



Following the masters: Viewer gaze is directed by relative detail in painted portraits

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Poster Number: 26.325

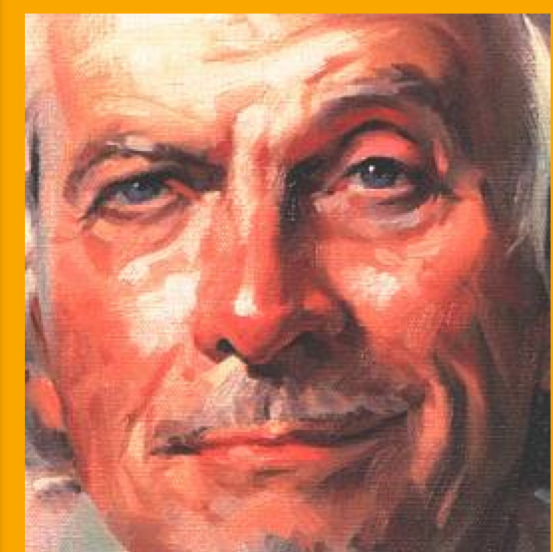
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Question

Does the textural detail of a painting guide the viewer's gaze?

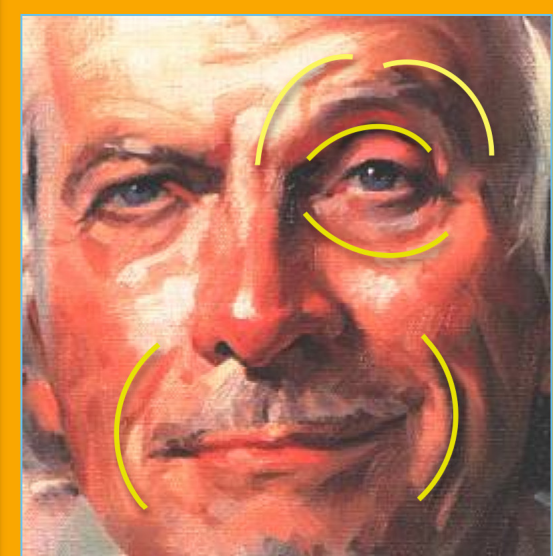
Art Background



J.H. Sanden's "Reverend Cole Close-up"

some portrait artists claim fine detail guides the viewer's gaze to selected regions, making it a tool for highlighting selective character traits of the sitter (Sanden, Portraits from Life, 2004).

Vision Background



human eye attracted to regions of higher contrast in luminance, color, orientation in natural scenes (Itti et al, 1998).

Problem of Interpretation

greater detail in a painting confounded with:

- meaning (foreground vs background interest)
- lighting (direct vs shadowed)
- location (center vs periphery of composition)

Approach

Generate portraits where detail uncorrelated with meaning, lighting, location.

Three steps



Step 1. original Rembrandts inspire new photos



Step 2. render photos using Rembrandt style painterly techniques

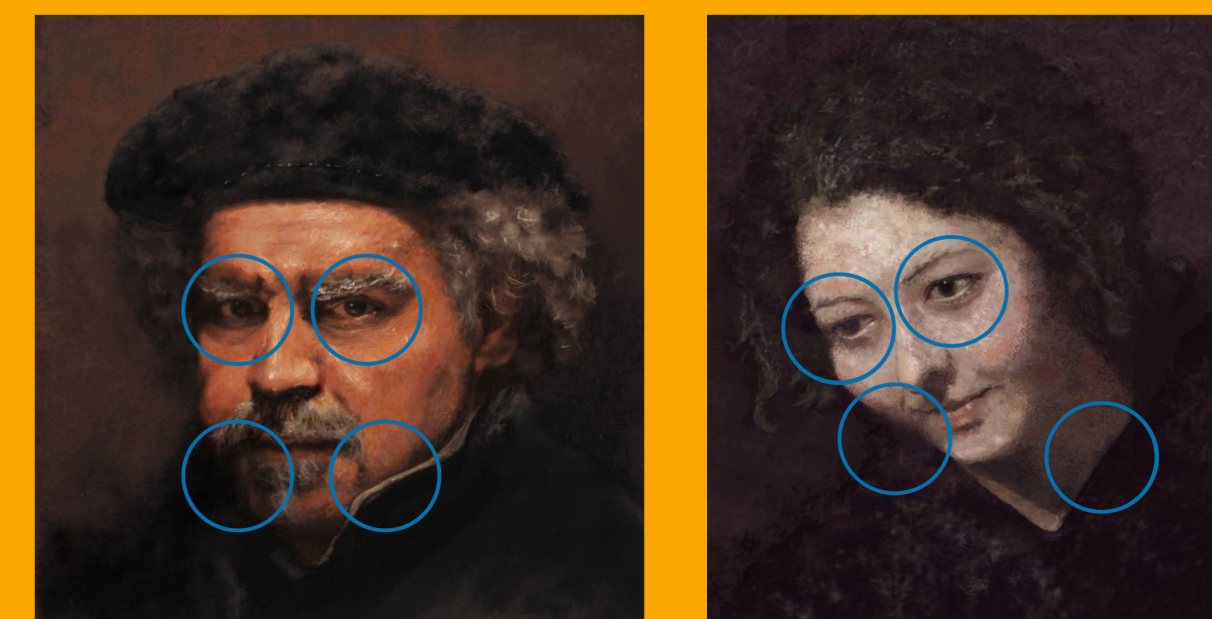


Step 3. vary detail of selected regions



Stimuli

Detail varied in four selected regions:



Test original and mirror image views to control image location, lighting, side of face



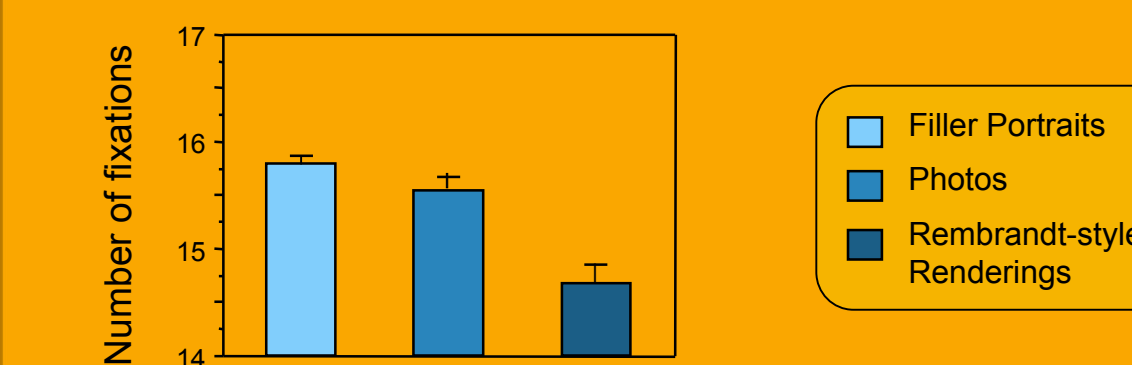
Procedure

Participants view each portrait for 5 seconds, intermixed with filler portraits in a wide range of styles, and rate for "artistic merit"

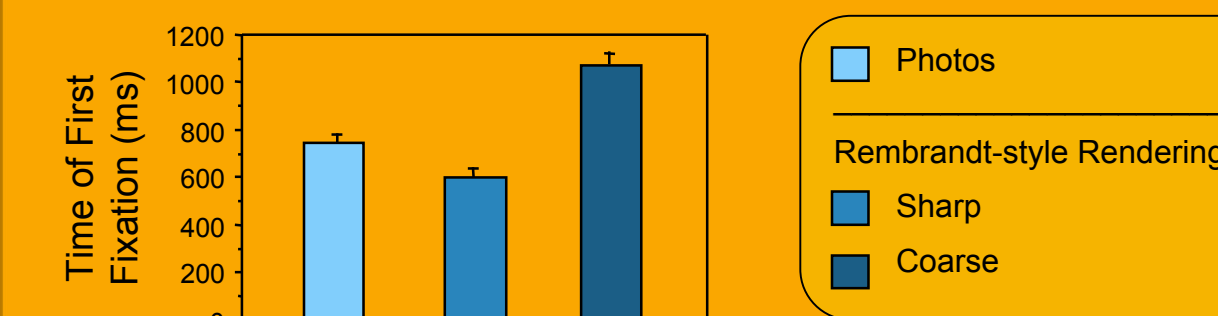


Results

1. A calm eye. Fewer fixations overall when viewing paintings than photos or fillers.

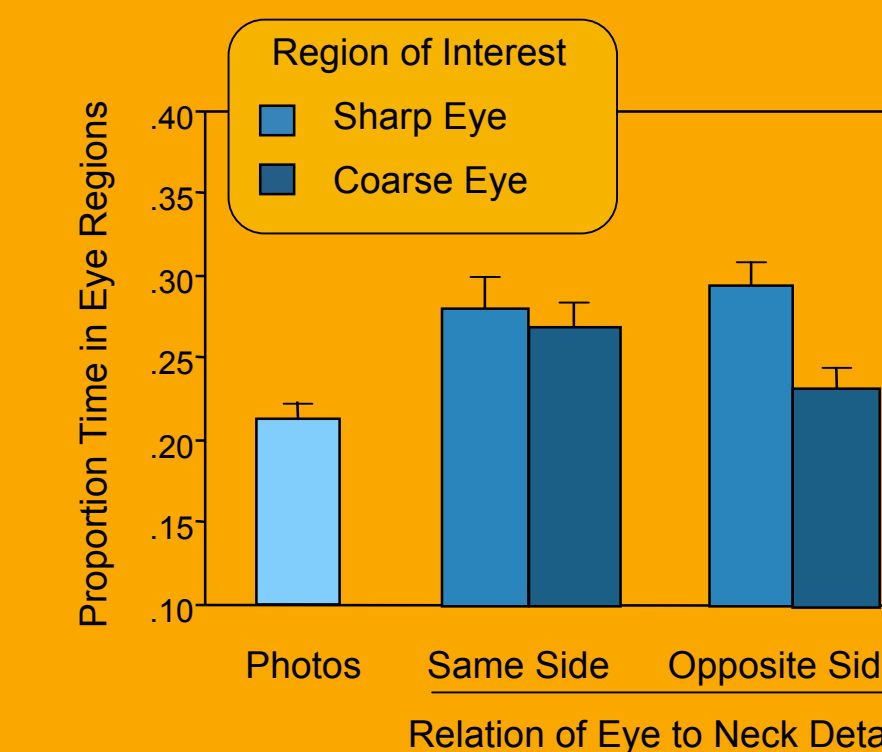


2. Attention-getting. Greater detail attracts first fixation in less time



3. Attention-holding. Greater detail attracts more viewing time.

4. Detail in non-fixated regions (collar) influences gaze



Implications

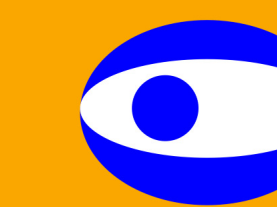
Artists are right! Relative detail in a painting guides viewer gaze.

Greater detail not only attracts first look, but encourages repeated looks.

Rembrandt experimented with this technique in late 1600s. Was he among the first to realize he could use it to guide the viewing experience?

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