



Supplementary Information for

Experimental evidence for delayed contingent cooperation among wild dwarf mongooses

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Tables S1 to S3

Table S1. Output from (A) permutation tests comparing real matrices with 1,000 randomly permuted matrices, and (B) Mantel tests comparing correlations between the two halves of a matrix. CV=coefficient of variation; significant outputs and groups used in future analyses shown in bold.

Group	(A) Permutation tests			(B) Mantel tests
	CV observed	CV random	<i>P</i>	<i>P</i>
A	0.80090	0.46446	0.0005	0.047
B	0.85795	0.63409	<0.0001	0.002
C	0.57519	0.30442	0.0005	0.622
D	0.65460	0.45878	0.001	0.008
E	0.92474	0.66890	<0.0001	0.016
F	0.89149	0.79099	0.0005	<0.001
G	1.14502	1.06529	0.047	0.060
H	1.18655	0.94469	<0.0001	<0.001
I	0.69211	0.55805	0.002	0.0005
J	0.66690	0.51340	0.0015	0.030
K	0.94725	0.68659	0.001	0.050
L	0.62081	0.44464	0.001	0.007

Table S2. Model output from linear mixed models (LMMs) investigating whether (A) total grooming duration, (B) number of grooming bouts and (C) mean grooming bout duration are predicted by the amount of sentinel behaviour conducted by different individuals ($N=49$ individuals, 10 groups). LMMs for (A) and (B) were conducted on the proportions of group-grooming. Significant fixed terms shown in bold; variance \pm SE reported for random terms.

	Fixed effect	Effect\pmSE	<i>df</i>	χ^2	<i>P</i>
(A) Total grooming duration					
Minimal model	(Intercept)	0.50 \pm 0.06			
	Group size	-0.02\pm0.01	1	9.28	0.002
	Sentinel contribution	0.54\pm0.23	1	5.25	0.022
Dropped terms	Sex		1		
	Dominance status		1		
Random terms	Group	0.00 \pm 0.00			
	Individual	0.00 \pm 0.07			
(B) Number of grooming bouts					
Minimal model	(Intercept)	0.49 \pm 0.06			
	Group size	-0.02\pm0.01	1	10.25	0.001
	Sentinel contribution	0.64\pm0.21	1	8.84	0.003
Dropped terms	Sex		1		
	Dominance status		1		
Random terms	Group	0.00 \pm 0.00			
	Individual	0.00 \pm 0.04			
(C) Mean grooming bout duration					
Minimal model	(Intercept)	30.35 \pm 1.29			
Dropped terms	Dominance status		1	0.562	0.454
	Sex		1	0.509	0.476
	Sentinel contribution		1	0.356	0.551
	Group size		1	0.040	0.842
Random terms	Group	10.27 \pm 3.21			
	Individual	6.47 \pm 2.54			

Table S3. Model output from linear mixed models investigating whether network measures (A) normalized weighted degree and (B) eigenvector centrality are predicted by the amount of sentinel behaviour conducted by different individuals ($N=49$ individuals, 10 groups). Significant fixed terms shown in bold; variance \pm SE reported for random terms.

	Fixed effect	Effect\pmSE	<i>df</i>	χ^2	<i>P</i>
(A) Normalized weighted degree					
Minimal model	(Intercept)	0.62 \pm 0.09			
	Group size	-0.04\pm0.012	1	10.35	0.001
	Sentinel contribution	0.55\pm0.23	1	5.48	0.019
Dropped terms	Sex		1	1.62	0.204
	Dominance status		1	0.08	0.781
Random terms	Group	0.00 \pm 0.04			
	Individual	0.00 \pm 0.05			
(B) Eigenvector centrality					
Minimal model	(Intercept)	0.43 \pm 0.07			
	Group size	-0.02\pm0.01	1	13.39	0.0002
	Sentinel contribution	0.92\pm0.24	1	5.30	0.021
Dropped terms	Sex		1	1.91	0.168
	Dominance status		1	0.00	0.948
Random terms	Group	0.00 \pm 0.00			
	Individual	0.00 \pm 0.04			