

DYNAMIC LANDSCAPE PARTITIONING AMONG BABOON SOCIAL GROUPS

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Most primates live in relatively stable social groups, and for many species these groups occupy partially overlapping homeranges. This non-exclusivity raises critical questions about when and how groups temporally partition the landscape. One hypothesis is that group-level social dominance hierarchies function to resolve intergroup resource competition, thus proximately affecting the allocation of resources among social groups and ultimately affecting intergroup variability in fitness. Here, we provide an initial evaluation of both the dynamics of space-use over time and the factors influencing group-level dominance in wild baboons (*Papio cynocephalus*) in Amboseli, Kenya. In addition to utilizing long-term ecological, life history, and behavioral data available through the Amboseli Baboon Research Project, we collected novel data using geographic information system (GIS) tools to automatically record the locations of numerous groups on a pre-determined, synchronous schedule. Close spatial proximity between social groups occurred less often than predicted if groups moved randomly and independently of each other, suggesting an avoidance-based social spacing pattern. Further, when intergroup agonisms did occur, group dominance was predicted both by asymmetries in group size and interaction location such that competitive advantage was experienced by groups with relatively more members and/or groups that were within the core of their homerange. Together, these findings highlight the potential importance of both direct and indirect intergroup competition in shaping group-level space-use strategies and movement decisions.

Keywords: intergroup dominance, geographic information system (GIS), *Papio cynocephalus*, spatial ecology