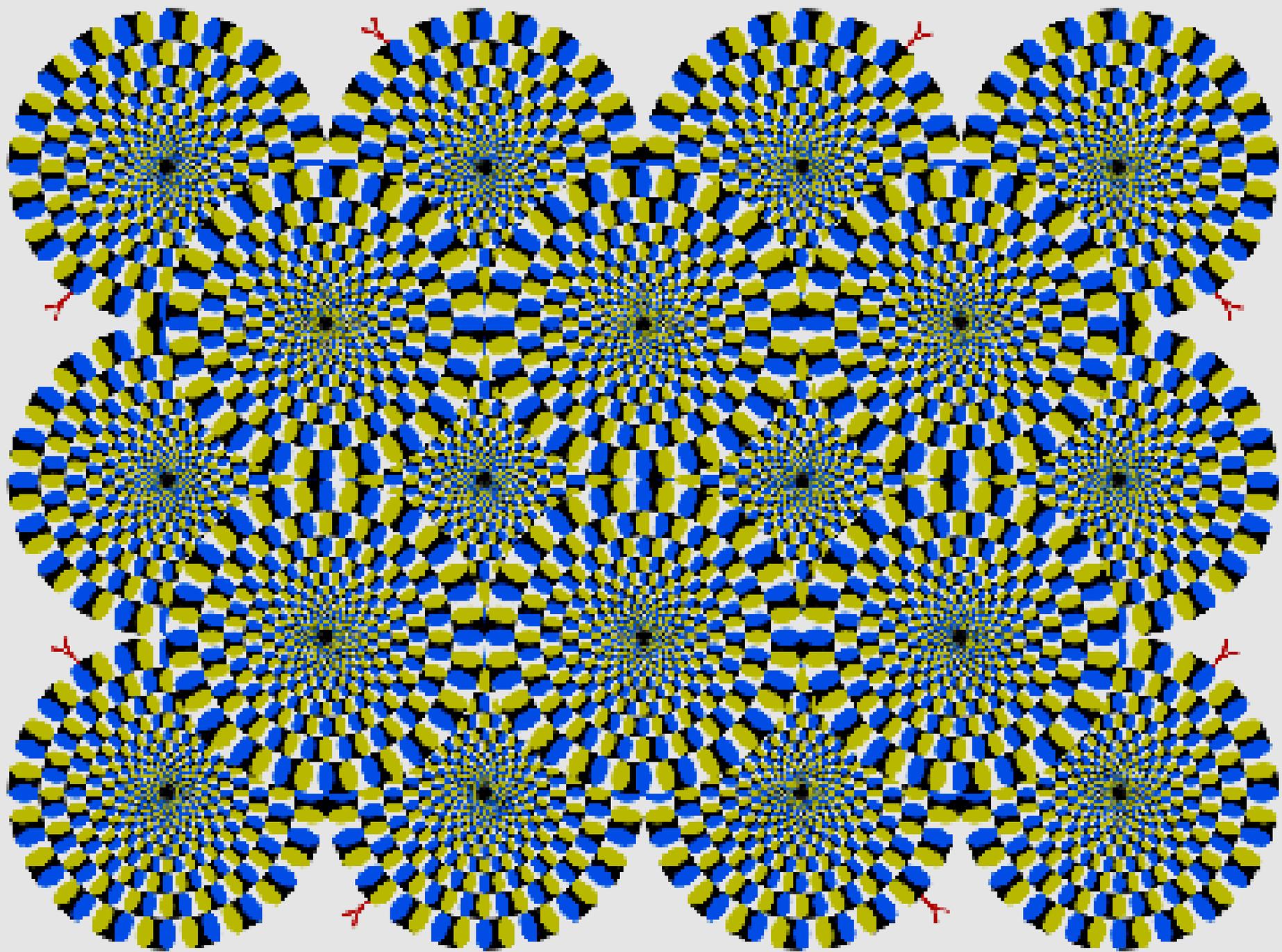


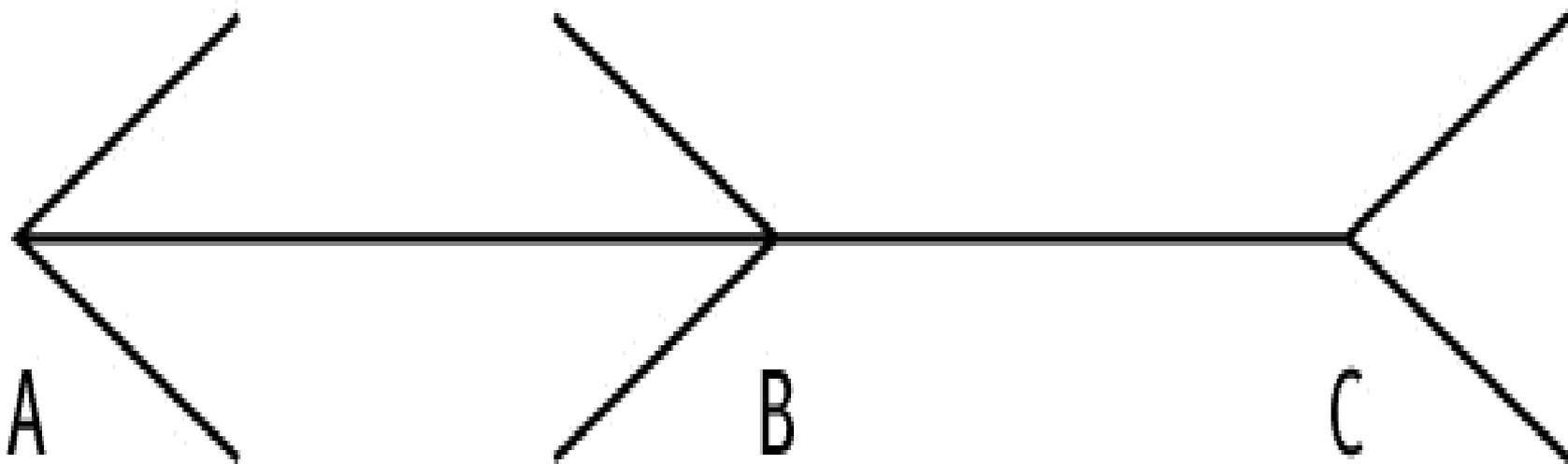
Perception

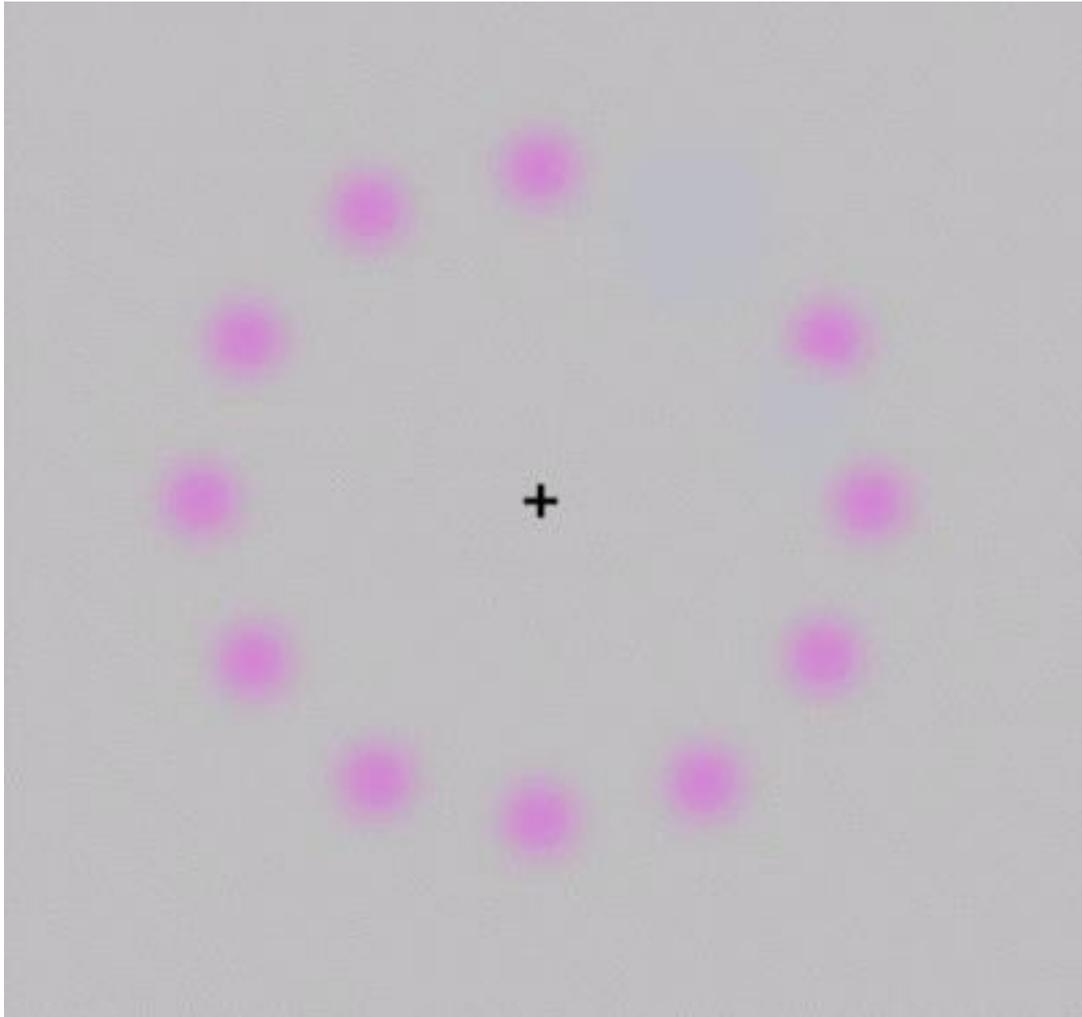


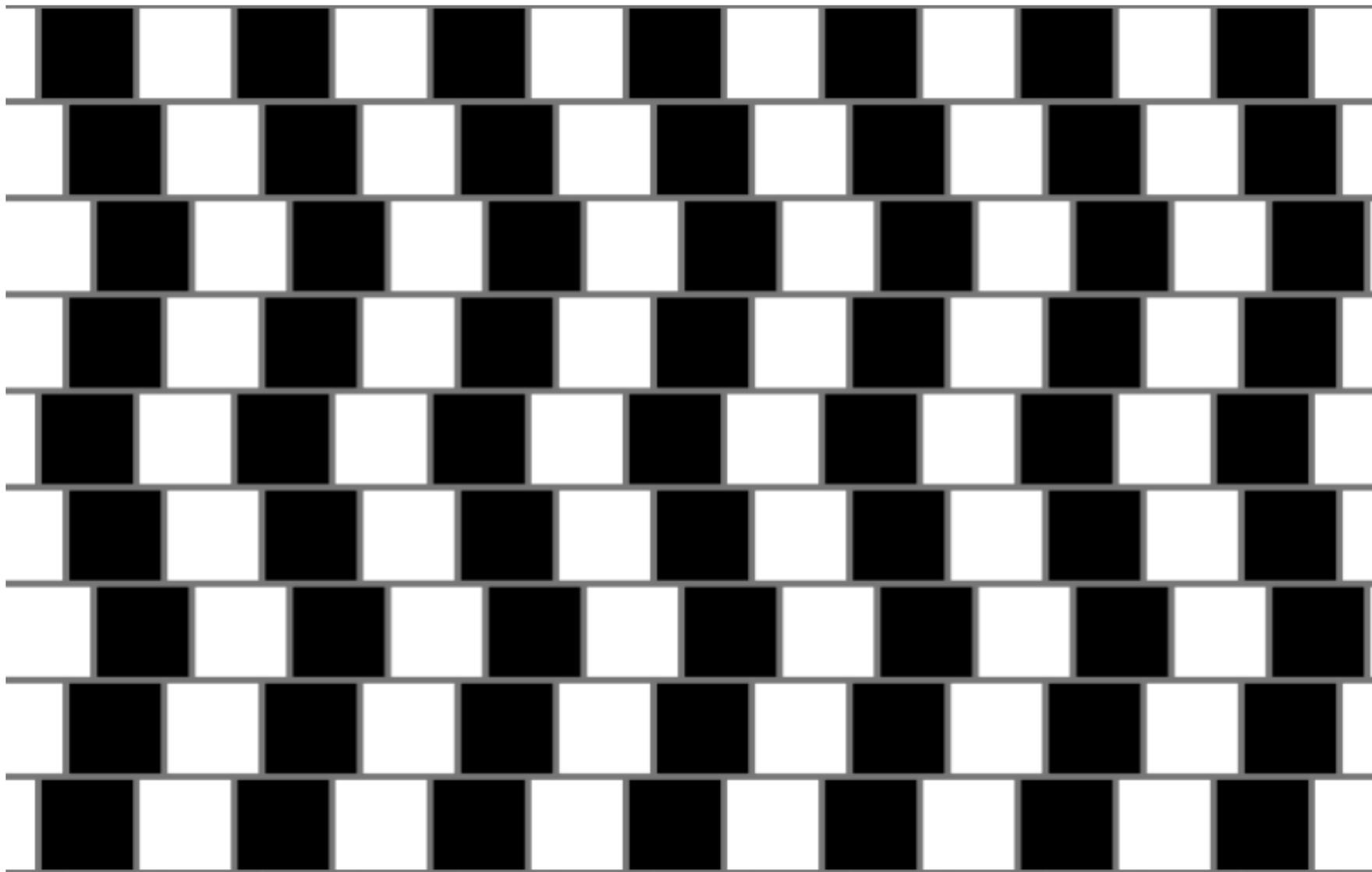
The process of organizing and interpreting information, enabling us to recognize meaningful objects and events.

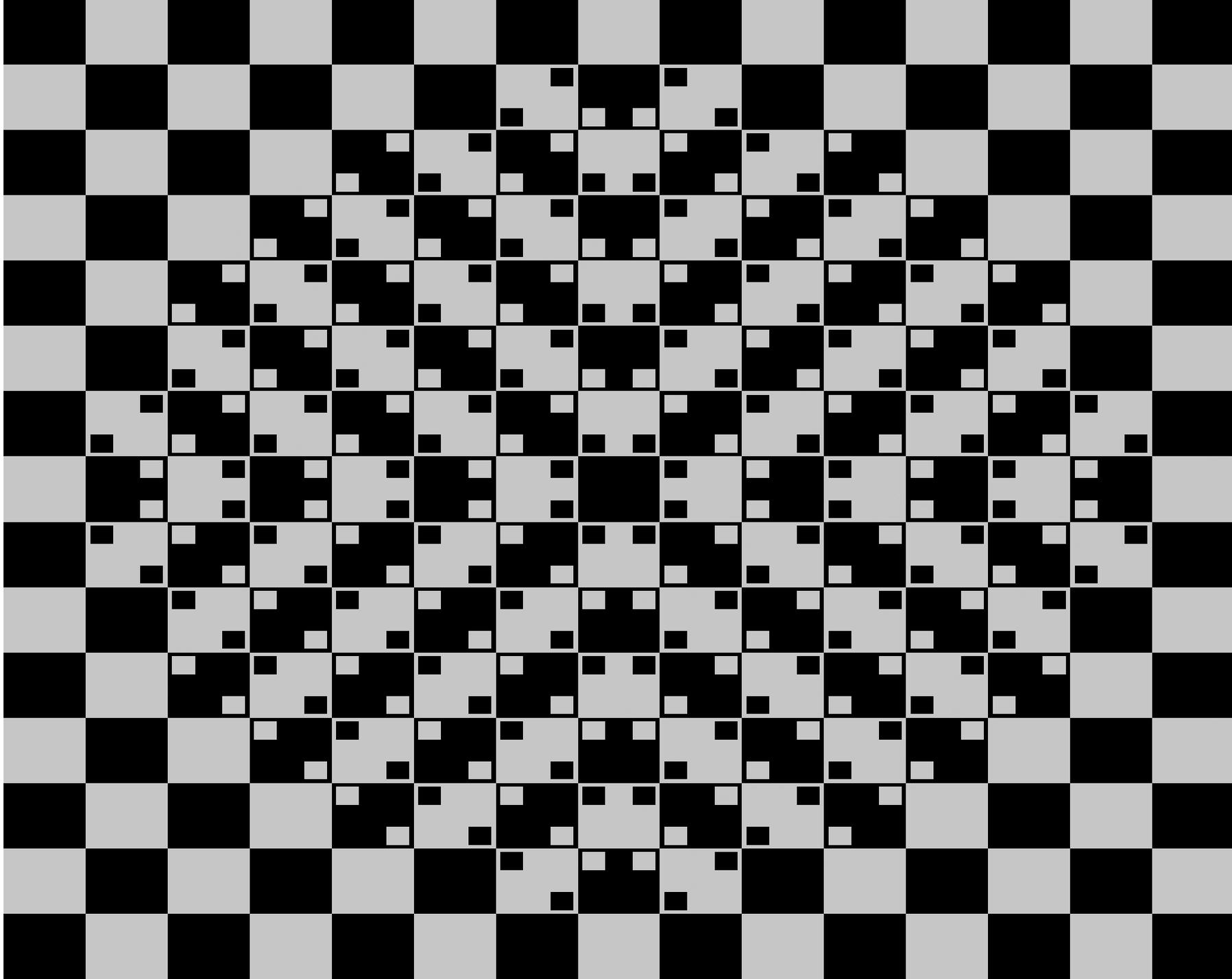


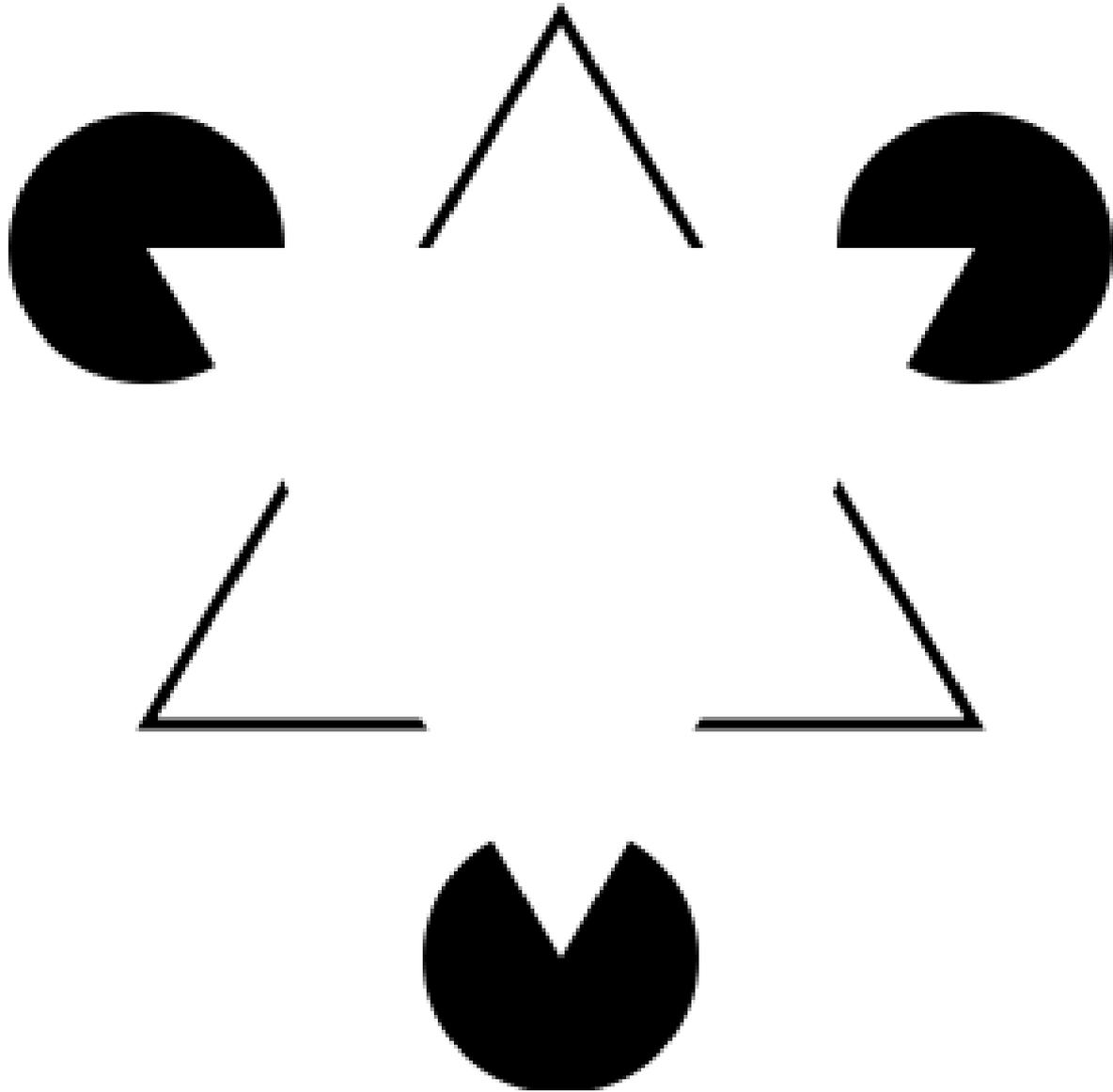


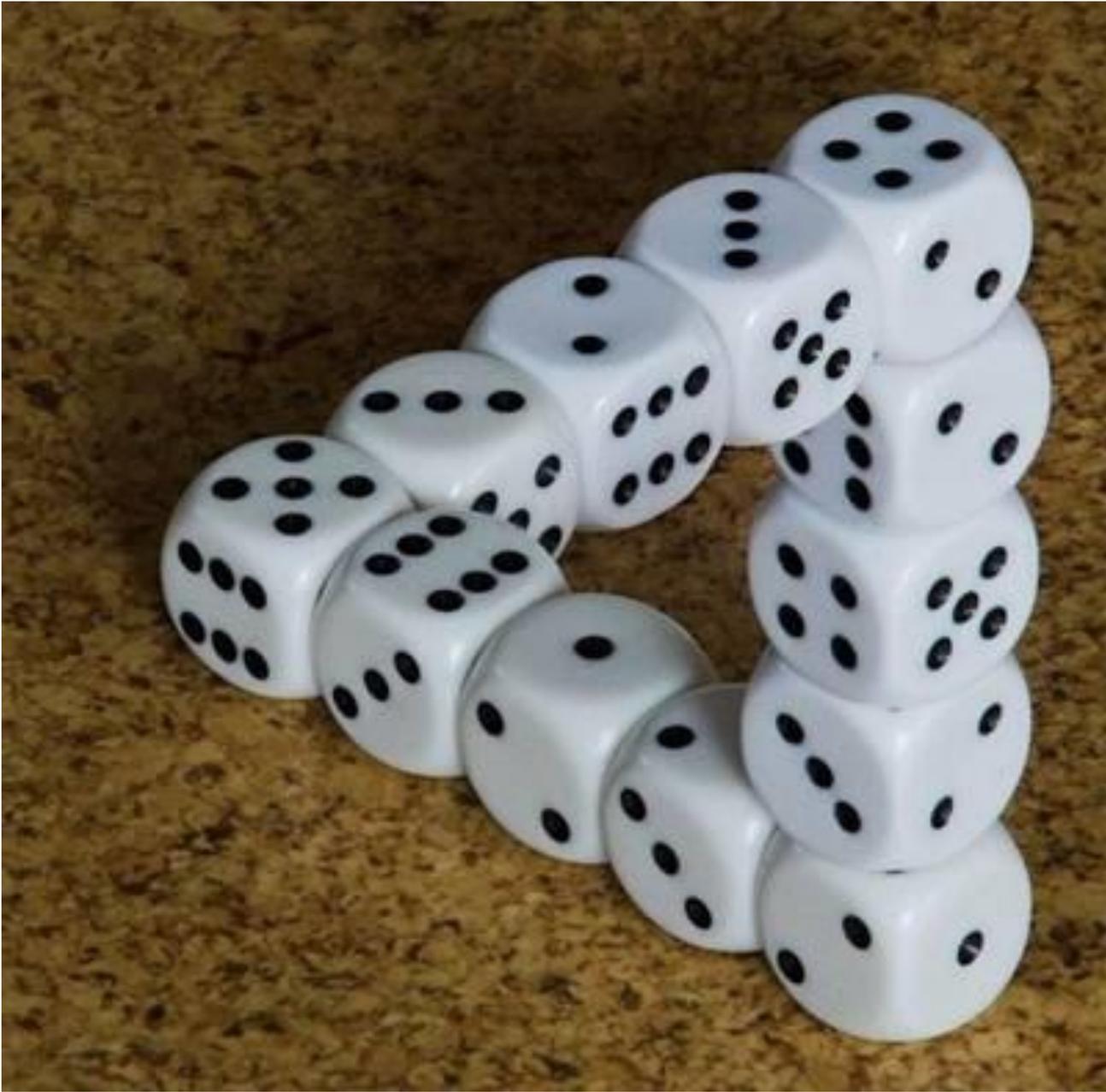






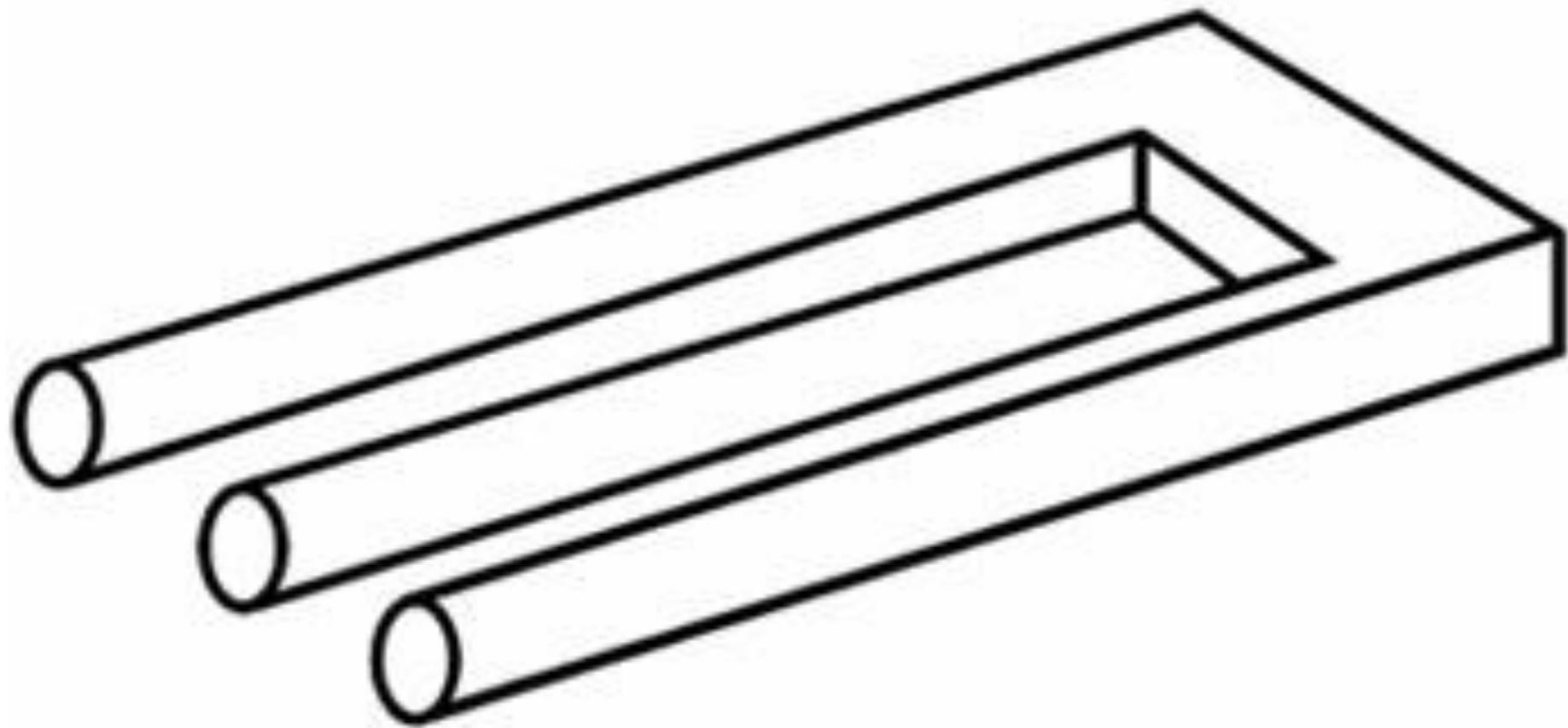


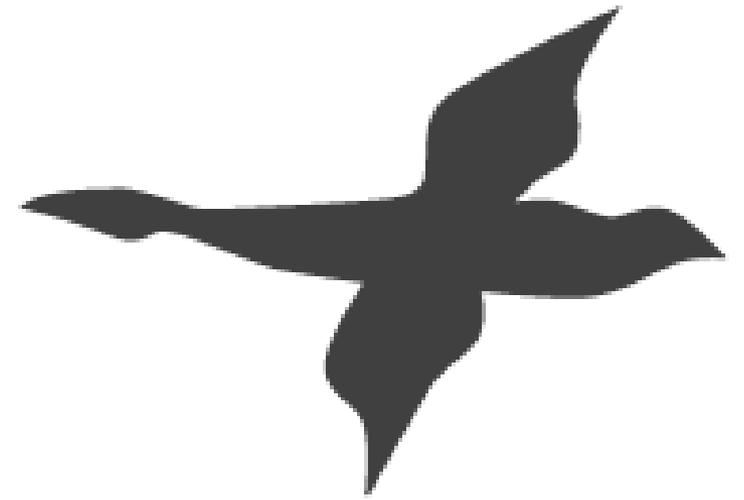
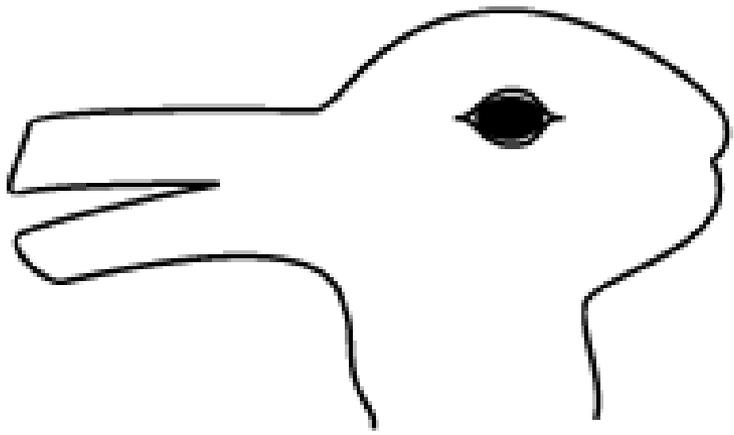












Perceptual Ideas



Perception

- **Selective Attention**: focus of conscious awareness on a particular stimulus
- We cannot multi-task! We just shift our attention back and forth very quickly.
- Implications for driving and talking on cell phone?
- What do you do to the radio when you're looking for an address?
- **Cocktail Party Effect**
 - Ability to attend to one voice among many
 - Form of Selective Attention



Selective Attention Example

- **In performing an experiment like this one on when attention you it read is the critically fine important print that you the realize material you that have is a being really read awesome by teacher the who subject makes for learning the fun relevant and task exciting is for cohesive everyone**

Another Example

- If you are right handed...
 - Move your right foot in a smooth counterclockwise circle...
 - While writing the number 3 repeatedly with your right hand.
- If you are musically inclined...
 - Tap a steady three times with your left hand while tapping four times with your right hand.

Class Activity

- I am going to show you a video clip. As you watch, I want you to count the **NUMBER OF BASKETBALL PASSES** made by **PLAYERS WEARING WHITE ONLY**.



Inattentional Blindness

- Inattentional blindness – failing to see visible objects when our attention is directed elsewhere



Change Blindness

Change blindness – failing to notice a visual change when our attention is directed elsewhere

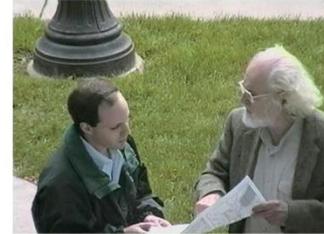
[Office Clip](#)



Change deafness

z40 percent of people

focused on repeating a list of words failed to notice a change in the person speaking



Did you know? Change blindness is a tactic used constantly by magicians to aid in their magic tricks!!

Perceptual Organization: Gestalt

- Gestalt Psychology: emphasizes our tendency to integrate pieces of information into meaningful wholes

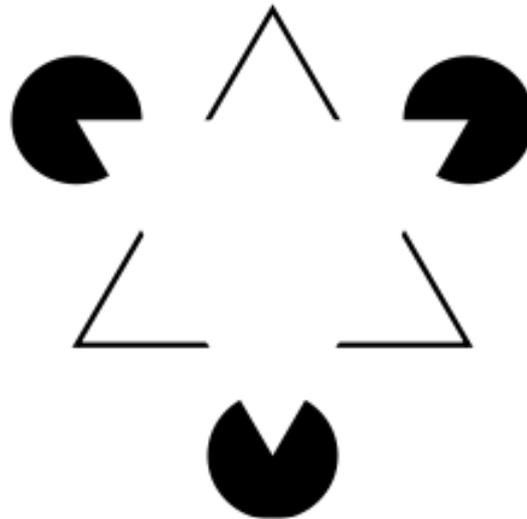
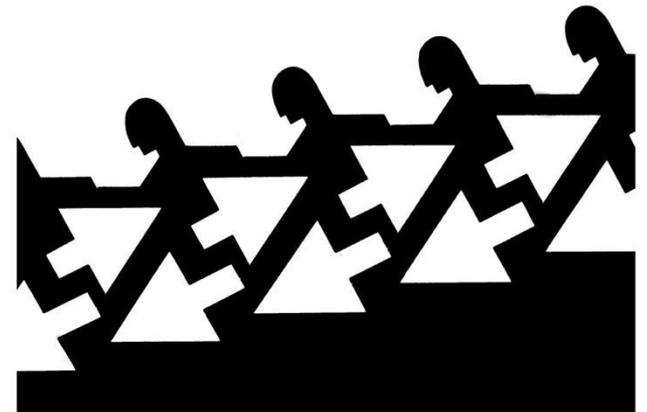
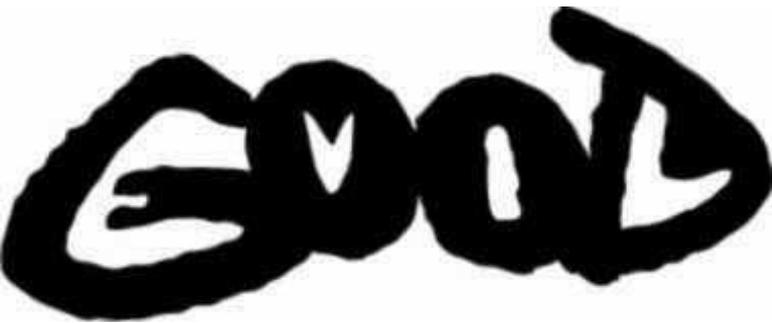


Figure Ground Relationship

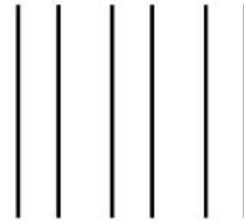


Our first perceptual decision is what is the image is the figure and what is the background.

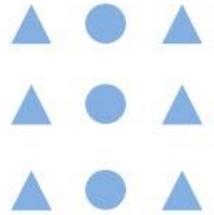


Gestalt Psychology

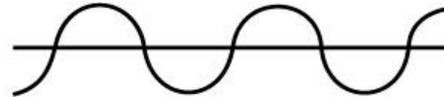
- Gestalt psychologists focused on how we *GROUP* objects together.
- We innately look at things in groups and not as isolated elements.
- **Proximity** (group objects that are close together as being part of same group)
- **Similarity** (objects similar in appearance are perceived as being part of same group)
- **Continuity** (objects that form a continuous form are perceived as same group)
- **Connectedness** (we perceive things that are uniform and linked to be a single unit)



Proximity



Similarity

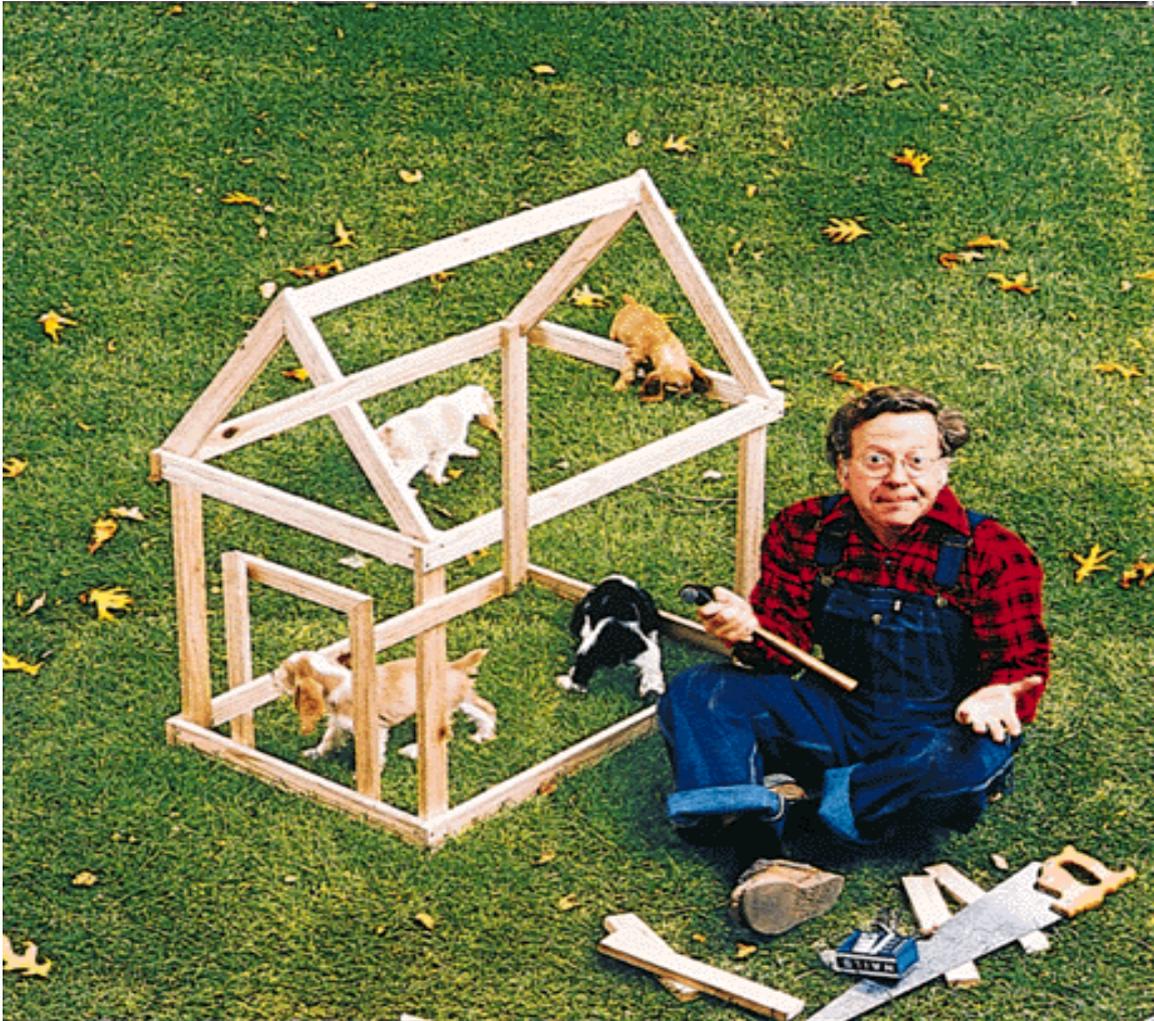


Continuity



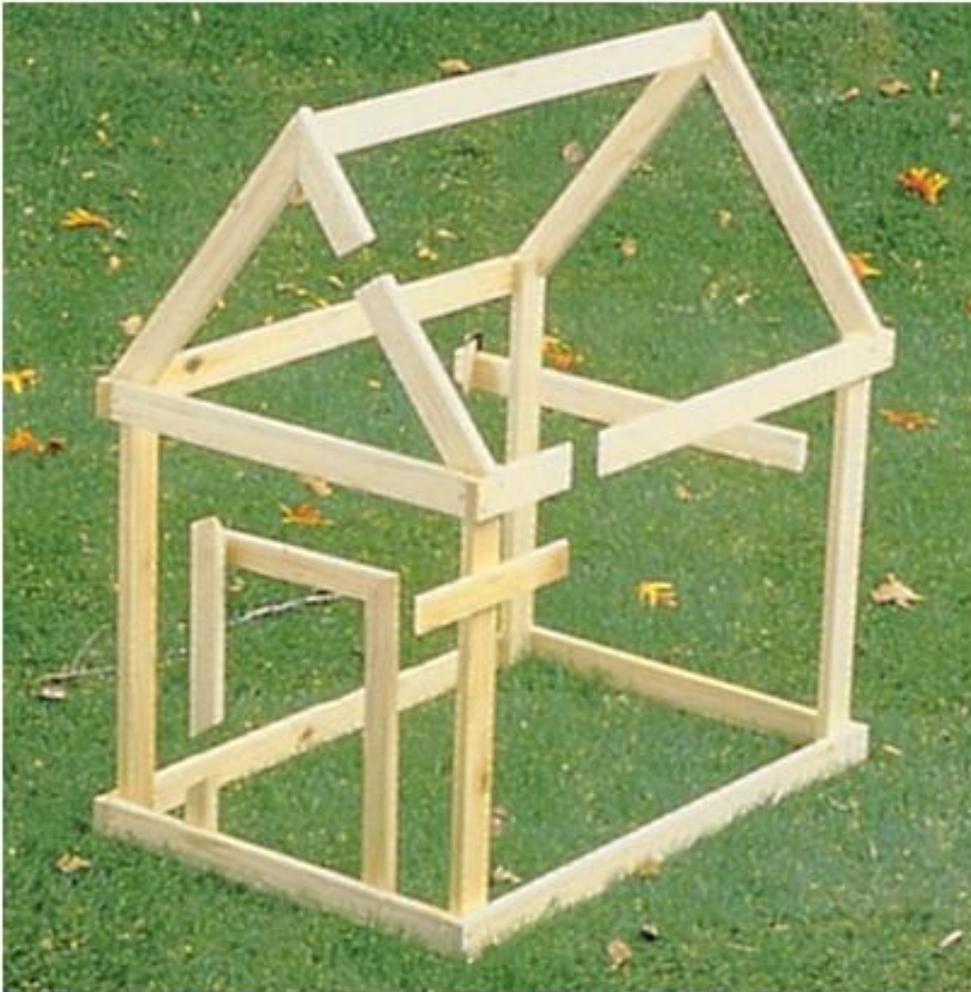
Connectedness

Perceptual Organization: Grouping Principles



- Gestalt grouping principles are at work here.

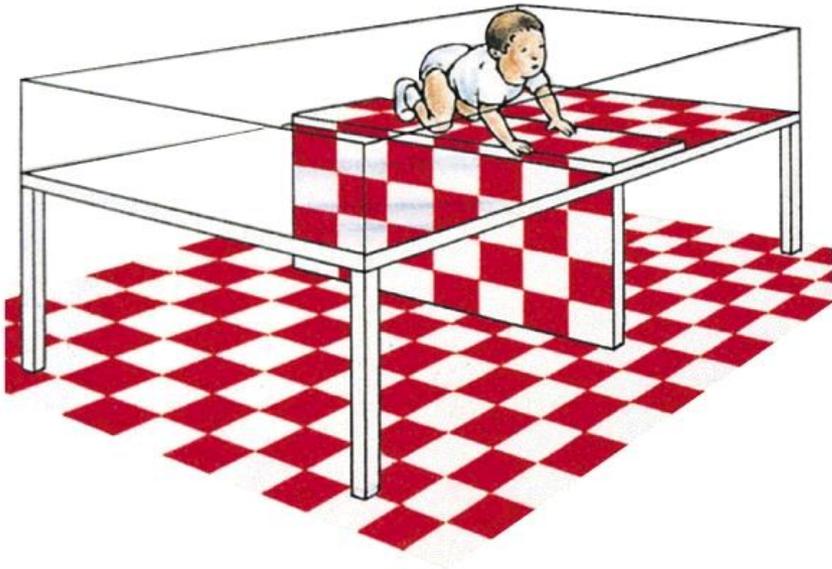
Perceptual Organization: Grouping Principles



- Impossible doghouse

Perceptual Organization: Depth Perception

- Depth Perception
 - ability to see objects in three dimensions
 - allows us to judge distance



Visual
Cliff

Depth Cues



- Eleanor Gibson and her **Visual Cliff Experiment**.
- If you are old enough to crawl, you are old enough to see depth perception.
- We see depth by using two cues that researchers have put in two categories:
 - Monocular Cues
 - Binocular Cues

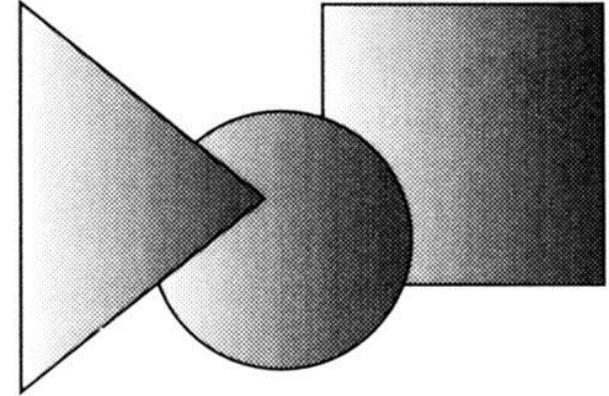
Monocular Cues

- Methods used by a single eye to judge depth perception

Linear Perspective



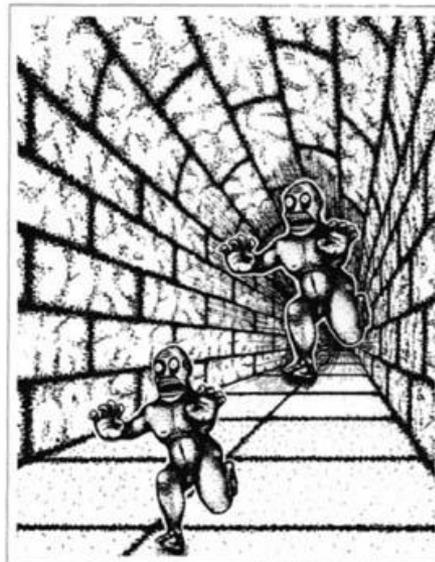
Interposition



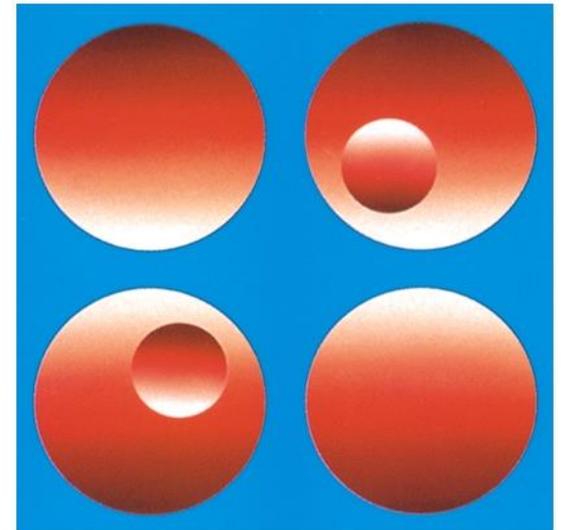
Relative size



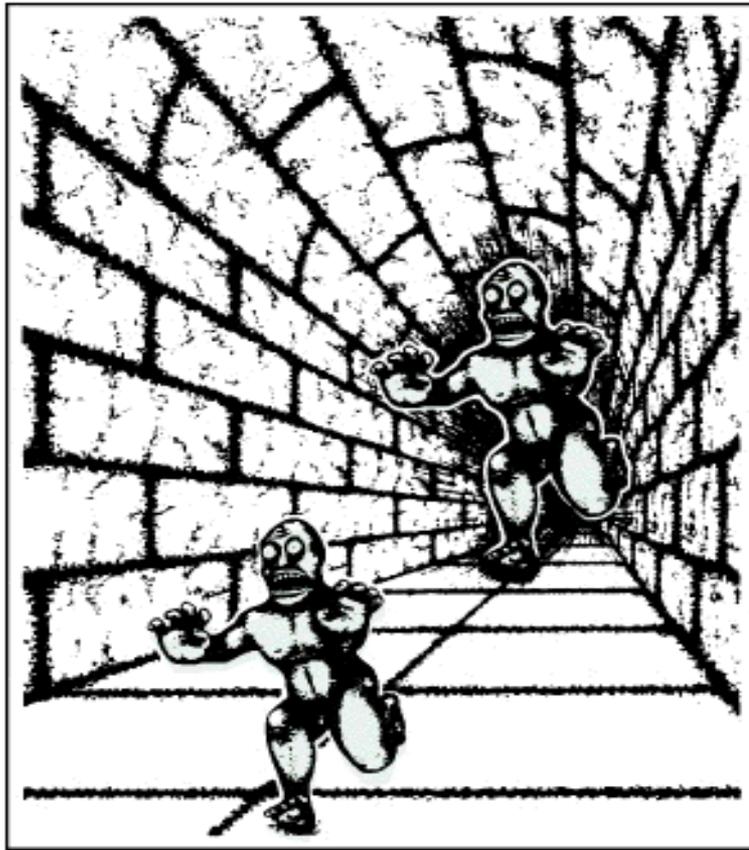
Relative height



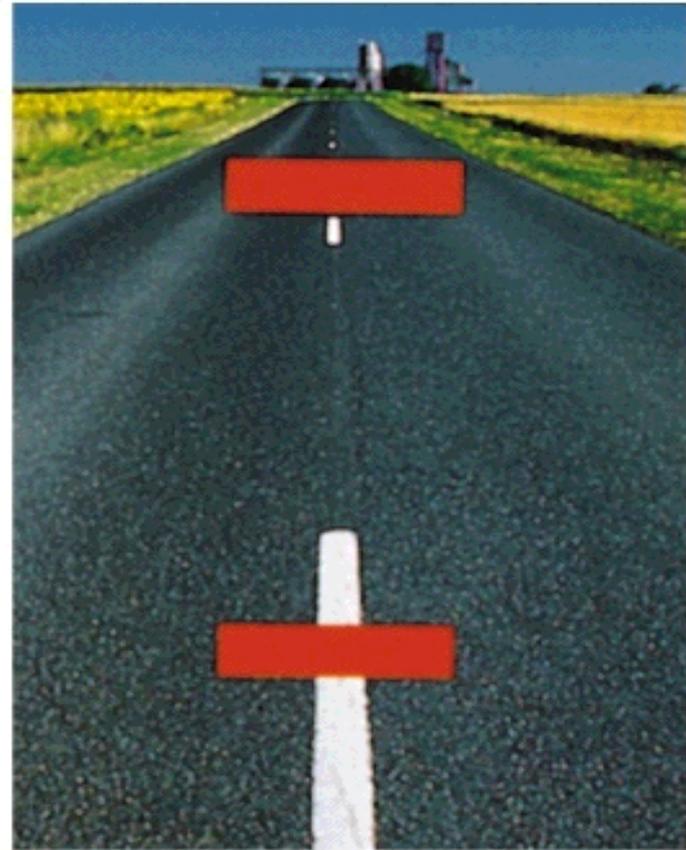
Light and shadow



Perceptual Organization

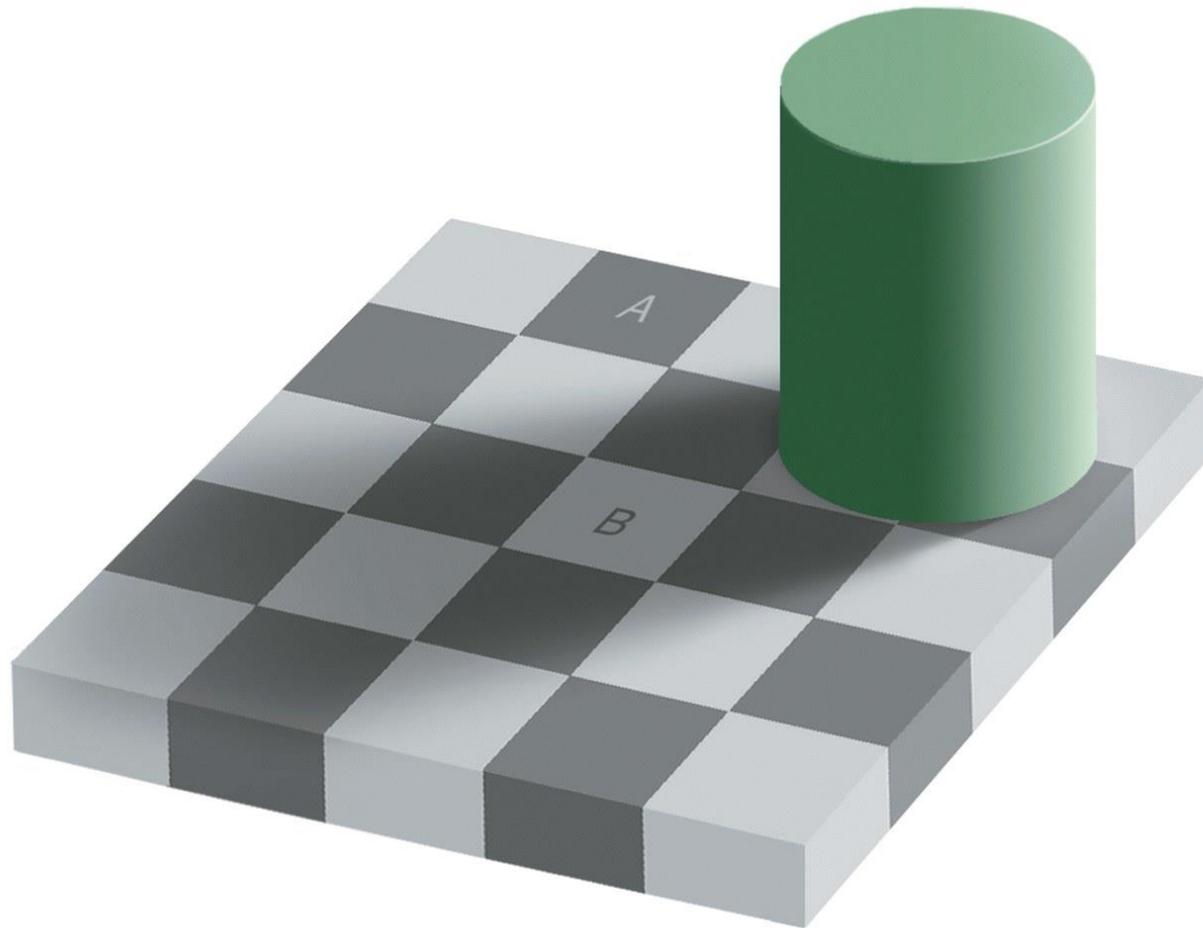


(a)

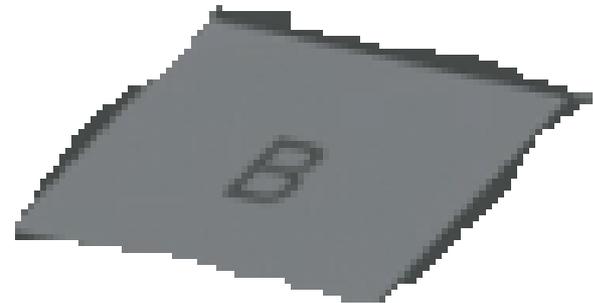
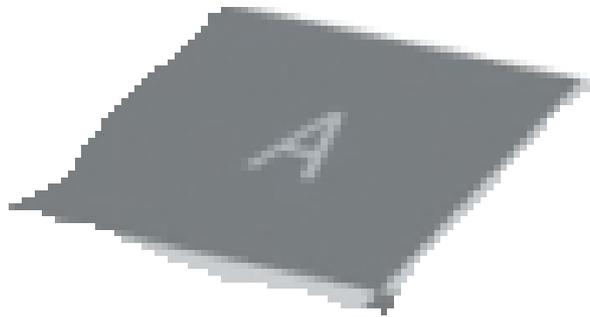


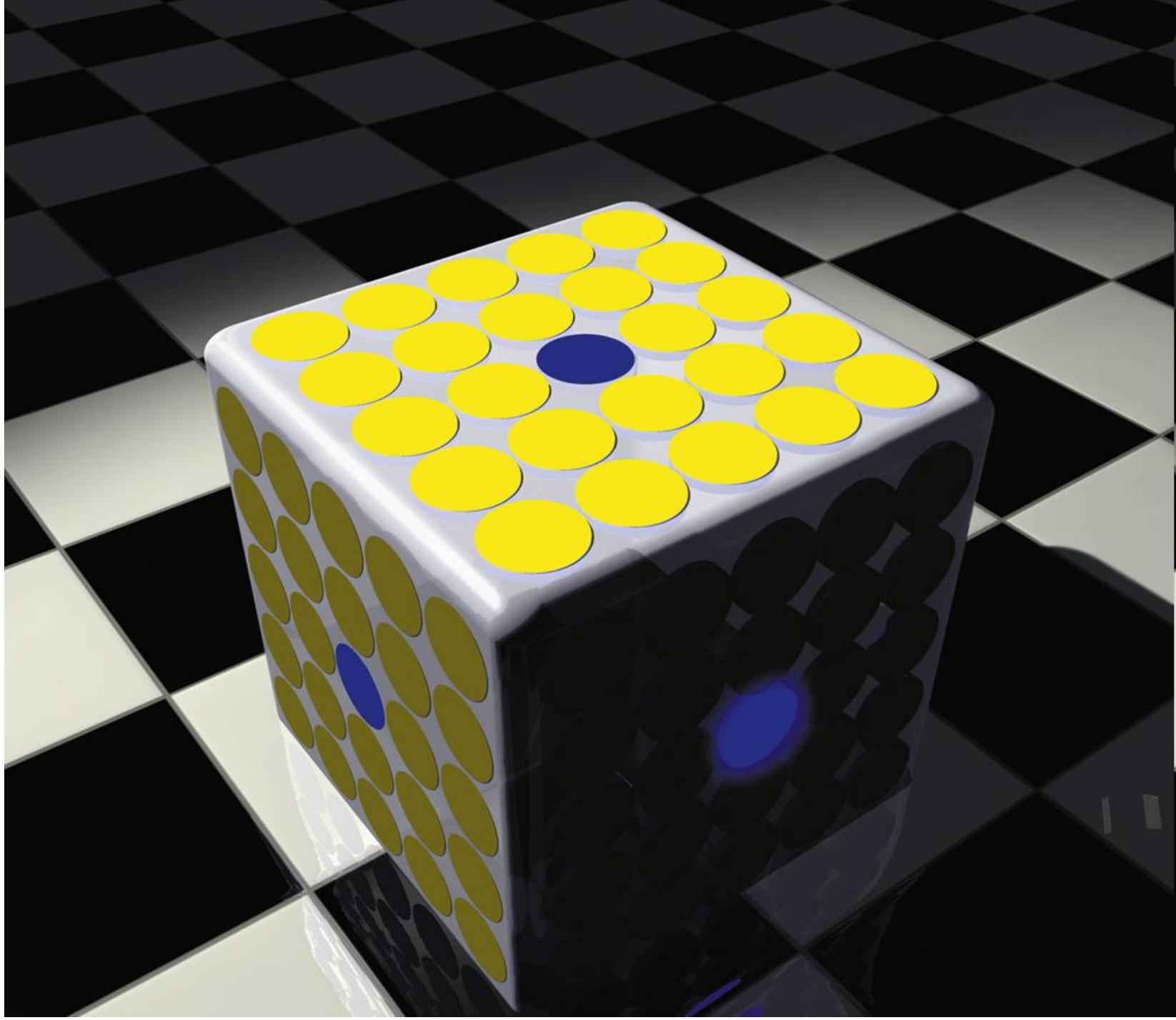
(b)

Perceptual Organization- Brightness Contrast



Perceptual Organization-Brightness Contrast



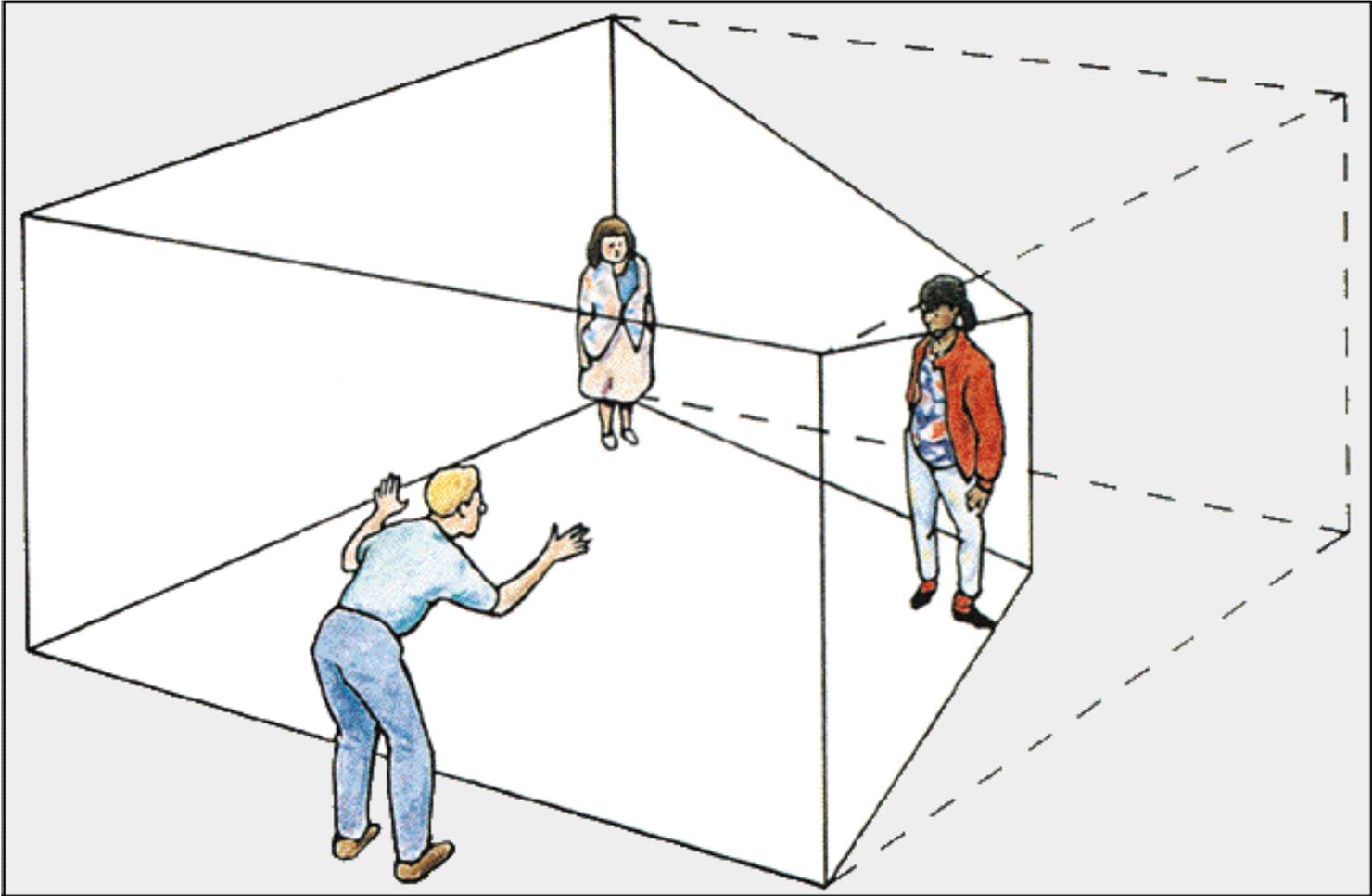


Perceptual Illusions



Perceptual Illusions



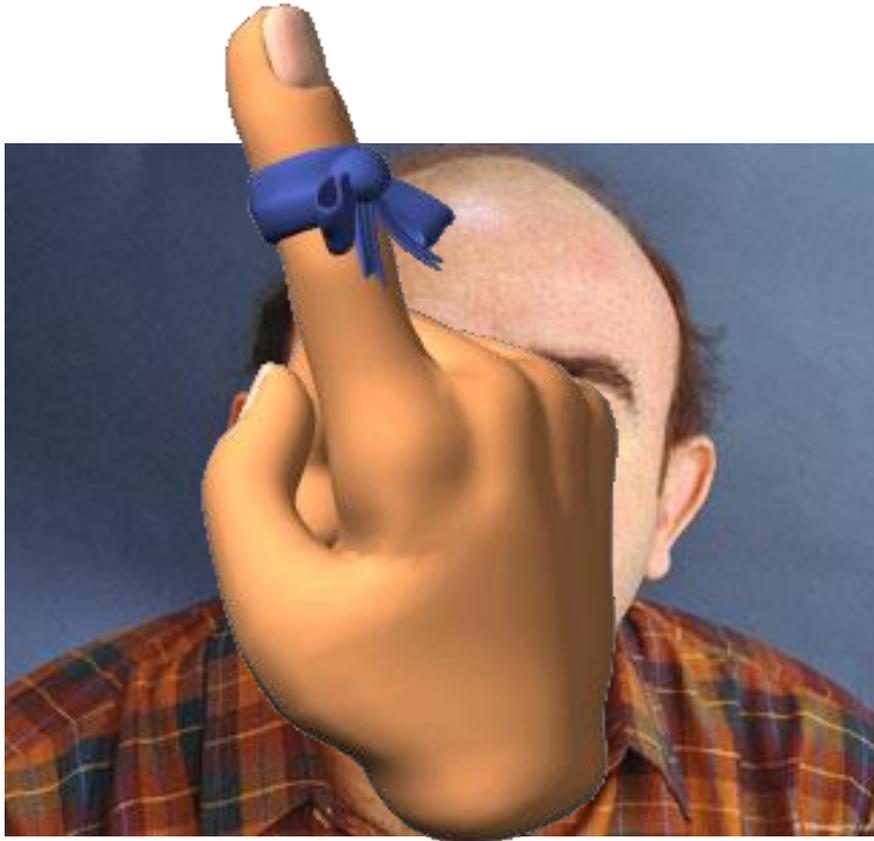
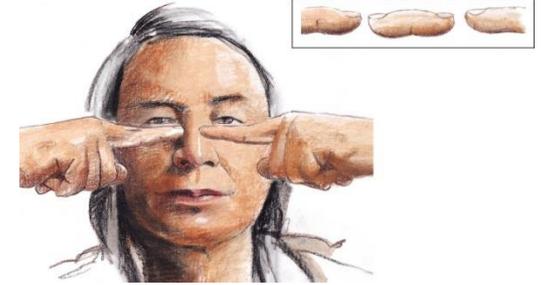


Vision and Hearing Product

You are to create products that is related to vision and hearing in some way. They can alter, improve, or change vision or hearing in any way that you choose. Your product must include the following: (MUST CREATE TWO). ONE for Vision and ONE for Hearing.

- A Title & Slogan
- A Diagram of the Eye or Ear (Including what the product affects/changes)
- Brief Description of what the Product Does
- Brief Description of how it works
- A Drawing/Picture of the Product
- A Neat, Colorful Final Product

Binocular Cues

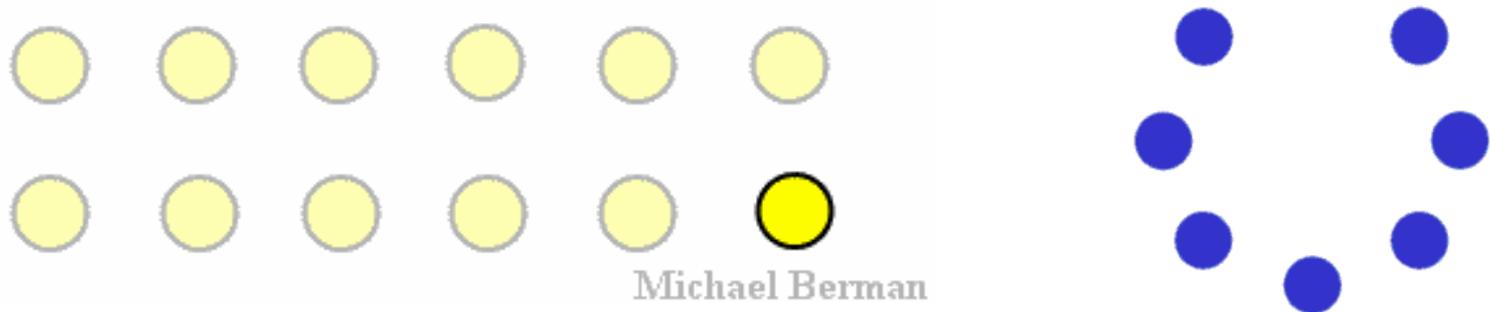


Did You Know? Retinal disparity is used by 3-D filmmakers... they achieve the 3-dimensional effect by displaying the film from two different projectors at once!

- Methods used by both eyes to judge depth perception
- Retinal Disparity (as an object comes closer to us, the differences in images between our eyes becomes greater.
- Convergence (as an object comes closer our eyes have to come together to keep focused on the object).

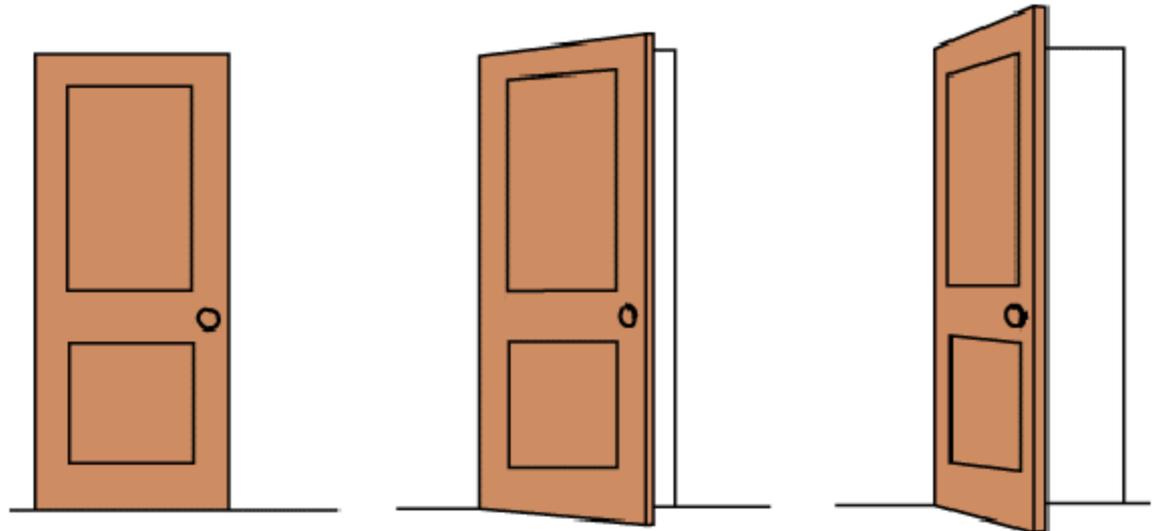
Perceived Motion

- **Phi Phenomenon** – illusion of movement created when two or more adjacent lights blink on and off in quick succession



Perceptual Constancy

- Perceptual Constancy
 - perceiving objects as unchanging even as illumination and retinal image change
 - color
 - shape
 - size



Perceptual Interpretation

- Perceptual Set
 - a mental predisposition to perceive one thing and not another

Class Activity! Half the class needs to close their eyes....







Perceptual Set: Schemas

- What you see in the center is influenced by perceptual set





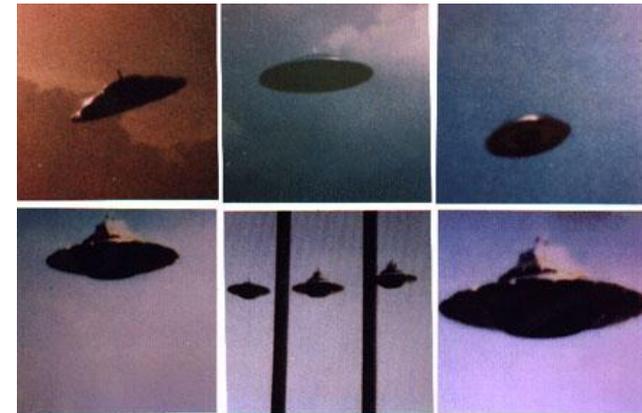


Perceptual Set: Schemas



Perceptual Set: Schemas

- What you see in the center is influenced by perceptual set





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Perceptual Set: Schemas

- What you see in the center is influenced by perceptual set

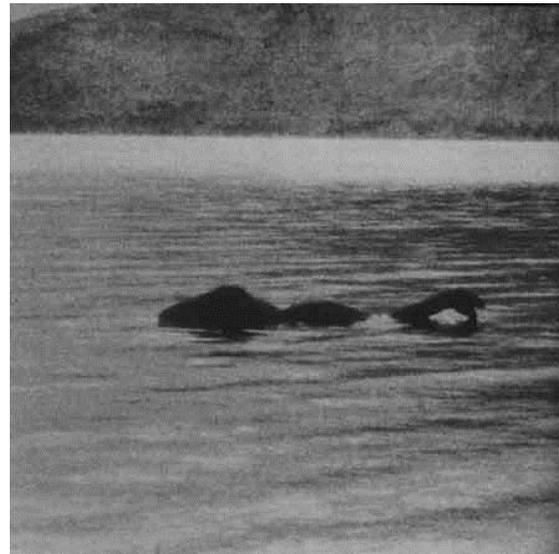


Figure 2



Impressions resist change.

Perceptual Set Examples

- In 1982, an airline pilot looked at his depressed co-pilot and said “Cheer up.” The co-pilot heard the usual “Gear up” and promptly raised the wheels—before they left the ground.
- By a 6 to 1 margin, preschool children judged french fries as tasting better when served in a McDonald’s bag rather than a plain white bag.
- Try “knuckling” the beat to a familiar tune on your desk and see if your partner knows it... it will make perfect sense to you but chances are they’ll have no idea what it is.

Face Schemas

- Our face recognition capabilities are mostly attuned to the eyes and mouth





Perception and the Human Factor

■ Human Factors Psychology

- explores how people and machines interact
- explores how machine and physical environments can be adapted to human behaviors



(a)



(b)

McGurk effect

- is a perceptual phenomenon that demonstrates an interaction between hearing and vision in speech perception. The illusion occurs when the auditory component of one sound is paired with the visual component of another sound, leading to the perception of a third sound.

This best illustrates the concept of sensory interaction.

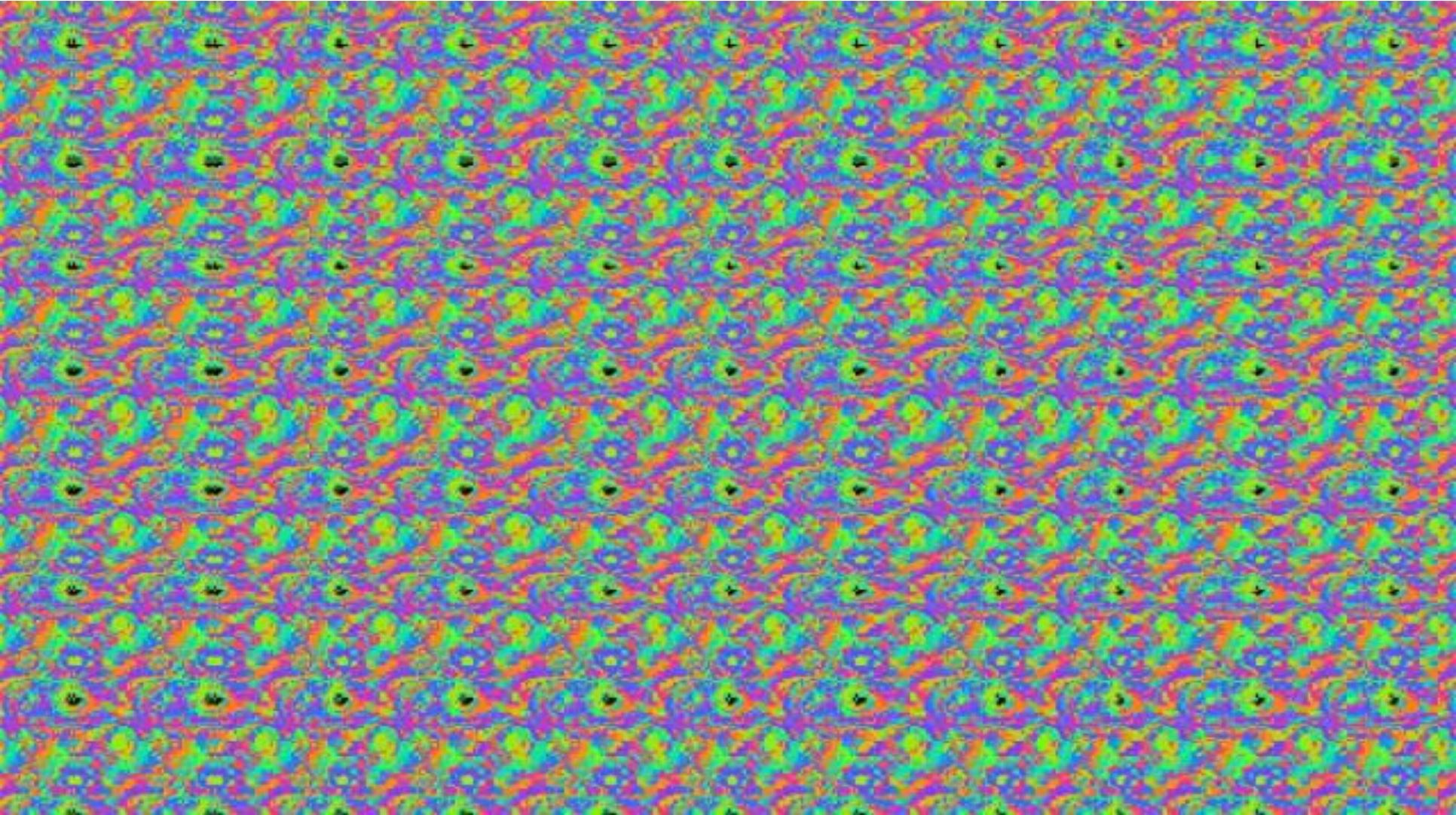
Feature Detectors

- is a process by which specialized nerve cells in the brain respond to specific features of a visual stimulus, such as lines, edges, angle, or movement

Difference Between Illusions and Hallucinations

- Illusions are based on perceptual learning, but hallucinations are based on thinking about an object which has no real existence.

Magic Eye



Magic Eye

- They would generate one image of uniform, randomly distributed dots. Then, he'd select a circular area of dots within the image and shift that area slightly in a second image. Someone viewing the two pictures side by side perceive a circle floating above the background, even though the random dots had no depth cues. This supported his idea that depth perception happened in the brain, and not in the eye itself.

Magic Eye

- The research revealed what was happening in the eyes and brain when viewers looked at stereograms. When presented with an image like this, your eyes might each look at two different points, but because the image is a repeating pattern, the brain is tricked into thinking that the two spots are the same thing. The brain then perceives depth, with the two points as being on a virtual plane behind the pattern.

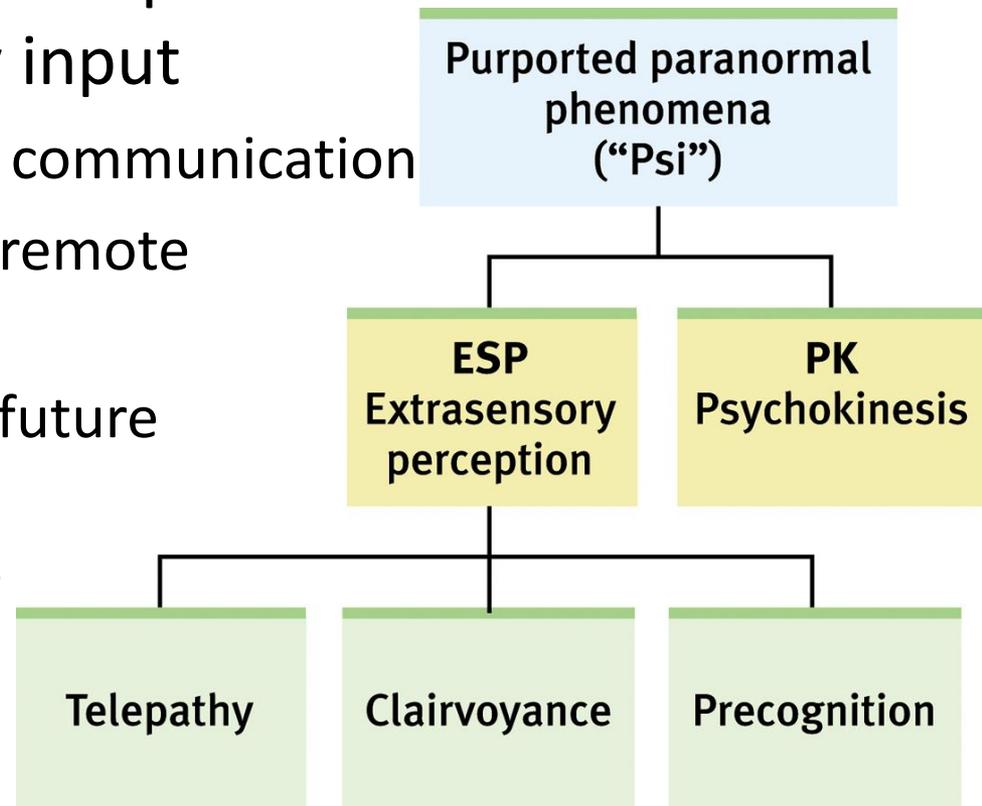
Is There Extrasensory Perception?

■ Parapsychology

- the study of paranormal phenomena

■ Extrasensory Perception

- controversial claim that perception can occur apart from sensory input
 - Telepathy – mind-to-mind communication
 - Clairvoyance – perceiving remote events
 - Precognition – perceiving future events
 - Psychokinesis – mind over matter



Telepathy (mind-to-mind communication)



8:00 mark

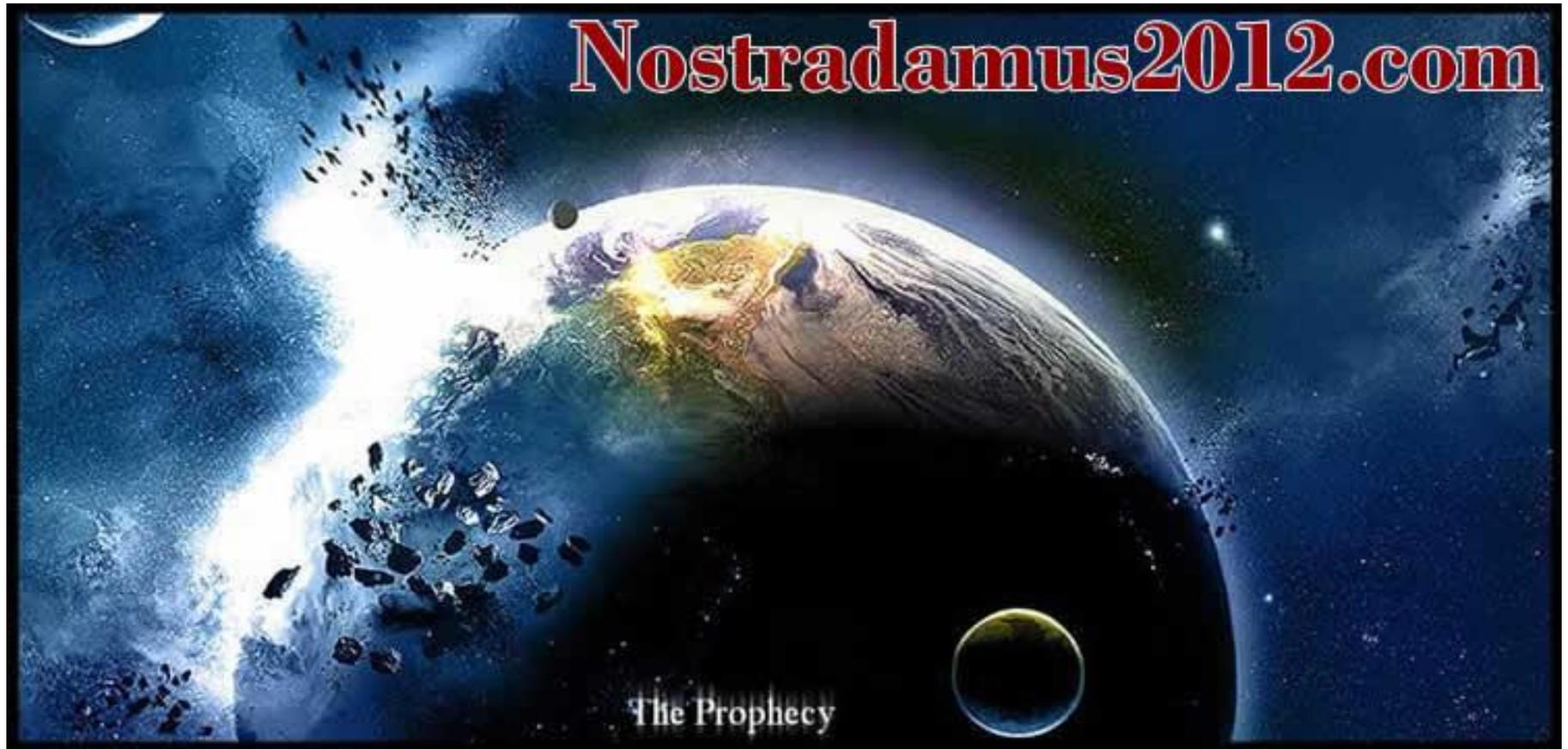
Precognition (perceiving future events)



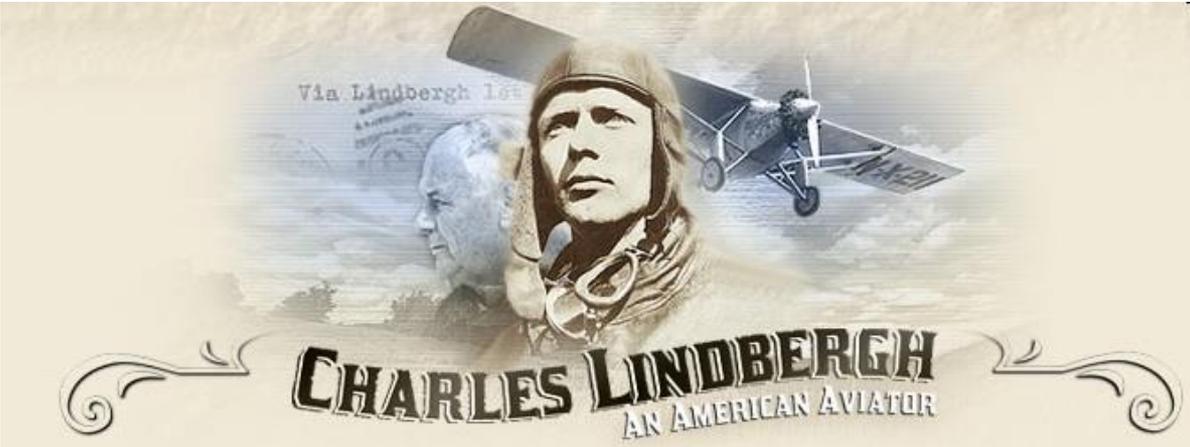
Psychokinesis (mind over matter)



Nostradamus



Two Harvard psychologists tested the prophetic power of dreams after aviator Charles Lindbergh's baby son was kidnapped and murdered in 1932, but before the body was discovered. When the researchers invited the public to report their dreams about the child, 1300 visionaries submitted dream reports. How many accurately envisioned the child dead? Five percent. And how many also correctly anticipated the body's location—buried among trees? Only 4 of the 1300. Although this number was surely no better than chance, to those 4 dreamers the accuracy of their apparent precognitions must have seemed uncanny.



WANTED

INFORMATION AS TO THE
WHEREABOUTS OF



CHAS. A. LINDBERGH, JR.

OF HOPEWELL, N. J.

SON OF COL. CHAS. A. LINDBERGH

World-Famous Aviator

This child was kidnaped from his home in Hopewell, N. J., between 8 and 10 p. m. on Tuesday, March 1, 1932.

DESCRIPTION:

- Age, 20 months
- Weight, 27 to 30 lbs.
- Height, 29 inches
- Hair, blond, curly
- Eyes, dark blue
- Complexion, light
- Deep dimple in center of chin
- Dressed in one-piece coverall night suit

ADDRESS ALL COMMUNICATIONS TO
COL. H. N. SCHWARZKOPF, TRENTON, N. J., or
COL. CHAS. A. LINDBERGH, HOPEWELL, N. J.

ALL COMMUNICATIONS WILL BE TREATED IN CONFIDENCE

COL. H. NORMAN SCHWARZKOPF
Supt. New Jersey State Police, Trenton, N. J.
March 11, 1932