

Play Picture Making Music Emotional Enrichment (PME) as Wellness Improvement in Captive Non-human Primates

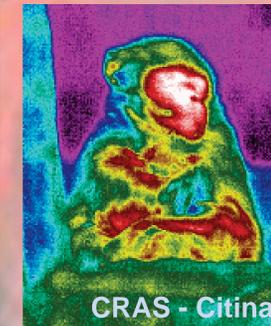
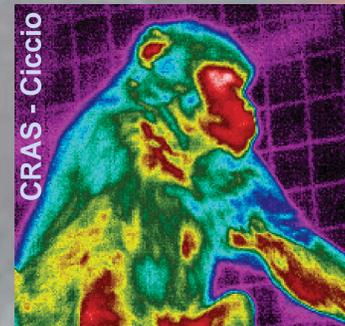
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PME is an experimental enrichment proposed for non-human primates in captivity, through free painting activity, music (earing and playing), play and interspecies relationship as mediators. It is based on the hypothesis that the individual psychological and social welfare could be improved by having fun playing, freely expressing one-self through art materials (multi-level stimulants) and creativity (that tends to integrate perception, thoughts and feelings). The artistic and relational mediators also stimulate self and group interaction.

Facial images (FI) of *Macaca sylvanus* were acquired by a thermo-camera before and during PME. Surface temperature changes (emotional variation index), were codified as bi-dim matrix and elaborated (devoted interactive software as imageJ).

Method:

- A – Accurate clipping of the scene around the facial zone
- B – Evaluation of the mean temperature of the clipped area pre/post any PME session
- C – Calculation of possible mean differences



- Method:
- A - free access to materials
 - B - no coercion
 - C - no reinforcement
 - D - respectful interaction human-non human.

PME has been tested with:

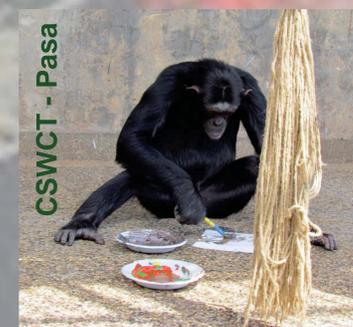
CHIMPANZEE
 Ngamba Island
 Chimpanzee Sanctuary
 CSWCT (2012-13)
 11 *Pan troglodytes*: 5 F, 4 M, 2 F babies
 84 work sessions (WS) of variable length (20–70 min)
 2012: 43 WS - 2013: 41 WS

CHIMPANZEE & GORILLA
 Ape Action Africa
 Mefou Reserve
 (2015)
 2 *Pan troglodytes*: 2 M (19 WS)
 2 *Gorilla gorilla gorilla*: 2 F (8 WS)
 27 WS of variable length (30-60 min)

MACAQUE - CRAS Bernezzo (Cn)
 A simplified method (music, play and interspecies interaction) was also proposed in a colony (4 *Macaca sylvanus*, 2 M, 2 F)

The PME's participants generally proved to busily appreciate the work, expressing interest in artistic materials, involvement and enterprising spirit. They had different approach to materials, personal style in painting and in playing music, a reduction of anxious or compulsive behaviors during the work sessions.

FI showed emotional variations pre/post PME, especially during temperate climate days.



This research complied with the European Directive 2010/63/EU and the International Primatological Society (IPS) Guidelines for the Use of Nonhuman Primates in Research.

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