Institute for Advanced Study
School of Humanities and Social Science
Center for Chinese Linguistics
Molecular Neuroscience Center
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Distinguished Lecture

Neurocorrelates of Reading Chinese Words in Texts without Word Boundaries: Evidence from the Educated Eyes to the Educated Brain

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About the speaker

Professor Ovid J. L. Tzeng is a distinguished psychologist recognized for his work in cognitive neuropsychology and particularly for his extensive analysis of cognition and memory system. His Ph.D. dissertation received the Creative Talent Award by the American Institutes for Research in 1972. During his tenure at the University of California, Riverside (UCR), he created a research center for studies in speech recording process during reading, human information processing, bilingual speech perception, orthography and reading behaviors of dyslexics, and Chinese aphasia. He is the leading pioneer in the field of Cognitive Neuroscientific Studies of Chinese Language, and the author of over 100 scientific papers, including three influential papers published in *Nature* between 1976 and 1979 on the cognitive neuropsychology of Chinese language processing.

Professor Tzeng has had a distinguished professional career that includes Dean of the College of Social Sciences at the National Chung Cheng University, President of the National Yang-Ming University, Minister of Education, and Vice President of the Academia Sinica.

Abstract

To assess the nature of the brain plasticity, I will discuss insight gained from experiments on learning to read Chinese texts. In particular, the concept of "wordness" in reading Chinese texts is explored using the data obtained from tracking the eye movements during reading and also from brain images of the so-called "visual word form area" during character identification. Comparative neuroimages of literate brains across different writing systems would be important for our understanding of how an "educated" brain is organized neurologically to meet the challenges imposed by various specific linguistic contexts.

Brain images suggest that words are basic cognitive units for reading non-alphabetic texts at both the neurophysiological and the cortical levels. There is much to be learned about the educational processes within the developing brain. Reading as a secondary linguistic activity offers an enlightening window for us to take a look inside the brain.