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ABSTRACTS

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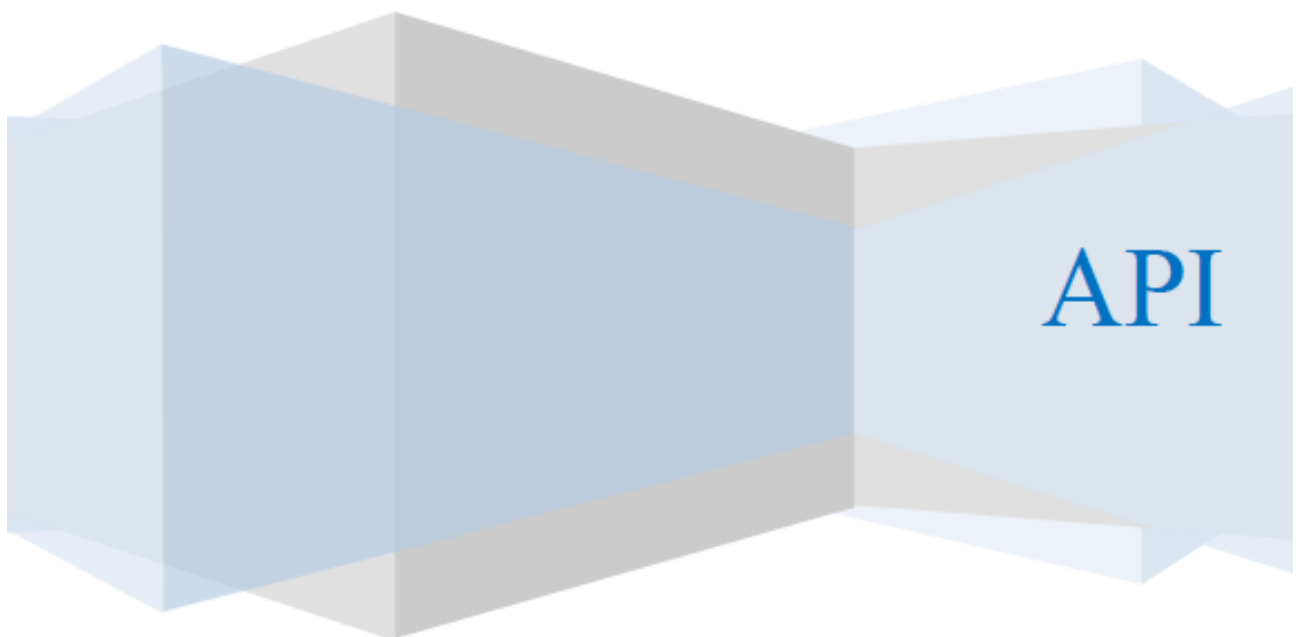
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Emotional contagion in parental bonding: an experimental approach on *Homo sapiens*

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In *Homo sapiens* the ability to share emotional states, known as empathy, is essential for building and preserving strong affiliative bonds between individuals. Emotional contagion represents a basic and unconscious form of empathy and emerges when the emotional state of an individual, communicated through facial expressions, arouses a similar state in the observer. Yawn contagion is a good indicator of emotional contagion. Empathic abilities seem to be skewed towards women, but no evidence is available on gender distribution of yawn contagion. This project investigates the role of yawn contagion as an indicator of parental empathy. We focused on gender differences by analyzing yawn responses evoked in the parents by videos showing yawns of their own (condition 1) or of an unrelated infant (condition 2). We expected mothers and fathers' responses to be higher in condition 1 than in condition 2 and women response to be higher than men's in both conditions. Parents yawned more frequently in response to their own infant yawns than to unrelated infant yawns. However, there was no difference between mothers and fathers in the frequency of response to an infant's yawn. Moreover, the generalized linear mixed model revealed that the frequency of yawn contagion depends not only on kinship, but also on the quality of parental investment (evaluated via questionnaires). Our results indicate that spending time together with the baby (e.g. physical contact), is fundamental for establishing and strengthening an emotional connection between parents and offspring. This could be the reason why we did not detect any differences in yawn contagion between mothers and fathers.

Key Words: Empathy • *Homo sapiens* • Emotional contagion • Yawn contagion • Gender differences

3D Geometric Morphometrics To Investigate Cercopithecini Evolution

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3D Geometric Morphometrics has been used on a preliminary dataset of 163 crania and 148 mandibles of primates. We sampled 27 species from Cercopithecidae and Hominidae, collected in 7 different museums. Our sampling campaign was carried on with the use of a 3D-digitizer Microscribe G2X and the data were processed through the software Morphologika.

The preliminary PCA analyses on crania highlight the presence of two different groups, which distinguish some *Chlorocebus* and Unknown *Cercopithecus* samples from all the others. Regarding on mandibular shape analyses, we found a tight cluster of *Cercopithecus* samples.

The "Sex" variable does not affect the reliability of the analysis, probably because interspecific differences are greater than intraspecific ones. In regard to the "Age" variable, it can be notice that "infant" samples gather separated from "adult" ones, while "juveniles" lie in the middle.

The morphometric methodology is very useful for evolutionary study, especially when the taxonomy of some samples is unknown. Furthermore, this is the first morphometric study on a so-wide survey of the entire Cercopithecini tribe.

Key Words: Geometric Morphometrics · Cercopithecini · Evolution · Crania · Mandibles