

Special Issue on Neuropsychology, from the Founding Conference of the Hellenic Neuropsychological Society, 9-10 April, 2016, Athens, Greece.

Guest Editors: Mary H. Kosmidis, Athanasia Liozidou, Lambros Messinis, Alexandra Thanellou, Ioannis Zalonis

## Lecture

# Neuropsychology and development: A revisionist look

**Athanasios Protopapas**

*Department of History and Philosophy of Sciences, National and Kapodistrian University of Athens*

### Abstract

Neuropsychological research aims to contribute to our understanding of brain function through the study of the effects of nervous system damage on cognitive performance. A focus on dichotomies has led to theoretical models dominated by binary distinctions in function and localization. Such models are occasionally applied to the study of developmental disorders, carrying over neuropsychological contrasts between putatively affected vs. intact domains. This counterproductive approach overlooks the developmental nature of functional system formation through constant interaction with the environment and consequent computational self-organization. Conceptual and empirical dead-ends arising from the neuropsychological approach become evident when, for example, distinctions originating in the study of acquired aphasias and dyslexias are applied to the study of language and reading development, respectively. By reversing the explanatory direction, a focus on developmental processes and on the gradual acquisition of functions and skills may support novel approaches to the description and explanation of acquired disorders, potentially improving the explanatory validity of theoretical neuropsychological models. Achieving this goal would seem to require a change of viewpoint and a close collaboration among neuropsychological and developmental approaches and traditions.