A touch of grounding



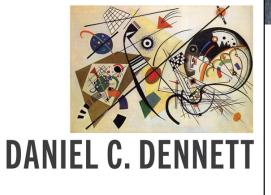
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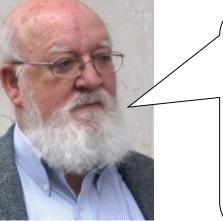
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Luminous Workshop: "Studying, Measuring and Altering Consciousness" 21/11/2019, Merton College, University of Oxford

Dan Dennett: Consciousness as an Evolved User-Illusion







the practice of sharing information in communicative actions with others, **giving and demanding reasons**, is what **creates our personal user-illusions**

Do infants really have zero consciousness / User-Illusion until they start to trade reasons?

Algorithms, infant development

Evolutionary mechanism	Trial & Error	Natural Selection / ge	Memetic replication, Language, Thinking tools						
Dennett's Creature		Darwinian		Skinnerian		Popperian	Gregorian		
Algorithmic		Representational Learni	ing						
substrates		Reinforcement Learning							
					Predictive Coding / Bayesia			an networks	
	6						Nested Virtual	Machines	
Infant development			CONCEPTION	Reflexive agency	BIRTH	Sensor-motor stage	Preoperational stage	Hands-on- Science	
						Onset of How about proto-reaso proto-User-Illu	ons,	reasons	

Grounding

The **Predictive Coding** substrate:

□ delivers competence without comprehension

□ its form and function are **grounded in survival**

Yet when **hypotheses** formed within the PC substrate begin to be **externally expressed** then:

An ulterior grounding arises: Evidence gets shared and we ask it to be grounded ...

in reality - tending towards that ontological grounding valued by philosophers and scientists.

Ontological impetus

On first encountering empty space and returning into contact with external surfaces: mother's arms etc. Three factors may coalesce in an infant:

□ **instantiation** of the Bayesian **hyper-prior**, in the PC substrate, to stipulate no two solids occupy the same physical space – see A.Clarke 2013

□ 'proto-reason': grounding of explicit spatial comprehension – anchoring subsequent empirical learning from evidential chains.

□ 'proto-user-illusion': onset of contact-/tactile- sentience in the circuits that mediate the "resonant loop between body states and brain states" – e.g. those serving fingers, lips and body surfaces – providing an 'ontologically underwriting/grounding', at least while those loops are not inhibited by sleep or adaptation.

If true . . .

Electromagnetic signs would correlate with brain areas associated with:

- newborns learning spatial relationships between surfaces of their body
- Iearning the visual appearance of objects within arms-length;
- ✤ and later extrapolating their grounding to distant objects.

The **insula** is a common nexus transited by somatosensory loops – for pressure, pain, and warmth – into which 'ontological grounding' and sentience might be further propagated.

