

Conjunction Effects in the Recognition of Aerial Photographs

David R. Anderson,¹ Robert A. Proffitt,² and
Michael J. Spivey³

University of
Colorado Boulder

Center for Experimental
Psychology

Department of Psychology

Conjunction effects occur when the recognition of a target is enhanced by the presence of a distractor that is related to the target. In three experiments, we examined conjunction effects in the recognition of aerial photographs. In Experiment 1, we found that recognition of a target photograph was enhanced when it was presented with a related distractor photograph. In Experiment 2, we found that the magnitude of the conjunction effect was modulated by the degree of similarity between the target and the distractor. In Experiment 3, we found that the magnitude of the conjunction effect was modulated by the degree of similarity between the target and the distractor. The results of these experiments suggest that conjunction effects are not limited to verbal stimuli and can occur in the recognition of visual stimuli. The results also suggest that the magnitude of the conjunction effect is modulated by the degree of similarity between the target and the distractor.

General Scientific Summary

Conjunction effects occur when the recognition of a target is enhanced by the presence of a distractor that is related to the target. In three experiments, we examined conjunction effects in the recognition of aerial photographs. In Experiment 1, we found that recognition of a target photograph was enhanced when it was presented with a related distractor photograph. In Experiment 2, we found that the magnitude of the conjunction effect was modulated by the degree of similarity between the target and the distractor. In Experiment 3, we found that the magnitude of the conjunction effect was modulated by the degree of similarity between the target and the distractor. The results of these experiments suggest that conjunction effects are not limited to verbal stimuli and can occur in the recognition of visual stimuli. The results also suggest that the magnitude of the conjunction effect is modulated by the degree of similarity between the target and the distractor.

Keywords: conjunction effects, recognition, aerial photographs, similarity

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Correspondence concerning this article should be addressed to David R. Anderson, Center for Experimental Psychology, University of Colorado Boulder, 380 Lincoln Hall, Boulder, CO 80508.
E-mail: david.anderson@colorado.edu

... (A), m r ... r l ... 6 f 9 m f ...
... m m ... k l l ... r ... r ... f
... m r ... r y r ... r ... (r ... A; A) r
f l l ... (r ... A; A) ... r ... r ...
... r ... & r r', 2010). A ... m r ... y k
... m r ... r r' ... r l l ... l ... r ...
(r ... & r r', 2010), A ... f ... l l r
l ... y l m r ... l ... l ... y l m r

Method

Participants

...

...

Materials

...

Procedure

...

Table 1
Characteristics of the Participants

	A D (N = 24)			D (N = 24)			t	p	
	M	SD	η ²	M	SD	η ²			
Age (M)	7.22	1.58	5.08	7.49	.66	6.50	8.65	-.769	.446
AD -	98.54	18.58	69	95.96	10.5	77	117	.592	.557
AD -	8.37	1.53	5	10					
AD -	8.46	1.47	5	10					
AD -	7.75	1.11	5	10					
AD -	21.88	5.57	10	30					
AD -	17.75	4.80	9	26					
AD -	8.67	2.08	5	12					
AD -	3.25	1.15	1	5					

Note. AD = ... D = ...

... (m ...)

E. ... (10x10 ...)

Eye Movement Data Analysis

Data preprocessing. ...

(...) ...

... (...) ...

... (...) ...

... (...) ...

Attention to objects. ...

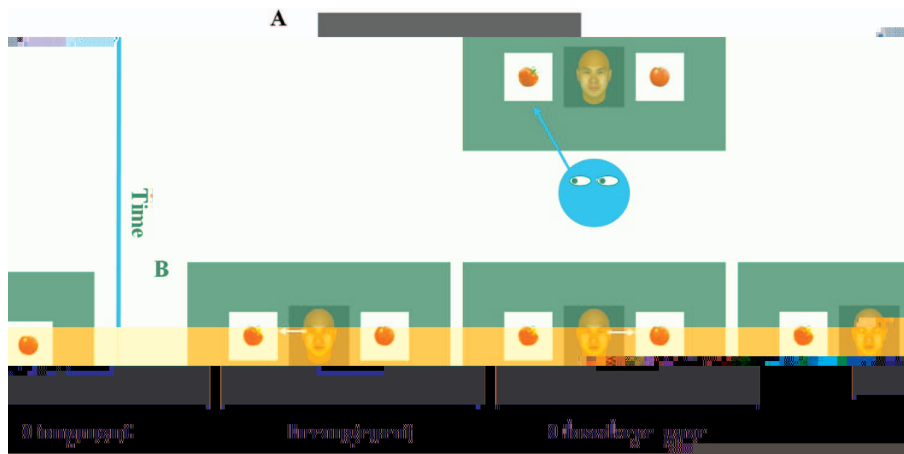


Figure 1. Eye movement data analysis diagram showing a top-down view (A) and a side view (B) of a task environment with objects and a participant's gaze.



Figure 2. The figure shows the eye-tracking results of the road layout. The x-axis represents the eye-looking time (s) and the y-axis represents the road layout. The heatmap shows the distribution of eye-looking time across the road layout. The color scale on the right indicates the intensity of the eye-looking time, ranging from 0 to 100. The inset image shows the road layout used for the eye-tracking experiment.

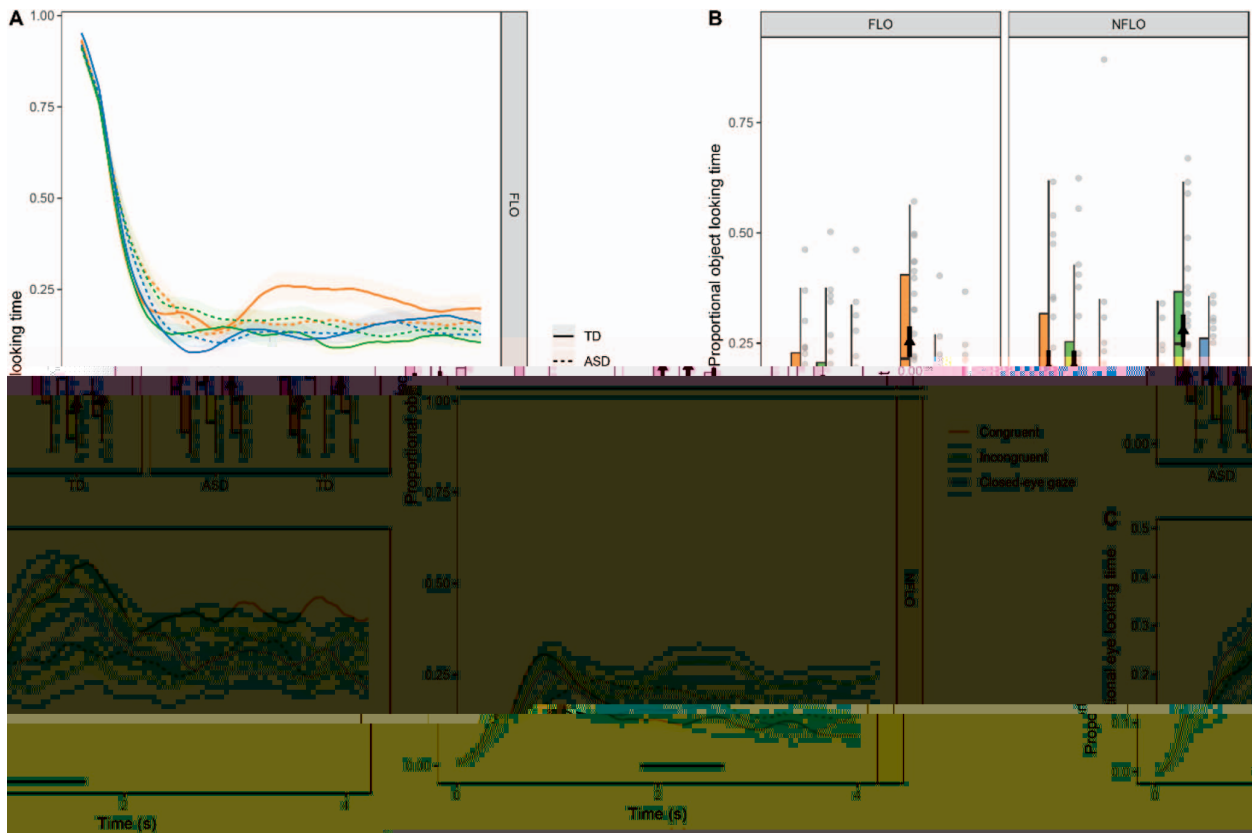


Figure 3. (A) Line graph showing looking time (y-axis, 0.00 to 1.00) over time (x-axis, 0 to 4 seconds) for TD (solid lines) and ASD (dashed lines) groups. (B) Bar charts showing proportional object looking time for FLO and NFLO conditions. (C) Detailed eye-tracking plots for Congruent, Incongruent, and Closed-eye gaze conditions, with a legend and a zoomed-in view of the ASD group's eye-tracking data.

Attention to Eyes

... (text describing attention to eyes) ...

Correlation Between Eye-Looking Time and Object-Looking Time

... (text describing correlation between eye- and object-looking time) ...

... $r = 0.75$, $Z_{\alpha} = -80.820$, $p = .046$. C' ...

Discussion

... $r = 0.75$, $Z_{\alpha} = -80.820$, $p = .046$. C' ...

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... $r = 0.75$, $Z_{\alpha} = -80.820$, $p = .046$. C' ...

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Main body of text on the right side of the page, containing a list of references.

References

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