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Background

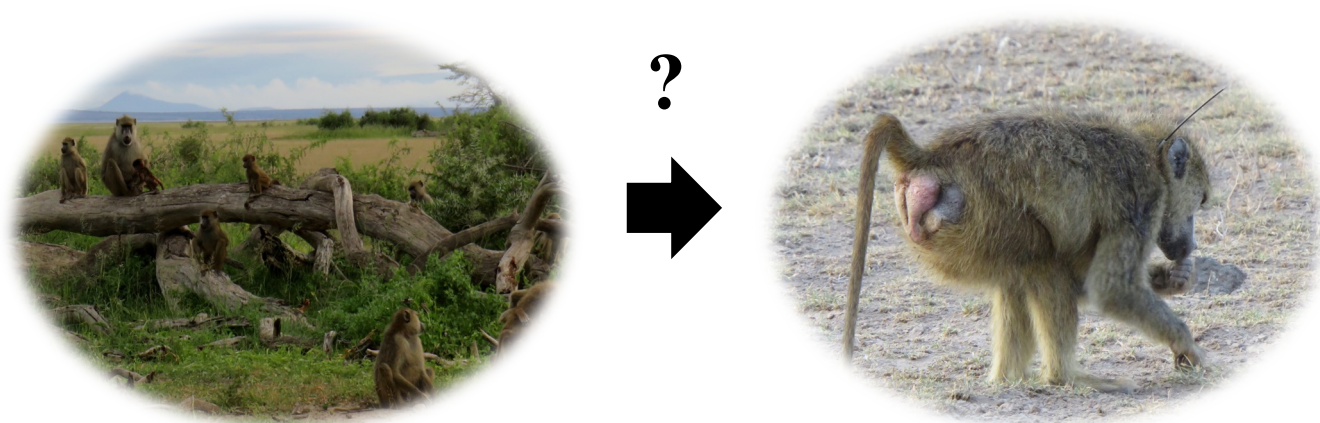
Are group social traits linked to foraging efficiency? The social environment can have health and survival benefits for animals [1], however, the mechanisms linking them are unclear [2]. One possibility is that being social offers foraging benefits: within social groups, close social partners in the network can provide information about how and where to access resources, and large groups may gain an advantage in inter-group competition [3,4].

Hypotheses

Due to the benefits of social living (e.g., information sharing and inter-group competition) we hypothesized:

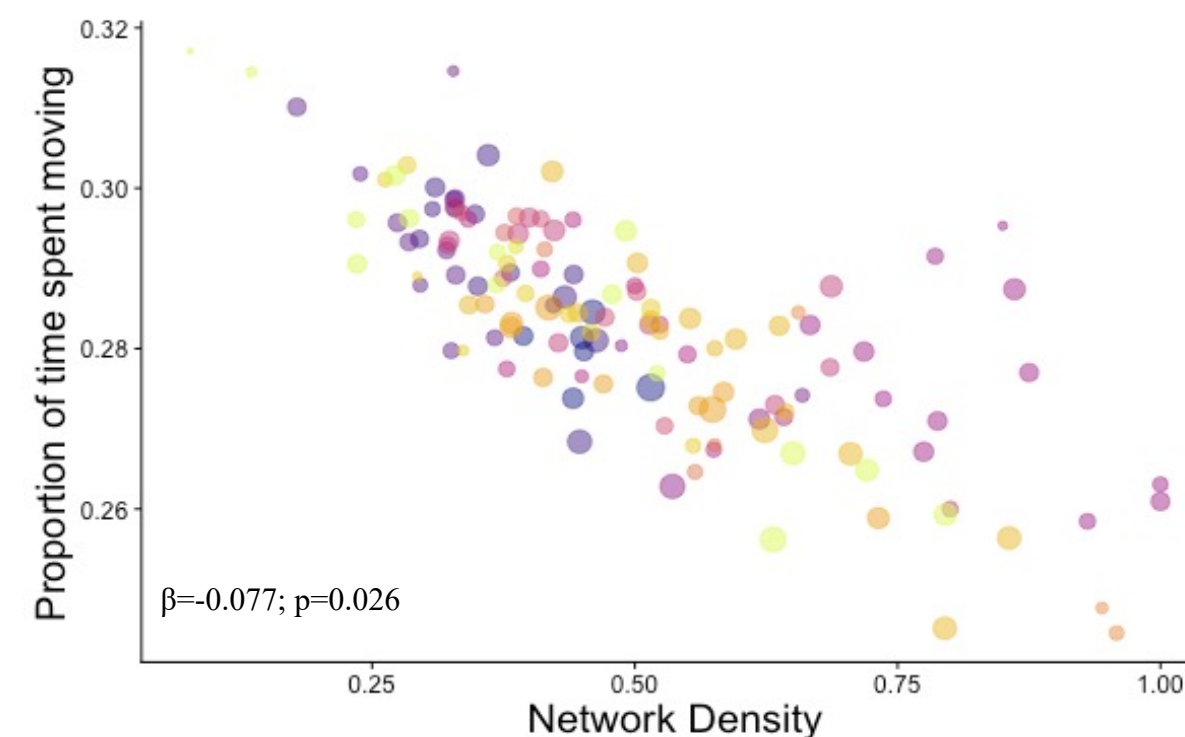
H1: Individuals in large and well-connected groups will have enhanced foraging efficiency.

H2: Individuals in large and well-connected groups will feed on higher quality foods.

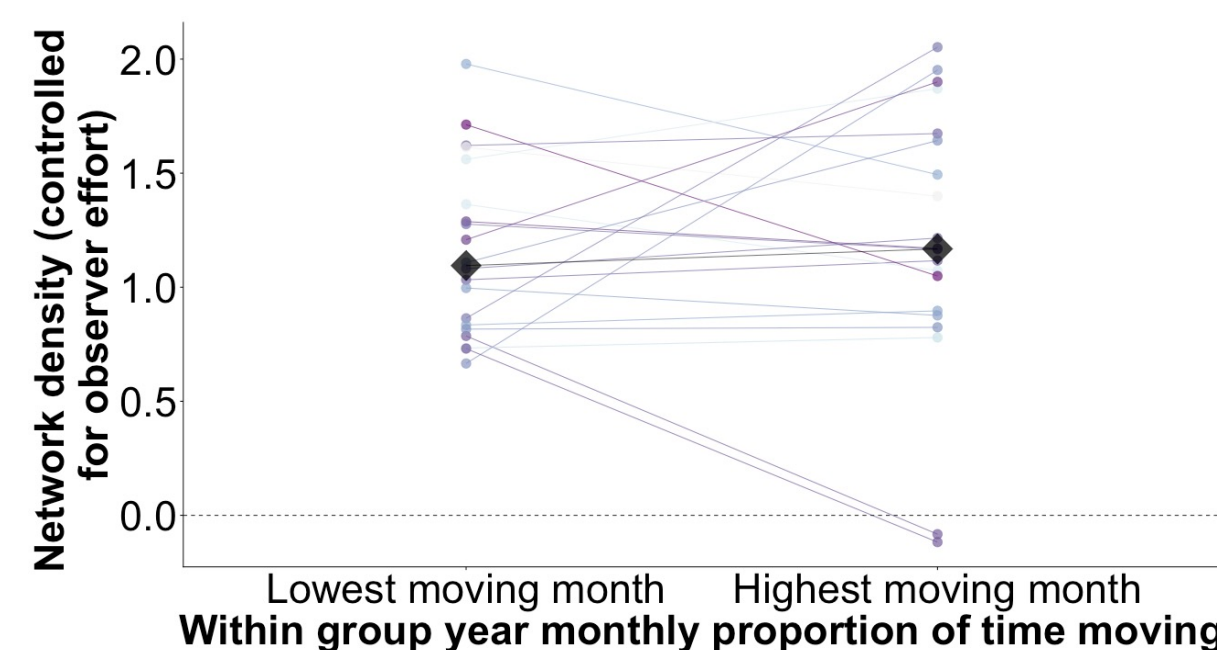


Results

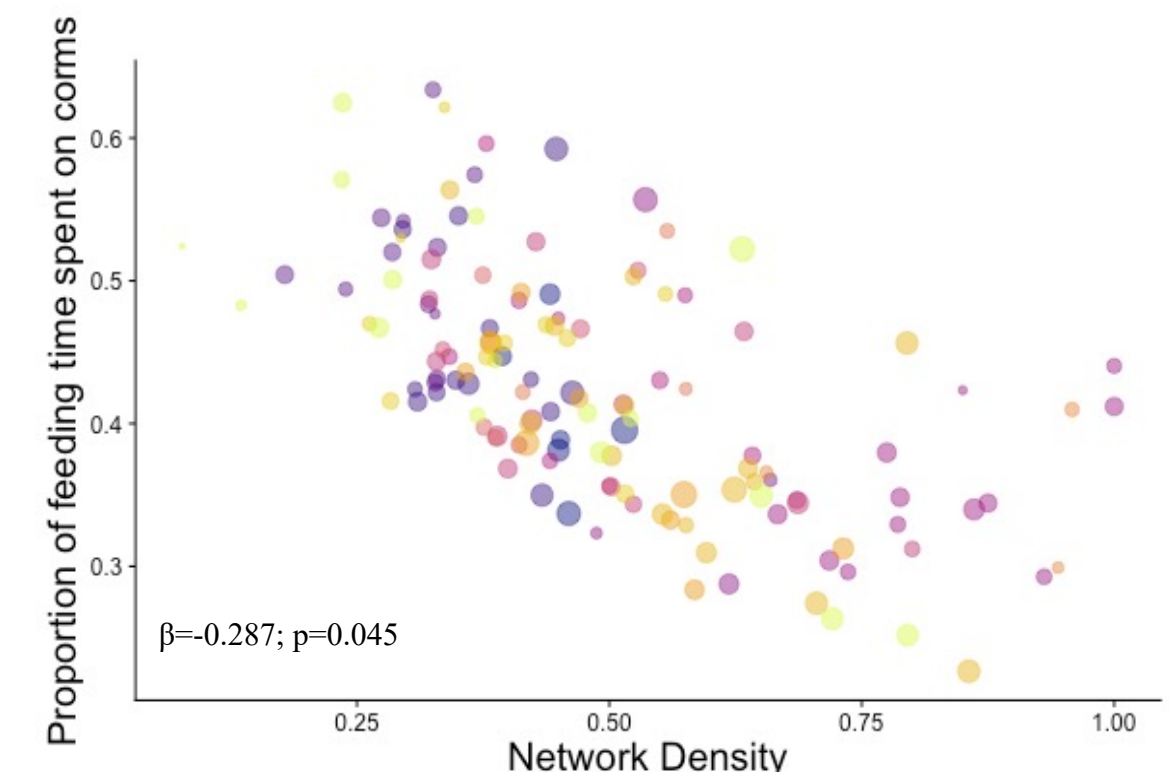
H1: Group size did not predict any foraging efficiency outcome while **network density** was negatively associated with the proportion of time females spent moving without feeding



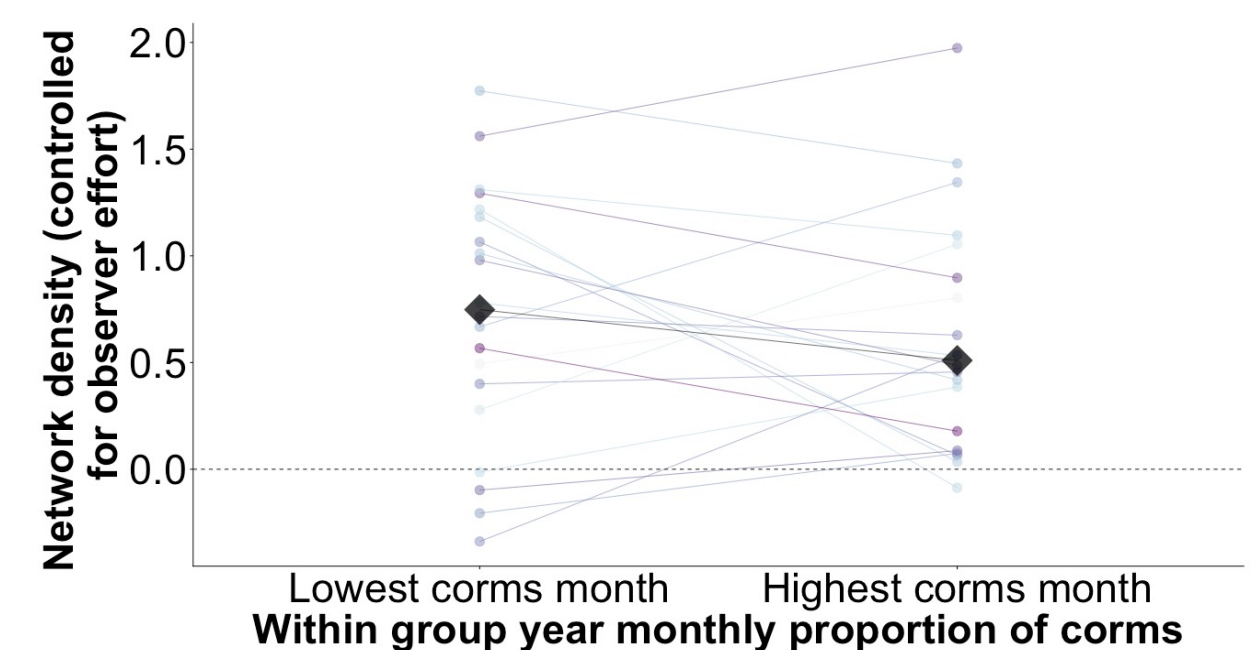
Evidence from within group years does not suggest reverse causality: groups do not socialize less when moving more



H2: Group size did not predict diet quality while **network density** was negatively associated with the proportion of feeding time females spent on energy-intensive foods (i.e., corms [7])



Evidence from within group years might suggest reverse causality: groups socialize less when eating more corms



Methods

- Data for 17 baboon social groups over 134 group years spanning from 1983 to 2021 in Amboseli
- Used GEEs to model foraging outcomes related to foraging efficiency (H1) and diet quality (H2) [5,6]
- Fixed effects: group size, network density, observer effort, average daily rainfall

Conclusion & Future Work

- Network density better predicts foraging outcomes than group size
- Two explanations: H1 – dense networks allow for efficient movement; H2 – individuals in groups spending less time on energy-intensive foods can spend time expanding their social network
- Future work could quantify effect of these foraging outcomes on individual proxies of health

Acknowledgements

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References

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