

Out-of-body experiences (OBEs) are often understood as experience of seeing oneself from a position outside of the body. OBEs are poorly understood in the framework of neuro science and pose a challenge for the reductionistic world view.

In TGD framework the notion of magnetic body provides an attractive starting point in attempts to understand what OBEs and related experiences are. The basic idea is that magnetic body serves effectively as a mirror defining a third person view as a cognitive representation also in ordinary wake-up state and that during OBEs this representation becomes sensory representation. Magnetic body need not always be a personal magnetic body but could correspond to a magnetic body receiving information from several brains (collective consciousness), magnetic body of another person, or be even associated with `{dead}` matter.

The progress in identifying dark matter as a phase of matter with large value of Planck constant making possible macroscopic quantum coherence has led to the vision about dark matter at magnetic flux quanta as quantum controller of ordinary matter in living systems. The Bose-Einstein condensates of dark photons decaying via decoherence to ordinary photons mediate interactions between ordinary and dark matter and the hypothesis is that dark photon `{laser}` beams from body and brain reflected at magnetic flux quanta give rise to third person aspect of consciousness which in OBEs and related experiences are realized as sensory representations. The identification of bio-photons as end products of the de-coherence of dark photon beams is natural.

Zero energy ontology and the notion of causal diamond (or CD defined roughly as the intersection of future and past directed light-cones) brings additional quantitative ingredients to the model. Sub-CDs define imbedding space ($M^4 \times CP_2$) correlates for selves and by holography the 2-D partonic 2-surfaces at the light-like future and past

boundaries of
CDs are the ultimate space-time correlates for mental images. The
moduli
space for CDs makes possible a more detailed view about sensory
representations.

A further new element is the vision about life as something in the
intersection of real and p-adic worlds. The most important outcome
is that
the notion of number theoretic entanglement negentropy making sense
in this
situation is positive so that entanglement carries conscious
information.
The fusion of selves (in particular mental image) by negentropic
entanglement is experienced as expansion of consciousness. It is
negentropic entanglement between parts of biological body and
corresponding
parts of the magnetic body and biological body which makes living
system
living. This negentropic entanglement between magnetic body and
biological
body is important also for OBEs.

The model leads also to a model for dreams, hallucinations, sensory
feedback from brain to sensory organs, and directed attention.
Concrete
models for how dark photons can give rise to experiences in various
sensory
modalities such as vision, hearing, olfaction, and tactile senses,
are
proposed.