Quality and function of affiliative actions in non-human primates

- **Supervisors:** Dr Alexander Mielke
- **Studentship Funding:**
  - **Name:** SBBS Studentship
  - **Funder:** *School of Biological and Behavioural Sciences*
- **Application Deadline:** 23:59PM on 25th October 2024
- **Expected Start Date:** January 2025

Project Overview

Applications are open for a **3-Year** funded PhD Studentship in the School of Biological and Behavioural Sciences (SBBS) at Queen Mary University of London.

This project will investigate how different cooperative and affiliative actions are used in non-human primates, whether we can detect qualitative differences in who uses them and when, and how these differences affect social outcomes in the short and long term.

Humans can judge the quality of social relationships by observing others, based on the quality of single interactions (Suvilehto et al., 2015). Also, different context might call for a different, highly specific action, with failure to use the correct one violating social norms (e.g., using a fist-bump to console someone). Non-human primates also have highly differentiated social relationships that affect many aspects of their wellbeing and fitness (Silk, 2014). Individuals are thought to negotiate their relationships through a number of cooperative interactions (e.g., grooming, food sharing) and affiliative actions (e.g., embraces, touches, kisses). However, studies investigating social relationships have relied on long term distributions of grooming to assess which individuals are friends (Massen et al., 2010), largely ignoring dozens of other affiliative actions that all primates seem to possess. This removes the nuance available to individuals, both in which actions to choose and how to structure them – we make the assumption that one grooming bout is equivalent to any other, and that a hug and touch have the same function. This reduction creates one-dimensional representations of social life that might hide the true dynamism and flexibility available to other species.

To create more nuanced measures of sociality, we need to test whether we can discern different 'types' of common interactions like grooming based on qualitative measures (Mielke et al., 2024), and how these types and affiliative actions represent specific relationships, influence other interactions they are woven into (e.g., consolation), or how their strategic use influences wider aspects of individual success (e.g., social integration, rank attainment, access to resources).

This project aims to answer the following questions:

1) What is the function of different cooperative and affiliative actions in primate social interactions?
2) Do short-term outcomes of interactions depend on the choice of affiliative action?
3) Are long-term outcomes (e.g., relationship formation, social integration, captive welfare) affected by cooperative and affiliative choices?

Research questions can be adapted based on PhD student interests and skills. As part of this PhD project, you would be mainly using observational and video data to answer the research questions; mathematical modelling approaches can also be accommodated. Depending on your interest,

experience, and skills, the project can involve either existing datasets or include a (field or captive) data collection phase (please indicate your interests in the Personal Statement).

Find out more about the School of Biological and Behavioural Sciences on our website.

Keywords:
Primates; Cooperation; Sociality; Cognition; Behaviour

Research Environment

The School of Biological and Behavioural Sciences at Queen Mary is one of the UK's elite research centres, according to the 2021 Research Excellence Framework (REF). We offer a multi-disciplinary research environment and have approximately 180 PhD students working on projects in the biological and psychological sciences. Our students have access to a variety of research facilities supported by experienced staff, as well as a range of student support services.

The Mielke Lab studies how non-human primates communicate and cooperate. We are using observational data (field observations, videos, camera traps) to understand the social decision processes underlying interactions, and how these stack up to form the network of social relationships that individuals are embedded in. This often involves developing new methods and statistical models that allow us to understand complex and sequential data. You can find out more here.

The successful applicant will learn a diverse set of skills including observational data collection, behavioural data analysis, video coding, computational modelling and statistical modelling, coding (R, Python), and academic writing and presentation. The lab sets a strong focus on open science practices. Additionally, PhD students become part of the Queen Mary Doctoral College, which provides further training and development opportunities.

Find out more about the School of Biological and Behavioural Sciences on our website.

Entry Requirements & Criteria

We are looking for candidates who have or are expecting to receive a first or upper-second class honours degree and a Master's degree in an area relevant to the project, such as Animal Behaviour, Psychology, or Biology. Experience working with primates is desirable, especially if the candidate would conduct field observations.

Experience in analysing behavioural or experimental data using R or Python would be highly advantageous. Find out more about our entry requirements here.

Applicants from outside of the UK are required to provide evidence of their English language ability. Details can be found on our English Language requirements page.

Funding

The studentship is funded by the School of Biological and Behavioural Sciences. It will cover home tuition fees and provide an annual tax-free maintenance allowance for 3 years at the UKRI rate (£21,237 in 2024/25).

To classify for Home Fees, this typically means the candidate will have unrestricted access on how long they can remain in the UK (i.e. are a British National, have settled, or pre-settled status, have indefinite leave to remain etc.)

International students will need to cover the difference in fees between the home and overseas basic rate from external sources. Further details can be found on our PhD Tuition Fees page.

Funding and eligibility queries can be sent to the sbbs-pgadmissions@qmul.ac.uk

How to Apply

Formal applications must be submitted through our online form by the **stated deadline** for consideration.

Applicants are required to submit the following documents:

- Your CV
- Personal Statement
- References
- Copies of academic transcripts and degree certificates

Find out more about our application process on our SBBS website.

Informal enquiries about the project can be sent to Alexander Mielke at a.mielke@qmul.ac.uk

Admissions-related queries can be sent to sbbs-pgadmissions@qmul.ac.uk.

Apply Online

The School of Biological and Behavioural Sciences is committed to promoting diversity in science; we have been awarded an Athena Swan Silver Award. We positively welcome applications from underrepresented groups.

http://hr.qmul.ac.uk/equality/
https://www.qmul.ac.uk/sbbs/about-us/athenaswan/

References

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