

# Attention

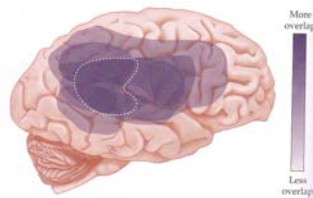
Attention

Parietal Lobe Lesion  
3.5

## Lesions resulting in neglect

Most common:  
**Inferior parietal lobe**

But sometimes also:  
Prefrontal cortex  
Cingulate gyrus  
Basal ganglia  
Thalamus  
Midbrain



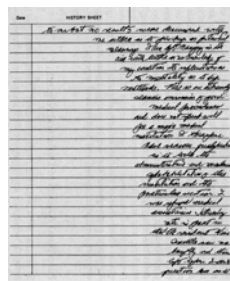
draw a clock

read compound words

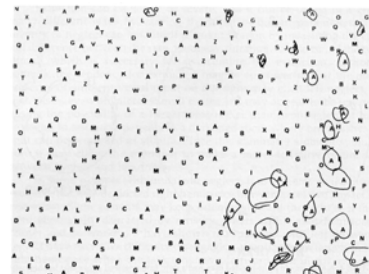


ice cream  
football

MODEL PATIENT'S COPY



find all "A" letters



### Anosagnosia

patients are unaware or deny their own deficits

Asked to clap: patient would move right hand only, claim to be clapping.

Asked to hold a tray of cocktail glasses: does so with right hand only, tray tumbles.

### Disorders of attention: Neglect



Recovery passes through 2 stages:

**1. allesthesia**

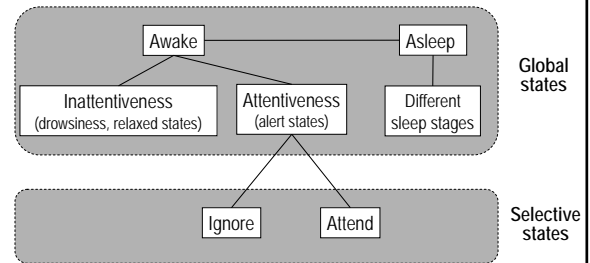
- patients respond to stimuli on the neglected side, but treating them as if they were on the good side

**2. extinction**

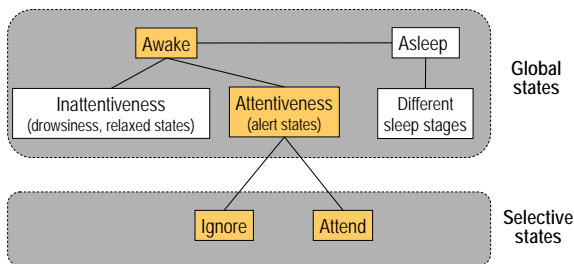
- when both sides are stimulated simultaneously, patients notice only the stimulation on the side ipsilateral to the lesion



### Arousal, attentiveness, and selective attention



### Arousal, attentiveness, and selective attention



### Basic phenomena of attention

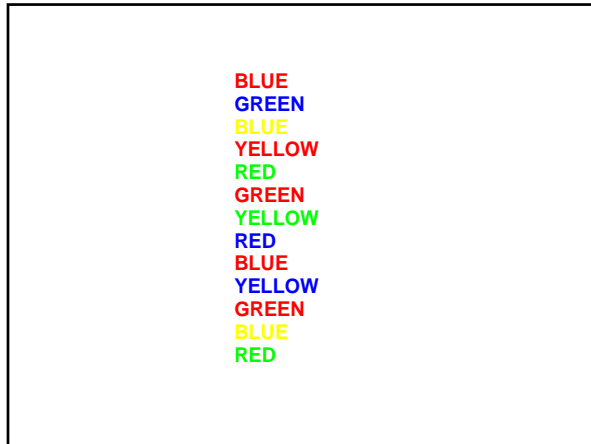


**limited capacity for processing**














only a small amount of available info can be processed

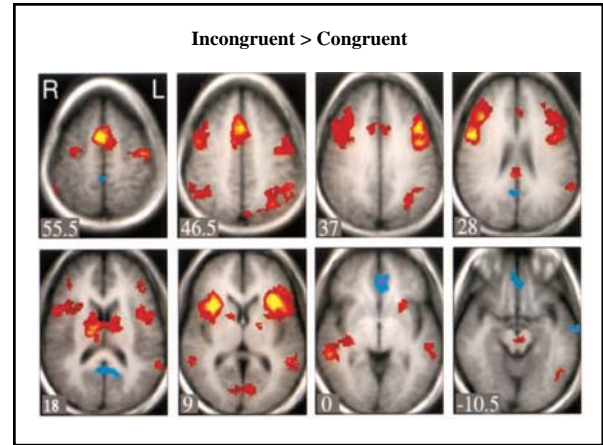
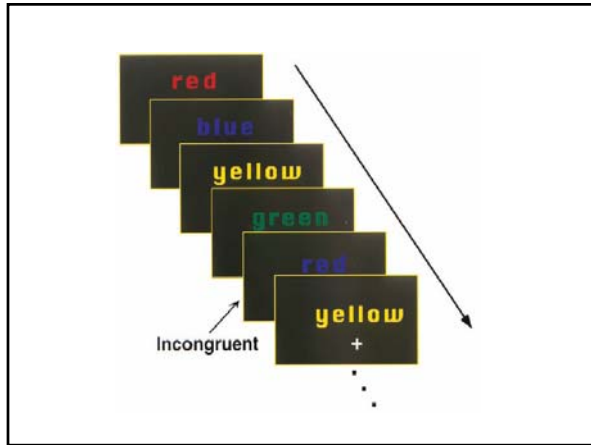
**selectivity**

the ability to filter out unwanted information



### Stroop Interference (Stroop, 1935)

	BLUE	Word reading •fast •effortless •uncontrollable	
	GREEN		
	BLUE		
	YELLOW		
	RED		
	GREEN		
	YELLOW		
	RED		Color naming •slow •effortful •controlled
	BLUE		
	YELLOW		
	GREEN		
	BLUE		
	RED		



### Two ways to focus attention

- Bottom-up processes
  - reflexive, stimulus-driven mechanisms, automatic
- Top-down processes
  - voluntary; mentally focusing on an object

### A general model of attention

**Attention leads to elevated levels of activation in the corresponding sensory cortices**

**Sensory cortices can be biased by higher-level regions**

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