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# National Program on Technology Enhanced Learning (NPTEL)

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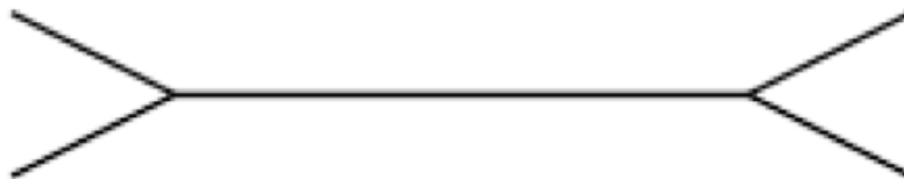
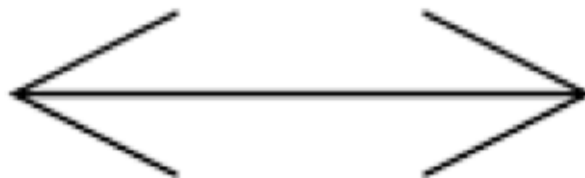
Course Title:

# Basic Cognitive Processes

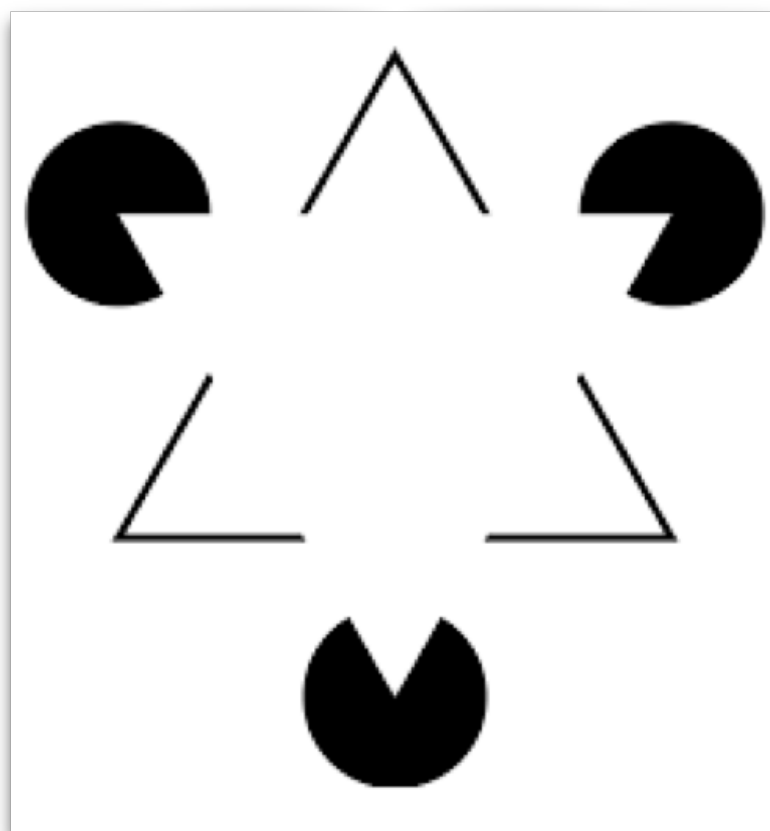
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# Lecture 13: Sensation & Perception













- What did you see in the last few pictures?
- Is it that you made a mistake or is it your senses that befooled you?
- In the latter case, is perception not accurate?

# Some basic considerations...

- *“perception is the set of processes by which we recognise, organise, & make sense of the sensations we receive from environmental stimuli (Goodale, 2000)”.*
- *“perception is the process by which the cognitive system constructs an internal representation of the outside world.”*
- constructs: an active process
- representation: may be different to reality

- Key Issues in Perception

- “not” an accurate representation of the reality.

- instead, perception is an “interpretation” of the sensory input.

- senses may deceive us.

- senses may be erroneous.

# Perception: Various Aspects

- Sensation
- Representation
- Perception
- Influences on Perception

# Part I: Sensation



*“A question often asked in the some philosophy classes is this: If a tree falls in the forest but nobody hears it, is there a sound?”*

The answer is now clear: No!!!

Sound is caused by waves of molecules (a physical event), but the waves themselves are not sound.

Sound is a psychological event and hence depends on a nervous system to transduce the physical energy of the waves to nerve impulses.

Without a brain to register the transduced physical energy, there can be no sound. The situation is exactly analogous to the relationships of wavelength to hue and of amplitude to lightness.

Physical properties lead to psychological events, but they are not the events themselves. The discipline of **psychophysics** charts the relationship between physical events and our experiences of them.

- What comes next?
  - We'll study some basic concepts in Psychophysics & see how they are used to measure sensation.
  - We'll talk about how 'representation' of information in the external world influences perception.
  - We'll discuss various approaches to perception.
  - We'll also talk about theories of object recognition.
  - We'll talk about various factors that may influence perception.

