On What Goes Inside Our Teetering Bulbs of Dread and Dream

A brief overview of a consciousness model developed to answer some major questions pertaining to Mind, Machines and Language

"What is an "I", and why are such things found (at least so far) only in association with, as poet Russell Edson once wonderfully phrased it, "teetering bulbs of dread and dream" -- that is, only in association with certain kinds of gooey lumps encased in hard protective shells mounted atop mobile pedestals that roam the world on pairs of slightly fuzzy, jointed stilts?"

- Douglas R. Hofstadter, Gödel, Escher, Bach: An Eternal Golden Braid

My paper would try to weave a common thread among some of the 75 questions handed to us. These are indicated in the square brackets next to the section relevant to them where they will be explored.

Assumptions:

1. There is a reality which exists independent of our mind.
2. Our neuro-anatomy and physiological composition has evolved so that we are able to model or perceive reality in such a way that makes our dealing with this objective reality easier. We are not aware of what objective reality is, cannot hypothesis about it and make any statement about it – it is outside the cognitive and meta-cognitive abilities endowed on us by our biological makeup, and the patterns that evolved thereof. Where different organisms differ is their different versions of modeling of this reality. This concept is similar to the concept of Qualia, which, according to Dennett, is "an unfamiliar term for something that could not be more familiar to each of us: the ways things seem to us".
3. Science and Scientists work towards making this modeling of the real world more efficient and suited to our purpose, and search for alternate models that might extend our range of perception. Thus, my paper would bypass the question as to whether physical and material processes are sufficient to generate consciousness as we experience it, noting that there is no such thing as immaterial substance - only things that we have not been evolutionary programmed to perceive.[1]

Model of Consciousness:

I adopt a Blockian Model of consciousness, dividing it into two types - phenomenal (P-consciousness) and access (A-consciousness), taking some liberty with the use of these terms. [2] P-consciousness is the one that deals with Qualia. I assume that A-consciousness is about accessing, processing and organizing information that has been obtained as a result of Qualia experiences. The key characteristics that arise out of A-consciousness that we possess are our abilities to recall, deceive, introspect etc. Moreover, consciousness is not an all -or- nothing phenomenon - it is more like a spectrum. [*Questions 4, 39, 41, 51*]

The question that confounds us is whether there are other organisms that possess A-consciousness akin to ours. I look at what form of conscious contributes to our notion of self, a being separate from others. I also look at experiments like psychologist Gordon Gallup's mirror self-awareness test, and use a model to answer questions that arise out of various thought experiments like those involving philosophical zombies. I will look at the patterns that arose in our neurosystems because of language evolution that contributed to A-consciousness, and thus speculate on the origin of consciousness. [*Questions 2, 48*]

On Dreams

I plan to explore which forms of conscious structures are deactivated during sleep, and thus explore what contributes to dreams. [*Question 5*]

On Machines

While most organisms seems to possess P-consciousness and negligible or little A-consciousness, with Machines and Artificial Intelligence it's the other way round. Most works with machines are centered on algorithms and procedures which design how to access, process and organize inputs and which outputs to produce thereof. But without P-consciousness, or Qualia experiences, such information is useless, insofar as we are testing for cognitive abilities like deception, introspection etc. [*Questions 3, 18, 53, 61*]

Experiments:

1. <u>Dream Diary</u>: This would involve noting down dream experiences every day, especially the Hypnopompic and Hypnogogic states, observing the circumstances in which dreams occur more frequently than other etc. Besides attempts at inducing particular kinds of dreams and lucid dreaming, I intend to disturb many a friends from their blissful sleep, and note down the observations as part of the experiment.
2. <u>Thought Experiment</u>: In this part I intend to explore what will happen when an advanced robot or a machine is placed in front of a mirror. (Modified mirror self-awareness test). I propose this to be a good measure for testing a machine for humanlike behavior, i.e. as a being with a notion of self.

Notes:

1. For example, we cannot perceive us as being made of millions of atoms and cells which are largely composed of empty spaces. Science allows us to model reality in a way our evolutionary makeup doesn't.
2. This modification or misapplication of a term will be pointed out as and when required and its purpose will be highlighted.

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