How the "Rule of Thirds" is Wrong: Let us Count the Ways

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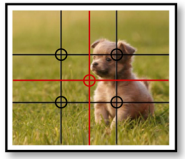
General Background

The "Rule of Thirds"

- Focal objects should be on the vertical and horizontal "thirds-lines," especially at the "thirds-points" (○).
- The center of the frame (○) and positions on the central symmetry lines are aesthetically poor choices.
- Content and other image structure doesn't matter.



ARE THESE CLAIMS TRUE?

TWO REASONS TO THINK THEY ARE NOT

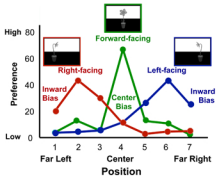
The Center and Inward Biases

Palmer et al. (2008) studied positional preferences for the same object in the same facing directions.

Their results showed strong effects of facing:

- ***Center biases*** for forward-facing objects, and
- ***Inward biases*** for right-facing & left-facing objects.

BUT THEY DID NOT TEST FOR THIRDS-LINES.

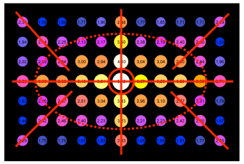


The Structure of Rectangular Frames

Palmer & Guidi (2012) studied goodness-of-fit ratings for circles at different positions in rectangular frames.

- The best-fitting position was at the center,
- Next-best was along global symmetry axes,
- Next-best along local symmetry axes at the corners,
- Poorest fit at asymmetric positions (e.g., third-lines).

BUT THEY DID NOT TEST FOR PREFERENCES.

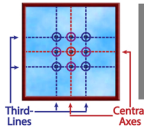


Experiment 1: Methods

Three Rendered Objects

Three Facing Directions

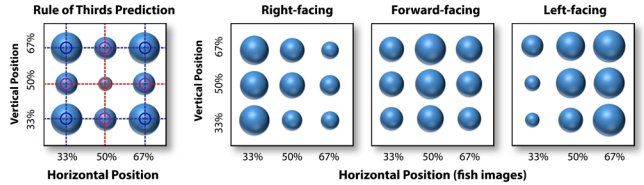
Nine Positions



2AFC Task

Each image was paired with the other 8 images of the same object in the same facing direction for 2AFC preference judgments.

Experiment 1: Results



The Rule of Thirds predicts:

- Equal effects for horizontal & vertical positions.
- Highest preferences at the 4 thirds-points (○).
- Lowest preference at the frame's center (○).
- Intermediate preferences at intersections of the thirds-lines with the central axes (○).
- No effects of facing direction.

The results show:

- Large effects for horizontal position, but not vertical.
- For forward-facing views, ***highest*** preferences along the frame's ***central axis***.
- For left- and right-facing views, ***highest*** preference at the ***inward-facing*** third-lines (only).
- For left- and right-facing views, ***lowest*** preference at the ***outward-facing*** third-lines (only).

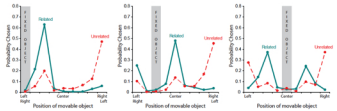
Experiment 2: Background & Methods

The Rule of Thirds does not consider any non-focal content or background structure. Is this valid?

Not for other objects! Leyssen, et al. (2012) studied "***drag-and-drop***" placements for a second object in an image with a fixed first object.

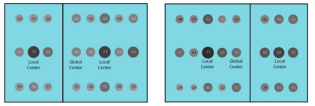
The results showed that people:

- do not like two objects to be too close together.
- prefer related objects close & unrelated ones far.



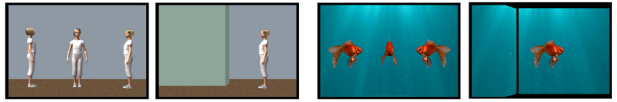
What about simply structuring the background?

Goodness-of-fit ratings for circles in ***divided rectangles*** shows that local (subframe) centers dominate global centers (Palmer & Guidi, 2012).

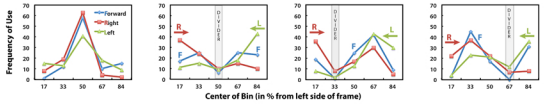


Will a divided background influence people's composition preferences, contrary to the Rule of Thirds?

Frames were ***undivided*** or ***divided*** along the 33%, 50%, or 67% lines of the frame.
The objects (a person, fish, or dog) faced right, forward or left.
Participants dragged the object to the most aesthetically pleasing position, and then clicked the mouse.



Experiment 2: Results



Very strong center bias for all views

Negative center bias and strong inward biases

Negative bias at 33% and clear inward biases

Negative bias at 67% and clear inward biases

Object's center categorized into one of 5 equally spaced bins.

Several robust, systematic effects were present:

- People do not like objects to overlap other elements, even background ones.
- If the background is divided, people strongly prefer the object to be in the larger subspace.
- Strong inward biases are evident in all divided frame conditions.

- All three findings are contrary to the Rule-of-Thirds (no effects of dividers or facing directions).
- All are consistent with previous results (Leyssen et al., 2012; Linsen et al., 2011; Palmer, et al., 2008; Palmer & Guidi, 2012).

Discussion & Conclusions

How is the Rule of Thirds wrong?

People's horizontal preferences are sensitive to objects' facing directions.

- People strongly prefer forward-facing objects at the frame's center, not on third-lines.
- People prefer side-facing objects along third-lines ***only*** when it faces ***into*** the frame.
- People ***dislike*** elements along third-lines when the object faces ***out*** of the frame.

People's compositional preferences are sensitive to spatial context.

- When more than one focal object is present, people do not like them to overlap.
- If the background is divided, people do not like the object to overlap the boundary.
- If the background is divided, people prefer the object to occupy the larger subspace.
- They also prefer the object to face into the subspace it occupies.

Why **is the Rule of Thirds wrong?**

- People's compositional preferences seem driven by asymmetries in the ***affordance spaces*** around objects: the functional space within which they act and interact with others.
- The correlation between asymmetries in people's judgments of Affordance Spaces for different objects and asymmetries in their compositional preferences is ~.80. Stay tuned!

References and Acknowledgments

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We thank Thomas Langlois and Josh Peterson for their help and support in conducting this research, and Jan Flatley-Feldman, Vivian Wung, Melissa Gertler, Sheila Rajagopalan, and Candita Wager for their help in running subjects.

This material is based on work supported by the National Science Foundation under Grant Nos. BCS-1059088 and BCS-0745820.