

Conscious Spacetime. Experiences localised in spacetime and a mathematical conjecture towards a proof of conscious experiences existing beyond brain.

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That brain could “produce” consciousness is a never proven belief. Tononi’s IIT besides five “self-evident” axioms, uses at least two assumptions, which are neither self-evident nor necessary. Tononi and Koch (2014) states; ” I am seeing, hearing feeling something *here*, inside my own head.” This is actually refuted by data, as *sensory experiences* are never localized in the brain/head but in the body or the surroundings.

But what about *mental experiences* such as memories, feelings and thoughts e.g. about future? They are not in space outside brain now, so must be in the brain? No. Physics shows that spacetime is ontologically (at least) four-dimensional, that is all that has happened and all that will happen in time exist all at once, but outside the now. So it is argued that memories, thoughts and mental experiences are localized in spacetime outside the now and thus outside 3D brain and that conscious experiences extend in time as in space.

Tononi and Koch further states; “Every experience will have associated NCC “ (neural correlate of consciousness). This is a plausible hypothesis but not self-evident and ought to be taken as a further axiom A1.

Logically we have the possibility of two different relations between NCC and conscious experiences = c.e.

and thus two different disjoint subsets of the set of all c.e. $\mathcal{C}. \mathcal{E}. = \{ \forall c.e.; c.e. \exists \}$

$M1 = \{ c.e. \in \mathcal{C}. \mathcal{E}. ; c.e. \text{ has NCC} \}$

$M2 = \{ c.e. \in \mathcal{C}. \mathcal{E}. ; c.e. \text{ has no NCC} \}$ (and thus fulfil even the stronger claim not being produced by the brain)

$M1 \cup M2 = \mathcal{C}. \mathcal{E}. \quad M1 \cap M2 = \emptyset$

So we can have an alternative axiom A2 to A1. Thus

A1. “Every experience will have associated NCC”. $M1 = \{ \forall c.e.; c.e. \exists \}$ and thus $M2 = \emptyset$

A2: “There are experiences without associated NCC”. $M1 \neq \{ \forall c.e.; c.e. \exists \}$ and $M2 \neq \emptyset$

As there is no known explanation of *how* brain can “produce” experiences it is legitimate to take out-of-body experiences at face value and a tentative support that an OBE is not produced by brain.

Near-death-experiences where people see past, present and future events at once can be interpreted as an experience of the 4D spacetime. When a person also “moves” to different events of his life, this can be interpreted as existence of an extra time dimension for moving in 4D and the experience can be interpreted as a 5D experience.

My conjecture is that a 4D experiential structure (e.g. brain in 4D spacetime) in no sense can “create”, “produce”, “emerge” etc. a 5D experiential structure and that this could be possible to prove mathematically-logically: $\forall \mathcal{M} \subseteq \mathcal{S}_N = \{ \forall (x_1, x_2, \dots x_N) \} \nexists \mathcal{ESF}_N; \mathcal{ESF}_N \{ \mathcal{M} \} \notin \mathcal{S}_N$

The crucial point yet to develop is a rigorous characterisation of *ESF experientialstructure function* which intuitively is expressing possible transformations on experiential structures.

Thus existence of $\geq 5D$ experiences and a mathematical proof of the conjecture would constitute a proof that there are experiences not created by 4D brain that is $M2 \neq \emptyset$.