

The Brain Basis of Language



David Poeppel

Professor, Psychology and Neural Science Director, Neuroscience

CURRENT RESEARCH

The Fundamental Mechanisms Underpinning Language Processing

Your phone rings, and with little effort you are able to respond to the sound, and begin a conversation with your friend on the other line. This effortless, and for most of us, daily, interaction, is no small feat. In fact, beginning with the vibrations in the ear to the perception of sound to organizing the sound, our brains are working hard to uncover what others are saying, and even more so, what it all means! Dr. David Poeppel, Director of the Department of Neuroscience at the Max-Planck-Institute in Frankfurt, Germany, and Professor of Psychology and Neural Science at New York University, focuses on the various processes that underpin auditory processing and language comprehension. His foundational language model, developed with collaborator Greg Hickok, has increasingly become the standard model for how language is processed in the brain, and his current research continues to unravel novel insights about auditory processing and language.

Using all the tools available, including behavioral methods, fMRI, MEG, EEG, and ECoG, Dr. Poeppel believes in utilizing the technology that is most relevant to the question he is investigating. This straightforward approach to scientific inquiry has resulted in exciting research that seeks to understand how the brain forms the basis for language processing. Therefore, his work is helping determine the spatial and temporal maps that form the basis of healthy language processing that is a prerequisite to understanding both developmental and acquired speech language disorders which include, autism, dyslexia, CAPD, and strokes. Informed by linguistic theory, neurophysiology, experimental psychology, and various clinical concerns, Dr. Poeppel's research is grounded in...

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AFFILIATION



New York University

EDUCATION

- S.B., in Brain and Cognitive Sciences, 1989, Massachusetts Institute of Technology
- Ph.D., in Brain and Cognitive Sciences, 1995, Massachusetts Institute of Technology
- Post-doc, in Radiology, 1997, University of California, San Francisco

AWARDS

- Fellow, Wissenschaftskolleg zu Berlin (Institute for Advanced Studies), 2003
- DaimlerChrysler Berlin Prize, American Academy, 2004
- Fellow, American Association for the Advancement of Science, 2007

RESEARCH AREAS

Life Science, Neurological / Cognitive, Neurological / Cognitive

FUNDING REQUEST

Your contributions will fund the continued research of Dr. David Poeppel as he develops a new understanding of how language processing in the brain is broken up in space and in time. Donations will fund the necessary \$850K/year required for personnel, liquid helium for the MEG system, scanning costs, publications, and travel. Help fund research shifting paradigms in language processing!