitates category learning of novel objects: Supplementary materials

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May 19, 2010

The tables below show the detailed abstract structure of the stimuli used in Experiments 1 and 2.

In each of the tables, columns represent a different stimulus dimension and rows represent different stimuli. Each number corresponds to a feature value for a given stimulus dimension – for instance “1” in the arms column might refer to hairy arms and “2” might refer to tentacle arms. As appropriate, in some tables, the final column shows the category of the stimulus if the stimuli in the table are used in the category learning phase of that experiment.

Note that, in Experiment 2, the particular features that corresponded to particular numbers in the table were rotated across participants to ensure that results were not restricted to particular combinations of features. A total of four feature-to-number mappings were yoked across conditions so that participants in all conditions were exposed to the same feature-to-number mappings.

Abstract structure of stimuli used in Experiment 1

Stimuli viewed during pre-exposure and during category learning with feedback

| dors.fin | vent.fin | eyes | tail | body | markings | category |
|-----------------|-----------------|-------------|-------------|-------------|-----------------|-----------------|
| 1 | 1 | 1 | 1 | 1 | 2 | Mog |
| 1 | 1 | 1 | 1 | 1 | 3 | Mog |
| 1 | 1 | 1 | 1 | 2 | 1 | Mog |
| 1 | 1 | 1 | 1 | 3 | 1 | Mog |
| 1 | 1 | 1 | 1 | 2 | 2 | Mog |
| 1 | 1 | 1 | 1 | 3 | 3 | Mog |
| 1 | 1 | 2 | 1 | 1 | 1 | Mog |
| 1 | 1 | 3 | 1 | 1 | 1 | Mog |
| 1 | 1 | 1 | 2 | 2 | 2 | Mog |
| 1 | 1 | 1 | 3 | 3 | 3 | Mog |
| 1 | 1 | 2 | 1 | 2 | 2 | Mog |
| 1 | 1 | 3 | 1 | 3 | 3 | Mog |
| 1 | 2 | 1 | 1 | 1 | 2 | Nib |
| 1 | 3 | 1 | 1 | 1 | 3 | Nib |
| 1 | 2 | 1 | 1 | 2 | 1 | Nib |
| 1 | 3 | 1 | 1 | 3 | 1 | Nib |
| 1 | 2 | 1 | 1 | 1 | 1 | Nib |
| 1 | 3 | 1 | 1 | 1 | 1 | Nib |
| 2 | 1 | 1 | 2 | 1 | 2 | Nib |
| 3 | 1 | 1 | 3 | 1 | 3 | Nib |
| 2 | 2 | 1 | 1 | 2 | 1 | Nib |
| 3 | 3 | 1 | 1 | 3 | 1 | Nib |
| 2 | 1 | 2 | 1 | 1 | 1 | Nib |
| 3 | 1 | 3 | 1 | 1 | 1 | Nib |

Stimuli viewed during the "Quiz"

| dors.fin | vent.fin | eyes | tail | body | markings | category |
|-----------------|-----------------|-------------|-------------|-------------|-----------------|-----------------|
| 1 | 1 | 1 | 1 | 1 | 4 | Mog |
| 1 | 1 | 1 | 1 | 1 | 5 | Mog |
| 1 | 1 | 1 | 1 | 4 | 1 | Mog |
| 1 | 1 | 1 | 1 | 5 | 1 | Mog |
| 1 | 1 | 1 | 1 | 4 | 4 | Mog |
| 1 | 1 | 1 | 1 | 5 | 5 | Mog |
| 1 | 1 | 4 | 1 | 1 | 1 | Mog |
| 1 | 1 | 5 | 1 | 1 | 1 | Mog |
| 1 | 1 | 1 | 4 | 4 | 4 | Mog |
| 1 | 1 | 1 | 5 | 5 | 5 | Mog |
| 1 | 1 | 4 | 1 | 4 | 4 | Mog |
| 1 | 1 | 5 | 1 | 5 | 5 | Mog |
| 1 | 4 | 1 | 1 | 1 | 4 | Nib |
| 1 | 5 | 1 | 1 | 1 | 5 | Nib |
| 1 | 4 | 1 | 1 | 4 | 1 | Nib |
| 1 | 5 | 1 | 1 | 5 | 1 | Nib |
| 1 | 4 | 1 | 1 | 1 | 1 | Nib |
| 1 | 5 | 1 | 1 | 1 | 1 | Nib |
| 4 | 1 | 1 | 4 | 1 | 4 | Nib |
| 5 | 1 | 1 | 5 | 1 | 5 | Nib |
| 4 | 4 | 1 | 1 | 4 | 1 | Nib |
| 5 | 5 | 1 | 1 | 5 | 1 | Nib |
| 4 | 1 | 4 | 1 | 1 | 1 | Nib |
| 5 | 1 | 5 | 1 | 1 | 1 | Nib |

Abstract structure of stimuli used in Experiment 2

Stimuli viewed during pre-exposure

Correlated(non-Diag) Condition

(correlated dimensions: head/wings; body/arms)

| head | wings | body | arms | ant. | legs |
|------|-------|------|------|------|------|
| 1 | 1 | 5 | 5 | 1 | 1 |
| 1 | 1 | 5 | 5 | 2 | 2 |
| 5 | 5 | 2 | 2 | 3 | 3 |
| 5 | 5 | 2 | 2 | 4 | 4 |
| 1 | 1 | 3 | 3 | 1 | 2 |
| 1 | 1 | 3 | 3 | 2 | 3 |
| 1 | 1 | 4 | 4 | 3 | 4 |
| 1 | 1 | 4 | 4 | 4 | 1 |
| 5 | 5 | 1 | 1 | 4 | 4 |
| 5 | 5 | 1 | 1 | 3 | 3 |
| 2 | 2 | 5 | 5 | 2 | 2 |
| 2 | 2 | 5 | 5 | 1 | 1 |
| 2 | 2 | 3 | 3 | 4 | 3 |
| 2 | 2 | 3 | 3 | 3 | 2 |
| 2 | 2 | 4 | 4 | 2 | 1 |
| 2 | 2 | 4 | 4 | 1 | 4 |
| 3 | 3 | 1 | 1 | 1 | 3 |
| 3 | 3 | 1 | 1 | 2 | 4 |
| 3 | 3 | 2 | 2 | 3 | 1 |
| 3 | 3 | 2 | 2 | 4 | 2 |
| 3 | 3 | 5 | 5 | 1 | 4 |
| 3 | 3 | 5 | 5 | 2 | 1 |
| 5 | 5 | 4 | 4 | 3 | 2 |
| 5 | 5 | 4 | 4 | 4 | 3 |
| 4 | 4 | 1 | 1 | 4 | 2 |
| 4 | 4 | 1 | 1 | 3 | 1 |
| 4 | 4 | 2 | 2 | 2 | 4 |
| 4 | 4 | 2 | 2 | 1 | 3 |
| 5 | 5 | 3 | 3 | 4 | 1 |
| 5 | 5 | 3 | 3 | 3 | 4 |
| 4 | 4 | 5 | 5 | 2 | 3 |
| 4 | 4 | 5 | 5 | 1 | 2 |

Correlated(Diag) Condition

(correlated dimensions: head/body; wings/arms)

| head | wings | body | arms | ant. | legs |
|------|-------|------|------|------|------|
| 1 | 5 | 1 | 5 | 1 | 1 |
| 1 | 5 | 1 | 5 | 2 | 2 |
| 5 | 2 | 5 | 2 | 3 | 3 |
| 5 | 2 | 5 | 2 | 4 | 4 |
| 1 | 3 | 1 | 3 | 1 | 2 |
| 1 | 3 | 1 | 3 | 2 | 3 |
| 1 | 4 | 1 | 4 | 3 | 4 |
| 1 | 4 | 1 | 4 | 4 | 1 |
| 5 | 1 | 5 | 1 | 4 | 4 |
| 5 | 1 | 5 | 1 | 3 | 3 |
| 2 | 5 | 2 | 5 | 2 | 2 |
| 2 | 5 | 2 | 5 | 1 | 1 |
| 2 | 3 | 2 | 3 | 4 | 3 |
| 2 | 3 | 2 | 3 | 3 | 2 |
| 2 | 4 | 2 | 4 | 2 | 1 |
| 2 | 4 | 2 | 4 | 1 | 4 |
| 3 | 1 | 3 | 1 | 1 | 3 |
| 3 | 1 | 3 | 1 | 2 | 4 |
| 3 | 2 | 3 | 2 | 3 | 1 |
| 3 | 2 | 3 | 2 | 4 | 2 |
| 3 | 5 | 3 | 5 | 1 | 4 |
| 3 | 5 | 3 | 5 | 2 | 1 |
| 5 | 4 | 5 | 4 | 3 | 2 |
| 5 | 4 | 5 | 4 | 4 | 3 |
| 4 | 1 | 4 | 1 | 4 | 2 |
| 4 | 1 | 4 | 1 | 3 | 1 |
| 4 | 2 | 4 | 2 | 2 | 4 |
| 4 | 2 | 4 | 2 | 1 | 3 |
| 5 | 3 | 5 | 3 | 4 | 1 |
| 5 | 3 | 5 | 3 | 3 | 4 |
| 4 | 5 | 4 | 5 | 2 | 3 |
| 4 | 5 | 4 | 5 | 1 | 2 |

Uncorrelated Condition

(features randomly assigned, examples only)

| head | wings | body | arms | ant. | legs |
|------|-------|------|------|------|------|
| 1 | 3 | 5 | 4 | 1 | 1 |
| 4 | 2 | 4 | 2 | 2 | 2 |
| 2 | 1 | 4 | 1 | 3 | 3 |
| 2 | 5 | 4 | 5 | 4 | 4 |
| 1 | 3 | 3 | 4 | 1 | 2 |
| 3 | 4 | 3 | 3 | 2 | 3 |
| 4 | 1 | 5 | 1 | 3 | 4 |
| 5 | 5 | 2 | 3 | 4 | 1 |
| 2 | 4 | 5 | 5 | 4 | 4 |
| 1 | 1 | 4 | 2 | 3 | 3 |
| 1 | 3 | 1 | 5 | 2 | 2 |
| 3 | 1 | 5 | 2 | 1 | 1 |
| 4 | 4 | 3 | 2 | 4 | 3 |
| 4 | 3 | 5 | 2 | 3 | 2 |
| 5 | 5 | 5 | 1 | 2 | 1 |
| 3 | 2 | 4 | 4 | 1 | 4 |
| 5 | 5 | 2 | 1 | 1 | 3 |
| 5 | 5 | 4 | 4 | 2 | 4 |
| 5 | 5 | 1 | 4 | 3 | 1 |
| 2 | 4 | 5 | 5 | 4 | 2 |
| 1 | 1 | 4 | 4 | 1 | 4 |
| 4 | 4 | 1 | 4 | 2 | 1 |
| 2 | 2 | 1 | 5 | 3 | 2 |
| 4 | 1 | 2 | 5 | 4 | 3 |
| 5 | 2 | 3 | 1 | 4 | 2 |
| 1 | 5 | 5 | 3 | 3 | 1 |
| 2 | 5 | 2 | 4 | 2 | 4 |
| 3 | 3 | 1 | 3 | 1 | 3 |
| 5 | 2 | 2 | 5 | 4 | 1 |
| 5 | 2 | 2 | 2 | 3 | 4 |
| 3 | 3 | 1 | 1 | 2 | 3 |
| 3 | 4 | 4 | 5 | 1 | 2 |

Stimuli viewed during category learning with feedback

| head | wings | body | arms | ant. | legs | category |
|-------------|--------------|-------------|-------------|-------------|-------------|-----------------|
| 1 | 1 | 1 | 1 | 1 | 1 | Mog |
| 1 | 1 | 1 | 1 | 2 | 2 | Mog |
| 1 | 1 | 1 | 1 | 3 | 3 | Mog |
| 1 | 1 | 1 | 1 | 4 | 4 | Mog |
| 2 | 2 | 2 | 2 | 1 | 1 | Mog |
| 2 | 2 | 2 | 2 | 2 | 2 | Mog |
| 2 | 2 | 2 | 2 | 3 | 3 | Mog |
| 2 | 2 | 2 | 2 | 4 | 4 | Mog |
| 1 | 1 | 2 | 2 | 1 | 1 | Nib |
| 1 | 1 | 2 | 2 | 2 | 2 | Nib |
| 1 | 1 | 2 | 2 | 3 | 3 | Nib |
| 1 | 1 | 2 | 2 | 4 | 4 | Nib |
| 2 | 2 | 1 | 1 | 1 | 1 | Nib |
| 2 | 2 | 1 | 1 | 2 | 2 | Nib |
| 2 | 2 | 1 | 1 | 3 | 3 | Nib |
| 2 | 2 | 1 | 1 | 4 | 4 | Nib |