### Recall: Two Major Aspects of Consciousness



Self-awareness ("Know Thyself" by unnamed artist (owner Dovanna Cleary), Salvador Dali, and Art Levin)



Phenomenal Consciousness (Colors, pains, etc.; dreams)

### In words:

### Kinds of consciousness

Accessibility, reportability, of our own characteristics, history, relationships, possessions, etc. → "access consciousness";

Implementation in an AI agent – knowledge base, reasoning, language, connection to the world (vision, etc.)

 We have sensory impressions/experiences – colors, shapes, motions, sounds, fragrances, pains, pleasures, emotions, real & imaginary → phenomenal consciousness (qualia)

## The Explanatory Gap and "the Hard Problem" of Consciousness

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What's the

connection?

Objective reality

- Factual information
- Communicable
- Matter, forces

Subjective reality

- Qualia
- Ineffable
- mind

Making the connection is the Hard Problem of Consciouness (D. Chalmers)

## Broad classes of "solutions"

- Dualism (Descartes: pineal gland);
  "Mind as causal" → contradiction, or epiphenomenalism (X Occam's Razor)
- The Big Switch (Daniel Dennett, Churchland, Baars, ...)

"Explain" subjective experience objectively → ignores subjectivity ("Easy Problem"); "Hornswoggle problem" (Churchland)? So is pain just behavior of physical matter? Ethics?

• Mysterianism (Colin McGinn, S. Pinker?)

Beyond human comprehension; cf. chimp & its cardiovascular system

We'll further consider realistic (non-dualistic) theories shortly

### **Defining Consciousness**



- Thomas Nagel: An X is conscious iff it's meaningful to ask, "What is it like to be an X"; I.e., what does it feel like; E.g., X = bat, vs. X = rock; Opposes the Big Switch: The objective viewpoint leaves out "direct acquaintance"
- Susan Blackmore: If not epiphenomenal, qualia are intrinsic to sentience/sapience;
  But extant perceiving/thinking AI agents exist, yet surely lack phenomenal consciousness!
  E.g., our blocks-world agent



Problem Solving in the Blocks World (Georgiy Platonov, Ben Kane, et al.) User: What blocks are to the right of the Target block? DAVID (avatar); THE TOYOTA BLOCK, BURGER KING BLOCK, AND MCDONALDS BLOCK. User: How many blocks have I moved since we started? DAVID: TWO BLOCKS – THE MERCEDS BLOCK AND THE MCDONALDS BLOCK

#### Why not phenomenally conscious??

- Too simple?
- Lack of "direct acquaintance" (Nagel)?
- No self-reflection on perceptions? (HOT; e.g., McDermott)

# Zombies (philosophical)



"You look & act just like me, but experience nothing!"



David Chalmer's Zombie Doppelgaenger

attended to?

### • "Daft"? (Blackmore)

Probably so, if <u>internally (materially)</u> as well as behaviorally identical.

- Partial zombies & the Pretty Hard Problem (LKS, S. Aaronson, D. Chalmers)
  - Deaf person with textual/descriptive-display sunglasses; acting <u>as if</u> hearing;
  - Blind person with "whispering sunglasses"; acting <u>as if</u> sighted;
  - Deaf & blind (cf. Helen Keller), with Morse-code prosthetics;
  - etc. (up to a point)

Also, sleepwalking (Parks, in Toronto); blindsight (Blackmore ch.2).

So, what's the difference between knowing what's being said or what's visible, etc., and experiencing sounds, sights, etc.?

Maybe: symbolic information is qualia-free, while sensory patterns "generate" qualia

## Troubles with naturalistic theories of consciousness

### **Epiphenomenalism:** Either self-contradictory or redundant;

Functionalism: Explanation of brain states & their causal connections suffices -> the Big Switch

<u>Delusionism</u>: Physical brain processes cause the illusion of consciousness, qualia, self **→** Huh?!

<u>Perspectivism (a suggestion)</u>: Two perspectives (objective & subjective) on <u>the same reality;</u>

- Our internal models of the world allow for both symbolic and "pattern" information;
- Purely symbolic propositions are communicable (via language) objectivity
- Propositions containing patterns are ineffable (e.g., (I see 🧶) 🗲 subjectivity, qualia
- The neural patterns are analyzable . . . . but that's the objective perspective!

Can there be different perspectives on the same reality? Consider wave / particle duality:



Schrödinger: The electrons are wavelets (nonzero everywhere) Screen (detector array): registers particles.

Waves/particles can't sensibly be merged...