

Aesthetics of Spatial Composition: Semantic Effects in Two-Object Pictures

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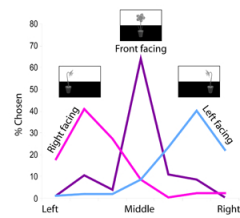
Background

Previous aesthetics research has shown two biases that affect people's aesthetic judgement of spatial composition (Palmer, Gardner & Wickens, 2008; Palmer & Gardner, VSS-2007).

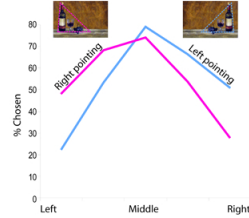
Center bias: Pictures are preferred when their focal object is placed near the horizontal center of the frame (see also Arnheim, 1983).

Inward bias: Pictures are preferred when their focal object is facing into rather than out of the frame.

Single object:



Configuration of multiple objects:



Percentage of placements in each of 7 equal-sized horizontal bins.

Research Questions

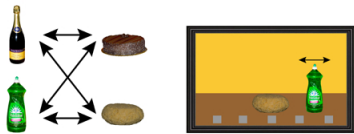
Do people prefer related objects to be depicted closer together than objects that are not related?

Do the center bias, inward bias and/or balance play a role in people's preference for the position of two depicted objects?

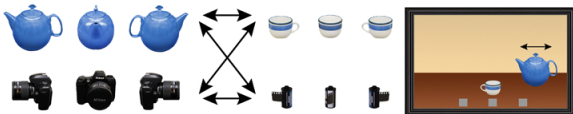
General Methods

On each trial, 2 objects (one small and one large) were presented on the screen: One fixed object, whose position could not be changed (see squares in frames below). One movable object whose position was horizontally adjustable using the mouse.

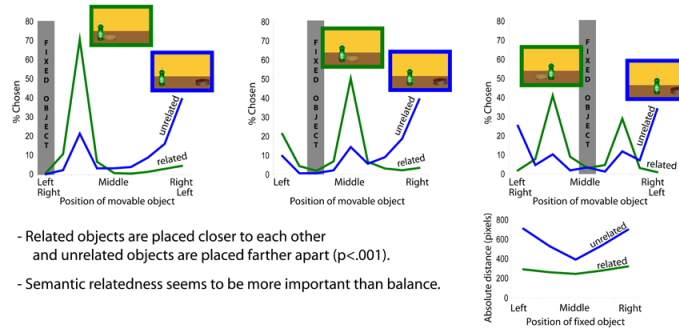
Experiment 1: Symmetrical Objects



Experiment 2: Objects with Different Facing Directions



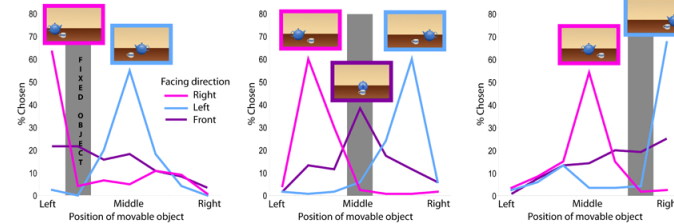
Experiment 1: Symmetrical Objects



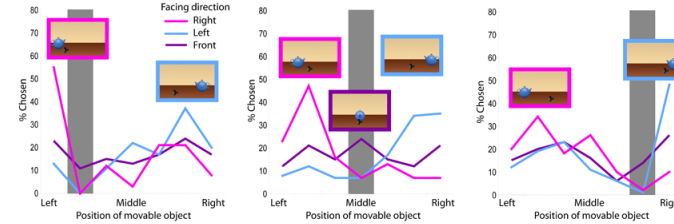
- Related objects are placed closer to each other and unrelated objects are placed farther apart ($p < .001$).
- Semantic relatedness seems to be more important than balance.

Experiment 2: Objects with Different Facing Directions

Related objects: Cup is fixed and teapot is movable



Unrelated objects: Roll of film is fixed and teapot is movable

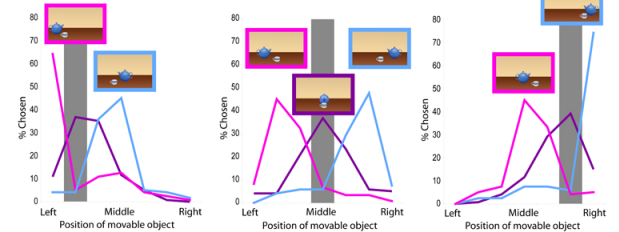


- Related objects are placed closer than unrelated objects are ($p < .001$).
- The movable object is preferred facing the fixed object.
- No influence of facing direction of small objects.
- Semantic relatedness seems to be more important than balance.

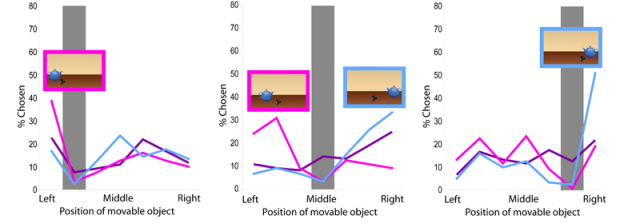
Experiment 3: Between Subjects Design

Are the results due to demand characteristics?

Related objects: Cup is fixed and teapot is movable



Unrelated objects: Roll of film is fixed and teapot is movable



Data look similar to the within subject design data, but less extreme.

Conclusions

People prefer related objects to be depicted closer together than unrelated objects.

preferred over

Directional objects are preferred facing another object.

preferred over

Semantic relatedness seems to be more important than balance.

preferred over

References and Acknowledgments

Arnheim, R. (1983). *The Power of the Center: A Study of Composition in the Visual Arts*. Berkeley: The University of California Press.
 Palmer, S. E., Gardner, J. S. and Wickens, T. D. (2008). Aesthetic issues in spatial composition: Effects of Position and Direction on Framing Single Objects. *Spatial Vision*, 21 (3-5), 421-449.
 Palmer, S. E. and Gardner, J. S. (2007). Framing Aesthetics: Effects of Spatial Composition. Presented at the 7th Annual Meeting of the Vision Sciences Society, Sarasota, FL, May 2007.

Acknowledgments

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