



The Role of Photographic Clarity and Blur in Guiding Attention

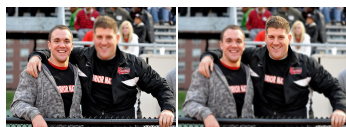
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QUESTION

How does blur and clarity in natural scenes influence the gaze of viewers attending to

- (1) photo content?
- (2) image quality?



BACKGROUND

Artists and advertisers believe viewers' gaze is guided by clarity and blur in an image
...but very little past research

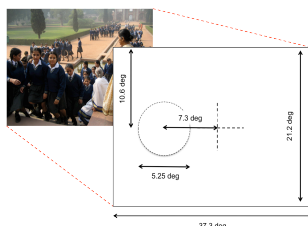
- When attending to content in a video clip, eye gaze guided to regions of clarity (Veas et al., 2011)
- When attending to surface quality of a photo, participants more sensitive to deviations signaling blur than clarity (Kosara et al., 2002)

PHOTOS

- Collection of commonplace, natural scenes taken from social media sites



- Selectively blurred or sharp target regions were added to either the left or right side of each photo



STUDY 1 New-Old Recognition

Attend to photo content

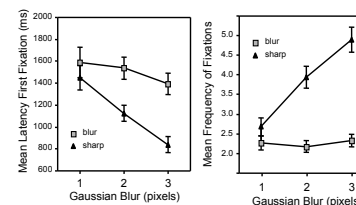
Study Phase participants view each photo for 5 seconds, trying to remember them for an upcoming new-old memory task

→ incidental eye tracking

Test Phase participants indicate whether photo is old or new

→ accuracy > 90%

Participants look to **sharp** targets more rapidly, more often, and for longer than to blurred targets



STUDY 2 Visual Search

Attend to image quality

Visual Search target region defined by either...

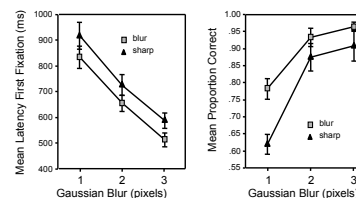
Sharp



Blur



Faster to fixate and more accurate response to **blurred** targets than sharp targets



CONCLUSION

Artists and advertisers are right!

- **Image clarity** draws gaze implicitly when viewers attend to photo content, but...
- **Image blur** is more attention getting when viewers attend explicitly to image quality



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