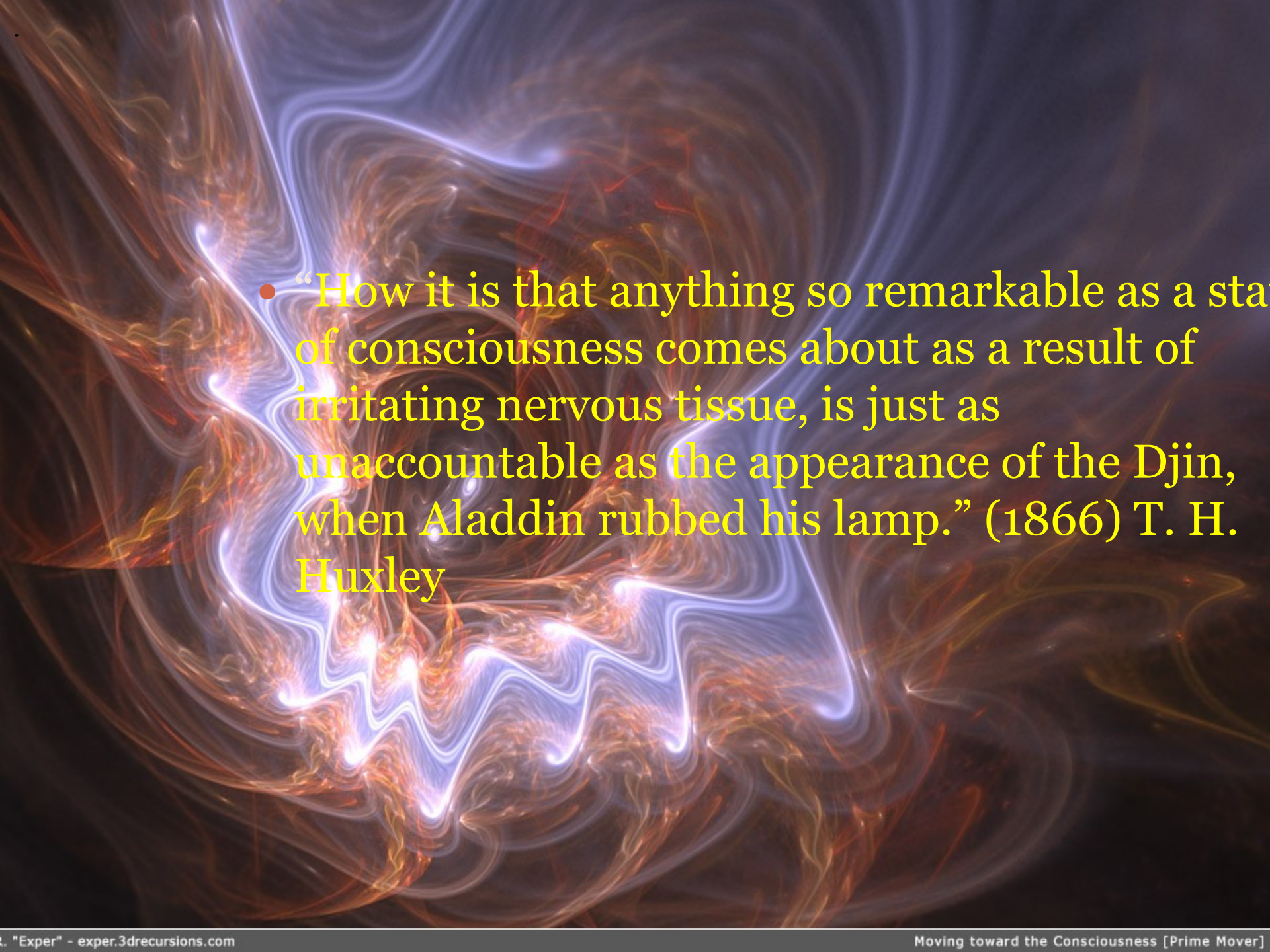


Consciousness



MICHAELA PORUBANOVA PSY 270

- 
- “How it is that anything so remarkable as a state of consciousness comes about as a result of irritating nervous tissue, is just as unaccountable as the appearance of the Djin, when Aladdin rubbed his lamp.” (1866) T. H. Huxley

Introduction



- Various stages of C (sleep to “full C”)
- Various aspects of C: Experience of pain to self- awareness
- Descartes- strict dualism
- Cartesian theatre....existence of “seat” of C in brain
- Daniel Dennet- contemporary opponent- no “seat” of C or time of C
-
- William James- C as a process, not a structure (STM and attention)
- No study of C (during behaviorism)
- 90. – thriving of studying of C

William James

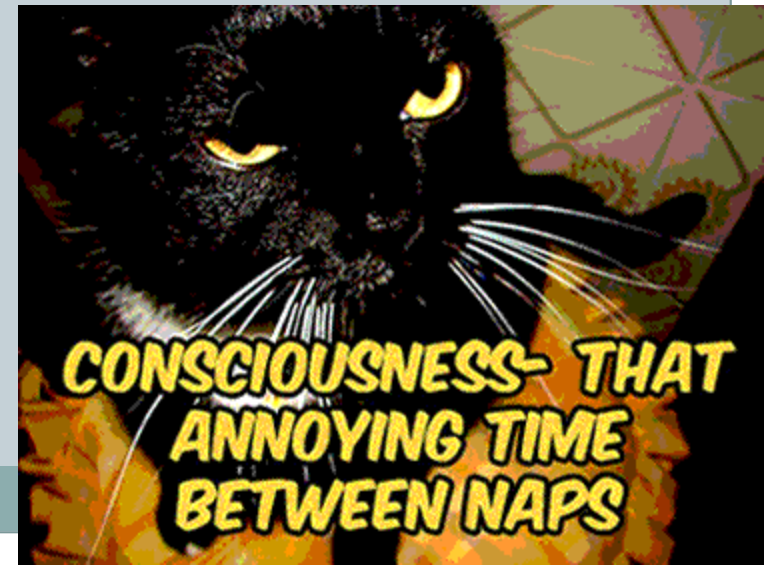
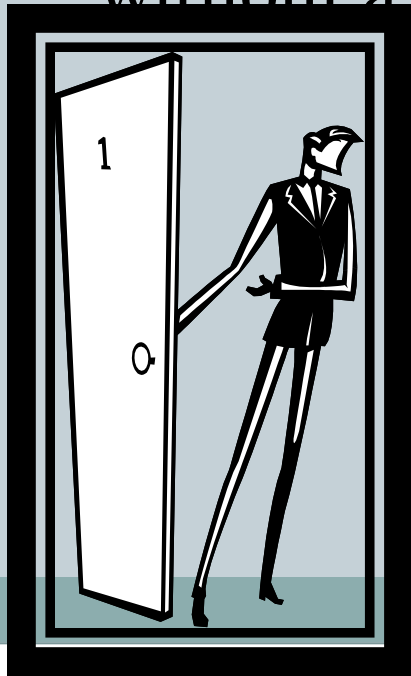


- *C: It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought.” (1890)*
- *Short term memory plus attention*
- *One can control C using free will*

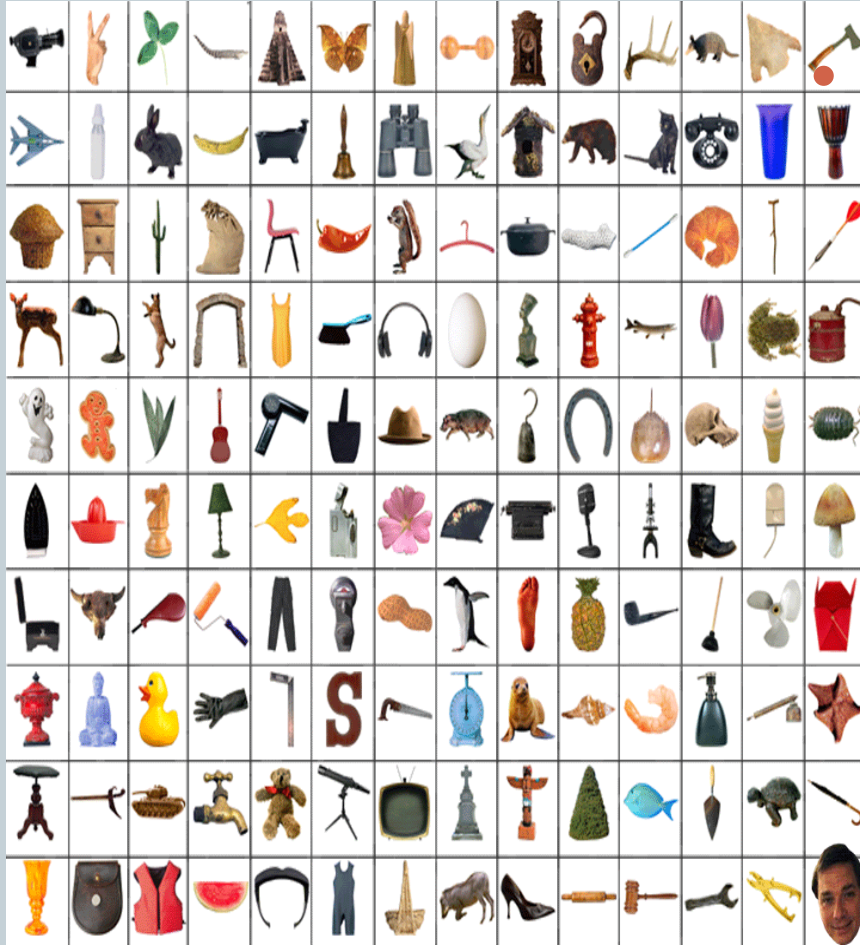
Think about....



- Somebody has opened a door:
- - 1, did you perceive consciously the person opening the door and then turned around?
- - 2, did you turn around from a different reason without a conscious perception?



Content of consciousness



the perceptual world; inner speech and visual imagery; the fleeting present and its fading traces in immediate memory; bodily feelings like pleasure, pain, and excitement; surges of emotional feeling; autobiographical events when they are recalled; clear and immediate intentions, expectations and actions; explicit beliefs about oneself and the world; and concepts that are abstract but focal.

- direct report

- is one triggered by the conscious
- visual experience of the observer; it can be a verbal report, or an action that is at least potentially
- verbalizable, such as a volitional press of a button. In contrast, The two main types of indirect report are behavioral

- indirect report

- observer has no conscious visual experience, so that the response must be made via mechanisms
- not triggered by conscious command. (Here, the entity "reporting" is not the conscious mind of
- the observer, but rather, some other system.) (e.g., priming effects of stimuli not consciously seen by the observer) and physiological (e.g.,
- differential activity of various brain regions).

Consciousness- types

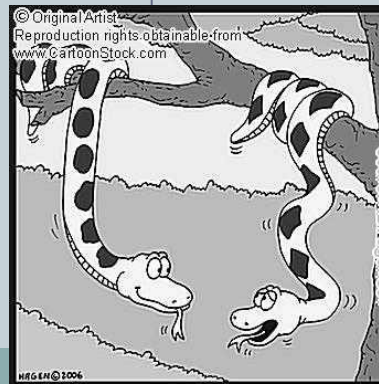


- ACCESS

- Information available,
- or potentially available, for report
- Tip-of-the-tongue states demonstrate access consciousness

- PHENOMENAL

- Current experience I have
- Not necessarily reportable



I can't remember it right now,
but it's on the tips of my tongue...

Consciousness- approaches



- ***1st person perspective***

- "what is it like to be a conscious being?"
- Subjective quality of experience
- Philosophy
- Qualitative approach

- ***3rd person perspective***

- Experiences of people in specific experimental conditions
- Objective representation of experience
- Verifiable reports of conscious experiences

Qualia



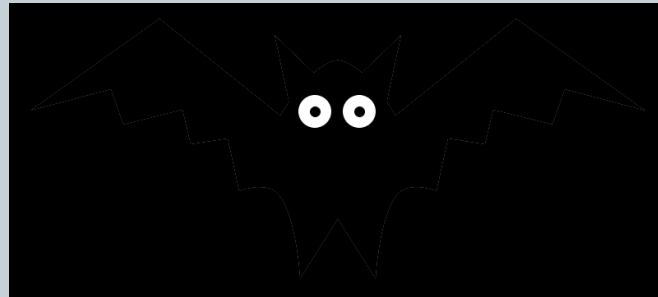
- “subjective” approach
- “what it is like” aspect of human experience

- 1, ineffable
- 2, intrinsic
- 3, directly apprehensible
- 4, private

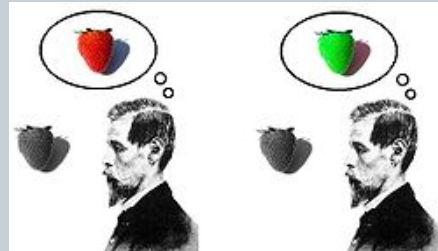
Arguments for qualia



- What is it like to be a bat? (Thomas Nagel)



- Inverse spectrum argument (John Locke)



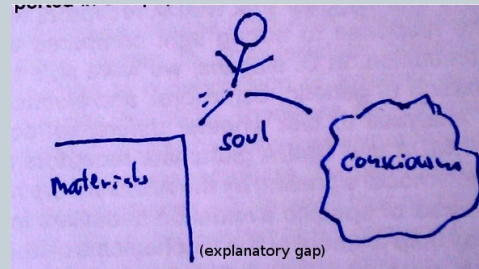
- Zombie argument



Arguments for qualia



- Explanatory gap



- Mary's room



Experimental research of consciousness



- Conscious versus unconscious experience
- -reportability index
- - ability to provide a proper response about the experience
- - versus subliminal cortical activation- subliminal perception

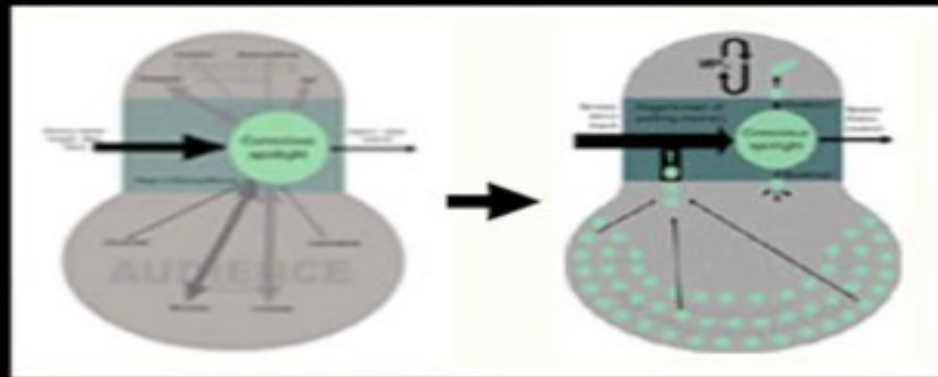
Easy vs. hard problem of consciousness



- The hard question: Why does anything *feel like*
- anything at all?
- How do we incorporate *subjective experience into a*
- scientific picture?
- Redness: what it feels like to see red

One Scientific Theory of Access Consciousness: Baars- Global Workspace Theory

In the Theater of Consciousness



The bright spot on stage has limited capacity.

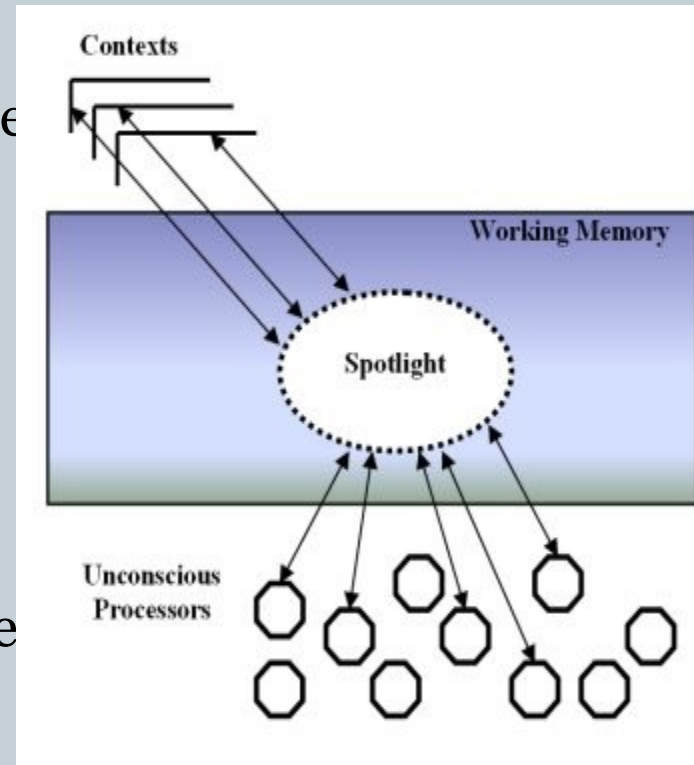
The audience has vast capacity.

From Carl Carpenter, *A New Model of Consciousness*, Sci & Con Rev.2006.

Baars- Global Workspace Theory

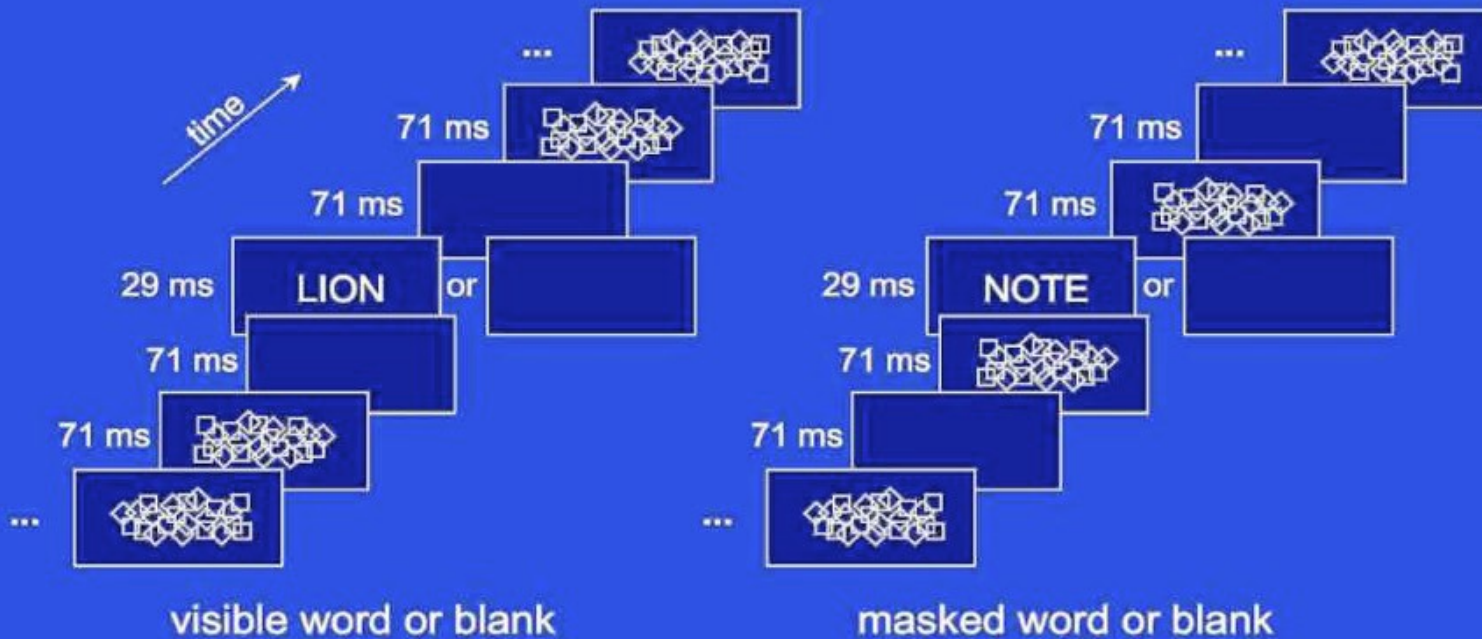


- As in the theatre of consciousness
- --- only the **bright spot on stage is conscious**
- (because consciousness has very limited capacity)
- --- sensory inputs compete for access to the conscious bright spot; so do output plans;
- --- the "theater stage" equals to **Working Memory**;
- --- all other parts are unconscious, including
- Long term memory, the automatic processes
- of language, and events going on backstage
- (The capacity of unconsciousness is enormous.)

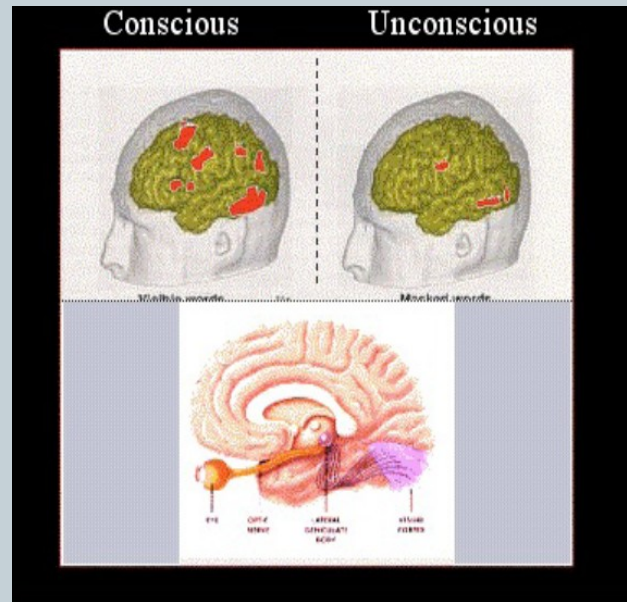


Baars- Global Workspace Theory

Brain Mechanisms of Conscious and Unconscious Reading



Baars- Global Workspace Theory



Consciousness disorders



- Visual agnosia
- Prosopagnosia
- Neglect
- Balint syndrome

Dennett's video



- Dennett on TED
- Prosopagnosia case study