

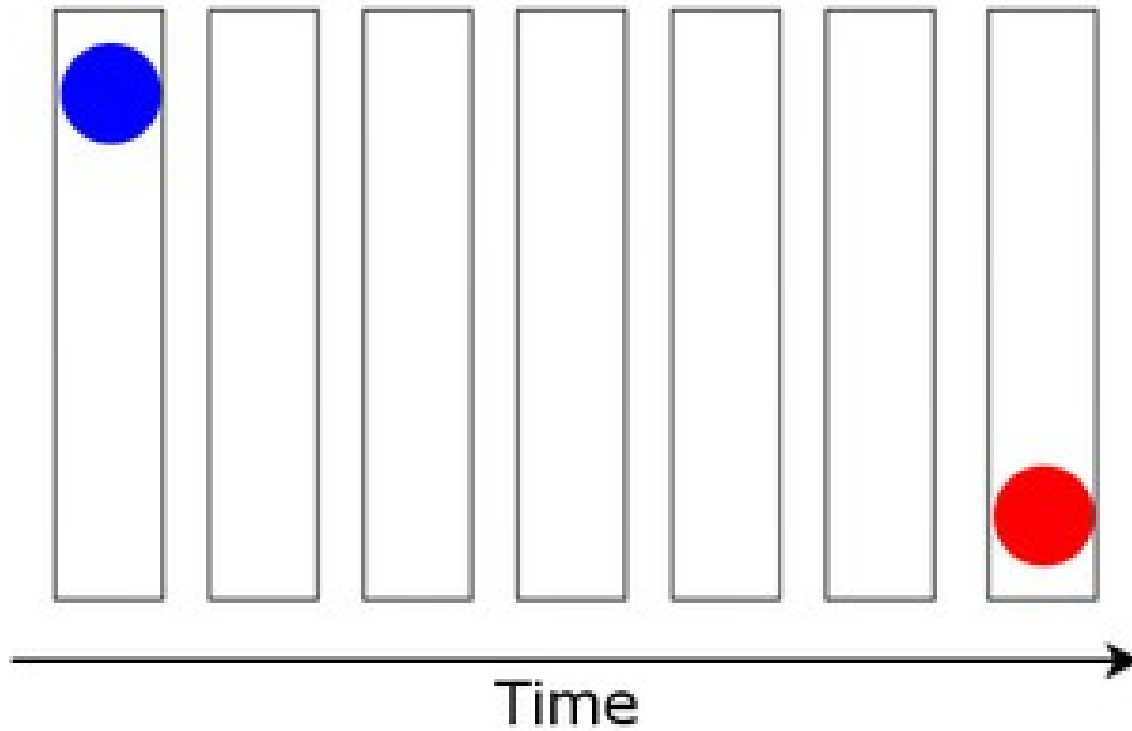
Consciousness

- Anesthesiology: alertness/responsiveness

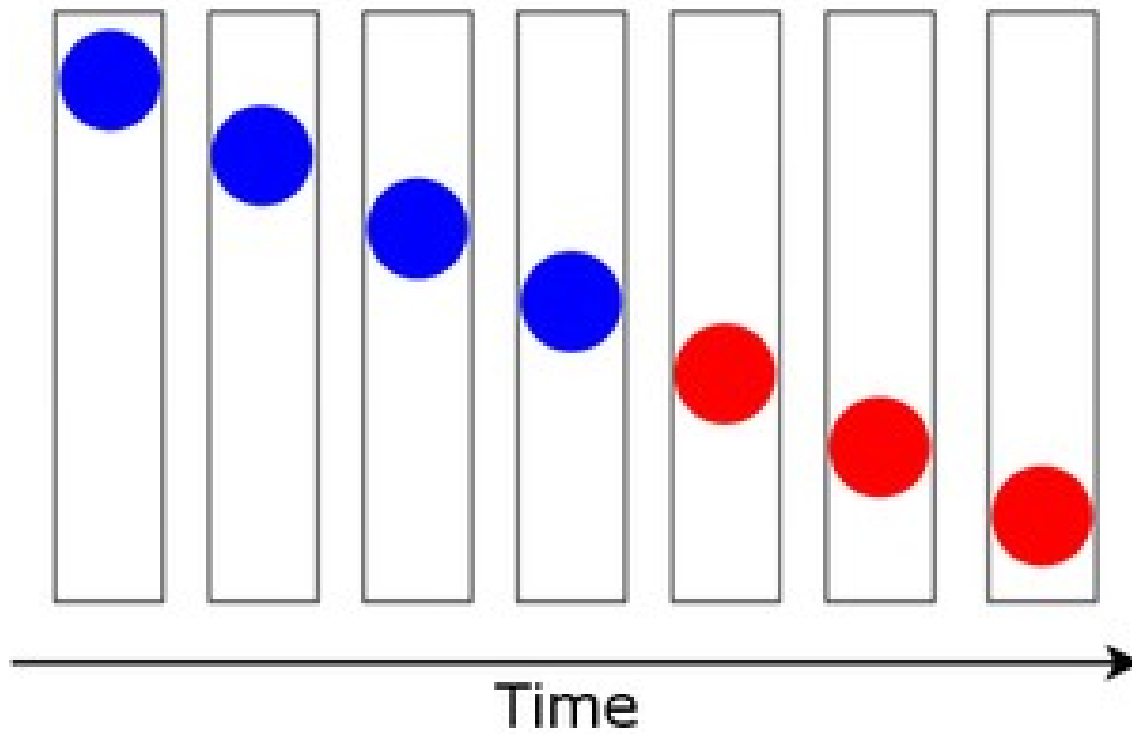
Continuum – alert, oriented to time, place, communicative, delirium, loss of communication and finally a loss of movement to painful stimulation

- Consciousness: awareness of ourselves and the environment
- Dennett: color phi phenomenon
Awareness comprises the small fraction of those mental events whose influence will persist and alter beliefs about what just happened

What is Actually Shown



What Subjects Report



Hippocampal complex: short term episodic memory

- recollection when cues stimulate memory –
both recent and remote
familiar
- Hippocampal damage – affects recall of recent
information but not retrieval of remoter events.

- Oliver Sacks “Greg” brain tumor
damaged area around the hippocampus and its
adjacent cortex

Confined to a single moment

lacking connection and continuity in his inner
life

Mind loses its coherence

Visual Perception

- Crick & Koch - Mammalian visual system

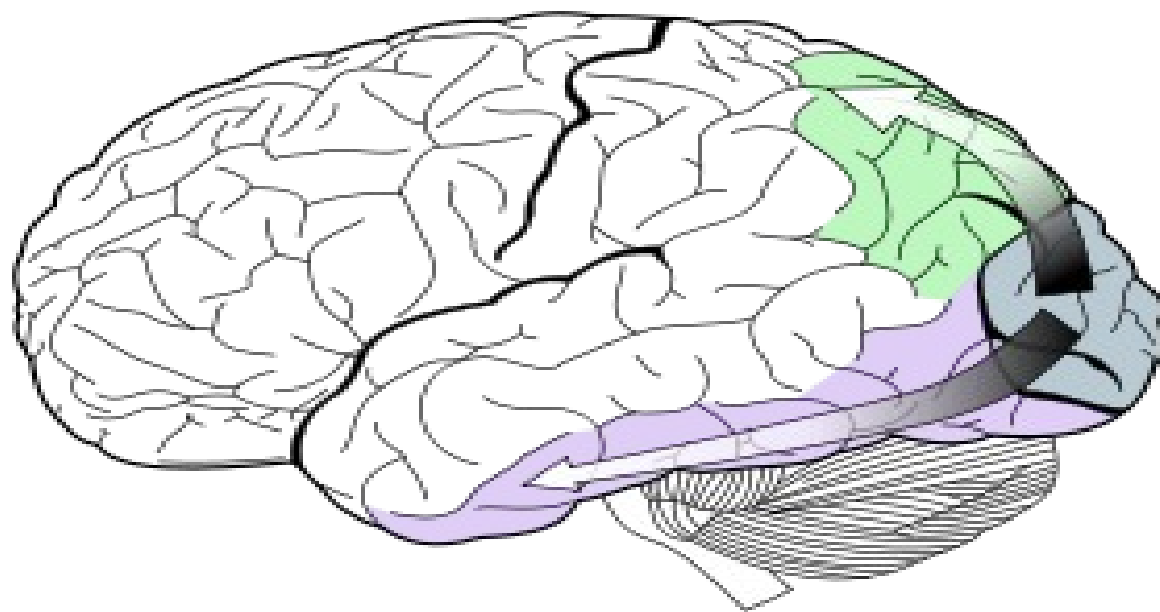
Infinite visual patterns can be recognized

Account for perceptual unity ?

- Cat's visual cortex – oscillations
neurons are firing in synchrony (shape, color, movement)
- Thalamus – cortex – reverberatory circuit
for very short term memory

Dual Processing/The Two Track Mind

- Goodale & Milner (2004, 2008)
‘Sight Unseen’
case of DF
Horizontal or vertical mail slot
- Different parts of the brain control
 - conscious perception/recognition of objects
(ventral stream)
 - reaching and grasping for objects
(dorsal stream)



- Libet (1985, 2004)
 - consciously move your wrist
 - experience the decision to move your wrist 0.2 seconds before the actual movement
 - brain waves are 0.35 seconds ahead of the conscious perception of the decision

- Wegner (2002)

Press a button when you feel a tap – respond in 1/10th of a second – less time than needed to become conscious that you have responded

- Soon et al 2008

fMRI brain scans enabled researchers to predict (60%) up to 7 sec ahead participant's decisions to press a button with their right or left finger

- Chalmers (1995) - easy and hard problems of consciousness
- Easy – integration of information, reportability of mental states, focus of attention.....
(access consciousness)
- Hard – problem of experience – subjective quality of redness, or the sound of the clarinet
(phenomenal consciousness)
- Nonreductive explanation