Electronic Supplementary Materials:

Chimpanzees (*Pan troglodytes*) Show the Isolation Effect During Serial List Recognition Memory Tests by Michael J. Beran

Animal Cognition

Assessing visual similarity of photographic stimuli used in the lists:

A commercially available software package was used to assist in this assessment. The Visual Similarity Duplicate Image Finder (version 3.8.0.1) available at MindGems.com was used. The program was set to visually compare all photographs and report any clusters of images that shared greater than 60% physical similarity. Shown below in the first table are the 48 images that were classified into 1 of 9 resulting clusters, with each cluster shown in a separate column. An initial survey of these clusters demonstrates that, with the exception of images of human faces (Cluster #2), none of the clusters were dominated by a large number of photographs from only one of the 10 semantic categories. [Single letters designate the names of humans.]

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
Ball	C1	Chalk	Balloon	Broccoli	Carrot	Brush	Panbanisha	Cracker
Cheese	C2	Paper	Banana	Dustpan	Orange	Hammer	Tamuli	Cup
Keys	J	Thermometer	Kiwi	Plate	Straw			
Bubbles	M1	Sweet potato	Oil	Apple				
Mask	M2	L						
Medicine	S							
Peach	Kanzi							
Toothbrush	Mercury							
Tomato	Sherman							
Lemonade	Raisins							
Orange drink	Nyota							
Orange juice								
Yogurt								
Panzee								
Pear								

To confirm further that the greater visual similarities were not exclusively within-category, each of the above clusters was analyzed by looking at the percent similarities between all possible pairs of photographs in those clusters. The resulting percent similarity measures for each pair of photos within each cluster are presented in the following 9 tables (row by column). Empty cells indicate that there was less than 60% similarity. For each photograph in the first column, the most closely related image across that row is shown in highlighting.

Of these 48 photographs, only 8 were most closely related to another photograph from the same category, and 5 of those 8 were human faces. Even if all of the face photographs were considered as one large category, along with all of the object photographs and the food photographs as two other large categories, only 22 of the 48 photographs were most closely related to another photo from the same supercategory (and 10 of these 22 were in the face supercategory). Thus, semantic classification of these photos was not highly related to perceptual similarity among the photos within a classification.

	Ball	Cheese	Keys	Bubbles	Mask	Medicine	Peach	Toothbrush	Tomato	Lemonade	Orange drink	Orange juice	Yogurt	Panzee	Pear
Ball		66													
Cheese	66		68	69	64	67		63	68						
Keys		68				67			65						
Bubbles		69					71								
Mask		64									68	69	67		
Medicine		67	67							62					
Peach				71					66						
Toothbrush		63							63						
Tomato		68	65				66	63		72					65
Lemonade						62			72						
Orange drink					68								67		
Orange juice					69									71	
Yogurt					67						67				
Panzee												71			
Pear									65						

	C1	C2	J	M1	M2	S	Kanzi	Mercury	Sherman	Raisins	Nyota
C1		68	64	73	69						
C2	68		79	72	74	72					
J	64	79		78	90	69	62			64	64
M1	73	72	78		77		83	74		61	61
M2	69	74	90	77			63	61			67
S		72	69								
Kanzi			62	83	63			78	63		
Mercury				74	61		78		67		
Sherman							63	67			
Raisins			64	61							
Nyota			64	61	67						

	Chalk	Paper	Thermometer	Sweet potato	L
Chalk		68	61	72	
Paper	68		74	70	63
Thermometer	61	74		65	
Sweet potato	72	70	65		
L		63			

	Balloon	Banana	Kiwi	Oil
Balloon		60	60	71
Banana	60			64
Kiwi	60			
Oil	71	64		

	Broccoli	Dustpan	Plate	Apple
Broccoli		66	68	66
Dustpan	66		74	62
Plate	68	74		74
Apple	66	62	74	

	Carrot	Orange	Straw
Carrot		63	69
Orange	63		
Straw	69		

	Brush	Hammer
Brush		65
Hammer	65	

	Panbanisha	Tamuli
Panbanisha		60
Tamuli	60	

	Cracker	Cup
Cracker		62
Cup	62	