

A touch of grounding



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Dan Dennett: Consciousness as an Evolved User-Illusion

From **Bacteria** The Evolution of Minds **to Bach** and **Back**



DANIEL C. DENNETT



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 / genetic replication				Memetic replication, Language, Thinking tools	
Dennett's Creature		Darwinian	Skinnerian	Popperian	Gregorian		
Algorithmic substrates		Representational Learning					
		Reinforcement Learning					
						Predictive Coding / Bayesian networks	
					Nested Virtual Machines		
Infant development		CONCEPTION	Reflexive agency	BIRTH	Sensor-motor stage	Preoperational stage	Hands-on-Science

Onset of trading reasons

How about:
proto-reasons,
proto-User-Illusion?

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
- ❖ learning 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.

