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Representation, Development and Disintegration of Conceptual Knowledge:
A Parallel-Distributed Processing Approach

I will describe a model of human semantic cognition, based on the ideas of distributed representation and gradual incremental learning inherent in the Parallel-Distributed Processing (PDP) framework. The model addresses progressive differentiation of conceptual knowledge in development and progressive disintegration of conceptual knowledge in semantic dementia, a rare condition affecting the anterior and lateral portions of the temporal lobes. In addition, the model addresses primacy of basic level naming responses in development and dementia, as well as typicality, frequency, and expertise effects, providing a broad framework for understanding development, adult cognitive performance, and deterioration of conceptual knowledge in dementia.