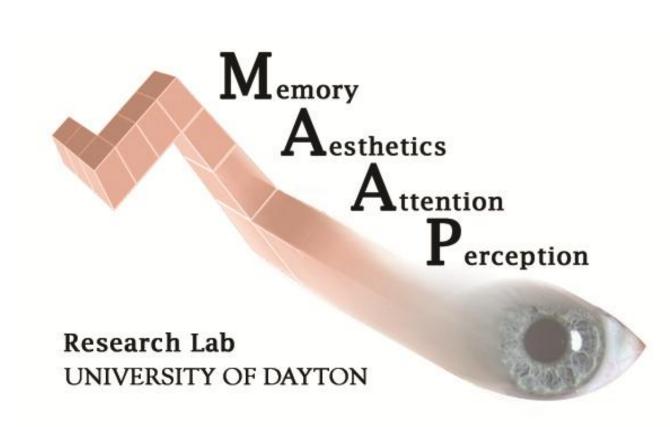


# Assessing Aesthetic Preferences for Faces with Measures of Ocular Gaze

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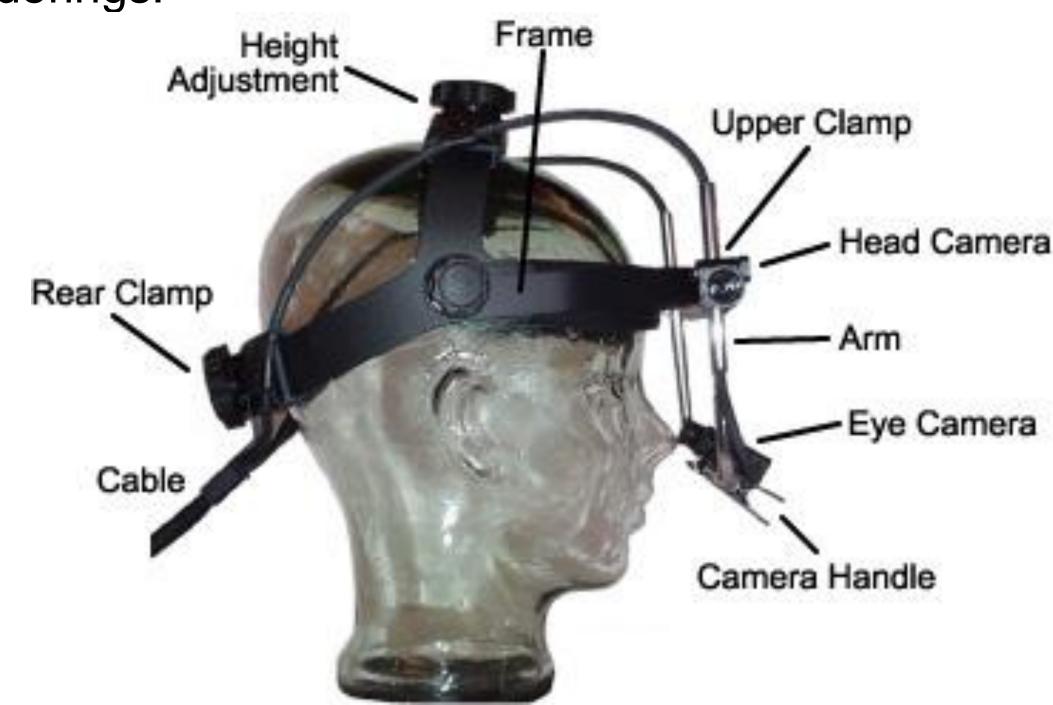


## Background

- Research has shown that participants analyzed paintings in a
  way that would cause them to want to spend more time and be
  more appreciative of the paintings. This greater appreciation led
  participants to consider the emotional or aesthetic qualities
  rather than focus on the pictorial elements of the image (Locher
  et al., 2006).
- Art images (paintings) matched and compared with non-art images (photographic renderings of paintings) showed further activation in reward processing in the brain when they were viewed. Further, participants preferred the paintings and rated them as more beautiful than the photographs(Lacey et al., 2010).
- The so-called art infusion effect, which is how art impacts consumer perceptions of the evaluation of an associated product, can occur without conscious attention and cognitive resources (Hagtvedt & Patrick, 2008). This indicates the importance of art and our analyses of art, but does not specify the type of art that is most influential.
- The present study aims to use self-report ratings and eye tracking equipment to measure the aesthetic pleasingness of a portrait in a painting as compared to that in a photograph. As Locher (2006) results indicate, the eye tracking equipment will provide a physiological measure of how the composition of an image affects a participant's viewing behavior.

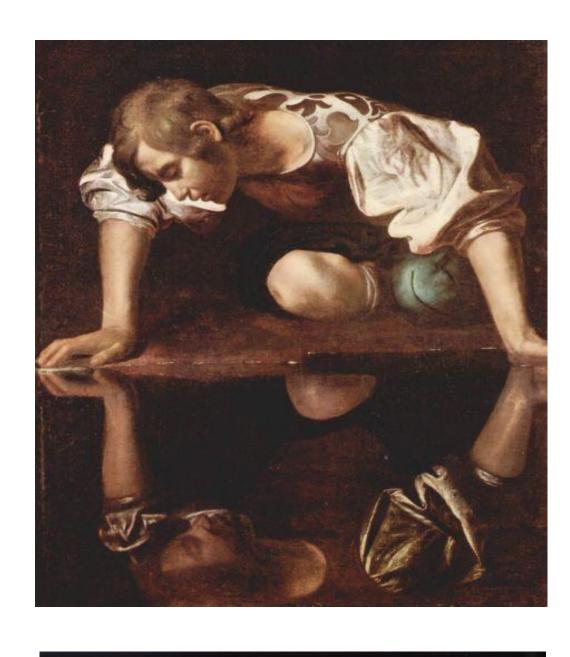
## Hypotheses

- Faces in portraits will be rated as more pleasing than faces in photographs matched for content. Physiological measurements recorded from the eye tracking equipment, as seen below, will correlate with the subjective ratings provided by the participants.
- Subjective ratings ill provide evidence that paintings will be perceived as higher in value as compared to the photographic renderings.



## Methods

- In Experiment 1, participants viewed the portraits and photographic renderings selected after analyses of mean ratings suggested that 11 pairs were similar and aesthetically pleasing enough for the experiment. (See examples of two pairs of stimuli below.) While viewing the 11 selected pairs, participants reported on aesthetic pleasingness, beauty, and whether they considered the image that they found to be more aesthetically pleasing to be a work of art. They also were asked if they considered the image that they selected as less aesthetically pleasing to be a work of art.
- In addition, participants in two different conditions answered either (A) "Which of the two images is most aesthetically pleasing?", or (B) "Which of the two images would you be more likely to purchase?"









#### Proposed Experiment 2

- Participants will view the same 11 pairs of portraits and photographic renderings of the portraits as viewed in Experiment 1 while reporting their responses; in this experiment, though, participants will wear eye tracking equipment while responding to the same questions as in Experiment I.
- As participants view and respond to the images, the eye tracker will record various physiological effects such as visual scan paths, fixation times, and pupil dilations.

### **Results and Conclusions**

#### Experiment I

Table 1. Percent choice for each type of art stimulus

<u>Question</u>		
Art stimulus	Aesthetically Pleasing?	Would you purchase?
Painting	27.7%	44.7%
Photograph	19.1%	8.5%

- This table shows that there was a significant difference between indications of aesthetic pleasingness for paintings (72.3%) and those for photographs (27.7%). Second, when responding to the question, "which item would you purchase?" more participants said they would purchase the painting (44.7%) than the matched photograph (8.5%). Likewise, when responding to the question, "which do you find more aesthetically pleasing?" more participants still favored the painting (27.7%) than the matched photograph (19.1%).
- However, when asked "which are you more likely to purchase?" 5 times as many participants said they would purchase the painting, whereas only 1.5 times as many said they found the painting more aesthetically pleasing. While these results are consistent in the preference for painting over matched photograph, it makes sense that when asked about purchase, they are even more likely to be consistent with the more traditional purchase of a painting over a photograph, which some are more reluctant to consider fine art suitable for display. We speculate that this is a result of the more likely behavior of purchasing paintings to display as art, rather than photographs of an unknown person.
- Results from this study have implications for marketing and product development, as well as for improving our understanding of what is considered "art" and how it adds to perceived value. Furthermore, the use of physiological measures, such as those of ocular gaze (in proposed Experiment 2), along with the more frequently used subjective ratings, stand to illuminate better the intimate relationship between body and mind in aesthetic preferences.

### References

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