



# PSYCHOLOGY

lecture III

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Sensation, perception and consciousness

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# Sensory knowledge of the surrounding world – perception

- Overall processes of apprehending objects and events in the environment: sensing, understanding, recognizing, labeling
- Percept – what is perceived – outcome of perception
- Function of perceptual processes: survival and sensuality
- Three stages of perception:
  1. *Sensation*
  2. *Perceptual organization*
  3. *Identification and recognition*

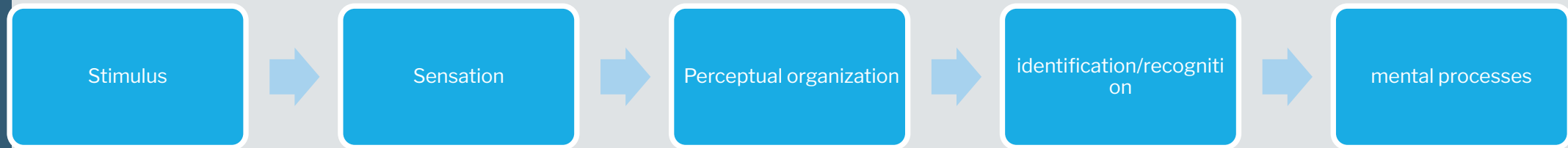
# Sensory knowledge of the surrounding world

- **Vision:** image (the physical object in the world: (distal stimulus) optical image on the retina (proximal stimulus)
- **Hearing** - psychological dimensions:
  - *Pitch: the highness and lowness of sound's frequency*
  - *Loudness: physical intensity*
  - *Timbre: complex sound wave*
- **Smell:** odorant molecules interact with receptor proteins
  - *Significant and powerful medium for interaction: pheromones*
- **Taste:** taste works together with smell in order for the gustation to be fully experienced
  - *sweet, bitter, sour i salty*
  - *Umami (MSG present in meat, seafood and aged cheese)*
- **Touch and skin senses**
  - *Sensations of pressure, warmth and cold*

# Sensory knowledge of the surrounding world

- **Vestibular sense:** orientation with respect to gravity
  - *Loss of vestibular sense may be compensated with vision*
- **Kinesthetic sense:** information about current position and movement of the body (stone example)
  - *Receptors in the joints*
  - *Receptors in the muscles and tendons*
- **Pain:** response of the body to stimuli which is harmful (human brains warn us of danger)
  - *Network of pain fibers cover human's entire body*
  - *Do people feel pain differently based on their current emotional state?*

# Perceptual processes network



# Organizational processes in perception (e.g. how does this thing look like?)

Integrating data originating from our previous experiences

- Attention processes (Focus on a subset of stimuli which you are aware of):
  - *Goal-directed attention – choices made by an individual to direct attention to certain object*
  - *Stimulus-driven attention – objects in the environment capture our attention (daydreaming on the stoplight, spider on the wall)*

# Perceptual grouping

- *Gestalt* psychology – psychological phenomena can be understood only when viewed as organized, structured wholes and not when broken down into elements
- The whole is quite different to its parts.
- Perceptual grouping laws:
  1. ***The law of proximity.***
  2. ***The law of similarity***
  3. ***The law of good continuation***
  4. ***The law of closure***
  5. ***The law of common fate***

# Peceptual grouping





# Peceptual grouping



# Peceptual grouping



# Perceptual processes

- <https://docplayer.pl/58916591-Percepcja-percepcja-jako-zmyslowy-odbior-bodzcow-percepcja-jako-proces-definicja-percepcji-spostrzegania.html>

# Mind and consciousness

- General state of mind- “being conscious”
- Specific contents of mind - “being conscious/aware”
- Introspection – exploring the contents of the conscious mind
- Ordinary waking consciousness - perceptions, thoughts, feelings, images, and desires at a given moment—all the mental activity on which an individual is focusing her attention.
- Sense of self - experience of watching yourself from the “insider” position

# Processes of the consciousness

- **nonconscious processes**
  - *Blood pressure*
  - *breathing*
- **preconscious memories**
  - *Functions in the background of your mind, until you draw your attention to it and recall it*
- **unattended information**
  - *Background noise*
- **unconscious** – *not readily accessible to conscious awareness*
  - *Denial – repressing - banishing threatening memories of the experiences from consciousness*
- How can the contents of consciousness be studied ?

# What do we need the consciousness for? the functions of consciousness

- Development of consciousness allowed for better comprehension of information in order to plan the most appropriate and effective action:
  - *Grand prize of survival of the fittest mind*
- Sensory-information overload:
  - *Aiding in survival by*
    - restricting what you notice and what you focus on from the flow of input
    - Selective storage – commitment to memory
    - Thinking through alternatives based on previous knowledge: planning

# Change in consciousness: sleep

- **circadian rhythm:** arousal levels, metabolism, heart rate, body temperature, and hormonal activity ebb and flow according to the ticking of the internal clock
- mismatch between the biological clock and the sleep cycle affect how people feel and act
  - *Night shifts*
  - *Jet legs: flying across time zones*
- Why people need to sleep?

# What happens when we're deprived of sleep: sleep disorders

- Insomnia: dissatisfaction with the quality or amount of sleep
  - *Determined by different factors: psychological, situational, biological*
  - *Consistent negative impact on people's sense of well-being*
- Narcolepsy: sudden and irresistible instances of sleepiness during the daytime
  - *combined with cataplexy*
  - *affects 1 in 2000 people*
  - *probably biologically determined*
- Sleep apnea– person stops breathing while asleep (2% - 4% of adults)
- Somnambulism: sleep walking