

Cervello e linguaggio

ALBERTO OLIVERIO

Sapienza Università di Roma

Abstract

Brain and Language

The natural history of language dates back hundreds of thousands of years and depends on the evolution of brain areas selected to make us speak and understand words. On the contrary, the origins of writing are much more recent. It is for this reason that writing does not depend on the evolution of specific brain structures. If we read and write, we owe it to the fact that humans have used for this function areas of the parietal cortex involved in spatiality. Thanks to studies based on neuroimaging, it is now possible to identify the complexity of the nervous networks involved in linguistic functions. While once a decisive role was attributed to the cortical areas of Broca and Wernicke, today the role played by subcortical structures is unquestioned, especially that of basal ganglia. In particular, the analysis of motor and cognitive sequencing in the understanding of syntax indicates that the Broca area's effective control of language aspects and manual movements is a consequence of the relationship established with basal ganglia.

Keywords: language evolution; writing; genes; basal ganglia; cerebral cortex.