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Introduction

•Landau, Smith and Jones (1998) showed that young children generalised on the basis of shape for naming familiar and novel objects even when information regarding function was provided. Adults on the other hand used functional information for naming novel objects but shape for naming familiar objects.

•Kemler Nelson, Frankenfield, Morris and Blair (2000) found that 4-year-olds were more likely to categorise on the basis of function when they could make sense of the relationship between the artifact structure and function.

Aims

•Investigate the shape bias and function bias.

Experiment 1a (Shape Bias)

Participants: 15 adults & 32 children (3-5-year-olds, mean age 52 months).

Method

The experimenter pointed to the object and said, "See this?"



Two more pictures of objects were then presented. The participant was asked if they could "Find another one".



Table 1. Percentage of participants selecting a target object the same shape and different shape as the test object.

	Same Shape	Different Shape
Adults (n= 15)	100%	0%
Children (n= 32)	94%	6%

Results: There was no significant difference between adults and children, Fishers Exact (1) =0.979, $p=1.000$. For children, there was a significant difference between the same shape object and different shape object, $\chi^2(1) =24.500$, $p<.001$.

Experiment 1b (Function Bias)

Participants: 15 & 33 (3-5-years-old, mean age 50 months).

Method

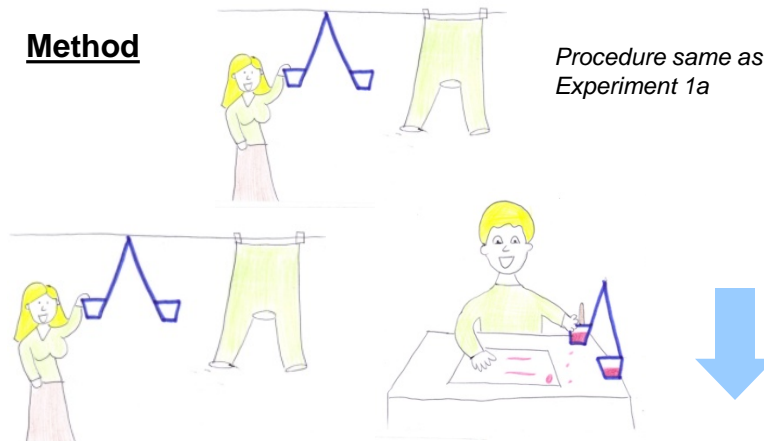


Table 2. Percentage of participants selecting a target object the same function and different function as the test object.

	Same Function	Different Function
Adults (n= 15)	100%	0%
Children (n= 33)	79%	21%

Results: There was no significant difference between adults and children in the way they categorised novel objects, Fishers Exact (1) =3.725, $p=0.082$. For children, there was a significant difference between the functionally same object and functionally different object, $\chi^2(1) =10.939$, $p=0.001$.

Experiment 1c (Shape VS Function)

Participants: 15 & 34 (3-5-years-old, mean age 55 months).

Method

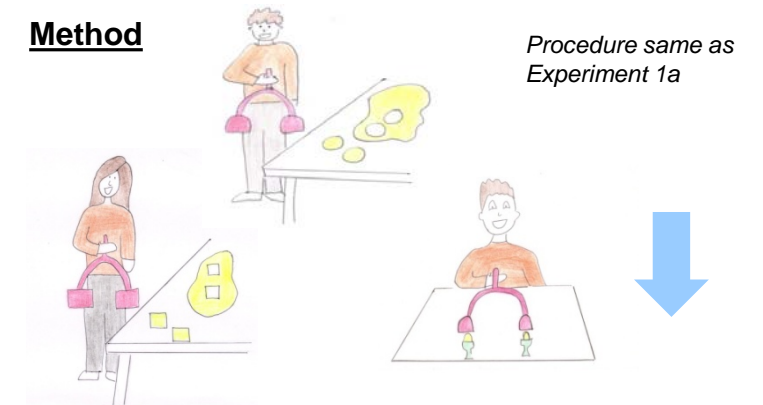


Table 3. Percentage of participants selecting a target object the same shape and same function as the test object.

	Shape	Function
Adults (n= 15)	20%	80%
Children (n= 34)	38%	62%

Results: No significant difference was found between adults and children in the way in which they categorised, Fishers Exact (1) =1.574, $p= 0.324$. For children, there was no significant difference between shape and function when categorising novel objects, $\chi^2(1) =1.882$, $p=0.229$. For adults, there was a significant difference between shape and function, with adults significantly reasoning in terms of function, $\chi^2(1) = 5.400$, $p= 0.035$.

General Discussion

Overall, children and adults can reliably extend on shape and function when categorising objects. However, when shape is pitted against function the performance of children is at chance.