

# Perception in Animation

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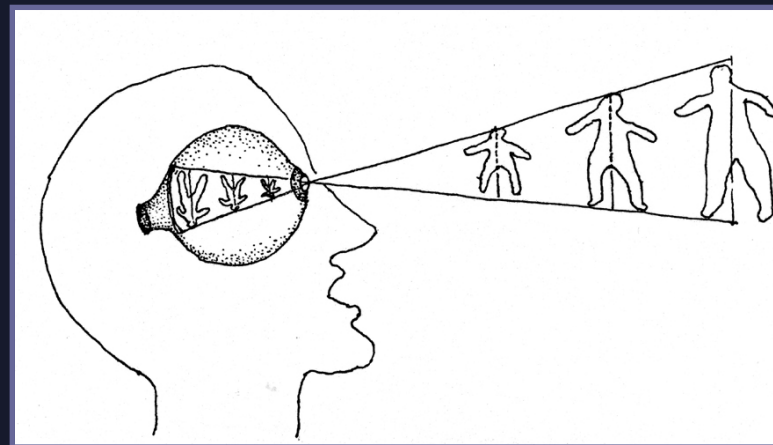
Diana Reichenbach  
Malak Quota  
Tim Garbutt  
Jordan Prieto  
Sara Spink  
Tianran Duan



# Research and Development

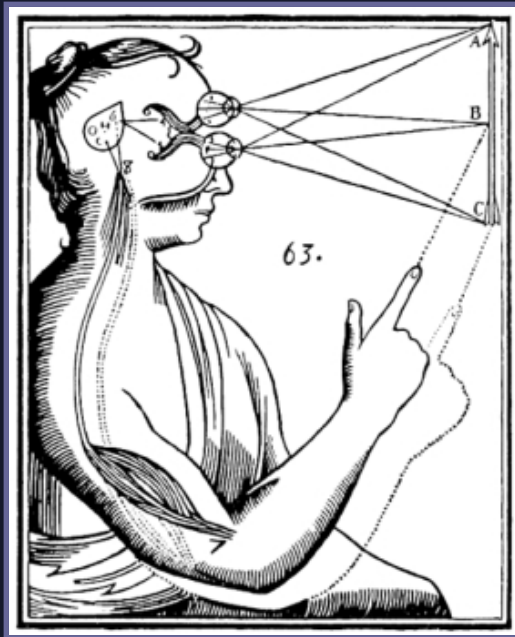


- Research/Blog
- Postcards
- Perceptual Exercise





- “It is one of the commonest of mistakes to consider that the limit of our power of perception is also the limit of all there is to perceive”



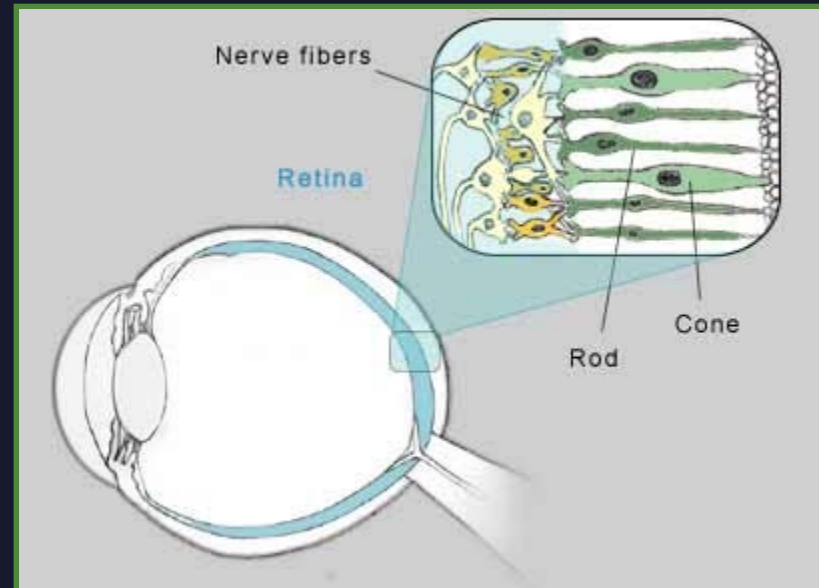
**-Charles Webster Leadbeater**

# Visual Perception

## How our eyes interpret images

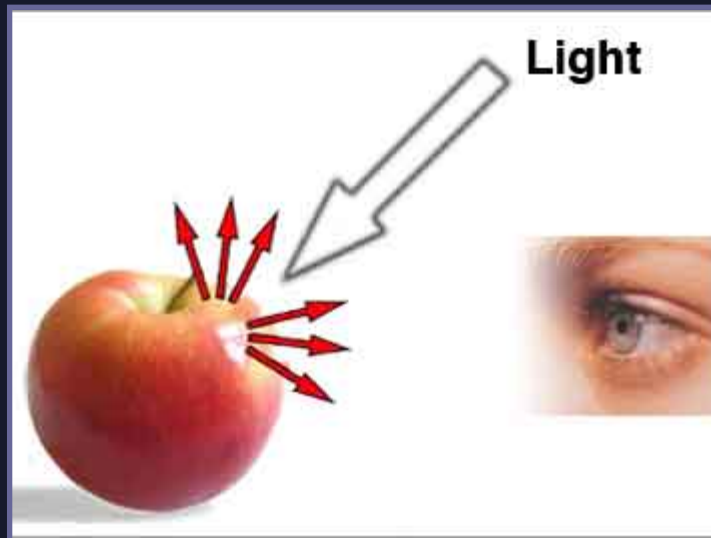


- The rods and cones (photoreceptors) are responsible for detecting light
  - Rods used for dim light
  - Cones used for bright light
    - Cones divided into 3 groups depending on the wavelength they absorb
      - Short wavelength = blue
      - Medium wavelength = green
      - Long wavelength = red
  - Cones and adapting to light and dark
    - Need to adjust to a dark room because lack of light causes lack of cone stimulus



# Visual Perception

## Light and Color



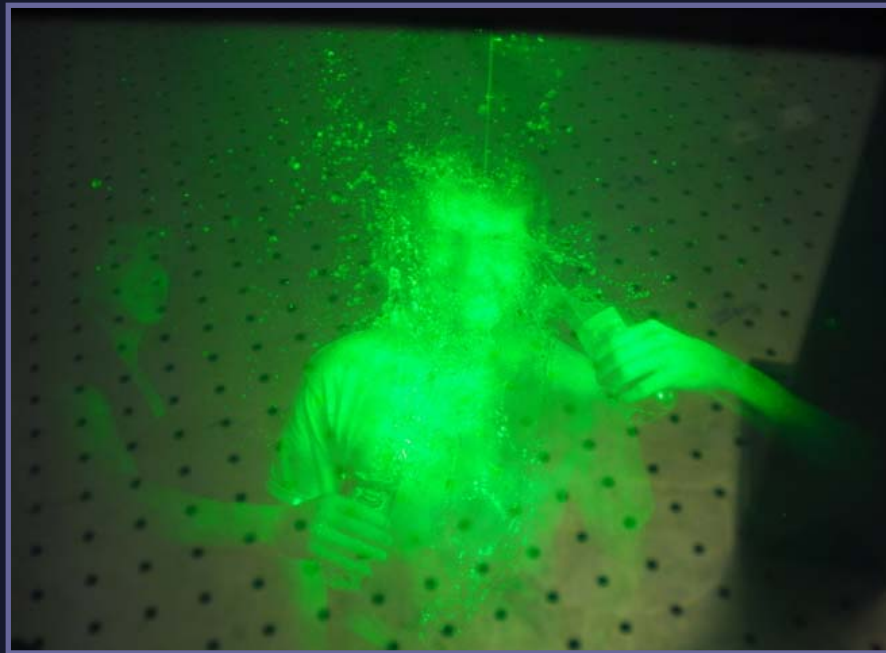
- The color of an object is determined by which light waves it absorbs and reflects
  - Ex. When an object appears black- all the wavelengths of light are being absorbed
- Solid objects will mostly reflect light, but transparent objects will transmit light through them

# Visual Perception

## A Memory of Light



- Holography allows the light scattered from an object to be recorded and later reconstructed so that it appears that the object is in the same position, relative to the recording medium, as when it was recorded
  - Can see light as a physical property



# Visual Perception

## Filling in the Gaps



- “We don’t see things as they are. We see them as we are.”

-Anais Nin (Author)

- Animation is possible through persistence of vision
- Our brains fill in gaps, many times in accordance with what we have already observed and learned visually

# Visual Perception

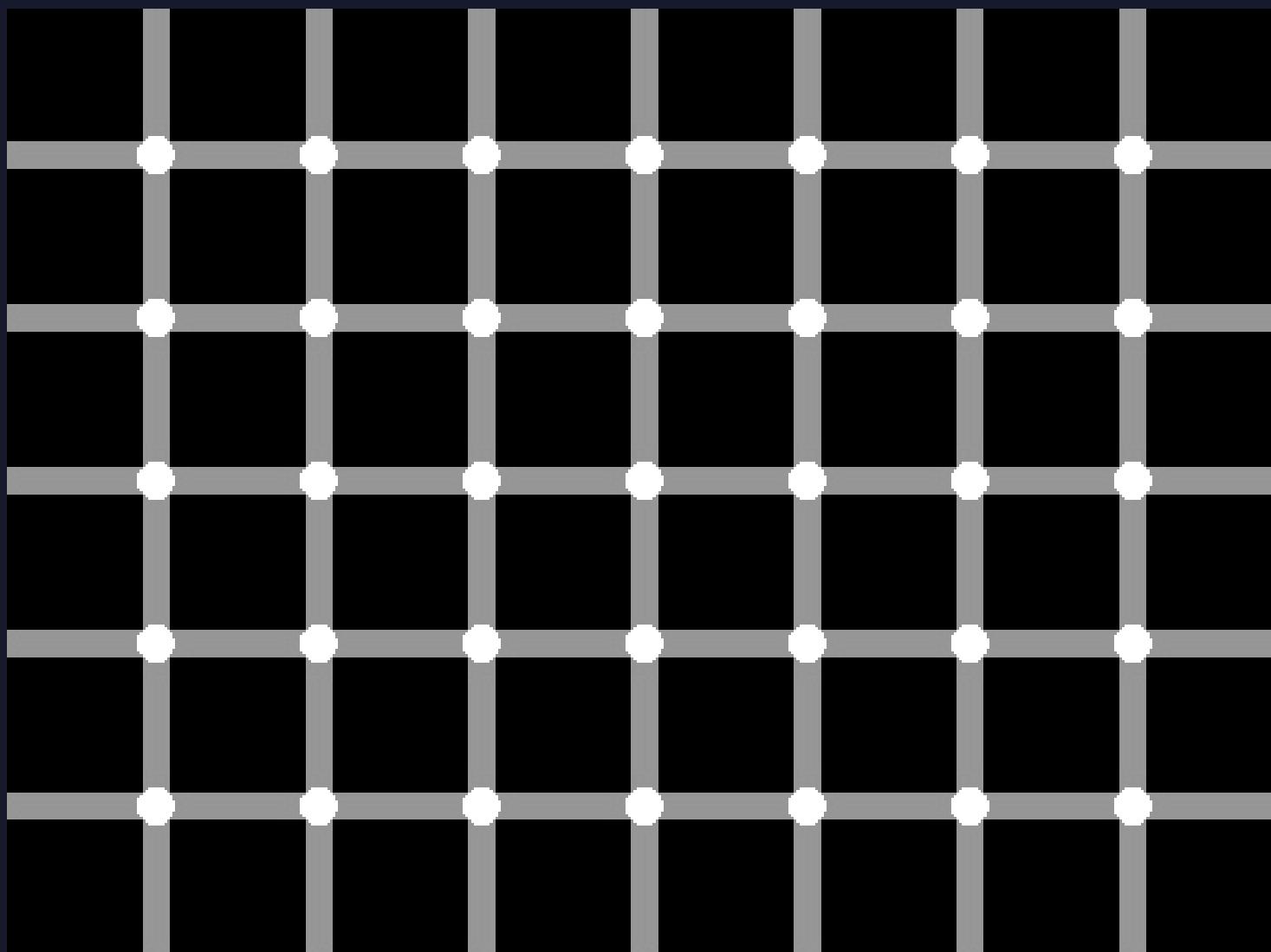
## Filling in the Gaps – After Image

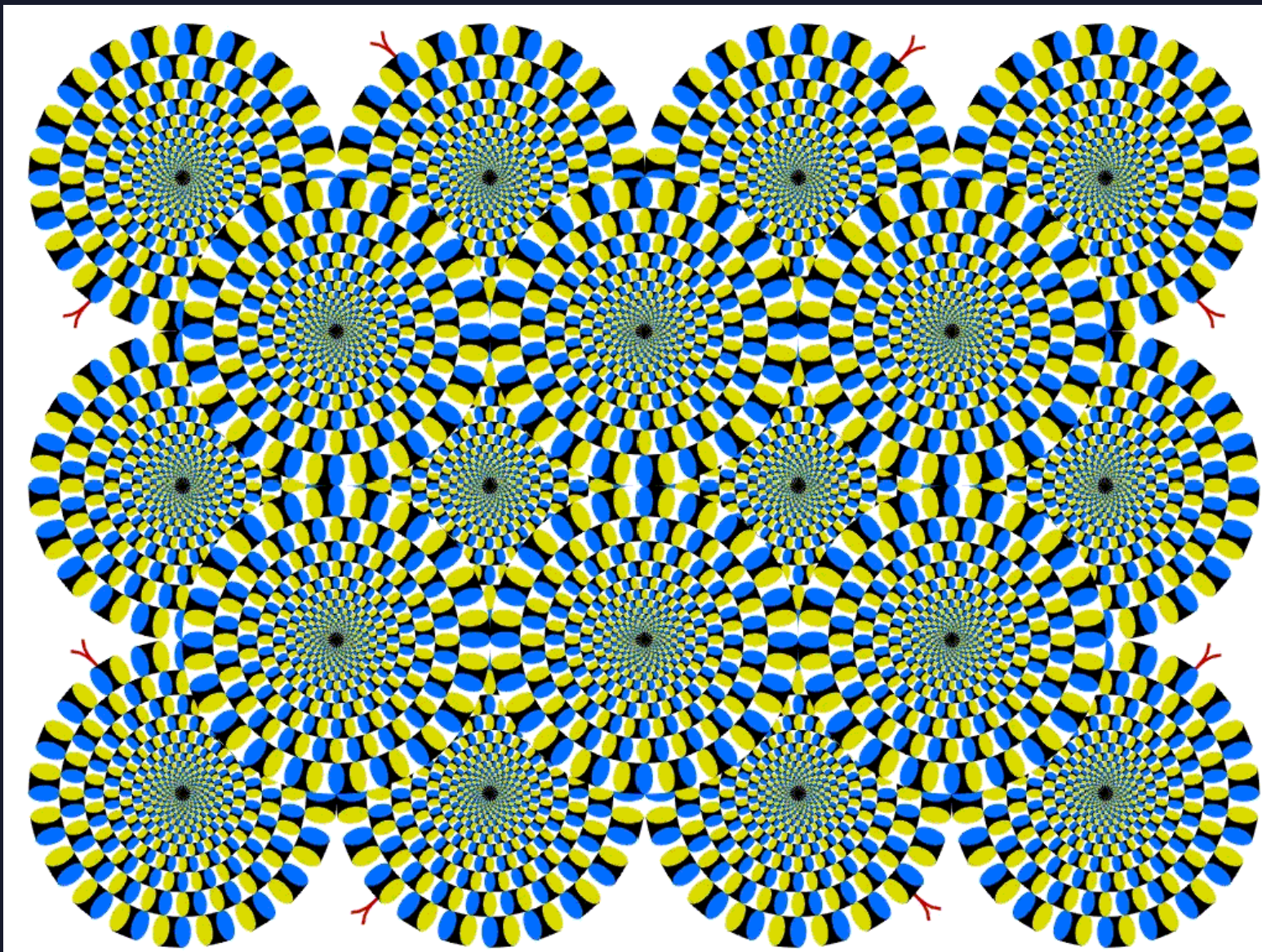


- After Images and Perception







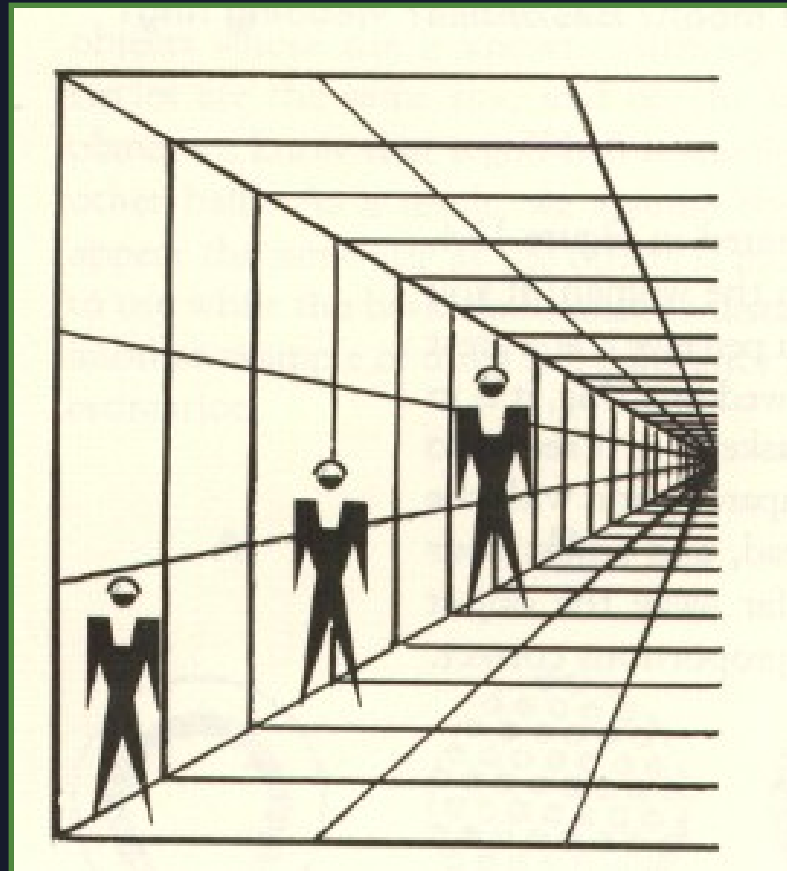


# Visual Perception

## Filling in the Gaps - Depth Cues



- Depth Cues- As we develop our visual senses our eyes begin to recognize the appearance of cues indicating depth
- Contradicting cues:
  - Horizon point
  - Height of subjects

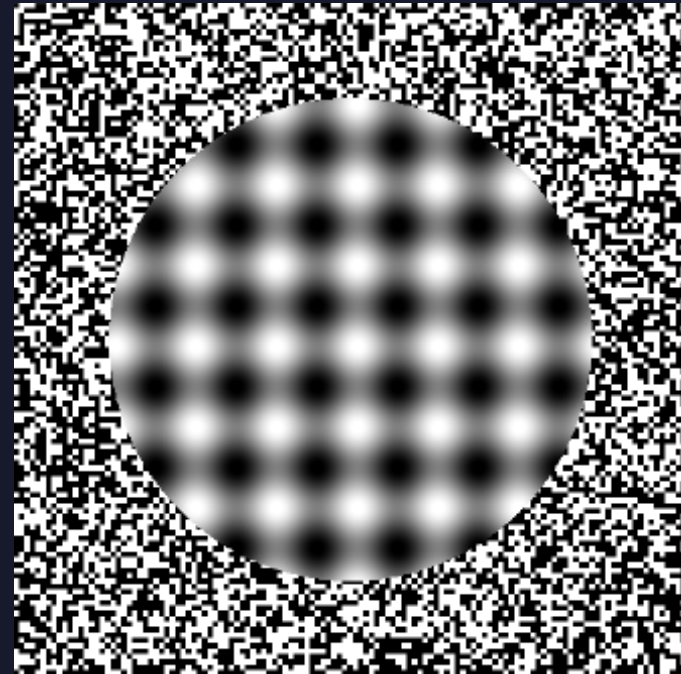


# Visual Perception

## Filling in the Gaps - Depth Cues



- Blur and Light/Dark



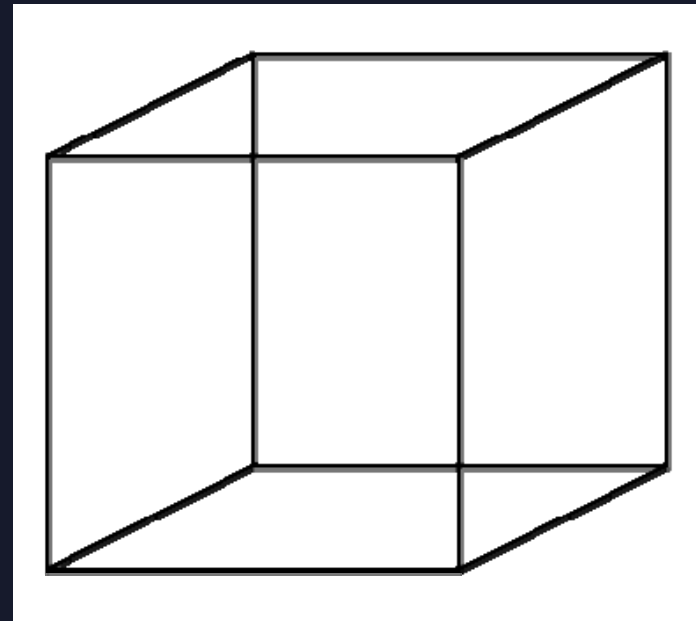
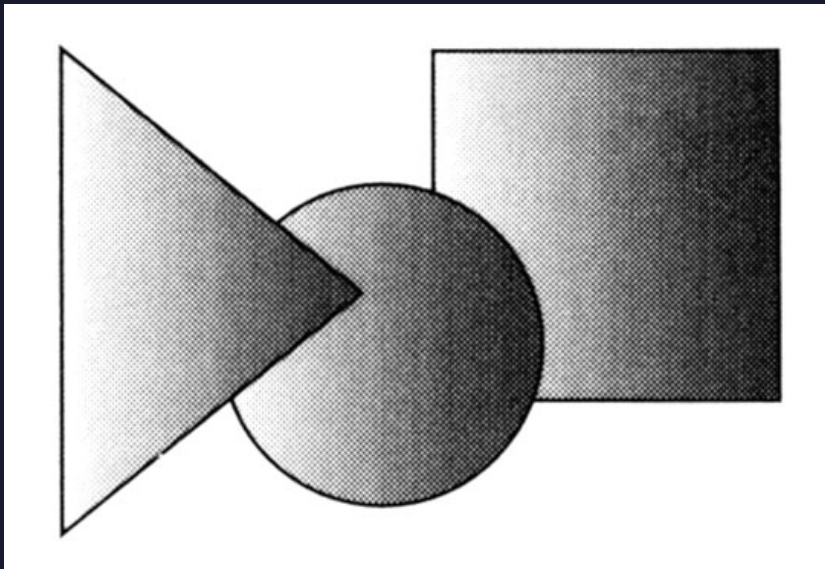


# Visual Perception

## Filling in the Gaps - Depth Cues



- Relation of objects



# Visual Perception

## Learned Perception- A Case Study ("Visual Intelligence" by Donald Hoffmann)



- Study by William Cheselden (1728): Boy of 14 was blind from congenital cataracts and was able see after eye surgery
  - Had problems identifying the difference between a cat and dog until he touched them
  - After months of observing pictures was he able to identify them to represent solid structures (not just flat planes of color)





# Perception Techniques

- “Art is the only possible means left in this world now to communicate directly to people’s minds without any translation”

-Bill Viola (Video Artist)



# Perception Techniques



- Light and the use of light and dark
  - High Key Lighting- predominately white and use light tones. This creates a softer image
  - Low Key Lighting- limits the amount of light in an image. High contrast and hard lighting give this image a moody atmosphere





# Perception Techniques



- How you light a subject alters its interpretation
  - Lighting from above emphasizes eye sockets and bone structure
  - Lighting from below emphasizes eyes and skin texture

# Perception Techniques



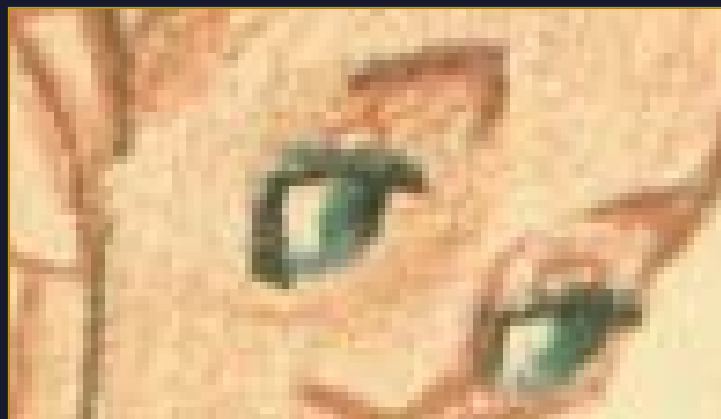
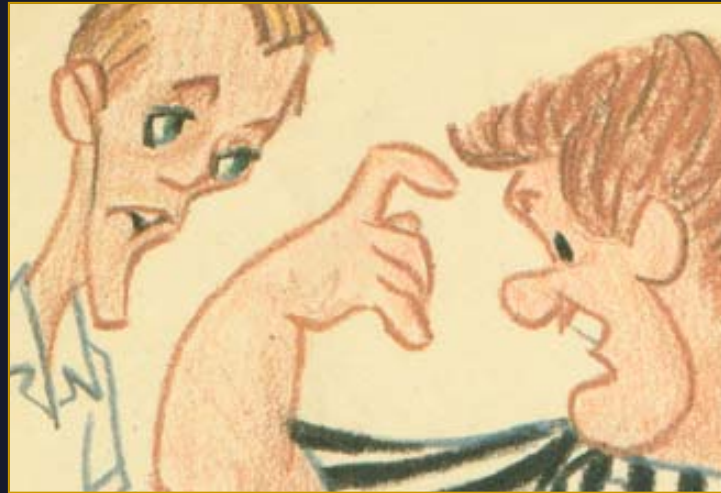
- Iconic Images can allow our minds to digest ideas in different ways
  - Can relieve the stigma attached with the real world



# Perception Techniques



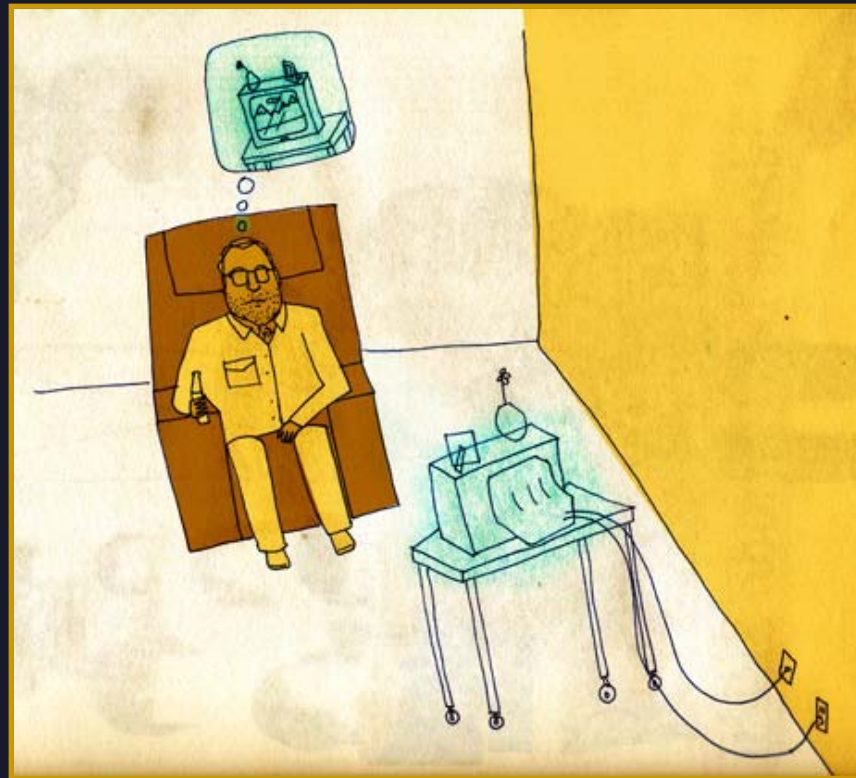
- Framing a shot
- Choice of line/color
- What you leave out



# Perception Techniques



- Depends on viewer's experiences



# Perception Techniques



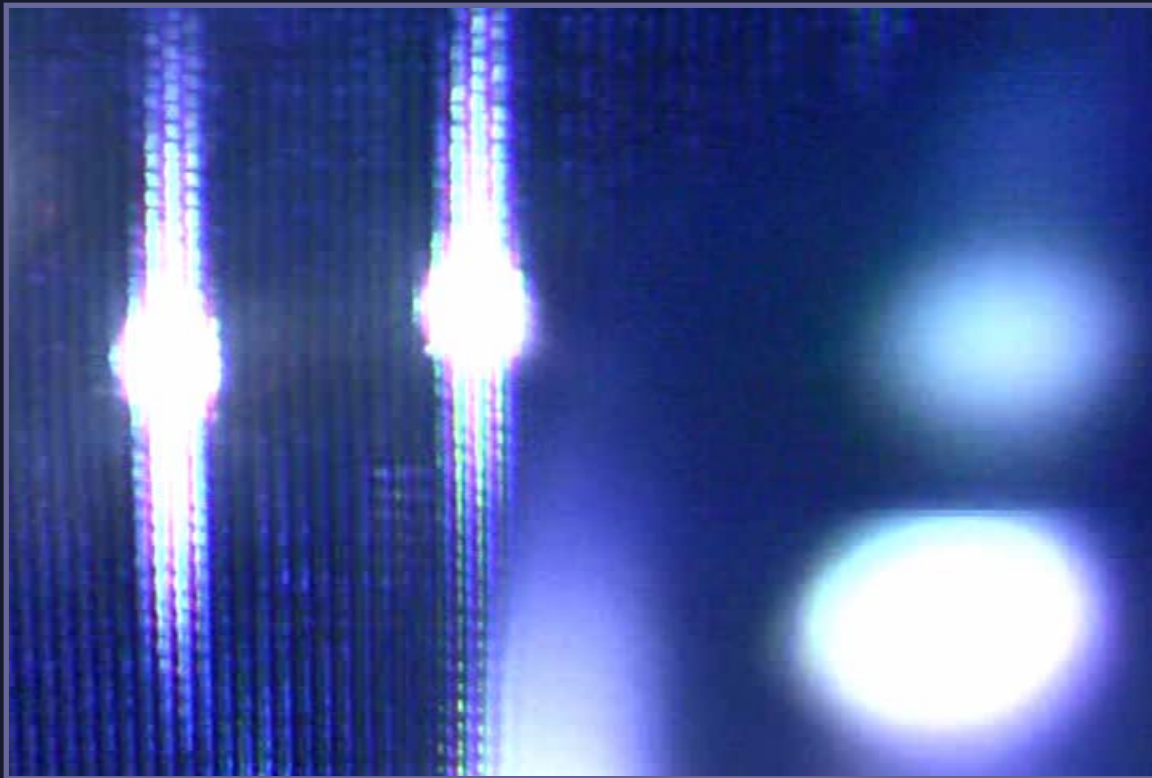
- The medium is which we are approached effects how we interpret
  - Written Word
  - Image
  - Technology/Multimedia effects interpretation
  - Animation combines many other mediums in art



# Research in Perception



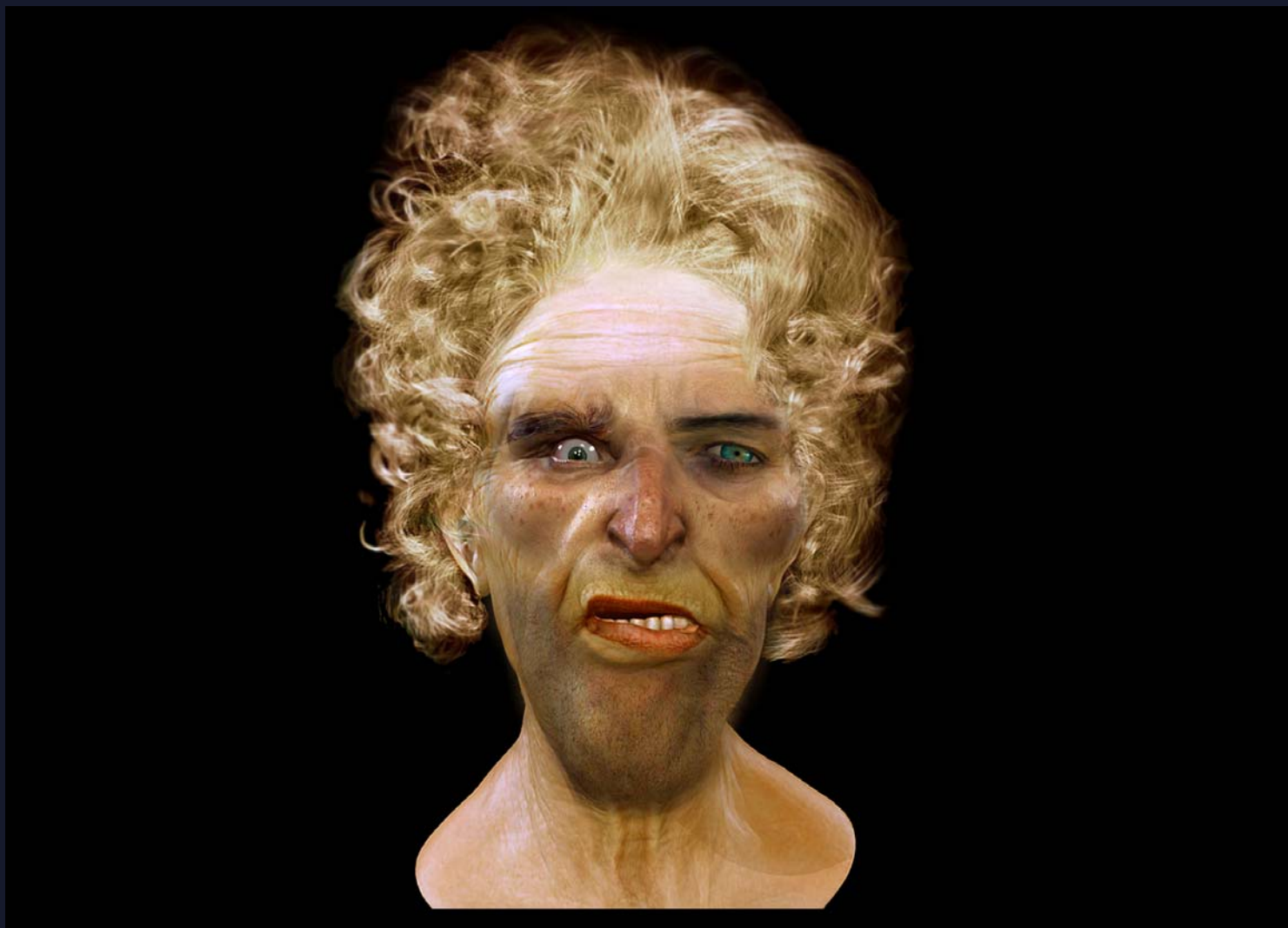
- Visual Music
- Sound
- Light and the Electronic Age



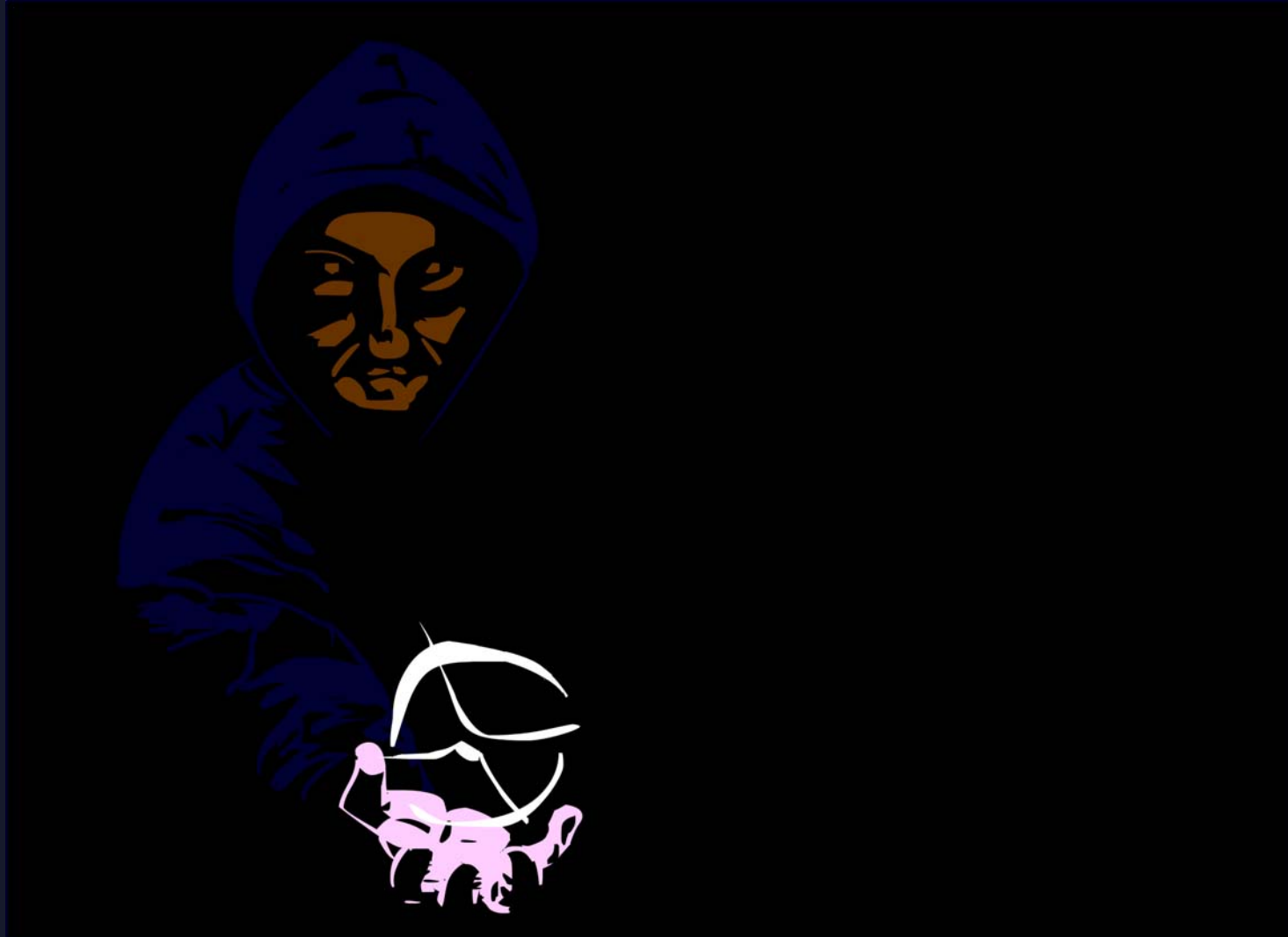


# Perception Project













My life is a  
moving image.

Tianran Duan











