

Supplementary Table 1. Statistical models for behaviour, weather and visitors under different conditions

Model	Chisq	Df	Pr(>Chisq)
Behaviour			
Agonistic	115	7	6.69e-22 ***
Affiliative	28.9	7	0.0001***
Body care	14.8	7	0.04*
Locomotion	88.04	7	3.12e-16 ***
Stationary	96.5	7	5.78e-18 ***
Diverse	33.7	7	1.99e-05 ***
Other	22.5	7	2.06e-03**
Feeding	14.3	7	0.04 *
Weather			
Agonistic	14.8	3	2.03e-03 **
Affiliative	4.57	3	0.21
Body care	18.7	3	0.0003 ***
Locomotion	17.4	3	5.89e-04 ***
Stationary	32.7	3	3.77e-07 ***
Diverse	14.3	3	2.55e-03**
Other	3.71	3	2.95 e-01*
Feeding	3.55	3	0.31
Visitor			
Agonistic	5.77	1	1.62e-02 **
Affiliative	1.69	1	0.19
Body care	2.79	1	0.09
Locomotion	0.45	1	5.03e-01 ***
Stationary	3.79	1	5.17e-02 ***
Diverse	12.2	1	4.75e-04 **
Other	24.6	1	7.00e-07 *
Feeding	1.46	1	0.23

Supplementary Table 2. The mean frequency per hour of state behaviours.

Condition	Agonistic (M ± SEM)	Affiliative (M ± SEM)	Diverse (M ± SEM)
Baseline	4.86 ± 0.74	1.99 ± 0.55	7.25 ± 0.92
No enrichment	1.93 ± 0.40	1.65 ± 0.45	3.98 ± 0.53
Large carcass	10.4 ± 1.56	5.88 ± 1.02	6.04 ± 0.83
Basketball	0.24 ± 0.14	0.71 ± 0.56	3.64 ± 0.71
Forage box	1.25 ± 0.74	0.49 ± 0.25	3.47 ± 0.78
Mirror	0.69 ± 0.27	0.27 ± 0.16	2.39 ± 0.55
Tube feeder	0.28 ± 0.21	0.38 ± 0.23	3.80 ± 0.78
Twig ball	1.52 ± 0.62	0.95 ± 0.50	1.52 ± 0.45

Supplementary Table 3. The mean duration per hour of event behaviours.

Condition	Body care (M ± SEM)	Locomotion (M ± SEM)	Stationary (M ± SEM)	Other (M ± SEM)	Feeding (M ± SEM)
Baseline	0.20 ± 0.02	0.03 ± 0.00	0.53 ± 0.02	0.01 ± 0.00	0.06 ± 0.01
No enrichment	0.19 ± 0.01	0.02 ± 0.00	0.63 ± 0.02	0.00 ± 0.00	0.03 ± 0.01
Large carcass	0.16 ± 0.02	0.03 ± 0.00	0.50 ± 0.03	0.00 ± 0.00	0.16 ± 0.02
Basketball	0.15 ± 0.02	0.00 ± 0.00	0.77 ± 0.02	0.00 ± 0.00	0.00 ± 0.00
Forage box	0.19 ± 0.02	0.01 ± 0.00	0.73 ± 0.02	0.00 ± 0.00	0.00 ± 0.00
Mirror	0.24 ± 0.02	0.01 ± 0.00	0.60 ± 0.03	0.00 ± 0.00	0.05 ± 0.01
Tube feeder	0.28 ± 0.03	0.01 ± 0.00	0.62 ± 0.03	0.00 ± 0.00	0.00 ± 0.00
Twig ball	0.27 ± 0.02	0.01 ± 0.00	0.63 ± 0.03	0.00 ± 0.00	0.02 ± 0.01

Supplementary Table 4. Pairwise comparison of the behavioural category models (agonistic model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	13.759	8.1909	Inf	1	4.404	0.0003
Baseline / Forage box	7.2666	3.1765	Inf	1	4.537	0.0002
Baseline / Large carcass	0.6305	0.1243	Inf	1	-2.34	0.2718
Baseline / Mirror	5.5968	2.2553	Inf	1	4.274	0.0005
Baseline / No enrichment	2.6373	0.5988	Inf	1	4.271	0.0005
Baseline / Tube feeder	14.1591	10.2789	Inf	1	3.651	0.0064
Baseline / Twig balls	4.1336	1.5216	Inf	1	3.855	0.0029
Basketball / Forage box	0.5281	0.3739	Inf	1	-0.902	0.986
Basketball / Large carcass	0.0458	0.0272	Inf	1	-5.19	<.0001
Basketball / Mirror	0.4068	0.2814	Inf	1	-1.3	0.8991
Basketball / No enrichment	0.1917	0.1156	Inf	1	-2.74	0.1107
Basketball / Tube feeder	1.0291	0.9413	Inf	1	0.031	1
Basketball / Twig balls	0.3004	0.2006	Inf	1	-1.801	0.6191
Forage box / Large carcass	0.0868	0.0376	Inf	1	-5.64	<.0001
Forage box / Mirror	0.7702	0.432	Inf	1	-0.465	0.9998
Forage box / No enrichment	0.3629	0.1608	Inf	1	-2.287	0.3006
Forage box / Tube feeder	1.9485	1.5918	Inf	1	0.817	0.9923
Forage box / Twig balls	0.5689	0.3005	Inf	1	-1.068	0.9634
Large carcass / Mirror	8.8771	3.5826	Inf	1	5.41	<.0001
Large carcass / No enrichment	4.1831	0.929	Inf	1	6.444	<.0001
Large carcass / Tube feeder	22.4577	16.2438	Inf	1	4.302	0.0004
Large carcass / Twig balls	6.5563	2.3912	Inf	1	5.156	<.0001
Mirror / No enrichment	0.4712	0.1971	Inf	1	-1.799	0.6206
Mirror / Tube feeder	2.5299	2.0391	Inf	1	1.152	0.9452
Mirror / Twig balls	0.7386	0.3769	Inf	1	-0.594	0.999
No enrichment / Tube feeder	5.3687	3.9107	Inf	1	2.307	0.2895
No enrichment / Twig balls	1.5673	0.5912	Inf	1	1.191	0.9346
Tube feeder / Twig balls	0.2919	0.2289	Inf	1	-1.571	0.7681

Supplementary Table 5. Pairwise comparison of the behavioural category models (affiliative model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	3.137	1.4986	Inf	1	2.394	0.2442
Baseline / Forage box	4.15	2.1826	Inf	1	2.706	0.1206
Baseline / Large carcass	1.048	0.2589	Inf	1	0.191	1
Baseline / Mirror	8.71	5.2289	Inf	1	3.605	0.0075
Baseline / No enrichment	1.233	0.3561	Inf	1	0.726	0.9962
Baseline / Tube feeder	5.207	3.3101	Inf	1	2.596	0.1573
Baseline / Twig balls	1.963	1.021	Inf	1	1.297	0.9003
Basketball / Forage box	1.323	0.808	Inf	1	0.458	0.9998
Basketball / Large carcass	0.334	0.148	Inf	1	-2.474	0.2064
Basketball / Mirror	2.776	1.9225	Inf	1	1.474	0.8213
Basketball / No enrichment	0.393	0.1735	Inf	1	-2.115	0.4047
Basketball / Tube feeder	1.66	1.1756	Inf	1	0.715	0.9966
Basketball / Twig balls	0.626	0.3681	Inf	1	-0.797	0.9933
Forage box / Large carcass	0.253	0.1237	Inf	1	-2.81	0.0925
Forage box / Mirror	2.099	1.5138	Inf	1	1.028	0.9704
Forage box / No enrichment	0.297	0.1452	Inf	1	-2.483	0.2025
Forage box / Tube feeder	1.255	0.9182	Inf	1	0.31	1
Forage box / Twig balls	0.473	0.2933	Inf	1	-1.207	0.9301
Large carcass / Mirror	8.309	4.7798	Inf	1	3.681	0.0057
Large carcass / No enrichment	1.176	0.2565	Inf	1	0.745	0.9956
Large carcass / Tube feeder	4.967	3.0025	Inf	1	2.652	0.1377
Large carcass / Twig balls	1.873	0.8936	Inf	1	1.315	0.8935
Mirror / No enrichment	0.142	0.0825	Inf	1	-3.357	0.018
Mirror / Tube feeder	0.598	0.4783	Inf	1	-0.643	0.9983
Mirror / Twig balls	0.225	0.1611	Inf	1	-2.084	0.4252
No enrichment / Tube feeder	4.222	2.5589	Inf	1	2.377	0.2528
No enrichment / Twig balls	1.592	0.7447	Inf	1	0.994	0.9755
Tube feeder / Twig balls	0.377	0.2715	Inf	1	-1.355	0.8775

Supplementary Table 6. Pairwise comparison of the behavioural category models (body care model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	1.22	0.177	Inf	1	1.37	0.871
Baseline / Forage box	0.95	0.1349	Inf	1	-0.359	1
Baseline / Large carcass	0.982	0.1497	Inf	1	-0.122	1
Baseline / Mirror	0.9	0.1177	Inf	1	-0.806	0.9929
Baseline / No enrichment	0.982	0.11	Inf	1	-0.164	1
Baseline / Tube feeder	0.757	0.1135	Inf	1	-1.858	0.5797
Baseline / Twig balls	0.714	0.1074	Inf	1	-2.237	0.3295
Basketball / Forage box	0.779	0.1235	Inf	1	-1.575	0.7655
Basketball / Large carcass	0.805	0.1366	Inf	1	-1.28	0.9064
Basketball / Mirror	0.738	0.1124	Inf	1	-1.997	0.4837
Basketball / No enrichment	0.805	0.1086	Inf	1	-1.61	0.7444
Basketball / Tube feeder	0.62	0.1026	Inf	1	-2.888	0.075
Basketball / Twig balls	0.586	0.0963	Inf	1	-3.252	0.0253
Forage box / Large carcass	1.033	0.1715	Inf	1	0.195	1
Forage box / Mirror	0.947	0.1395	Inf	1	-0.37	1
Forage box / No enrichment	1.033	0.1318	Inf	1	0.255	1
Forage box / Tube feeder	0.796	0.1241	Inf	1	-1.461	0.828
Forage box / Twig balls	0.752	0.1185	Inf	1	-1.811	0.6125
Large carcass / Mirror	0.917	0.1442	Inf	1	-0.552	0.9994
Large carcass / No enrichment	1	0.1431	Inf	1	0.001	1
Large carcass / Tube feeder	0.771	0.133	Inf	1	-1.507	0.8038
Large carcass / Twig balls	0.728	0.127	Inf	1	-1.82	0.6062
Mirror / No enrichment	1.091	0.1313	Inf	1	0.723	0.9963
Mirror / Tube feeder	0.841	0.1302	Inf	1	-1.119	0.9528
Mirror / Twig balls	0.794	0.1252	Inf	1	-1.464	0.8266
No enrichment / Tube feeder	0.771	0.1041	Inf	1	-1.928	0.5314
No enrichment / Twig balls	0.728	0.0994	Inf	1	-2.328	0.2784
Tube feeder / Twig balls	0.944	0.1535	Inf	1	-0.354	1

Supplementary Table 7. Pairwise comparison of the behavioural category models (locomotion model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	6.576	1.5154	Inf	1	8.172	<.0001
Baseline / Forage box	3.171	0.7125	Inf	1	5.137	<.0001
Baseline / Large carcass	1.191	0.1903	Inf	1	1.092	0.9587
Baseline / Mirror	2.847	0.6033	Inf	1	4.939	<.0001
Baseline / No enrichment	1.798	0.2848	Inf	1	3.704	0.0052
Baseline / Tube feeder	2.948	0.744	Inf	1	4.283	0.0005
Baseline / Twig balls	2.802	0.6107	Inf	1	4.728	0.0001
Basketball / Forage box	0.482	0.128	Inf	1	-2.747	0.1088
Basketball / Large carcass	0.181	0.0439	Inf	1	-7.044	<.0001
Basketball / Mirror	0.433	0.1109	Inf	1	-3.268	0.0241
Basketball / No enrichment	0.273	0.0617	Inf	1	-5.743	<.0001
Basketball / Tube feeder	0.448	0.1302	Inf	1	-2.763	0.1046
Basketball / Twig balls	0.426	0.1147	Inf	1	-3.168	0.033
Forage box / Large carcass	0.375	0.0864	Inf	1	-4.259	0.0005
Forage box / Mirror	0.898	0.2165	Inf	1	-0.447	0.9998
Forage box / No enrichment	0.567	0.1139	Inf	1	-2.825	0.0888
Forage box / Tube feeder	0.929	0.2569	Inf	1	-0.265	1
Forage box / Twig balls	0.884	0.2209	Inf	1	-0.495	0.9997
Large carcass / Mirror	2.391	0.5264	Inf	1	3.961	0.0019
Large carcass / No enrichment	1.51	0.2512	Inf	1	2.478	0.205
Large carcass / Tube feeder	2.476	0.6414	Inf	1	3.498	0.011
Large carcass / Twig balls	2.353	0.5287	Inf	1	3.81	0.0035
Mirror / No enrichment	0.631	0.1238	Inf	1	-2.345	0.269
Mirror / Tube feeder	1.035	0.2755	Inf	1	0.13	1
Mirror / Twig balls	0.984	0.247	Inf	1	-0.064	1
No enrichment / Tube feeder	1.639	0.3896	Inf	1	2.081	0.4276
No enrichment / Twig balls	1.559	0.3254	Inf	1	2.126	0.3981
Tube feeder / Twig balls	0.951	0.2733	Inf	1	-0.176	1

Supplementary Table 8. Pairwise comparison of the behavioural category models (stationary model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	0.658	0.0366	Inf	1	-7.51	<.0001
Baseline / Forage box	0.693	0.0386	Inf	1	-6.582	<.0001
Baseline / Large carcass	1.006	0.0619	Inf	1	0.103	1
Baseline / Mirror	0.901	0.0525	Inf	1	-1.785	0.6301
Baseline / No enrichment	0.84	0.0402	Inf	1	-3.643	0.0066
Baseline / Tube feeder	0.804	0.0515	Inf	1	-3.406	0.0152
Baseline / Twig balls	0.877	0.0563	Inf	1	-2.044	0.4518
Basketball / Forage box	1.052	0.0594	Inf	1	0.897	0.9864
Basketball / Large carcass	1.529	0.0962	Inf	1	6.743	<.0001
Basketball / Mirror	1.369	0.0827	Inf	1	5.196	<.0001
Basketball / No enrichment	1.276	0.0633	Inf	1	4.915	<.0001
Basketball / Tube feeder	1.221	0.0791	Inf	1	3.081	0.0431
Basketball / Twig balls	1.332	0.0864	Inf	1	4.421	0.0003
Forage box / Large carcass	1.453	0.0912	Inf	1	5.955	<.0001
Forage box / Mirror	1.301	0.0781	Inf	1	4.389	0.0003
Forage box / No enrichment	1.213	0.0588	Inf	1	3.983	0.0017
Forage box / Tube feeder	1.161	0.073	Inf	1	2.369	0.2566
Forage box / Twig balls	1.266	0.0807	Inf	1	3.702	0.0053
Large carcass / Mirror	0.896	0.059	Inf	1	-1.674	0.7043
Large carcass / No enrichment	0.835	0.0471	Inf	1	-3.201	0.0298
Large carcass / Tube feeder	0.799	0.0561	Inf	1	-3.197	0.0301
Large carcass / Twig balls	0.871	0.0613	Inf	1	-1.957	0.5115
Mirror / No enrichment	0.932	0.0489	Inf	1	-1.337	0.8847
Mirror / Tube feeder	0.892	0.0599	Inf	1	-1.703	0.6853
Mirror / Twig balls	0.973	0.0666	Inf	1	-0.398	0.9999
No enrichment / Tube feeder	0.957	0.0548	Inf	1	-0.772	0.9945
No enrichment / Twig balls	1.044	0.0607	Inf	1	0.738	0.9958
Tube feeder / Twig balls	1.091	0.0774	Inf	1	1.228	0.9239

Supplementary Table 9. Pairwise comparison of the behavioural category models (diverse model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / No enrichment	1.959	0.475	Inf	1	2.775	0.1013
Baseline / Large carcass	1.797	0.431	Inf	1	2.446	0.2193
Baseline / Basketball	1.15	0.253	Inf	1	0.636	0.9984
Baseline / Forage box	2.79	0.699	Inf	1	4.096	0.0011
Baseline / Mirror	1.529	0.288	Inf	1	2.253	0.3201
Baseline / Tube feeder	1.476	0.386	Inf	1	1.489	0.8136
Baseline / Twig balls	4.08	1.333	Inf	1	4.305	0.0004
No enrichment / Large carcass	0.917	0.255	Inf	1	-0.31	1
No enrichment / Basketball	0.587	0.154	Inf	1	-2.03	0.4617
No enrichment / Forage box	1.424	0.414	Inf	1	1.218	0.927
No enrichment / Mirror	0.781	0.185	Inf	1	-1.048	0.967
No enrichment / Tube feeder	0.754	0.226	Inf	1	-0.944	0.9817
No enrichment / Twig balls	2.083	0.738	Inf	1	2.072	0.4335
Large carcass / Basketball	0.64	0.166	Inf	1	-1.717	0.6763
Large carcass / Forage box	1.552	0.445	Inf	1	1.535	0.7886
Large carcass / Mirror	0.851	0.193	Inf	1	-0.712	0.9967
Large carcass / Tube feeder	0.822	0.239	Inf	1	-0.676	0.9976
Large carcass / Twig balls	2.27	0.789	Inf	1	2.358	0.2622
Basketball / Forage box	2.426	0.664	Inf	1	3.241	0.0263
Basketball / Mirror	1.33	0.288	Inf	1	1.313	0.8943
Basketball / Tube feeder	1.284	0.355	Inf	1	0.903	0.9859
Basketball / Twig balls	3.548	1.201	Inf	1	3.742	0.0045
Forage box / Mirror	0.548	0.134	Inf	1	-2.455	0.2151
Forage box / Tube feeder	0.529	0.161	Inf	1	-2.091	0.4204
Forage box / Twig balls	1.462	0.531	Inf	1	1.046	0.9673
Mirror / Tube feeder	0.966	0.242	Inf	1	-0.14	1
Mirror / Twig balls	2.669	0.849	Inf	1	3.086	0.0424
Tube feeder / Twig balls	2.764	1.012	Inf	1	2.776	0.1011

Supplementary Table 10. Pairwise comparison of the behavioural category models (other model)

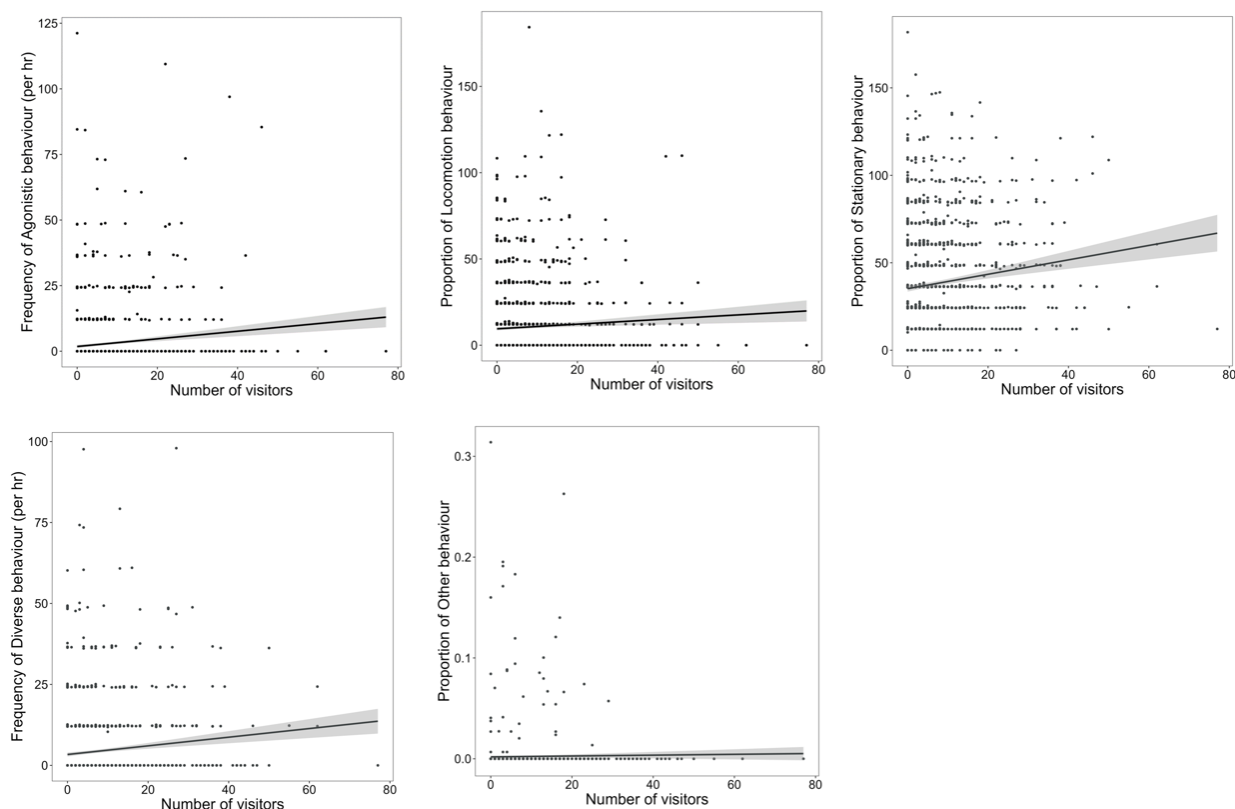
Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	19.2841	22.7552	Inf	1	2.508	0.1919
Baseline / Forage box	7.2672	8.8098	Inf	1	1.636	0.7283
Baseline / Large carcass	4.1648	2.966	Inf	1	2.003	0.4795
Baseline / Mirror	19.0935	21.4347	Inf	1	2.627	0.1461
Baseline / No enrichment	7.9159	4.5267	Inf	1	3.618	0.0072
Baseline / Tube feeder	1.9012	2.8723	Inf	1	0.425	0.9999
Baseline / Twig balls	1.4603	1.1177	Inf	1	0.495	0.9997
Basketball / Forage box	0.3768	0.595	Inf	1	-0.618	0.9987
Basketball / Large carcass	0.216	0.2768	Inf	1	-1.196	0.9334
Basketball / Mirror	0.9901	1.5449	Inf	1	-0.006	1
Basketball / No enrichment	0.4105	0.4979	Inf	1	-0.734	0.996
Basketball / Tube feeder	0.0986	0.1813	Inf	1	-1.26	0.9135
Basketball / Twig balls	0.0757	0.0997	Inf	1	-1.96	0.5096
Forage box / Large carcass	0.5731	0.7286	Inf	1	-0.438	0.9999
Forage box / Mirror	2.6274	4.1269	Inf	1	0.615	0.9987
Forage box / No enrichment	1.0893	1.3516	Inf	1	0.069	1
Forage box / Tube feeder	0.2616	0.4864	Inf	1	-0.721	0.9964
Forage box / Twig balls	0.2009	0.2579	Inf	1	-1.25	0.9167
Large carcass / Mirror	4.5845	5.7527	Inf	1	1.213	0.9282
Large carcass / No enrichment	1.9007	1.5132	Inf	1	0.807	0.9928
Large carcass / Tube feeder	0.4565	0.7178	Inf	1	-0.499	0.9997
Large carcass / Twig balls	0.3506	0.312	Inf	1	-1.178	0.9384
Mirror / No enrichment	0.4146	0.4891	Inf	1	-0.746	0.9955
Mirror / Tube feeder	0.0996	0.1793	Inf	1	-1.281	0.9061
Mirror / Twig balls	0.0765	0.0998	Inf	1	-1.97	0.5022
No enrichment / Tube feeder	0.2402	0.3764	Inf	1	-0.91	0.9852
No enrichment / Twig balls	0.1845	0.1547	Inf	1	-2.016	0.471
Tube feeder / Twig balls	0.7681	1.3102	Inf	1	-0.155	1

Supplementary Table 11. Pairwise comparison of the behavioural category models (feeding model)

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Baseline / Basketball	1.18E+10	2.75E+13	Inf	1	0.01	1
Baseline / Forage box	6.00E+00	4.00E+00	Inf	1	2.535	0.1805
Baseline / Large carcass	1.00E+00	0.00E+00	Inf	1	-1.188	0.9357
Baseline / Mirror	1.00E+00	0.00E+00	Inf	1	-1.214	0.9282
Baseline / No enrichment	1.00E+00	0.00E+00	Inf	1	0.971	0.9784
Baseline / Tube feeder	4.88E+11	7.46E+15	Inf	1	0.002	1
Baseline / Twig balls	1.00E+00	0.00E+00	Inf	1	0.397	0.9999
Basketball / Forage box	0.00E+00	0.00E+00	Inf	1	-0.009	1
Basketball / Large carcass	0.00E+00	0.00E+00	Inf	1	-0.01	1
Basketball / Mirror	0.00E+00	0.00E+00	Inf	1	-0.01	1
Basketball / No enrichment	0.00E+00	0.00E+00	Inf	1	-0.01	1
Basketball / Tube feeder	4.10E+01	6.39E+05	Inf	1	0	1
Basketball / Twig balls	0.00E+00	0.00E+00	Inf	1	-0.01	1
Forage box / Large carcass	0.00E+00	0.00E+00	Inf	1	-2.962	0.0609
Forage box / Mirror	0.00E+00	0.00E+00	Inf	1	-3.05	0.0472
Forage box / No enrichment	0.00E+00	0.00E+00	Inf	1	-2.24	0.3278
Forage box / Tube feeder	8.46E+10	1.29E+15	Inf	1	0.002	1
Forage box / Twig balls	0.00E+00	0.00E+00	Inf	1	-2.066	0.437
Large carcass / Mirror	1.00E+00	0.00E+00	Inf	1	-0.555	0.9993
Large carcass / No enrichment	2.00E+00	0.00E+00	Inf	1	2.203	0.3498
Large carcass / Tube feeder	6.30E+11	9.63E+15	Inf	1	0.002	1
Large carcass / Twig balls	2.00E+00	1.00E+00	Inf	1	1.024	0.9709
Mirror / No enrichment	2.00E+00	1.00E+00	Inf	1	1.998	0.483
Mirror / Tube feeder	7.66E+11	1.17E+16	Inf	1	0.002	1
Mirror / Twig balls	2.00E+00	1.00E+00	Inf	1	1.208	0.9298
No enrichment / Tube feeder	3.77E+11	5.76E+15	Inf	1	0.002	1
No enrichment / Twig balls	1.00E+00	0.00E+00	Inf	1	-0.211	1
Tube feeder / Twig balls	0.00E+00	0.00E+00	Inf	1	-0.002	1

Supplementary Table 12. Pairwise comparison of the weather models

Contrast	Ratio	SE	df	Null	Z.Ratio	P value
Agonistic model						
Cloudy / Partly cloudy	0.745	0.194	Inf	1	-1.131	0.6705
Cloudy / Rainy	2.104	1.31	Inf	1	1.194	0.6306
Cloudy / Sunny	0.482	0.126	Inf	1	-2.788	0.0273
Partly cloudy / Rainy	2.824	1.673	Inf	1	1.753	0.2963
Partly cloudy / Sunny	0.647	0.11	Inf	1	-2.57	0.0498
Rainy / Sunny	0.229	0.136	Inf	1	-2.48	0.063
Body care model						
Cloudy / Partly cloudy	1.33	0.13	Inf	1	2.892	0.02
Cloudy / Rainy	1.35	0.304	Inf	1	1.314	0.5541
Cloudy / Sunny	1.59	0.171	Inf	1	4.324	0.0001
Partly cloudy / Rainy	1.01	0.218	Inf	1	0.063	0.9999
Partly cloudy / Sunny	1.2	0.101	Inf	1	2.166	0.1328
Rainy / Sunny	1.18	0.26	Inf	1	0.767	0.8695
Locomotion model						
Cloudy / Partly cloudy	1.015	0.1552	Inf	1	0.098	0.9997
Cloudy / Rainy	2.943	0.8738	Inf	1	3.636	0.0016
Cloudy / Sunny	0.885	0.1421	Inf	1	-0.759	0.8729
Partly cloudy / Rainy	2.9	0.8213	Inf	1	3.758	0.001
Partly cloudy / Sunny	0.872	0.1042	Inf	1	-1.145	0.6613
Rainy / Sunny	0.301	0.0869	Inf	1	-4.161	0.0002
Stationary model						
Cloudy / Partly cloudy	0.87	0.038	Inf	1	-3.189	0.0078
Cloudy / Rainy	0.693	0.0486	Inf	1	-5.23	<.0001
Cloudy / Sunny	0.825	0.0372	Inf	1	-4.254	0.0001
Partly cloudy / Rainy	0.796	0.0503	Inf	1	-3.604	0.0018
Partly cloudy / Sunny	0.949	0.0307	Inf	1	-1.617	0.3687
Rainy / Sunny	1.192	0.0769	Inf	1	2.716	0.0335
Diverse model						
Sunny / Partly cloudy	1.147	0.209	Inf	1	0.756	0.8743
Sunny / Cloudy	3.88	1.614	Inf	1	3.259	0.0061
Sunny / Rainy	1.485	0.276	Inf	1	2.124	0.1453
Partly cloudy / Cloudy	3.382	1.358	Inf	1	3.034	0.0129
Partly cloudy / Rainy	1.294	0.192	Inf	1	1.738	0.3039
Cloudy / Rainy	0.383	0.156	Inf	1	-2.355	0.0861
Other model						
Cloudy / Partly cloudy	0.764	0.665	Inf	1	-0.31	0.9897
Cloudy / Rainy	0.899	1.576	Inf	1	-0.061	0.9999
Cloudy / Sunny	0.337	0.309	Inf	1	-1.184	0.6368
Partly cloudy / Rainy	1.177	1.808	Inf	1	0.106	0.9996
Partly cloudy / Sunny	0.441	0.202	Inf	1	-1.788	0.2793
Rainy / Sunny	0.375	0.574	Inf	1	-0.641	0.9189



Supplementary Figure 1. Correlations between the number of visitors present and the frequency of agonistic and diverse behaviours, and the proportion of locomotion, stationary and other behaviours.

Supplementary Table 13. Comparison of the occurrence (%) of each behaviour category between the Baseline and enrichment period.

Condition	Occurrence %	
	Baseline	Enrichment
Stationary	41	49
Body care	17	26
Locomotion	22	12
Diverse	7	4
Feeding	7	4
Agonistic	4	3
Affiliation	2	2

Supplementary Table 14. Name, sex and age (years) of the vultures

Name	Sex	Age (years)
06 metal	Female	8
04 AG **	Female	5
03 metal	Female	3
10 AS	Female	1
11 ZL	Female	1
08 ZU	Female	1
09 ZU	Male	1
02 CP	Male	5
07 AK	Male	3
JS LB	Male	6
CR FM	Male	7
ZZ	Male	5
01 CDD	Male	6

**Relocated to another zoo at the end of the study, resulting in 3 less observations.

Supplementary Table 15. Number of sessions, per condition.

Condition	Number of sessions
Forage box	6
Twig ball	6
Tube feeder	5
Large carcass	6
Mirror	6
Basketball	6
Control	15

Supplementary Table 16. Average number of visitors per five minute interval for each weather condition.

Visitor number ($\bar{x}$)	Weather
1.93	Heavy rain
3.14	Light rain
4.72	Cloudy
6.87	Partly cloudy
6.94	Sunny