Published in final edited form as:

Appl Anim Behav Sci. 2011 January 15; 129(1): 55–56. doi:10.1016/j.applanim.2010.11.008.

A Response to the Influence of Observer Presence on Baboon (*Papio spp.*) and Rhesus Macaques (*Macaca mulatta*) Behavior: A Comment On

Corrine Lutz and

Southwest National Primate Research Center, Southwest Foundation for Biomedical Research, P.O. Box 760549, San Antonio, TX 78245, USA, clutz@sfbr.org Phone: (210) 258-9729 Fax: (210) 475-4339

Christian Nevill

Southwest National Primate Research Center, Southwest Foundation for Biomedical Research, P.O. Box 760549, San Antonio, TX 78245, USA

The intent of our study (Iredale et al., 2010) was to assess the effect of an observer on the behavior of two primate species housed in a laboratory setting when on biomedical research protocols requiring single housing. This was done in order to determine the most accurate and effective way to monitor the behavior of primates under these conditions. The application of the results is intended to help those collecting behavioral data on primates under similar conditions to make informed decisions when evaluating behavior and assessing psychological well-being as part of a larger animal care program.

Given that the findings of this research were intended for application in a laboratory setting, it would not have served the aims of the study to conduct observations on group-housed animals in larger enclosures. As noted in the manuscript, this study was conducted at an Association for Assessment and Accreditation of Laboratory Animal Care-accredited institution, and the study protocols to which the subjects were assigned, both biomedical and behavioral, were Institutional Animal Care and Use Committee (IACUC) approved. We were allowed access to these animals for the purpose of behavioral data collection while they took part in a biomedical research study requiring single housing. The subjects were singly housed for the duration of the biomedical studies to which they were assigned. Though it required 10 months to collect data on all of the individuals, as stated in the manuscript, each animal was only observed for a total of 2 hours over 4 days. In her Letter to the Editor, Hawkins speculated as to whether the animals were isolated at any point during these studies, but this was not the case. At all times, animals had visual, auditory, and olfactory contact with conspecifics.

As noted by Hawkins, housing in this study was acceptable according to the new Institute of Laboratory Animal Resources guide (National Research Council (NRC), 2010). Whether or not the cage sizes recommended in the Guide are adequate is a discussion outside the scope of this study. Though asserted otherwise, these cages provided ample room for hanging food puzzles, manipulanda such as Kong toys or plastic balls, and fixed metal perches built into

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

the cage, all of which were intended to encourage species-typical behavior and cognitive stimulation as described in Section 2.1 of the manuscript.

Hawkins also expressed concern about the apparently high level of abnormal behavior recorded, particularly with the macaques. To reiterate, behavioral data were collected on each animal for 30 min per day over 4 days using a 30-s point sampling method. This yielded a total of 240 point samples per animal. As stated in section 2.3, the values in parentheses are the back-transformed SQR mean. Therefore, the value of 14.28 in section 3.1, represents the untransformed average number of point samples of abnormal behavior. As a percentage of total time points, this represents 5.95%. While Hawkins claims this level to be high, it is actually lower than the amounts of abnormal behavior expressed by macaques in similar housing situations at other facilities; 19.6% (Baker et al., 2009), 436 s/1800 s or 24.2% (Bayne et al., 1991).

Concern was also raised because female macaques spent most of their observations perched high in the rear corner of their cages in what is implied to be a protracted fear response reinforced by their interaction with humans. However, as stated in Section 2.1 of the manuscript, the observer in this study was unfamiliar to the subjects and not a regular caretaker that they had experience with on a daily basis. As each animal was only exposed to the observer sitting directly in front of their cage for a total of 1 h (two, 30-min sessions) for the purposes of this study, it is unreasonable to assume that this was a fear response generalized to all humans that persisted for up to 10 months as suggested by Hawkins. Regardless of housing conditions, it is important to accurately assess behavior as part of a comprehensive animal management program. Because some biomedical research requires subjects to be singly housed indoors, often in close proximity to humans for data collection, it is crucial to understand the effect human presence has on the behavior of these animals.

In conclusion, the behavioral assessment of individually housed primates under laboratory conditions is important for monitoring their well-being. An understanding of the effect observation methods have on the behavior of these primates is necessary for developing accurate assessment procedures. Data collected from group-housed animals in large enclosures, as recommended by Hawkins, would have produced irrelevant data for our purposes. This study was IACUC approved with housing following the version of the Guide in effect at the time the study was conducted (NRC, 1996), and the animals benefited from a comprehensive enrichment program. The subjects, housing, and methodology used to conduct this study were appropriate for its intent and yielded results that are both valid and relevant.

References

- Baker KC, Blooms Smith M, Neu K, Griffis C, Maloney M, Oettinger B, Schoof VAM, Martinez M. Positive reinforcement training moderates only high levels of abnormal behavior in singly housed rhesus macaques. *J Appl Anim Welfare Sci* 2009;12:236–252.
- Bayne K, Mainzer H, Dexter S, Campbell G, Yamada F, Soumi S. The reduction of abnormal behavior in individually housed rhesus monkeys (*Macaca mulatta*) with a foraging/grooming board. *Am J Primatol* 1991;23(1):23–35.
- Iredale SK, Nevill CH, Lutz CK. The influence of observer presence on baboon (*Papio* spp.) and rhesus macaque (*Macaca mulatta*) behavior. *Appl Anim Behav Sci* 2010;122:53–57. [PubMed: 20228948]
- National Research Council. Guide for the Care and Use of Laboratory Animals. 7th. National Academy Press; Washington D.C.: 1996.
- National Research Council. Guide for the Care and Use of Laboratory Animals. 8th. National Academy Press; Washington D.C.: 2010.