

# Qualia and the Hard Problem of Consciousness (according to Chalmers)

- Standardly, the term 'qualia' (singular 'quale') refers to the introspectively accessible, phenomenal aspects of our mental lives.
  - I run my fingers over sandpaper
  - I feel a sharp pain in my finger
  - I see bright purple
- In each of these cases, I am the subject of a mental state with a very distinctive subjective character. There is something it is *like* for me to undergo each state, some phenomenology that it has.
- The status of qualia is hotly debated in philosophy largely because it is central to a proper understanding of the nature of consciousness. Qualia are at the very heart of the mind-body problem.

## How qualia relate to the physical world both inside and outside the head? Is it possible to reduce qualia to certain (properties of) brain states?

David Chalmers argues

- against reductionism: The tools of neuroscience cannot provide a full account of conscious experience, although they have much to offer.
- against mysterianism: Qualia / Consciousness might be explained by a new kind of theory. The full details of such a theory are still out of reach, but careful reasoning and some educated inferences can reveal something of its general nature.

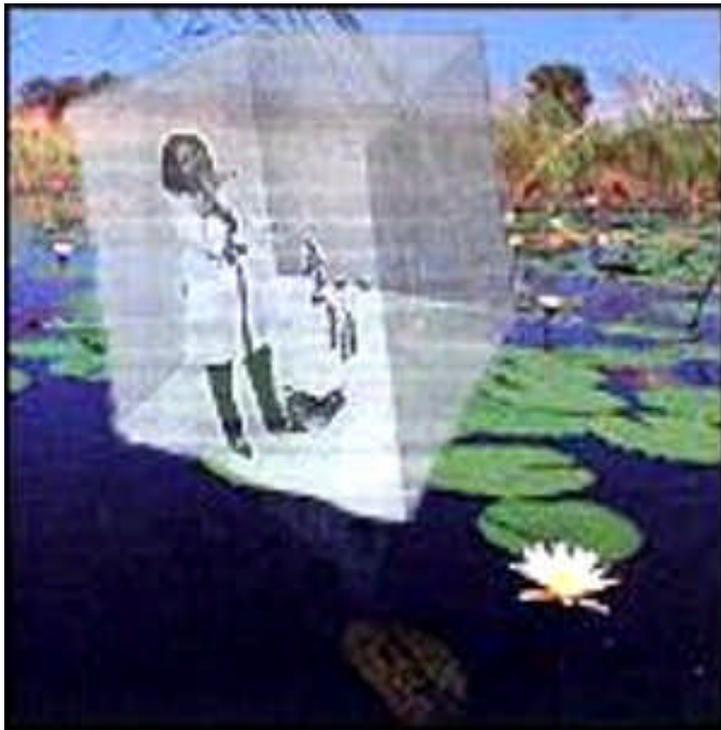
## 'Easy' problems

- How can a human subject discriminate sensory stimuli and react to them appropriately?
- How does the brain integrate information from many different sources and use this information to control behaviour?
- How is it that subjects can verbalize their internal states?

"Although all these questions are associated with consciousness, they all concern the objective mechanisms of the cognitive system. Consequently, we have every reason to expect that continued work in cognitive psychology and neuroscience will answer them." (Chalmers 1995)

## The 'hard' problem

How physical processes in the brain give rise to subjective experience? Subjective experience involves the inner aspect of thought and perception: the way things feel for the subject.



Chalmers discusses an isolated neuroscientist in a black-and-white room who knows everything about how the brain processes colors but does not know what it is like to see them. This scenario suggests that knowledge of the brain does not yield complete knowledge of conscious experience. Instead of calling it

*a hard problem* others have called it an *explanatory gap*.

According to Francis Crick and Christof Koch the **hard problem** can be broken down into several subproblems, for instance:

- What leads to a particular conscious experience (such as the blueness of blue)?
- What are the relations between different kinds of a particular conscious experience (say, between the blueness of blue and the reddishness of red)
- Why are some aspects of subjective experience impossible to convey to other people (in other words, why are they private)?

## The explanatory gap

"For no matter how deeply we probe into the physical structure of neurons and the chemical transactions which occur when they fire, no matter how much objective information we come to acquire, we still seem to be left with something that we cannot explain, namely, why and how such-and-such objective, physical changes, whatever they might be, generate so-and-so subjective feeling, or any subjective feeling at all. This is the famous "explanatory gap" for qualia (Levine 1983)." (Tye 1997)

## There are many different positions with regard to the explanatory gap / hard problem:

- There is a corresponding gap in the world. If existing fundamental theories cannot explain subjective experience, then something new is required. Experiences and feelings have irreducibly subjective, non-physical qualities. (e.g. Chalmers; see the Online Reader of my "Philosophy and Cognition").

"A complete theory will have two components: physical laws, telling us about the behavior of physical systems from the infinitesimal to the cosmological, and what we might call psychophysical laws, telling us how some of those systems are associated with conscious experience. These two components will constitute a true theory of everything."  
(Chalmers 1995)

- The existence of the gap does not detract from a purely physicalist view of experiences and feelings. Some physical qualities or states are irreducibly subjective entities (Searle 1992).
- The explanatory gap may one day be bridged but we currently lack the concepts to bring the subjective and objective perspectives together. On this view, it may turn out that qualia are physical, but we currently have no clear conception as to how they could be (Nagel 1974).
- The explanatory gap is, in principle, bridgeable but not by us or by any creatures like us. It is just that with the concepts we have and the concepts we are capable of forming, we are cognitively closed to a full, bridging explanation by the very structure of our minds (McGinn 1991).

- There is a real, unbridgeable gap, but it has no consequences for the nature of consciousness and physicalist or functionalist theories thereof. There aren't two sorts of natural phenomena: the irreducibly subjective and the objective.

The explanatory gap derives from the special character of *phenomenal* concepts. These concepts mislead us into thinking that the gap is deeper and more troublesome than it really is. Phenomenal concepts are very special, first-person concepts different in kind from all others (Tye 1999, in the Reader "Philosophy and Cognition")

==> There is no general agreement on how the gap is generated and what it shows.