Perceptual and Unsupervised Learning

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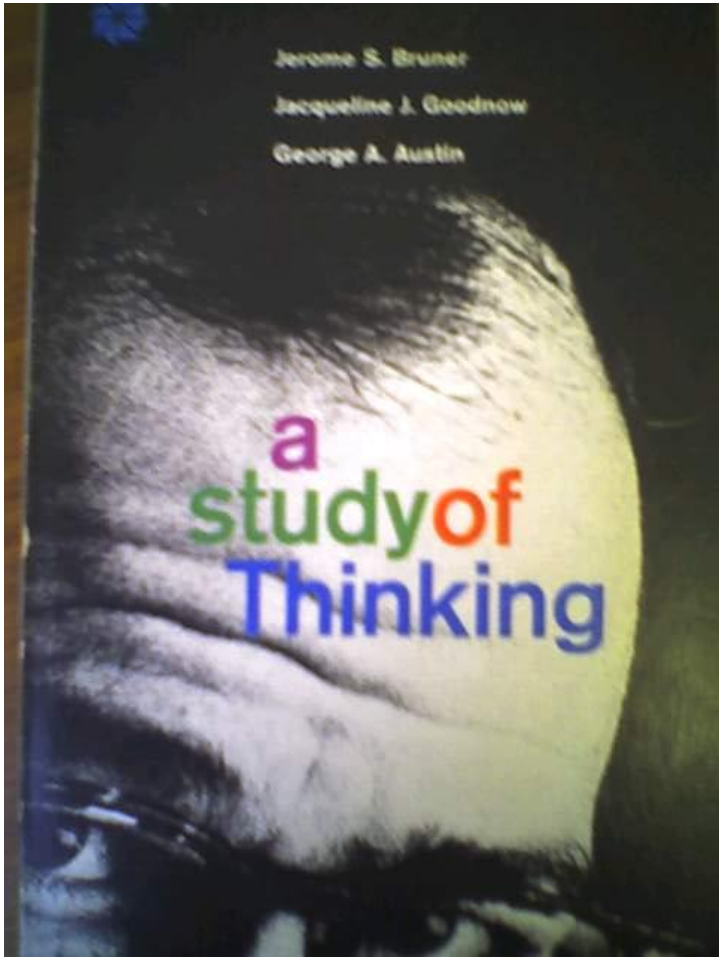
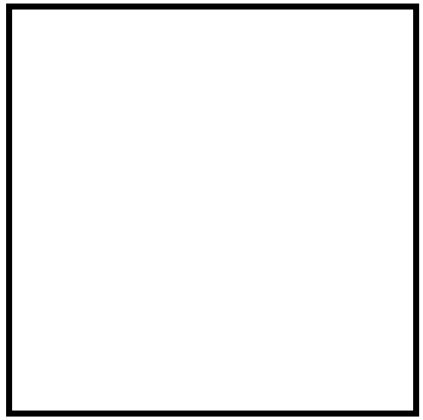
Categorisation “parlour game”

- “Guess and correct” methodology.



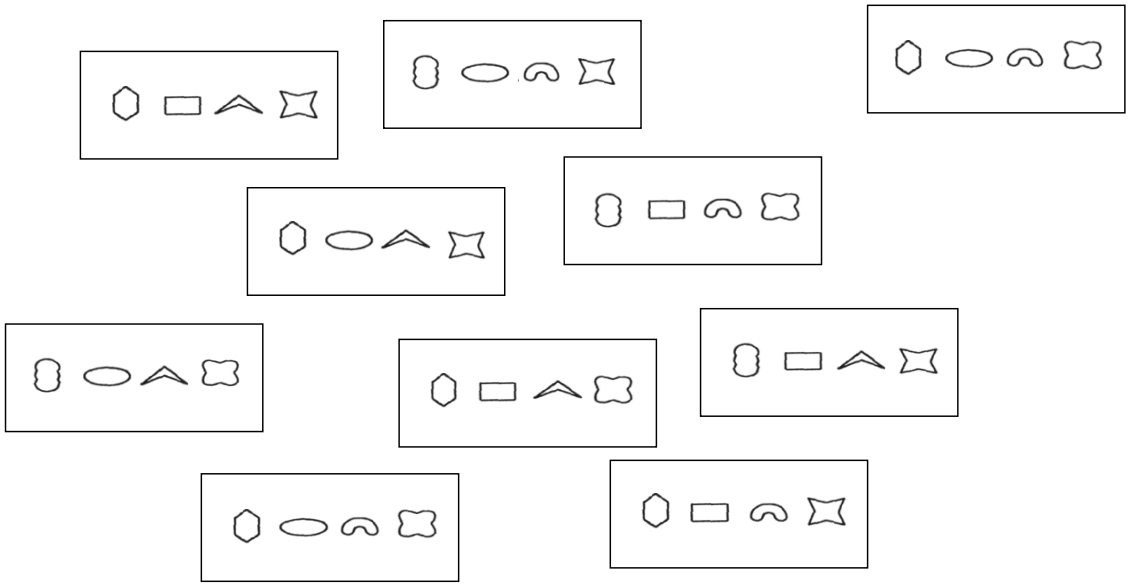


A or B?

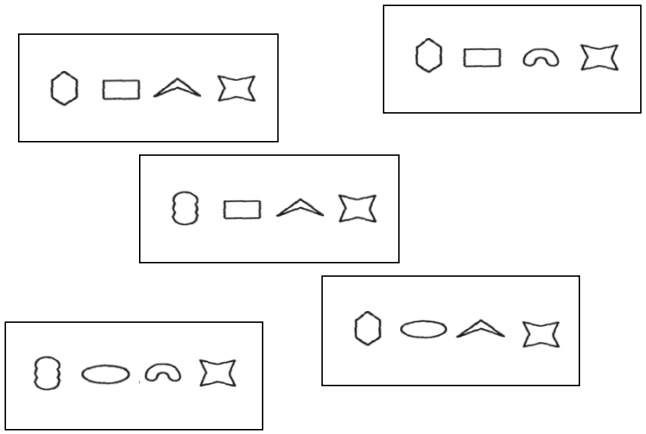
Wrong!

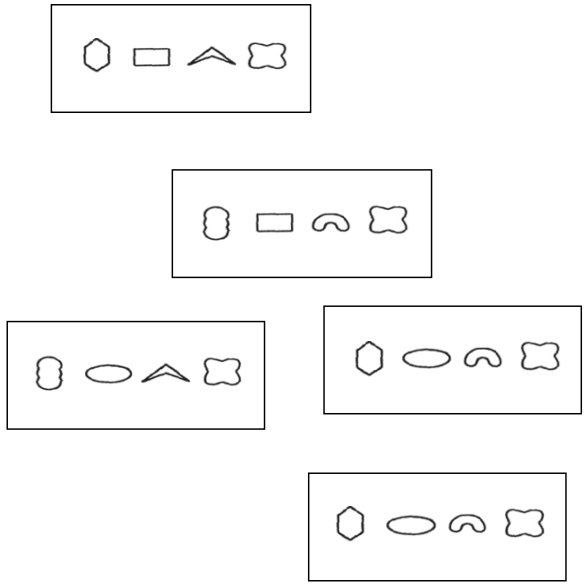
It was B

Free sorting

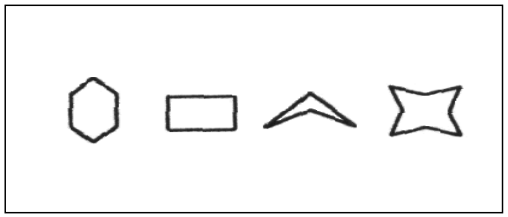


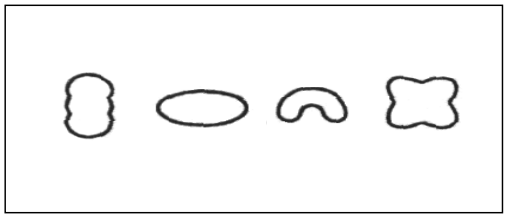
Free sorting





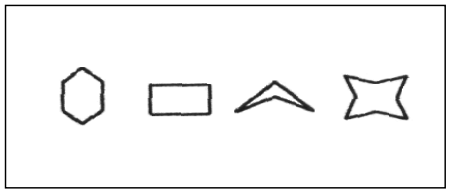
Family resemblance

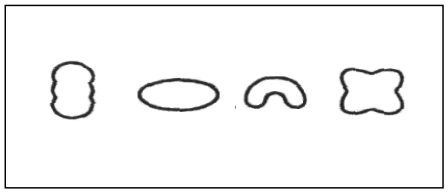


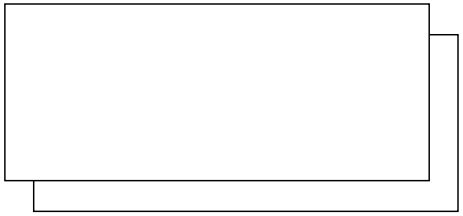


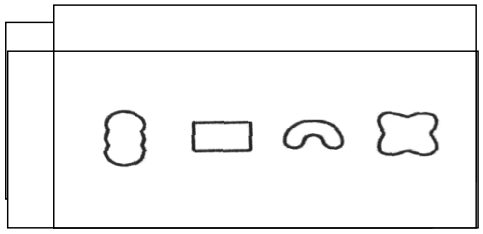
Category							
A				B			
D1	D2	D3	D4	D1	D2	D3	D4
1	1	1	1	0	0	0	0
1	1	1	0	0	0	0	1
1	1	0	1	0	0	1	0
1	0	1	1	0	1	0	0
0	1	1	1	1	0	0	0

Match-to-standards

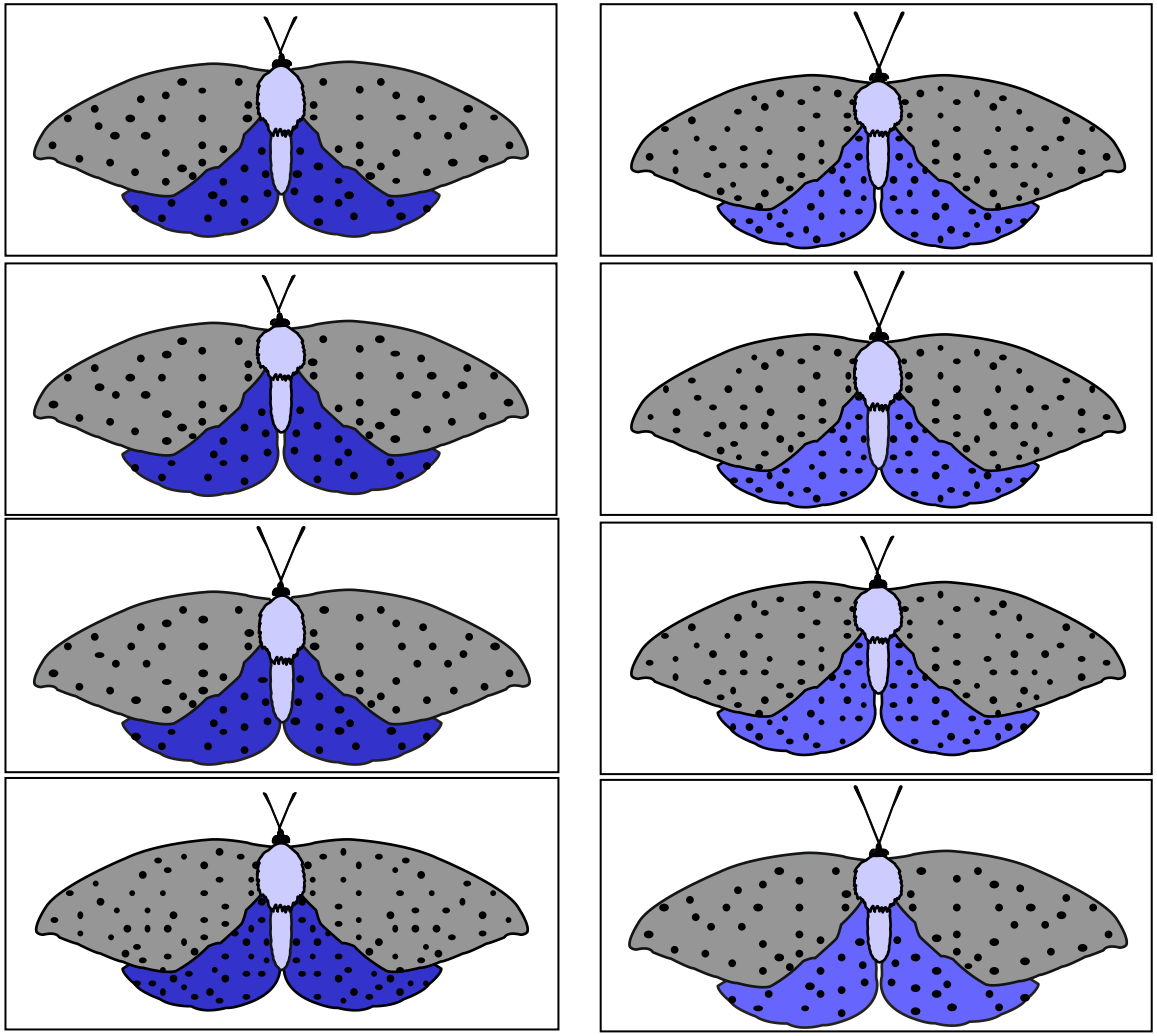






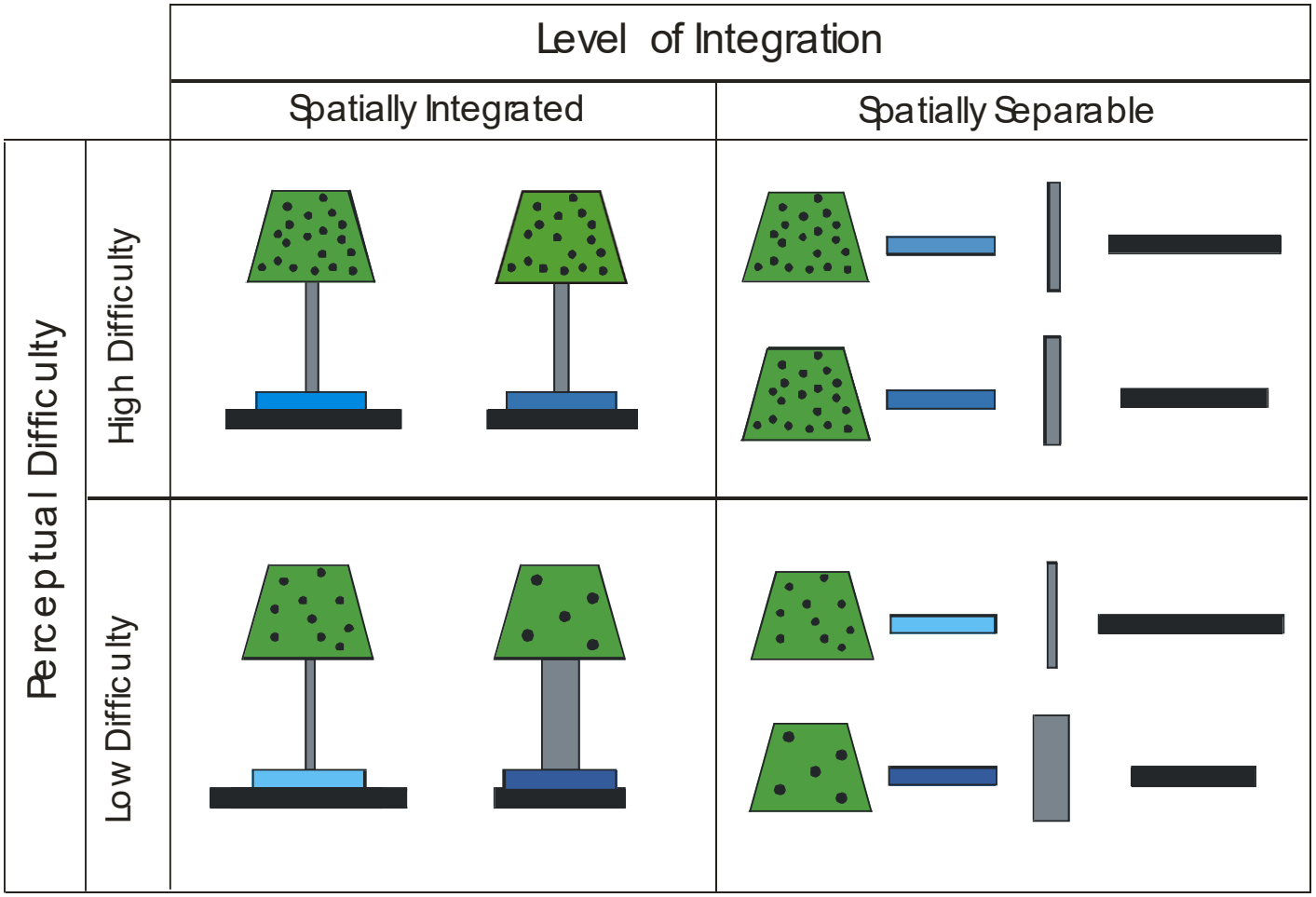


Return of the 1D sort!



Milton & Wills (2004), Experiment 2.

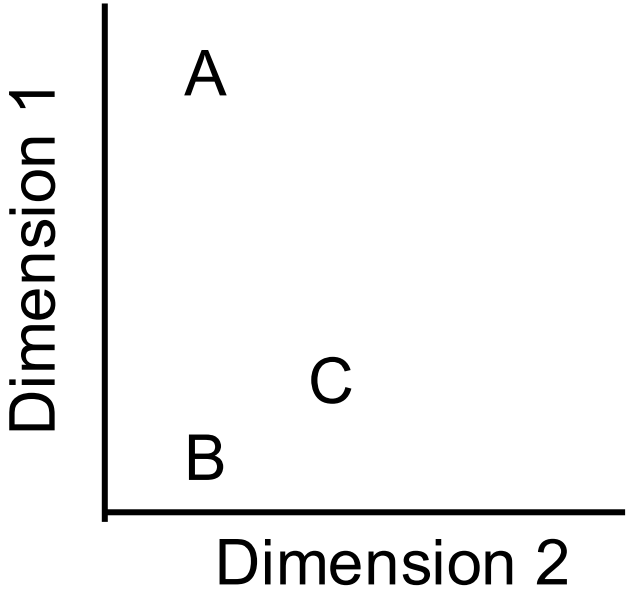
Spatial separability



Milton & Wills (2004), Experiment 5.

Time pressure

More overall similarity responding

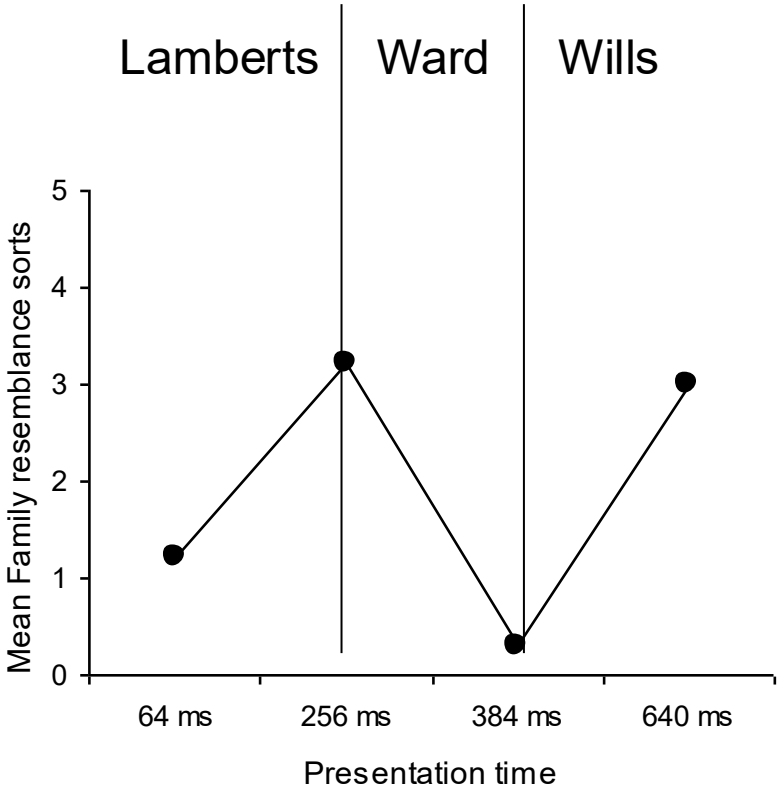


e.g. Ward (1983)

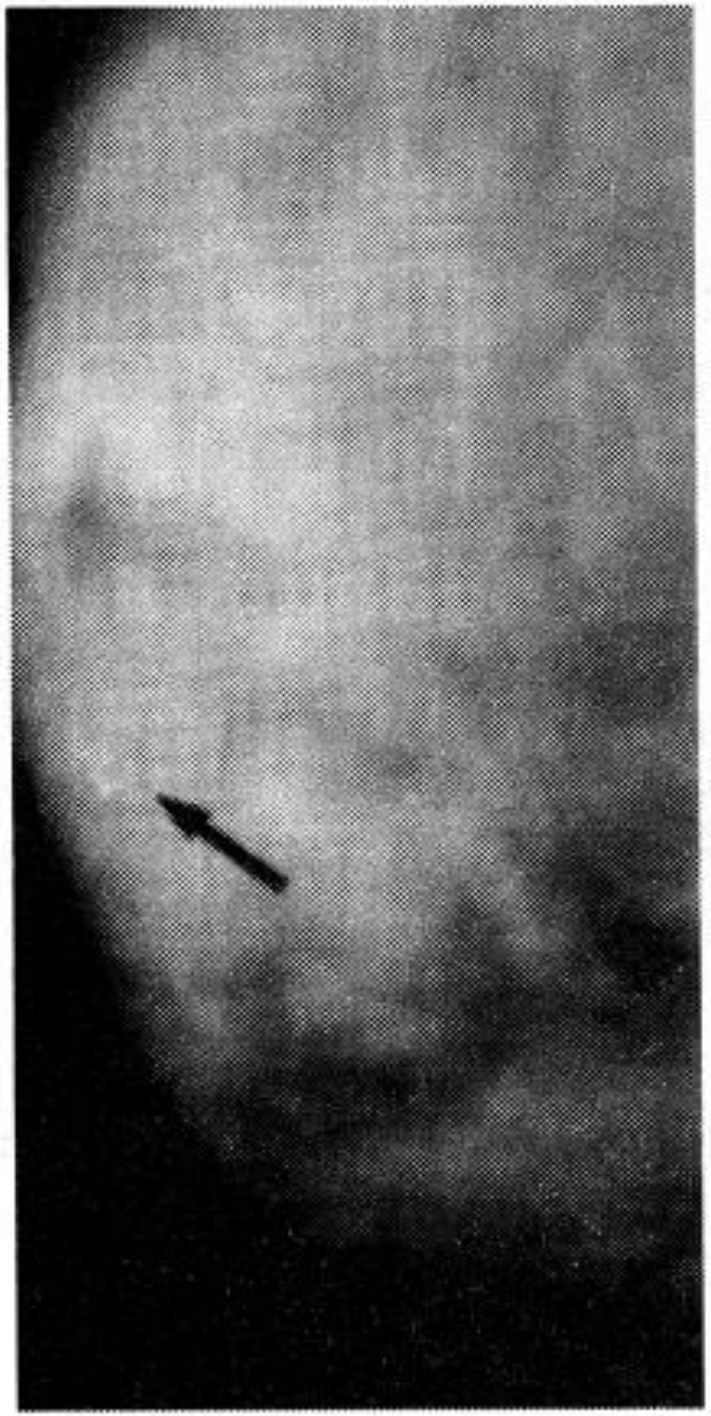
More single-dimension responding

e.g. Lamberts & Freeman (1999)

Everyone's right!



Milton & Wills (submitted), Experiment 4.



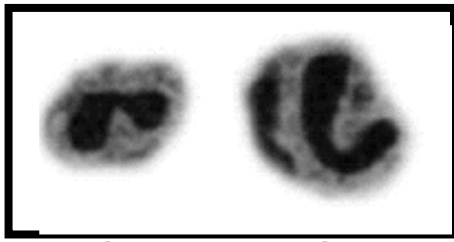
Perceptual obviousness

Sowden, Davies & Roling (2000)

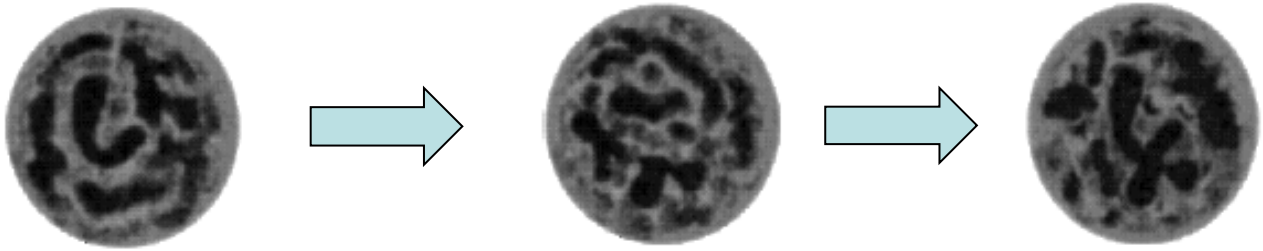
“Categorisation creates functional features”

Category A Category B Category C

A = 19%



Category ?



Category B Category C Category A

A = 88%

Schyns & Rodet (1997)

Obvious feature control

a) NOF features (top right hand quarter of stimuli).

b) OF features (top right hand quarter of stimuli).

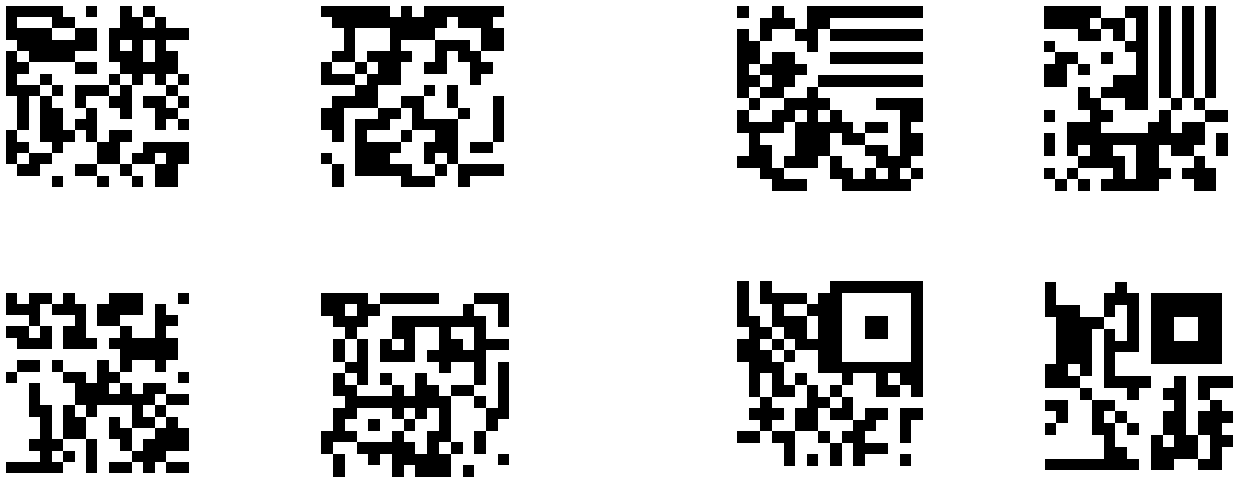
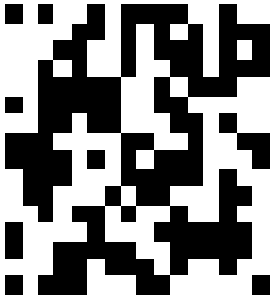
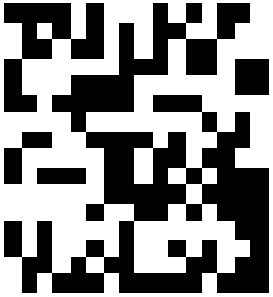


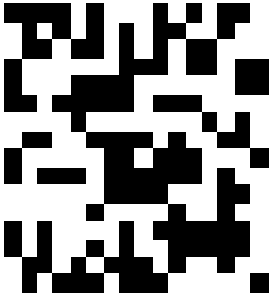
Figure 2.2. Eight checkerboard stimuli each containing one of the features, in the top right hand corner. The top four stimuli contain features from the NOF (experimental) condition (clockwise from top left: P, Q, X and Y).The bottom four stimuli are from the OF (control) condition.

Welham & Wills (in preparation), Experiment 3

Behavioural test: Triad task

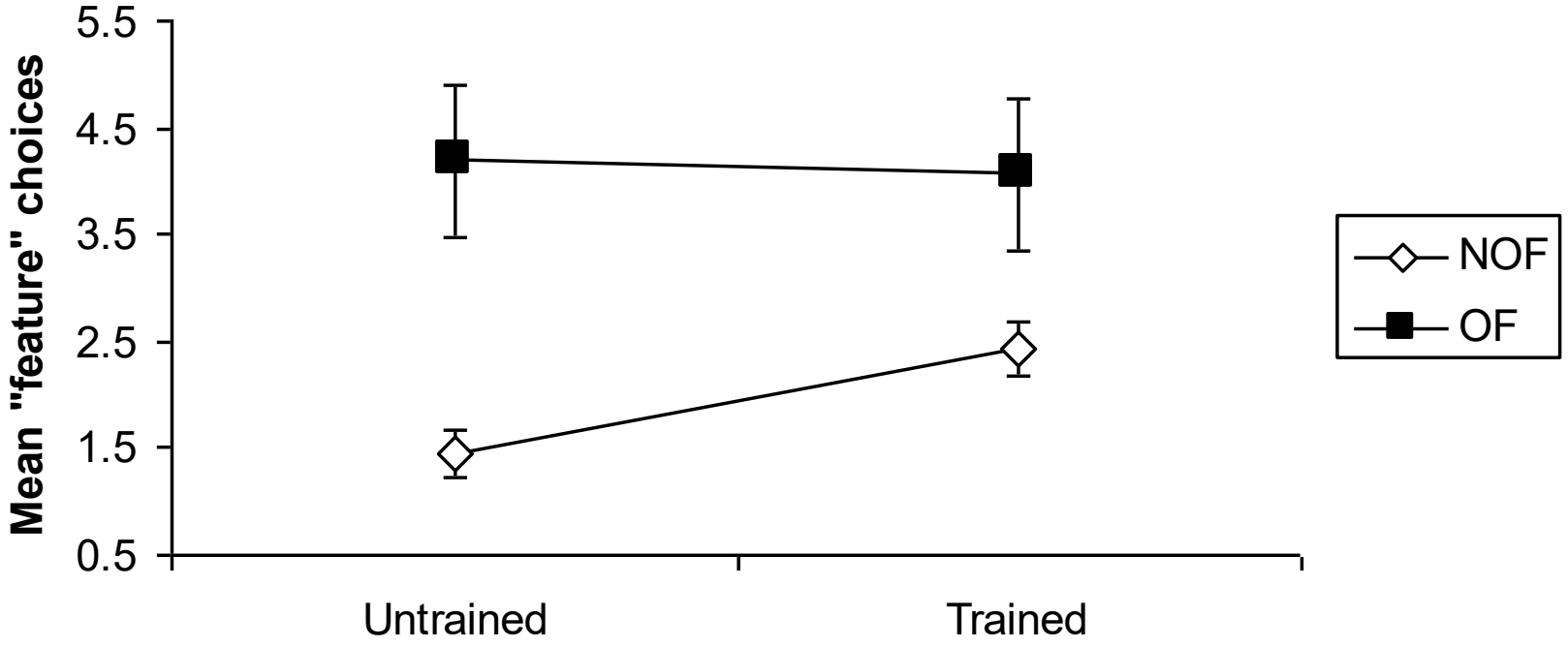






Welham & Wills (in preparation), Experiment 3

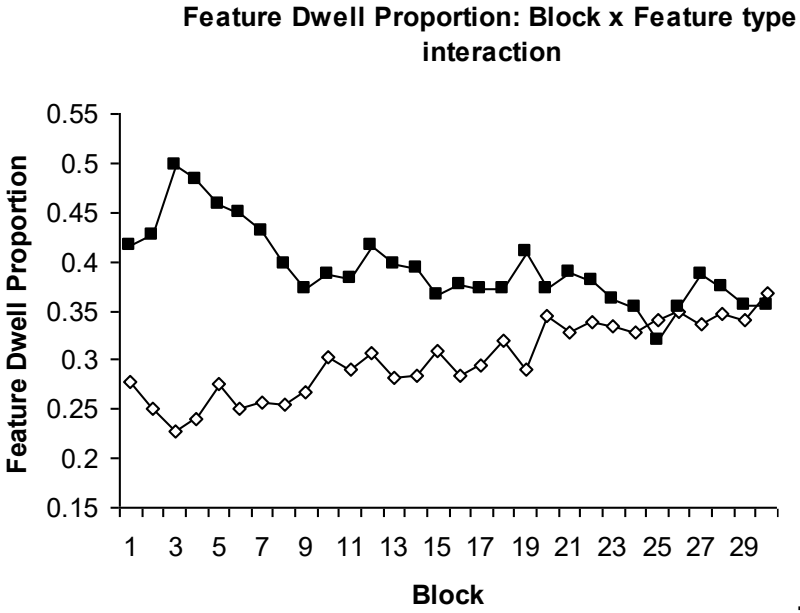
Triad task results

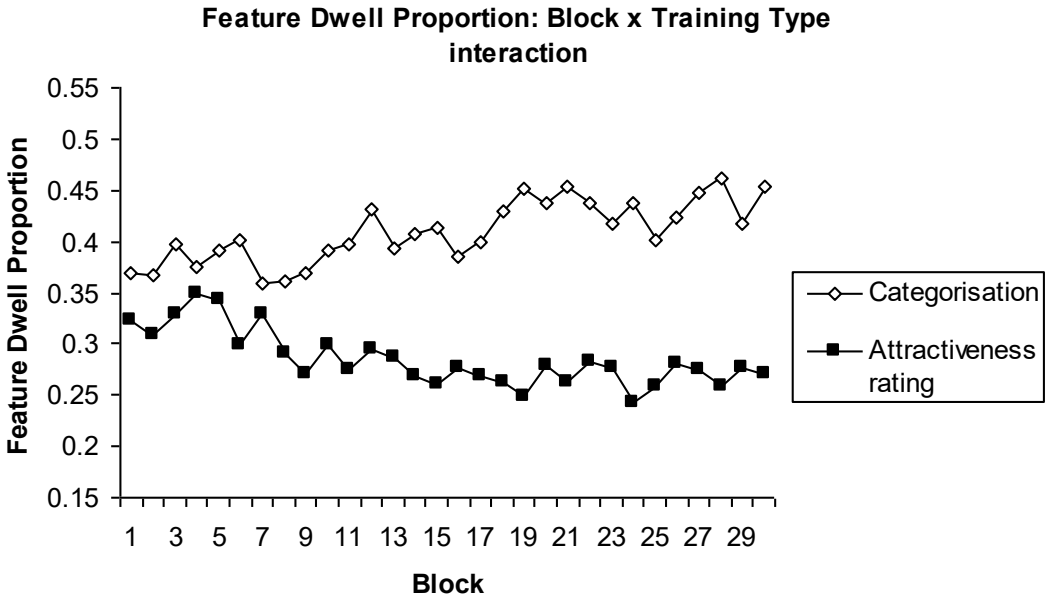


- No significant effect of preexposure type (categorization vs. attractiveness ratings)
- Effect individually reliable in both exposure types.

Welham & Wills (in preparation)

Eye-tracking data: Training





Welham & Wills (in preparation), Experiment 3

Wills, Suret & McLaren (2004)