Cognition

➤ 'Cognition = To know (The science of knowing)

➤ In human being (Animals??) (living creatures)

➤ Many questions arise ....

- Is it a biological phenomena?

- Can we create it on silicon chips (Computers)?

- How do we model it?

- It has something to do with the BRAIN, specially with the Human Brain.

- Human brain is a part of Central Nervous System (It has Peripheral Nervous System also, together with Stimulus sensing organs, such as Eyes, Ears, Nose, Skin, Tongue, etc.)

Five approaches to Cognition

➤ Biological : Neuroscience approach (Neural basis of cognition)

➤ Psychological : Cognitive Psychology (Stimulus and Response characterization of human Mind)

➤ Philosophical : Nature of MIND (relationship between Mind and Brain : MIND – BODY Problem)

➤ Linguistic : Analysis and generation (Listening and Speaking) of thoughts through natural languages; Relationship between words in Mind and the outer world.

➤ Artificial Intelligence (AI) : Simulation of Mind Processes on computers to understand it.

Terminology

➤ Brain and Mind, Consciousness, Awareness (Self-Awareness)

➤ Emotions; Volitions and Free Will, Agents

➤ Rational Mind, Thought, Symbolism and Representations

➤ Behaviorism Vs Cognitivism

➤ Syntax and Semantics, Form and Content

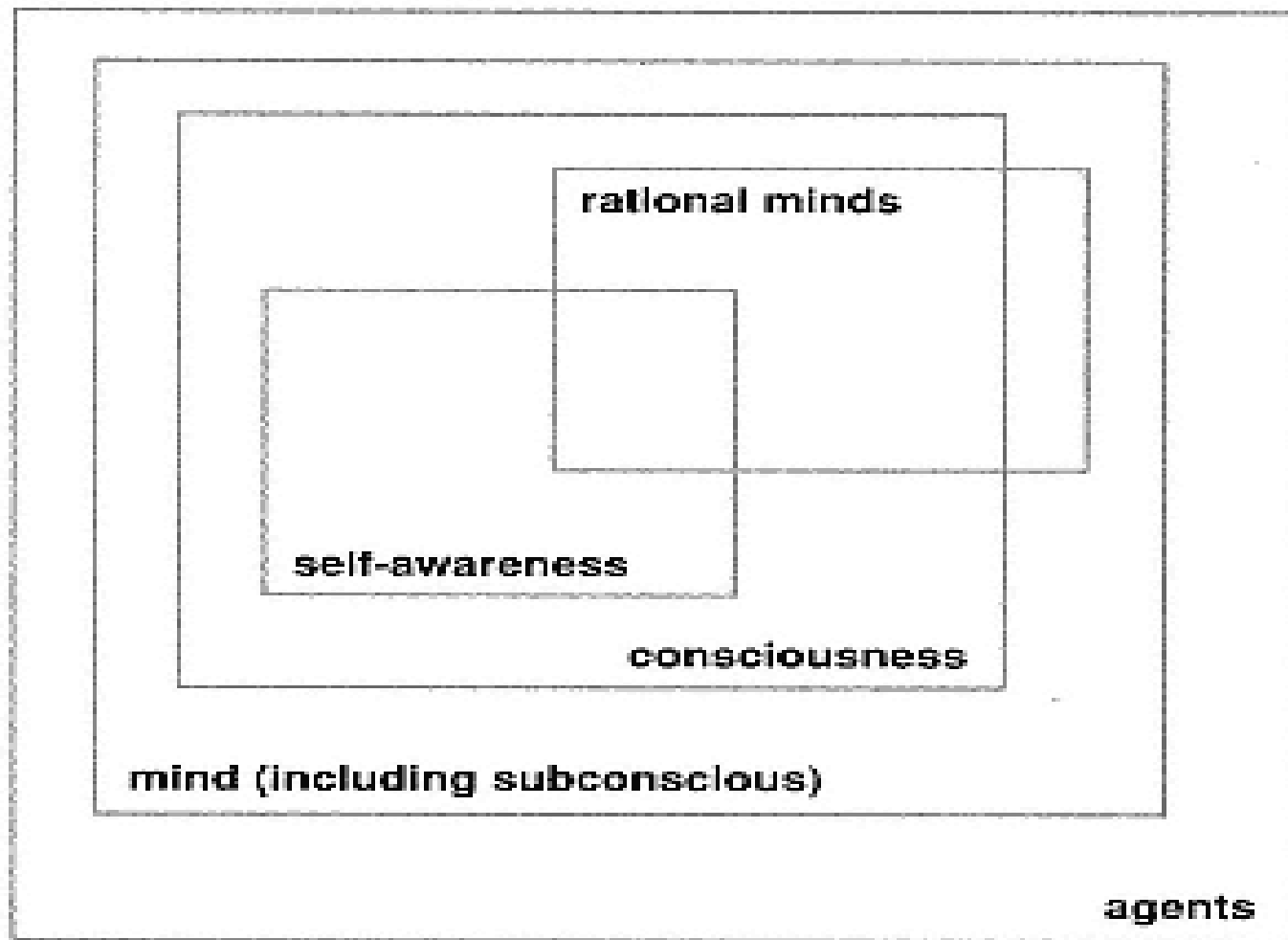➤ And Many More..........as we progress

Mind : Definition 1

➢ 'MIND' according to the *Oxford English Dictionary (OED)*

➢ 17. Mental or psychical being or faculty.

- The seat of a person's **consciousness, thoughts, volitions, and feelings**.

- The system of cognitive and emotional phenomena and powers that constitutes the subjective being of a person.

- Also the incorporeal subject of the psychical faculties, the spiritual part of a human being.

- The soul as distinguished from the body.
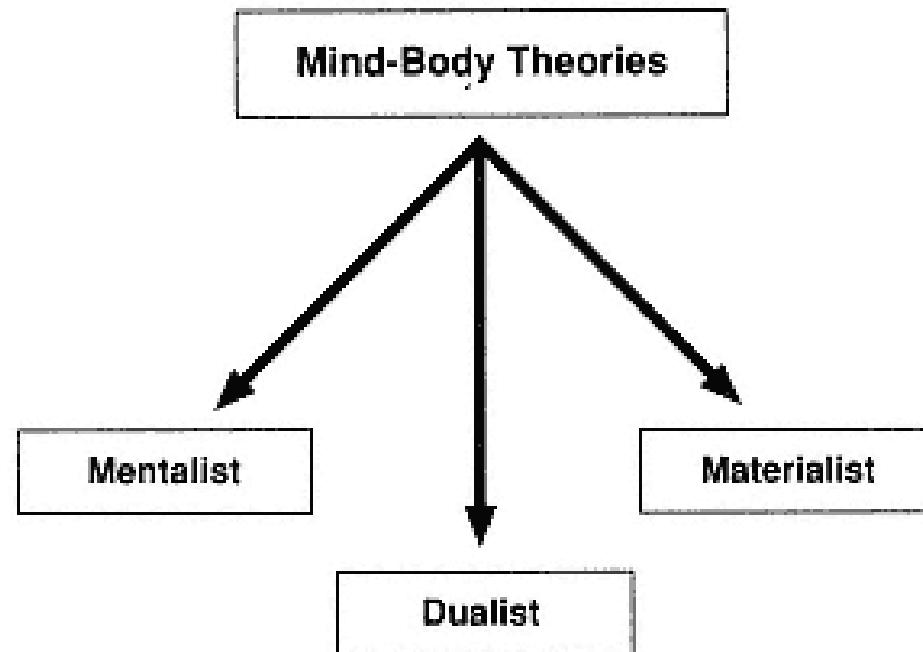
Mind : Definition 2

➤ 'MIND' according to the *Oxford English Dictionary (OED)*

➤ 18. In more restricted applications.

- The **cognitive or intellectual powers**, as distinguished from the will and emotions. Often contrasted with *heart*.

➤ Note several features of "mind" as per OED

- Mind is essentially identified with the *conscious mind*.

- Mind is subjective.

- The mind is incorporeal, and is to be distinguished from the body. This leads to the mind–body problem.

- Definition 18 describes the *rational mind*, a deliberative mind.
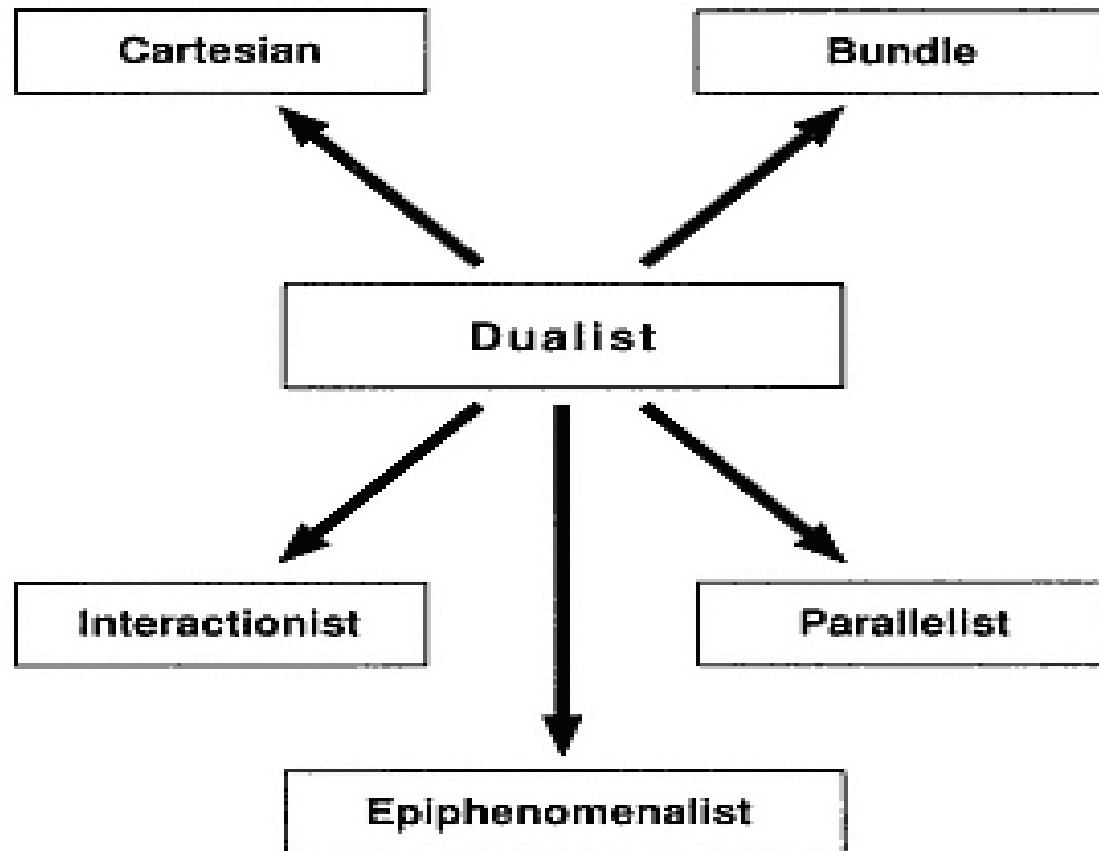
Varieties of Mind

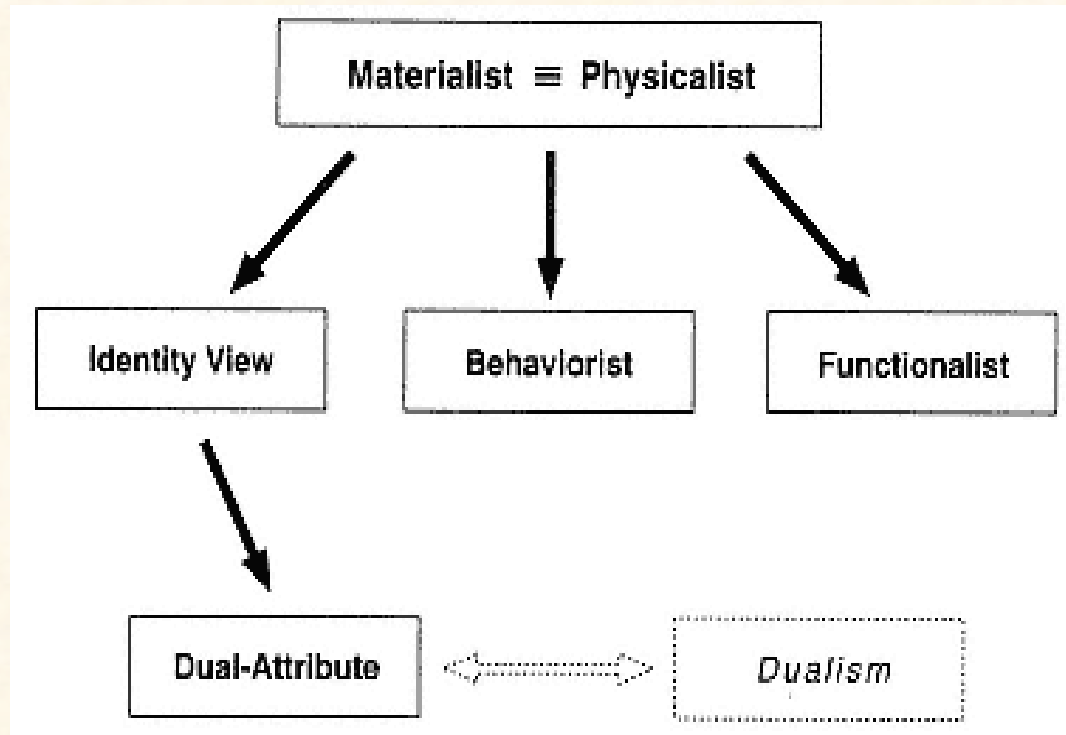# Theories of Mind

Theories of Mind

Theories of Mind

➢ *Cartesian duality* postulates mind and body as substances, one extended and material, the other unextended and spiritual.

➢ Hume, who looked around and said he couldn't find anything like mind, only bundles of perceptions. That's the *bundle theory*, partitioning the mind into bundles while leaving the physical world intact.

➢ *interactive duality*, which says that the mind affects the body and the body affects the mind.

➢ *Parallel duality* holds that the mind and body run in parallel, with neither having anything to do with the other.

➢ *epiphenomenalist view* that the body affects the mind but not conversely.

Materialist theories of Mind

Materialist theories of Mind

➢ *Behaviorism* maintains that mind is nothing more than sophisticated overt behavior.

➢ the *identity view*, which identifies mental events with physical processes in the nervous system. There is only one substance, the physical, but mental happenings are allowed to interact causally with the physical body.

➢ Minsky adopts the *functionalist* view when he proclaims: "as far as I'm concerned, the so-called problem of body and mind does not hold any mystery: *Minds are simply what brains do*" (1985, p. 287). The functionalists view mind, the software, running on brain, the hardware.

Brain States and Mental States

➢