**CORRESPONDENCE**

**Triggers for better science: there is no place for maternal deprivation in ethical scientific practice**

Corresponding authors:

Gal Badihi1 & Catherine Hobaiter1, on behalf of the attached list of co-authors

1 Wild Minds Lab, School of Psychology & Neuroscience, University of St Andrews, Scotland

Correspondence: Catherine Hobaiter, Wild Minds Lab, School of Psychology & Neuroscience, University of St Andrews, KY16 9JP; +44 1334 462053; clh42@st-andrews.ac.uk

**To the Editors** – We are writing regarding the article by Margaret S. Livingstone: “Triggers for Mother Love” (1), published in PNAS on September 19th 2022. We were extremely disappointed and saddened that such an article could be published in this day, particularly as it was chosen as an Inaugural Article for a member elected to the NAS, a prestigious position of influence, and an opportunity to laud the best of our science.

After decades of philosophical discussion (2,3) and rigorous scientific research (4) our scientific community, including the journals supporting our work, should know better than to publish a study that upholds such unethical practices.

As a group of animal behaviour scientists, including primatologists with 100s of years of cumulative research experience, we believe the time for this unethical treatment of nonhuman animals for research is over. High impact journals, like PNAS, have a responsibility not only to their academic community, but also to the nonhuman animal subjects on who we rely for our studies. Indeed, Livingstone noted “it is clear when monkeys are distressed: They vocalize, pace, and act aggressive”. We have decades of research on the importance of the mother-infant bond (5), highlighting its particular importance in primates (6). An entire field of primate thanatology explores the psychological significance of the impact of death (7). Wild observations have shown us primates mourn dead social partners (8) and that mothers form long-lasting attachments to offspring, even after death; sometimes even carrying objects, apparently in place of a dead infant (9).

We have a well-established case for the importance of maternal bonding. Experiments like this do not add any meaningful contribution to our knowledge of primate or human behaviour. This study is obviously outdated. More than half the literature is over 50-years old, and many of these studies, uncritically presented by Livingstone, have been condemned by philosophers for decades for their unethical treatment of animals and lack of contribution to scientific knowledge (2).

We understand this paper exploited the permanent separation of mothers and infants undertaken for separate work. There is no lesser obligation to consider the ethical impact of our work when it is derived from pre-existing data or opportunities. We were disturbed that any ethics committee approved original experiments requiring isolation of pregnant mothers and maternal separation so soon after birth. And further disturbed PNAS published a paper on subsequent interventions with no specific ethical approval.

We understand that regulations vary substantially between institutions and countries. But we ask that you, as a journal, do better (10). Human experiments universally require consent from subjects. We cannot ask monkeys for consent, but we can stop using, publishing, and in this case actively promoting cruel methods that knowingly cause extreme distress. “Doing science to promote welfare becomes a moral obligation. It is what we owe the animals who live with us, given our autonomy violations in the past” (3)

We ask that PNAS retract Professor Livingstone’s article due to the unethical practices and research standards it promotes and its failure to advance scientific knowledge.

**References**

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