

The Nature of Consciousness

Handout [15]

John Searle: *Reductionism and the Irreducibility of Consciousness*

§ The Goals:

1. To argue that consciousness is irreducible to properties of the brain.
2. To show why consciousness is irreducible, and
3. To show why it does not make any difference at all to our scientific world view that consciousness should be irreducible.

§ Emergent Properties

[system features]

___ Suppose we have a system, S, made up of elements a, b, c.... In general, there will be features of S that are not, or not necessarily, features of a, b, c...

[For example, S might weigh ten pounds, but the molecules individually do not weigh ten pounds.]

[causally emergent system features]

___ Some system features cannot be figured out just from the composition of the elements and environmental relations; they have to be explained in terms of the *causal interactions* among the elements.

[e.g. solidity, liquidity, and transparency.]

* Searle's Claim 1:

___ Consciousness is a causally emergent property of the system.

The existence of consciousness can be explained by the causal interaction between elements of the brain at the micro level, but consciousness cannot itself be deduced or calculated from the sheer physical structure of the neurons without some additional account of the causal relations between them.

["emergent-1" vs. "emergent-2"]

___ "emergent-1": causally emergent system features.

___ "emergent-2": A feature F is emergent-2 iff F is emergent-1 and F has causal powers that cannot be explained by the causal interactions of a, b, c...

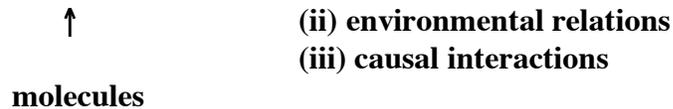
* Searle's Claim 2:

___ Consciousness is emergent-1 but not emergent-2.

___ If consciousness were emergent-2, then consciousness could cause things that could not be explained by the causal behavior of the neurons. => dualism

system

(i) composition



§ Different Versions of Reductionism

1. Ontological Reduction

___ It is the form in which objects of certain types can be shown to consist in nothing but objects of other types.

e.g. Material objects are nothing but collections of molecules...

2. Property Ontological Reduction

___ Property reductions for properties corresponding to theoretical terms, such as "heat," "light," etc., are often a result of theoretical reductions.

3. Theoretical Reduction

___ Theoretical reduction is primarily a relation between theories, where the laws of the reduced theory can (more or less) be deduced from the laws of the reducing theory. This demonstrates that the reduced theory is nothing but a special case of the reducing theory.

4. Logical or Definitional Reduction

___ It is a relation between words and sentences, where words and sentences referring to one type of entity can be translated without any residue into those referring to another type of entity.... Since the words and sentences are logically or definitionally reducible, the corresponding entities referred to by the words and sentences are ontologically reducible.

5. Causal Reduction

___ This is a relation between any two types of things that can have causal powers, where the existence and a fortiori the causal powers of the reduced entity are shown to be entirely explainable in terms of the causal powers of the reducing phenomena.

* Searle's Claim 3:

___ Mental features are caused by neurobiological processes.

___ Consciousness is causally reducible to brain processes. [causal reduction].

* Searle's Claim 4:

___ But a perfect science of the brain would still not lead to an ontological reduction of consciousness in the way that our present science can reduce heat, solidity, color, or sound.

[Question]: Can Searle have his cake and eat it too?

* Searle's First Argument for the Irreducibility of Consciousness:

___ 1. No description of the third-person, objective, physiological facts would convey the subjective, first-person character of the pain, simply because the first-person features are different from the third-person features.

- ___ 2. The essential feature of pain is its first-person subjectivity.
- ___ 3. Thus if we tried such an ontological reduction, the essential features of the pain would be left out.
- ___ 4. Therefore, consciousness of pain is not ontologically reducible.

§ Why the Irreducibility of Consciousness Has No Deep Consequences

1. Heat = molecular motion

The reduction of heat to molecule movements involves no new fact whatever. It is simply a trivial consequence of the redefinition. We don't first discover all the facts and then discover a new fact, the fact that heat is reducible; rather, we simply redefine heat so that the reduction follows from the definition.

2. Pain = the stimulation of C-fibers

But the reduction of pain to its physical reality still leaves the subjective experience of pain unreduced, just as the reduction of heat left the subjective experience of heat unreduced.

* Searle's Second Argument for the Irreducibility of Consciousness:

- ___ 1. Part of the point of the reduction in the case of heat was to distinguish between the subjective appearance on the one hand and the underlying physical reality on the other. Indeed, it is a general feature of such reductions that the phenomenon is defined in terms of the "reality" and not in terms of the "appearance."
- ___ 2. But we can't make that sort of appearance-reality distinction for consciousness because consciousness consists in the appearances themselves. *Where appearance is concerned we cannot make the appearance-reality distinction because the appearance is the reality.*
- ___ 3. Therefore, consciousness is fundamentally irreducible.

* Searle's Claim 5:

___ Consciousness fails to be reducible, not because of some mysterious feature, but simply because by definition it falls outside the pattern of reduction that we have chosen to use for pragmatic reasons.

* Searle's Claim 6:

___ We are left with a universe that contains an irreducibly subjective physical component as a component of physical reality.

§ Supervenience

* "supervenience":

___ (1) Mental states are totally dependent on corresponding neurophysiological states in the sense that a difference in mental states would necessarily involve a corresponding difference in neurophysiological states.

___ (2) Sameness of neurophysiology guarantees sameness of mentality; but sameness of mentality does not guarantee sameness of neurophysiology.

* **Searle's Claim 7:**

___ **Mental states *causally supervene on* neurophysiological states.**

§ Conclusion

___ **Once you recognize the existence of bottom-up, micro to macro forms of causation, the notion of supervenience no longer does any work in philosophy. The formal features of the relation are already present in the causal sufficiency of the micro-macro forms of causation.**