



DISORDERS OF PERCEPTION

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INTRODUCTION

- Perception is an active, creative process in which raw sensory data are organized and given meaning **(Casey & Brendan, 2007)**
- Disorder is a disruption of normal physical or mental functions **(Gross, 2010)**

INTRODUCTION ...

- Perception functions as the source of our experience and the state of the surroundings
- Without perception we still be able to see, hear, test, smell and or have skin sensations, but we will not understand what we see, hear and so on

INTRODUCTION ...

- Perception-making “sense” of what our senses tell us-is an active process of organizing the stimulus input and giving it meaning

CREATION OF PERCEPTION

- In creation of perception the brain carries out two different kinds of processing function, bottom-up and top-down processing

1. BOTTOM UP PROCESSING

- The system takes in individual elements of the stimulus and then combines them into unified perception, as shown below

Combination and interpretation of “whole”



Breakdown/analysis of stimuli (Features detection)



Detection of individual stimulus elements

- Visual system operate in bottom-up fashion in reading

2. TOP-DOWN PROCESSING

- Sensory information is interpreted in light of existing knowledge, concepts, ideas, and expectations

Concept, expectations



Guides analysis (Yes? No?)



Interpretation of incoming stimuli

- This accounts for many psychological influences on perception, such as the roles played by our motives, expectations, previous experiences, and cultural learning

DISORDERS OF PERCEPTION

- Disorders of perception can be divided in two
 1. Sensory deceptions
 2. Sensory distortions



SENSORY DECEPTION

Illusions and Hallucinations



ILLUSIONS

- Illusion – misinterpretations of stimuli arising from an external object ()
- Illusions are thought to occur when stimuli from a perceived object are combined with mental images to produce a false perception

ILLUSIONS ...

- Illusions are associated with:
 - Inattention
 - When external stimuli are meager
 - When attention is impaired due to delirium
 - Illusions are associated with affect (e.g frightened individual)
- Illusions almost always disappear when sensory stimuli increases and inattention improves

ILLUSIONS ...

- The phenomena may occur with fatigue and is typically seen with marijuana intoxication also occur in severe depression
- In delirium when the perceptual threshold is raised and an anxious and bewildered patient misinterprets stimuli
 - In *delirium* patient may perceive innocent gestures and actions from caregivers as threats
- Visual illusions more common but can occur in any modality i.e. auditory

ILLUSIONS ...

Three types of illusion (Sims, 2003)

1. Complete illusions: depend on inattention such as misreading words e.g. word '-ook' ... as book rather than look
2. Affect illusions: arise in the context of a particular mood state e.g. bereaved person may momentarily believe they see the deceased person

ILLUSIONS ...

3. Pareidolia: result of excessive fantasy thinking and a vivid visual imagery e.g. subject sees vivid pictures in fire or in clouds without any conscious effort
- Illusions in themselves are not indicative of psychopathology since they can occur in the absence of psychiatric disorder

HALLUCINATIONS

- Hallucination – perceptions without an adequate external stimulus
- Hallucinations are the most clinically significant false perception
 - They are not distortions of real perceptions
 - They are not experienced in inner subjective space but occur in the individual's external environment
 - They have the sustainability of a normal perception and are not under voluntary control

HALLUCINATIONS ...

- A percept like experience that has the full force and impact of a real percept that is unwilled, occurs spontaneously and cannot be readily controlled by the percipient
- Hallucinations can be the result of intense emotions (depression) or psychiatric disorder, suggestion, disorder of sense organs, sensory deprivation and disorders of the CNS

HALLUCINATIONS ...

- Hallucination vary according to the sensory modalities, perceived location of the hallucination, and the degree to which the persons believes that the hallucination is real
- The intensity of a perception can become heightened or diminished and qualitative changes can occur (this commonly affects the visual modality as when toxicity from certain drugs alters color vision)

HALLUCINATIONS ...

- Visual (sight)
- Tactile (touch)
- Gustatory (taste)
- Olfactory (smell)

HALLUCINATIONS ...

Hallucinations may be classified as

- **Auditory**
 - 2nd person - speaker and the subject
 - 3rd person - conversation between two or more parties about the person who is hallucinating
- **Command hallucination; patient is ordered by the voices to do things**
 - Often frightening as they involve act of violence towards self or others i.e. jump off the roof, go drink, go steal, go visit a friend, pick up the knife and kill your mother

HALLUCINATIONS ...

- Many patients have mixed sensory hallucinations mostly auditory and visual
- Hallucinations may be experienced by normal people in unusual condition
- Hypnagogic and hypnopompic hallucinations are common visual hallucinations that occur during moment of falling and emerging from sleep



SENSORY DISTORTIONS

**Changes in intensity, quality,
spatial form**

SENSORY DISTORTIONS

- Results of a change in the intensity and quality of the stimulus or the spatial form of the perception **(Casey & Brendan, 2007)**

CHANGES IN INTENSITY (HYPER OR HYPO AESTHESIA)

- Increased intensity of sensations or hyperaesthesia may be due to intense emotions or a lowering of the physiological threshold
- E.g. a person may hear the noise of a door closing like a clap of thunder
- Ordinary green color may assume a glaring green
- Somebody walking may sound as if they are making a loud noise with clattering of shoes

CHANGES IN INTENSITY (HYPER OR HYPO AESTHESIA) ...

- Anxiety and depressive disorders as well as hangover from alcohol and migraine are all associated with increased sensitivity of noise (hyperacusis)
- True hypoacusis occurs in delirium where the threshold of all sensations is raised.
- People inebriated with alcohol enjoy blaring music because of a degree of hypoacusis

CHANGES IN QUALITY

- Changes in quality are often visual distortions due to toxic substances
- Patients may see the following colours over the objects they are looking at due a certain substance
 - Xanthopsia – yellow colouration
 - Chloropsia – green colouration
 - Erythropsia – red colouration

CHANGES IN SPATIAL FORM (DYSMEGALOPSIA)

- Change in the perceived shape of an object
- Quantitative changes in which objects are seen as smaller or farther away than reality (micropsia), bigger (macropsia), Such phenomena may be due to acute organic disorders and epilepsy
- Can result from retinal disease, disorders of accommodation or temporal lobe lesions

PERCEPTION AND CULTURE

- Perceptual development involves both physical and learning
- Some perceptual abilities are innate or developed shortly after birth, where as others require particular experiences early in life in order to develop
- The specific learning experiences, memories, motives, and emotions of the individual also can influence perception

PERCEPTION AND CULTURE ...

- Cultural factors can influence certain aspects of perception, including pictures perception and susceptibility to illusions