

Lecture Six

Part One

Consciousness:

Some definitions and some
science

Plan

- What is consciousness?
 - Awakeness
 - Self awareness
 - Availability for verbal report
 - Availability for the control of intentional action
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 - Qualia (qualitative experience, phenomenal awareness)
- Some scientific research on consciousness
- A (access) consciousness and P (phenomenal) consciousness
- The 'easy' and 'hard' problems of consciousness

Introduction

- Used to be 'off limits'
- Now if you read cognitive neuroscience literature you might well think the problem is solved!
- VERY hot topic currently
- Some people think the science misses the point
- Other people think the philosophical notion of consciousness needs to be trashed (eliminated)

Awakeness

- The difference between being asleep and being awake
- Relevant for anesthesiology
- ‘She’s unconscious - she’s asleep’
- We are learning much about the (relatively) primitive brain structures that regulate sleep and wakefulness
- *But it seems that we can have experiences while asleep (e.g., while dreaming)*

Self Awareness

- The capacity for 'meta-cognition' - to reflect on our cognitive states and experiences
- To have a sense of oneself as being extended through time, having different projects and preferences and dreams...
- People with dissociative identity disorder (multiple personality disorder) experience a 'fragmented sense of personal identity' (multiple selves). This is thought to be a disorder of consciousness
- *Small children and animals lack a sense of self awareness but they might still have experiences*

Availability for Verbal Report

- Often the best way to know what a person is experiencing is to ask them
- We seem able to report on our conscious experiences
- *Seems to suggest that those who lack verbal capacity (e.g., animals and small children) lack conscious experience insofar as their experiences aren't available for verbal report*
- *Seems possible to promptly FORGET a conscious experience e.g., would you rather take a drug that blocked the experience of pain or blocked the availability of the experience to verbal report?*

Availability for Control of Intentional Action

- People can often use their conscious experiences to guide a diversity of plans, projects, and goals
- E.g., psychological experiments where people press a key when they have certain experiences. These experiments are thought to show us whether people have consciously experienced the stimuli
- *It is unclear how much animals and small children are able to control intentional action yet seems intuitive to us that they are conscious*
- *Would you rather lack the experience of pain or lack the availability of the experience to guide your action?*

Qualitative Experiences, Qualia (singular 'quale')

- Probably impossible to define
- Can gesture towards the phenomena... And hope that people get the intuition
 - Descartes - cogito ergo sum
 - The particular way that your experiences feel or seem to you from your first person point of view
 - The sum total of your experience right now is your 'phenomenal field'

Some scientific research on consciousness

- Binding (the unity of the phenomenal field)
- Blindsight
- Dorsal versus ventral processing

Binding

- The experiential field seems to be unified
 - Within modalities (e.g., objects near and far away seem to be present at the same time)
 - Between modalities (e.g., vision and audition)
- The ‘binding problem’ has to do with how the brain manages to unify sensory modalities etc to underwrite the unity of experience
 - E.g., the 40hz thesis (when different regions fire in this frequency the information presents as ‘bound’)

Blindsight

- Cortical damage results in a schomata (blind spot) in the visual field
- Can present information to that region
- Patients report no conscious visual experience
- But when forced to 'guess' their guesses are above chance

Dorsal versus Ventral Processing

- Dorsal stream - 'where' (spatial location) - guidance of action
- Ventral stream - 'what' (identification / recognition) - perception involved in visual awareness
- So action without awareness (ventral deficit) or awareness without appropriate action (dorsal deficits)

Ned Block

- A CONSCIOUSNESS (access consciousness)
 - Information poised to control action and verbal report
- P CONSCIOUSNESS (phenomenal consciousness)
 - qualia

David Chalmers

- The “EASY PROBLEM” of consciousness
 - Learning about states that are poised to control action and verbal report
- The “HARD PROBLEM” of consciousness
 - Learning about qualia

- What is striking is that it is only the final target (“qualia”) that threatens to present any *special* kind of problem for our standard modes of cognitive scientific explanation and understanding. (Mindware)

Questions

- Do you have the intuition that an understanding / explanation of consciousness will involve understanding / explaining qualia or P consciousness?
- If so then what has cognitive science shown us about consciousness thus far?
- If not... Should 'phenomenal consciousness' go the way of vital spirits (i.e., eliminate them from science)?