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**NEURODYNAMICS OF CATEGORY LEARNING: TOWARDS UNDERSTANDING THE CREATION OF MEANING IN THE BRAIN**

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## **NEURODYNAMICS OF CATEGORY LEARNING: TOWARDS UNDERSTANDING THE CREATION OF MEANING IN THE BRAIN**

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Category learning, the formation and use of categories (equivalence classes of meaning), is an elemental function of cognition. We report our approach to study the physiological mechanisms underlying category learning using high-density multi-channel recordings of electrocorticograms in rodents. These data suggest the coexistence of separate coding principles for representing physical stimulus attributes ("stimulus representation") and subjectively relevant information (meaning) about stimuli, respectively. The implications of these findings for the construction of interactive cortical sensory neuroprostheses are discussed.

**Keywords:** Cortical dynamics; category learning; neuroprostheses