

Interpreting Words and Other Sensory Inputs to Construct a World



Marta Kutas

Distinguished Professor and Chair, Department of Cognitive Science

CURRENT RESEARCH

Understanding how the brain processes and interprets language (and non-language materials)

Language is the medium of social interaction and cultural transmission of knowledge. We all use language routinely for multiple purposes – to communicate, learn, and persuade, some more effectively than others, but we still have much to discover about how our two half-brains use what we know to construct interpretations from words that often have many possible meanings or senses so quickly and effortlessly. Understanding how human brains flexibly and successfully adjust to variations in rate, meaning, and voices in dynamically changing contexts will have untold benefits for normal and abnormal language users in all walks of life. Dr. Marta Kutas, Distinguished Professor and Chair of Cognitive Science of University of California, San Diego, thus studies the "normal" pattern of electrical brain activity sensitivities to assess possible "abnormal" patterns (e.g., in children, SLI, schizophrenia, brain damage), and to learn what assessments or interventions may best test and benefit developing and/or compromised brains.

Electrical activity is the currency of how neurons communicate and transfer information. Recording electrical brain activity -- or brainwaves at the scalp -- is as close as we can get to seeing this mind-brain activity in action without cutting people open. These brainwaves are an exquisitely sensitive index of activity in the human perceptual, motor, cognitive, and emotional systems -- healthy and compromised alike, across the lifespan. Thus, for more than two decades, Dr. Kutas and her team have analyzed brainwaves from people, young and old, healthy and with brain damage as they make sense of written and spoken language, pictures and comics to learn more about how the two seemingly similar...

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AFFILIATION

 University of California, San Diego

EDUCATION

- Ph.D. in 1977, University of Illinois, Champaign
- M.A. in 1974, University of Illinois, Champaign
- B.A. in 1971, Oberlin College

AWARDS

- Distinguished Career Contributions Award, 2015
- Honorary Degree of Science, 2014
- President, Society for Neurobiology of Language, 2012
- Honorary Degree, 2010
- Fellow of The Society of Experimental Psychologists, 2009

RESEARCH AREAS

Life Science, Neurological / Cognitive, Veteran's Causes, Neurological / Cognitive

FUNDING REQUEST

Your contributions will support Dr. Marta Kutas and her lab at the University of California, San Diego as they study the human mind and the way it processes spoken and written language and the information it carries. Your donations will help fund the annual \$350K needed per project, supporting personnel, lab supplies, instrumentation, computer hardware & software, and other expenses like subject compensation.