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### Authors

CARPENTER, PATRICIA A.  
DAVIA, CHRISTOPHER J.  
VIMAL, RAM LAKHAN PANDEY

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*PATRICIA A. CARPENTER, CHRISTOPHER J. DAVIA, RAM LAKHAN PANDEY VIMAL*  
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## **CATALYSIS, PERCEPTION, AND CONSCIOUSNESS**

PATRICIA A. CARPENTER

Department of Psychology, Carnegie Mellon University, Pittsburgh, PA 15213, USA

CHRISTOPHER J. DAVIA

Centre for Research in Cognitive Science, University of Sussex, Brighton, BN19RH, UK

RAM LAKHAN PANDEY VIMAL

Vision Research Institute, 428 Great Road, Suite 11, Acton, MA 01720, USA

This paper describes and provides support for a non-representational theory of perception called the Fractal Catalytic theory, which proposes that perception is a catalytic type of process that occurs at multiple scales.<sup>1</sup> Enzyme catalysis involves a vibratory facilitation of a reaction. A catalytic model for smell at the molecular level is supported by evidence that smell involves a vibratory process.<sup>2</sup> This type of facilitation can be generalized to the neural level, where many neuroscientists have observed vibratory neural patterns. At the level of the organism, we describe research with blind individuals who experience a visuo-spatial world through patterns of sounds or tactile vibrations. Such research argues against the standard theory that people are representing objects and events, and supports the view that experience arises as an organism mediates (catalyzes) the transitions in its surround. The theory relates to the biologically-grounded theory of Autopoiesis<sup>3</sup> as well as proposals that catalysis is central in biological evolution. We examine the implications of this theory for the nature of consciousness.

**Keywords:** Perception; fractal catalysis; autopoiesis; consciousness