

## **Persistency in the semi-sheaf of Hierarchical Systems**

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We show how a hierarchical, time indexed, categorical theory model can explain SBS brain activity through time from the model MENS. Given we need multiple time scales in the brain working simultaneously for experience of time, and for judgements within time, we enlarge the previous work of Ehresmann by introducing these features. This should give a formal overview about conscious processes with the addition of different aspects of time in the categorical structure.

**Keywords:** Hierarchical category; Indexed category; Cat-neuron; Consciousness through time.