

**Phil 490: *Consciousness and the Self***  
**Handout [7]**  
**David Chalmers: *Facing Up to the Problem of Consciousness***

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**§ Goals:**

1. First isolate the hard problem, separating it from other easier problems.
2. Critique of some recent work that uses reductive methods to address consciousness, and argue that these methods inevitably fail to come to grips with the hardest part of the problem.
3. To give a naturalistic account of consciousness that combines nonreductive explanation.

**§ The Easy Problem and the Hard Problem:**

\* **Experience:** What unites all of these states is that there is something it's like to be in them. All of them are states of experience.

In this central sense of "consciousness," an organism is conscious if there is something it's like to be that organism, and a mental state is conscious if there is something it's like to be in that state.

\_\_\_ phenomenal consciousness; qualia; conscious experience

**The easy problems of consciousness: [phenomena of awareness]**

- \_\_\_ the ability to discriminate, categorize, and react to environmental stimuli;
- \_\_\_ the integration of information by a cognitive system
- \_\_\_ the reportability of mental states
- \_\_\_ the focus of attention
- \_\_\_ the deliberate control of behavior
- \_\_\_ the difference between a wakefulness and sleep

**The hard problem: [phenomena of consciousness]**

\_\_\_ The problems of experience: How is it that these physical systems are subjects of experience? Why and how does our experience arise from a physical basis? Why should physical processing give rise to a rich inner life at all?

**[Question: Why are the easy problems easy and is the hard on hard?]**

To explain experience, we need a new approach. The usual explanatory methods of cognitive science and neuroscience do not suffice. These methods have been developed precisely to explain the performance of cognitive functions, and they do a good job. But ... when it comes to the hard problem, the standard approach has nothing to say.

Christof Koch:

Let's first forget about the really difficult aspects, like subjective feelings, for they may not have a scientific solution. The subjective state of play, of pain, of pleasure, of seeing blue, of smelling a rose — there seems to be a huge jump between the materialist level, of explaining molecules and neurons, and the subjective level. (Koch 1992, p. 96)

**Chalmers' argument for “explanatory gap”:**

1. When a phenomenon is functionally definable, we explain the phenomenon by explaining its function.
2. We explain a function by specifying a mechanism that performs the function.
3. This kind of explanation is *reductive* in the sense that the explanation of the mechanism gives the complete story of the phenomenon.
4. But even after we have given a complete explanation of the physical mechanism for conscious experience, we still don't give the complete explanation of conscious experience itself.
5. Therefore, conscious experience is not functionally definable.
6. Therefore, there is an explanatory gap between a functional analysis of conscious experience and the explanation of the experience itself.

**§ Some research strategies:**

- \_\_\_ 1. to explain something else.
- \_\_\_ 2. to deny that there is anything more to be explained (Dennett)
- \_\_\_ 3. to claim to be explaining experience (Humphrey)
- \_\_\_ 4. to explain the structure of experience (Clark, Hardin)
- \_\_\_ 5. to isolate the substrate of experience; to identify the sort of neural process from which consciousness arises (Crick & Koch, Edelman, Jackendoff)

**\* For a satisfactory theory, we need to know more than *which* processes give rise to experience; we need an account of *why* and *how*.**

**§ Chalmers' Proposal: Nonreductive Explanation**

- 1) **We will take experience itself as a fundamental feature of the world, alongside mass, charge, and space-time.**
- 2) **There are basic psychophysical principles that will not interfere with physical laws, but will be a supplement to a physical theory.**
- 3) **The new basic principles postulated by a nonreductive theory give us the extra ingredient that we need to build an explanatory bridge.**
- 4) **Naturalistic dualism.**

## § Toward A Theory of Consciousness (Naturalistic Dualism)

### 1. The principle of structural coherence

\_\_\_ Awareness is a purely functional notion: it contains cognitively accessible information.

\_\_\_ There is a direct correspondence between consciousness and awareness.

\_\_\_ It is this isomorphism between the structures of consciousness and awareness that constitutes the principle of structural coherence.

\_\_\_ Given the coherence between consciousness and awareness, it follows that a mechanism of awareness will itself be a correlate of conscious experience.

### 2. The principle of organizational invariance

\_\_\_ This principle states that any two systems with the same fine-grained *functional* organization will have qualitatively identical experiences.

### 3. The double-aspect theory of information

\_\_\_ There is a direct isomorphism between certain physically embodied information spaces and certain phenomenal (or experiential) information spaces.

\_\_\_ Thus, information (or at least some information) has two basic aspects, a physical aspect and a phenomenal aspect.