

Supplementary Material

Llamas use social information from conspecifics and humans to solve a spatial detour task

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Table S1. Results from binomial GLMM with success and failure as response variable (using *cbind*-function) with minimum and maximum of estimates after dropping one individual at a time.

Term	Estimate	SE	Lower CI	Upper CI	Chisq	df	p-value	Min.	Max.
Intercept	-4.443	1.764	-23.579	-1.789			¹	-5.446	-4.136
Condition (conspecific)	4.068	2.096	0.463	22.906				3.348	5.022
Condition (human) ²	4.235	2.150	0.654	22.992	6.658	2	0.036	3.486	5.209
Age ³	0.198	0.780	-1.640	2.345	0.064	1	0.800	2.453	3.653

¹ not shown due to limited interpretability

² test for overall effect of condition is depicted

³ age was z-transformed to a mean of 0 and a standard deviation of 1. Original variable: 2-18 yrs.

Table S2. Model stability estimates of poisson GLMM with number of successful trials as response variable. Minimum and maximum estimates after dropping one individual at a time.

Term	Estimate	Min	Max
Intercept	-2.021	-3.397	-1.017
Condition (conspecific)	1.274	0.319	2.376
Condition (human)	1.213	-0.256	2.361
Age	0.068	0.000	0.394

Table S3. Test for proportional hazards assumption of the Cox regression model for the latency to success in llamas.

Term	Chisq	df	p-value
Trial	1.397	1	0.24
Condition	1.496	2	0.47
Trial x Condition	0.913	2	0.63
Global	3.123	5	0.68

Table S4. Results of full model for distracted behaviours (GLMM with beta error distribution) with minimum and maximum model estimates after dropping one individual at a time.

Term	Estimate	SE	Chisq	df	p-value	Min	Max
Intercept	0.476	0.346			¹	0.184	0.685
Success	-1.937	0.572			¹	-2.146	-1.430
Condition (conspecific)	-0.559	0.313			¹	-0.772	-0.411
Condition (human)	-1.109	0.350			¹	-1.326	-0.937
Age ²	0.390	0.121	9.913	1	0.002	0.288	0.497
Trial	-0.119	0.133	0.797	1	0.372	-0.168	-0.031
Condition (consp) x Success	0.728	0.676				0.236	0.968
Condition (human) x Success ³	0.622	0.687	1.271	2	0.530	0.121	1.091

¹ not shown due to limited interpretability

² age was z-transformed to a mean of 0 and a standard deviation of 1. Original variable: 2-18 yrs.

³ test for overall effect of condition is depicted

Table S5. Model stability estimates of beta GLMM with proportion of food-directed behaviours as response variable. Minimum and maximum estimates after dropping one individual at a time.

Term	Estimate	Min	Max
Intercept	-2.372	-2.434	-2.207
Success	1.882	0.714	2.355
Condition (conspecific)	0.385	-0.007	0.596
Condition (human)	0.608	0.346	0.823
Age	-0.362	-0.413	-0.281
Trial	0.065	0.013	0.110
Condition (consp) x Success	-0.804	-1.179	0.462
Condition (human) x Success	-2.154	-2.594	-0.953

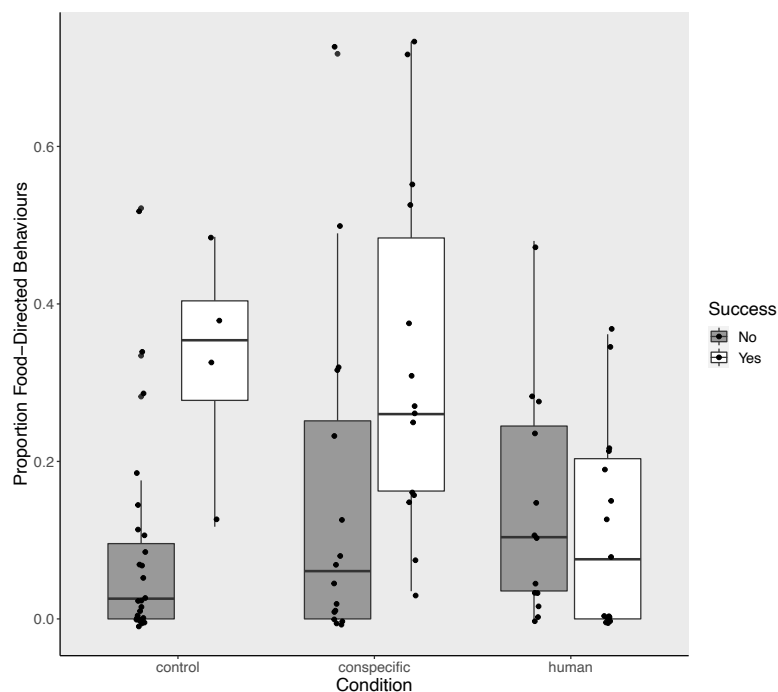


Figure S1. Proportion of food-directed behaviours (duration behaviour/ total trial duration) shown across test conditions. Success and failure within a trial are plotted separately (grey = failure; white = success). Black points represent raw data. Black bar depicts median, boxes indicate interquartile range and whiskers show upper and lower hinges.