



Standing Committee for the Humanities

## **OMLL: The Origin of Man, Language and Languages**

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### ***The origins of primate semantic and syntactic abilities (CRP 01-JA33)***

- Ronald Noë, Laboratoire Ethologie et Ecologie comportementale de Primates CEPE (CNRS UPR 9010), Université Louis Pasteur, Strasbourg, France

#### Abstract:

Syntactic communication is a central distinctive feature of human language and it is therefore crucial to provide a detailed account of the emergence of this specific behaviour. Syntax allows a speaker to combine signals with existing meanings to create an infinite number of new meanings. Although syntactic rules have been found in animal communication they typically have not been linked to concurrent changes in meaning, a functional hallmark of human syntax. Recent field experiments from Ivory Coast suggest, however, that wild Diana monkeys comprehend the semantic changes caused by a syntactic rule present in the natural communication of another primate, the Campbell's monkey.

Campbell's males give acoustically distinct alarm calls to leopards and eagles and Diana monkeys respond to these calls with their own corresponding alarm calls. However, in less dangerous situations Campbell's males emit a pair of low, resounding boom calls before their alarm calls. Playbacks of "boom"-introduced Campbell's alarm calls, which normally elicit alarm calls from Diana monkeys, cease to do so, indicating that the booms change the semantic specificity of the subsequent alarm calls. These preliminary data suggest that in the natural communication of primates, some calls can be combined according to structural rules to form more complex utterances, and that these combinations are linked with underlying changes in meaning. However, the implications of these findings remain suggestive because it is not clear whether this pattern represents an isolated case or whether it is representative of primate communication and cognition in general.

Our objective is to continue and expand research on primate semantic and syntactic abilities involving more species living both in the Taï forest and at a second study site, the Gashaka Gumti National Park in Northern Nigeria. By investigating more species living under different ecological conditions, we seek to understand whether syntactically organised meaningful communication is a widespread and common feature in primate communication and cognition. We expect that these findings will be relevant for theories of human language evolution.