JAN VAN EYCK’S CREATION PROCESS

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JAN VAN EYCK

- One of the first artist’s to show photo-like qualities in his paintings
- Created paintings very quickly and with great detail and precision
- *Portrait of Arnolfini and his Wife* has always been in question because contains a lot of detail in a poster sized painting
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• Contemporary artist
• Began questioning how old masters developed their artistic skills so drastically
• Questioned if used optical tools
• Began a collection of all the paintings that had photogenic qualities
• Optics expert
• Began to calculate sections in famous paintings to see if possible that optical aids were used in their creation
• Developed the idea of which optical aids could have been used
• Calculated distortions (imperfections) that would result from optical devices
Advances in realism and accuracy in art, beginning in Renaissance art, is caused by optical aids.
DAVID G. STORK

• Computer scientist and statistician
• Questioned the validity of the Hockney-Falco thesis
• Replicated Falco’s calculations and received different results
• Believes that the development of art was not caused by optical aids, but by human advancements
Development in art, beginning in Renaissance art, was caused by human advancements such as the development of spectacles and encouragement amongst the arts.
THE CONFLICT

• There has been an ongoing battle between Falco and Stork in regards to whose theory is correct
• No consensus has been reached for 8 years (since 2004)
• Both theories have not been put to the test consecutively
• Not enough evidence from either professional to prove that their theory is more plausible than the other
- Used to measure how strongly the system is brought into focus.

- Short focal length: Greater power and larger angle of view

- Long focal lengths: Higher magnification and smaller angle of view

- Measured by finding distance from center of lens to the focal point
  - Convex lens = positive
  - Concave lens = negative

\[
\frac{1}{FL} = \frac{1}{(d_{\text{lens-subject}})} + \frac{1}{(d_{\text{lens-image}})}
\]
• Caused by the type of curved mirror used
• If mirror was used up close, it produced a clear magnified image
• If mirror was used at a distance, it created a zoomed in magnification of the ambiance being projected

\[ M = \frac{d_{\text{lens} - \text{image}}}{d_{\text{lens} - \text{subject}}} \]
VANISHING POINTS

There is no clear formula stated to have been used.

Easy to find vanishing points.

Area where all lines seem to merge into one point.
THE CHANDELIER: QUESTIONED

Stork Questions:
Where is the vanishing point
Which chandelier was projected because the errors calculated are too big for any real chandelier made in the 15th century

Falco Answers:
The image is prone to errors because a person's mind was used in the creation process
THE CONVEX MIRROR

Stork questions:
If a curved mirror was used, where is it in this reflection

Falco Answers:
The artist is not present in the reflection
Jan Van Eyck chose not to include himself or his aids in the painting
Keep his aids in secrecy
STORK QUESTIONS THE THEORY:

• If the theory is plausible, why has it never been carried out to completion?

• When Stork replicated the calculations done by Falco, he received a much greater error percentage than him.

• When an image is produced using a concave mirror, it produces an upside-down image, which when flipped right side up, produces a left handed trace.
FALCO’S FINAL REMARKS

• There were many artist’s in the Renaissance era, so in order to get patrons artists would offer their services and secrets (intrigue potential patron’s)
  • May have been the use of optical aids

• Keep in mind that although old masters may have used optical aids, the hand and mind of the artist was intimately involved in the creation process
**HOCKNEY FALCO THESIS**

**Pros**
- Explains the sudden development in art
- Would provide an exact replica of the ambiance being presented
- Would speed up the painting process

**Cons**
- Not enough information to prove plausible
- No historical data recording the use of optical aids in the creation of Renaissance art
- No image has been fully completed using this method
STORK THEORIES

Pros

• This is already believed to be the cause of such advances in art
• Spectacles helped artists see clearer than ever before
• Patrons were funding artists, which gave artists the money and time to develop their skills

Cons

• Nobody questions it because it seems the most plausible
• It has never been tested
• No data has been presented that proves this theory more plausible than the Hockney-Falco thesis
FURTHER RESEARCH

Both theories need to be put to the test to develop enough data to prove that one theory is more plausible than the other.
QUESTIONS?
REFERENCES:


