Origins of language: neurobiological evolution, socio-cultural development and their interactions

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In search of the origins of the function of language, various competences may receive attention as taking part in the mosaic emergence of this central human feature. A first distinction may be drawn between the development of the main *medium* of human communication - the vocal-auditory channel - and more central cognitive functions related to its semiotic, semantic and syntactic properties. Investigations may also be carried more or less independently on the neurobiological setting-up of language, and the cultural environment it gradually colonized and modified. Various sources of data, from linguistics and archaeology to neuroscience and primatology, address these aspects with their specificities, and therefore require, and will benefit from, integrative efforts to sketch out a relevant global scenario.

In this talk, we will deal with evidence and theories from various fields in order to investigate the evolutionary lines which led to anatomically and behaviourally modern humans. When and how did significant changes take place? Which pieces of the puzzle had since long been available and were recruited in a “mosaic” fashion? Which ones arose closer to us in time, and may be said to be unique to humans? Which clues may we find in the archaeological record to support one perspective or another? More precisely, we will report on studies on the development of the motor control of the tongue and of breathing, on P. MacNeilage’s conceptions regarding the reorganisation of language-related functions in brain areas, on R. Dunbar’s hypothesis on the evolution of the neocortex, and finally on the role possibly played by mirror neurons.

We will especially focus on the way scholars view interactions between neurobiological and socio-cultural evolutions and their dynamics, from abrupt genetic changes leading to dramatic cognitive transformations to culturally rooted and propagated innovations. These theoretical options will be discussed on the one hand in connection with cognitive paradigms highlighting embodied and distributed aspects of cognition, and on the other with on-going shifts in paleo-anthropological conceptions of the emergence of cultural modernity. This will help us in shaping general perspectives about the respective weights of cultural and biological structures in the emergence of language.