

# SCIENTIFIC ANIMATION



C B I  
Centre de Biologie  
Intégrative - Toulouse

MOLECULAR, CELLULAR AND BEHAVIORAL NEUROSCIENCES AXIS

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### The Gestural Roots of Language: Communication in Primates & Hemispheric Specialization of the Brain

**Summary:** Whereas some researchers have suggested that language resulted from the evolution of the vocal system, this theory is now challenged by a growing number of authors supporting the "gestural origins" view. Such an alternative theory underlies the fundamental role of gestural communication in the first phylogenetic roots of language. In the present communication, I will review our previous and on-going works on the gestural and vocal behaviors in nonhuman primates, laterality as well as recent findings in anatomical brain imaging in chimpanzees and baboons. I will try to demonstrate that these data in ethology, comparative psychology and neurosciences speak not only for a specific significance of communicative gestures in the course of the language evolution and its hemispheric brain specialization but also for the "bimodal" origin of language with the progressive integration of the oro-facial and vocal control into the gestural intentional system.

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