

UNCC: The Cure for Chronic 'Zombie Blues'

(Universal Correlates of Consciousness)

ASSC 11, Las Vegas, 6/23/07



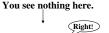
deiss@appliedneuro.com

ad this way

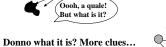
Steve Deiss, UC San Diego, Biology Dept., Neurobiology Section, Integrated Systems Neurobiology Lab, and Applied Neurodynamics, Encinitas, CA



Well, Duuh, Yeah! Like I could help it.



Now you see a B/W contrast.



Donno what it is: More clues.



Whoah !! WTF was all that?

That was the sound of you *filling in* the given pattern of qualia contrasts with the conditional expectation of many more... An explosion of *associations* using your *memory*. Your *expectations* created the dog.

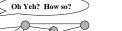
BUT, there is no dog there, is there? There are just a bunch of quale that are assembled in a familiar pattern.

Maybe. The 'dog' is one interpretation of the qualitative contrasts sensed. (Qualia) The dog is the <u>meaning to you</u> of the qualia. The dog you see is <u>your theory</u> of what's there. Assuming something *IS* there makes you a realist or materialist or physicalist. So what's your point?

Your sensation was needed for perception. (i.e., must have qualitative contrast) Your memory was needed for perception. (provides the fill material for filling in) Putting them together was an interpretation.

But then how does memory fill in missing or expected sensations?

Brains are all very pregnant with expectations. Give them an inch and they take a mile.



Neural Networks!

When you sense qualitative contrasts your <u>networks add all the expected</u> <u>sensations</u> that follow from there being a Dalmatian based upon generalization from many past sensory samples.

> Hold it right there damn it! You just pulled the Necker cube Dualism bait and switch on me! First you are talking about my experience, then you talk about brains and neural networks. Talk about non-sequiturs.... Sheesh! Not so fast.

Well, Yeah! That is my interpretation of what I see going on in your head, just as you would interpret the meaning of the events you see in my head. If I see a certain firing pattern in your neurons, I expect you to report a certain experience. I'm filling in my sensations by my theory.

You are telling me that my experiences are "nothing but" these brain processes.

Not at all. Now <u>you</u> need to hold it! Try to stay with me here......

Brain cramp,



Lets talk about ants.



All ants sense bread crumbs, and they can find them to eat.



So they don't have brain like ours!

So doesn't that make them just little eating machines?

In a word <u>no</u>. They sense and interpret their environment like we do, but without a

Do you mean ants experience The world same as we do?

Hardly! But they surely have experience of the ant variety.

Why should they?

Well, if we have experience when we sense contrasts and interpret them by filling in, then why shouldn't that ant be having some experience?

Mom !!

Exactly! Just as your Mom had compassion and empathy for you as an infant (using her mirror neurons) so maybe you can use yours to have a sense of what it is like to be an ant.

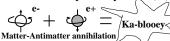
BUT THE ANT IS JUST A <u>MACHINE</u>! It is just obeying laws of nature without any sensation or thought. It's a robot!

Well then, prove to me that *YOU* are not just an insentient zombie robot.

I'm different! No, you're a Dualist, and stuck in a box.

If the ant isn't a machine, maybe you'd say rocks, plants and electrons are sentient too! (Now I've got him with a reductio :-)

Well let's talk about electrons (e-) and their antimatter positron partners (e+).



According to physicists this happens because of laws of nature that govern such collisions of matter and antimatter. Collisions are seen bagillions of times every day in particle accelerators, but you know what? No one ever has seen one of those laws of nature yet.



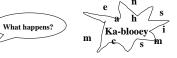
Of course not, dummy. We don't 'see' Laws of Nature, we infer them by inductive methods. ('Bagilions' - really)

You mean they are a theory of such phenomena? An example of our interpretive expectations? Right. Well, *that's just like seeing* Dalmations then isn't it !!

Instead of there being 'mechanisms' everywhere in nature *prescribing* what it does, why do we not just conclude nature behaves in systematic ways *described* by the ''laws'' (other things being equal).



More like untangling a 3 century old giant hairball ! In analyzing consciousness scientists come to a fork in the road.... Natural Laws are either *prescriptive* or *descriptive*. Many scientists implicitly favor the prescriptive view. However, look what happens to 'mechanisms' if the laws are only descriptive.



Suddenly 'self-organization' takes on a whole new light. The electron and positron are not obeying a governing law. They are behaving in a manner that defines them as electron and positron. Their behavior is not random. It's their interpretation of how they sense each other.

That is crazy. Elementary particles do not make 'interpretations' the way we interpret signals. Electrons have no eyeballs and no expectations! So.

They have state variables don't they? So what they do depends on their current state and 'input.' They make changes when they sense photons. There is no oracle telling them how to behave. They choose, like we do, based upon their state and habits that define them. Define consciousness as this interpretive process. It is 'interpretations of sensations' all the way down.

