The abstract for this article is from the Special Issue on Neurodynamic Correlates of Higher Cognition and Consciousness: Theoretical and Experimental Approaches - in Honor of Walter J Freeman's 80th Birthday Part I: Theoretical and Experimental Aspects of Higher Cognitive Functions was provided by World Scientific.

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ON CRITICAL STATE TRANSITIONS BETWEEN DIFFERENT LEVELS IN NEURAL SYSTEMS

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DOI: 10.1142/S1793005709001222
Cited by:


**Keywords:** Critical state transitions; state space; neural systems; statistical mechanics; complex systems; consciousness?

Emergence:

Levels of organization "emerge" from lower levels. General in that state transitions between all levels of organization are proposed as the mechanisms by which successful hierarchical transitions are implemented. However, the interplay of these levels is also more complex than the simple idea of a sequential network of independent systems. The concept of "emergence" is based on the idea that the properties of a system as a whole cannot be deduced from the properties of its individual parts. The framework of "Modern Theories of Critical State Transitions" considers the relation between different levels of organization in complex systems.

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**Neural Systems**

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GERHARD WERNER, NEW MATH. NEW NAT. COMPUTATION, 05, 185 (2009). DOI: 10.1142/S1793005709001222