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Effects of dogs' visits to a public exhibition

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Supplementary Material

Appendix I. Domestic dog ethogram adapted from Beerda (1998) and Tami & Gallagher (2009).

Posture	Description
High posture	Dog is in neutral conditions, with tail raised and/or head elevated, ears facing forward
Walk	Dog is standing and moves forward without pulling the leash
Sit/Lay	Dog is immobile with two (sit) or four limbs (lay) resting on the floor
Pull	Dog is standing and moves forward by pulling the leash
Rear	Dog supports one or both front legs in any structure, with rear paws touching the floor, upper body inclined or even vertical in relation to the floor; can vocalize
Ambivalent posture	Dog is in crouching posture OR high body posture accompanied by a below than usual tail; ears can be backwards
Avoid II	Dog gets distance from stimuli by pulling the leash or trying to walk backwards
Avoid III	Dog actively tries to fly or hide where possible
Low posture	Dog has low tail, back ears, and crouched legs

Behaviour	Description
Pant	Dog breathes with mouth open, gasping; with in or out tongue
Hypervigilant	Dog is constantly alert and attentive to environment, while sitting/standing or moving, with eyes wide open, dilated pupils, and constant activity of the head, ears, and nose
Lip licking	Dog's tongue quickly moves outside, along the lips and may reach nose
Paw lift	Paw lifts off the floor and keeps the forelimb hovering in the air
Yawning	Dog opens mouth, breathing a great amount of air with or without a high-pitched sound
Shake	Dog shakes head from side to side quickly and vigorously, extending this movement progressively throughout the body
Scratching	Dog rubs one or more parts of the body with one of its hind limbs
Bark	Dog opens mouth and emits a short, loud, deep, intense throaty sound which is repeated a variable number of times; it can be accompanied by a tail wag
Neutral behaviour	In any posture, dog remains immobile but active, looking attentively in any direction and responding promptly to any stimulus
Look owner	Dog looks at owner, once or repeatedly; may or may not lean its head against owner
Owner pet	Dog is stroked by the owner; it can be in any posture.
Ingest	Dog ingests water and/or food
Smell	Forced inhalation of air, repeated in rapid successions, through the nose
Interaction with object	Dog interacts, or tries to interact (chases), with an object; with or without vocalisations
Interaction humans/dogs	Dog interacts with humans/dogs in a positive way, in a friendly posture, while wagging its tail; may include the invitation to play posture
Avoid I	Dog diverts look / head / body from stimulus source
Scare	Dog winces or slightly jumps following a sudden event in the vicinity
Freeze	Dog remains in any immobile posture, does not reacting to any income stimuli

Appendix II. Generalised linear mixed-effects (GLMM) parameters for the analysis of dogs' postures and behaviours among different rooms (AB, ACC, DOI, EXP), observers (1-6) and training level (trained or not trained). Asterisk denotes group that is significantly different ($p < 0.05$) from AB Room, Observer 1, and/or untrained dogs.

Variable	LME coefficient	SE	df	t	P
Postures					
High posture					
Intercept	0.585	0.269	149.629	2.172	0.031*
Room ACC	0.461	0.221	118.377	2.087	0.039*
Room DOI	0.449	0.219	124.742	2.053	0.042*
Room EXP	0.388	0.217	135.765	1.790	0.076
Observer 2	-0.123	0.248	133.564	-0.496	0.621
Observer 3	-0.380	0.225	118.415	-1.689	0.094
Observer 4	-0.372	0.225	119.858	-1.652	0.101
Observer 5	0.479	0.293	129.331	1.635	0.105
Observer 6	0.031	0.233	125.690	0.133	0.895
Training	0.121	0.192	30.182	0.632	0.532
Walk					
Intercept	0.500	0.122	149.108	4.105	<0.000*
Room ACC	0.206	0.098	126.922	2.099	0.038*
Room DOI	0.196	0.097	131.444	2.008	0.047*
Room EXP	-0.210	0.097	140.172	-2.166	0.032*
Observer 2	-0.184	0.111	138.484	-1.657	0.099
Observer 3	0.2441	0.100	126.999	2.441	0.016*
Observer 4	-0.014	0.100	128.165	-0.139	0.889
Observer 5	0.153	0.131	135.048	1.169	0.244
Observer 6	-0.013	0.104	132.727	-0.123	0.902
Training	0.0855	0.091	40.0458	0.943	0.351
Sit/Lay					
Intercept	0.187	0.332	151.503	0.565	0.573
Room ACC	0.421	0.276	119.529	1.527	0.129
Room DOI	0.833	0.273	126.347	3.051	0.003*
Room EXP	0.191	0.270	137.079	0.707	0.481
Observer 2	-0.127	0.309	134.905	-0.412	0.681
Observer 3	0.262	0.281	119.523	0.935	0.352
Observer 4	-0.227	0.280	120.958	-0.810	0.419
Observer 5	0.211	0.365	130.869	0.579	0.564
Observer 6	0.238	0.291	126.809	0.820	0.414
Training	-0.065	0.231	30.490	-0.282	0.779
Rear					
Intercept	0.104	0.045	156.979	2.303	0.023*
Room ACC	-0.08	0.040	132.274	-2.060	0.041*
Room DOI	-0.050	0.039	141.805	-1.279	0.203
Room EXP	-0.082	0.038	147.085	-2.128	0.035*
Observer 2	-0.050	0.044	145.376	-1.130	0.260
Observer 3	-0.041	0.041	131.733	-1.017	0.311
Observer 4	-0.014	0.041	132.702	-0.352	0.725
Observer 5	-0.049	0.052	143.839	-0.931	0.353
Observer 6	0.055	0.042	137.456	1.322	0.188
Training	0.010	0.025	37.581	0.406	0.687

Variable	LME coefficient	SE	df	t	P
Stress management					
Pant					
Intercept	0.775	0.324	95.537	2.390	0.019*
Room ACC	0.007	0.195	120.130	0.037	0.971
Room DOI	0.195	0.195	121.297	1.000	0.319
Room EXP	-0.150	0.198	126.515	-0.756	0.451
Observer 2	0.413	0.226	125.421	1.833	0.069*
Observer 3	0.468	0.199	120.250	2.353	0.020*
Observer 4	0.154	0.199	121.273	0.770	0.443
Observer 5	-0.083	0.264	123.084	-0.315	0.753
Observer 6	0.387	0.209	123.204	1.849	0.067
Training	-0.221	0.332	47.687	-0.665	0.509
Appraisal					
Intercept	0.502	0.181	151.742	2.779	0.006*
Room ACC	0.037	0.150	123.138	0.251	0.802
Room DOI	-0.048	0.148	129.276	-0.327	0.744
Room EXP	-0.229	0.146	139.084	-1.561	0.121
Observer 2	-0.296	0.168	137.122	-1.765	0.080
Observer 3	-0.230	0.152	123.145	-1.512	0.133
Observer 4	-0.148	0.152	124.474	-0.970	0.334
Observer 5	-0.262	0.198	133.417	-1.322	0.188
Observer 6	-0.297	0.158	129.841	-1.884	0.062
Training	-0.108	0.127	34.066	-0.857	0.397
Displacement					
Intercept	0.006	0.021	155.603	0.313	0.755
Room ACC	-0.028	0.018	129.845	-1.585	0.115
Room DOI	-0.002	0.018	136.721	-0.108	0.914
Room EXP	-0.007	0.017	144.329	-0.420	0.675
Observer 2	0.016	0.020	142.670	0.827	0.410
Observer 3	0.009	0.018	129.695	0.474	0.636
Observer 4	0.009	0.018	130.842	0.473	0.637
Observer 5	0.042	0.024	140.025	1.757	0.081
Observer 6	0.0048	0.0189	135.654	0.255	0.799
Training	0.0286	0.0135	39.071	2.110	0.041*
Bark					
Intercept	0.022	0.019	152.058	1.159	0.248
Room ACC	-0.021	0.015	126.680	-1.344	0.181
Room DOI	-0.011	0.015	132.165	-0.719	0.473
Room EXP	-0.015	0.015	141.038	-1.025	0.307
Observer 2	-0.003	0.017	139.283	-0.167	0.867
Observer 3	0.006	0.016	126.697	0.371	0.711
Observer 4	-0.003	0.016	127.914	-0.238	0.812
Observer 5	0.042	0.020	135.918	2.021	0.045*
Observer 6	0.015	0.016	132.790	0.919	0.360
Training	-0.008	0.013	38.135	-0.575	0.569

Variable	LME coefficient	SE	df	t	P
Neutral Behaviour					
Intercept	0.095	0.362	144.438	0.263	0.793
Room ACC	0.651	0.2860	123.292	2.279	0.024*
Room DOI	0.613	0.284	127.524	2.159	0.033*
Room EXP	0.506	0.283	136.942	1.792	0.075
Observer 2	-0.025	0.323	135.121	-0.078	0.938
Observer 3	0.114	0.291	123.411	0.391	0.696
Observer 4	-0.532	0.291	124.635	-1.831	0.069
Observer 5	0.277	0.381	131.309	0.727	0.468
Observer 6	0.295	0.302	129.350	0.977	0.330
Training	0.182	0.281	37.170	0.649	0.520
Interactions					
Environment					
Intercept	0.250	0.108	142.164	2.308	0.022*
Room ACC	0.121	0.083	126.338	1.446	0.151
Room DOI	0.204	0.083	129.728	2.461	0.015*
Room EXP	0.021	0.083	138.086	0.250	0.803
Observer 2	-0.231	0.095	136.478	-2.443	0.016*
Observer 3	-0.041	0.085	126.469	-0.484	0.629
Observer 4	-0.067	0.085	127.564	-0.784	0.434
Observer 5	0.199	0.112	133.029	1.791	0.075
Observer 6	-0.246	0.088	131.664	-2.775	0.006*
Training	-0.032	0.087	41.930	-0.366	0.716
Owner					
Intercept	-0.10	0.131	155.306	-0.743	0.459
Room ACC	0.136	0.111	132.231	1.219	0.225
Room DOI	0.239	0.110	138.159	2.173	0.031*
Room EXP	0.043	0.108	145.271	0.394	0.694
Observer 2	0.076	0.124	143.776	0.610	0.543
Observer 3	0.160	0.113	132.135	1.409	0.161
Observer 4	0.055	0.113	133.199	0.487	0.627
Observer 5	0.548	0.147	141.253	3.724	0.0002*
Observer 6	0.134	0.117	137.581	1.147	0.253
Training	0.182	0.086	43.145	2.104	0.041*
Dogs					
Intercept	-0.047	0.033	156.524	-1.393	0.166
Room ACC	0.055	0.029	132.897	1.874	0.063
Room DOI	0.033	0.029	140.234	1.158	0.249
Room EXP	0.044	0.028	146.525	1.554	0.122
Observer 2	0.053	0.032	144.997	1.653	0.100
Observer 3	0.019	0.030	132.633	0.640	0.523
Observer 4	0.006	0.030	133.659	0.197	0.844
Observer 5	0.185	0.038	142.940	4.822	<0.000*
Observer 6	0.021	0.030	138.146	0.684	0.495
Training	0.035	0.020	41.4849	1.728	0.091

Variable	LME coefficient	SE	df	t	P
<i>Avoid/Fear</i>					
Behaviours					
Intercept	0.045	0.027	149.654	1.645	0.102
Room ACC	-0.045	0.023	119.224	-2.000	0.048*
Room DOI	-0.056	0.022	125.428	-2.504	0.014*
Room EXP	-0.046	0.022	136.236	-2.091	0.038*
Observer 2	0.036	0.025	134.084	1.431	0.155
Observer 3	0.051	0.023	119.264	2.236	0.027*
Observer 4	0.034	0.023	120.684	1.475	0.143
Observer 5	0.016	0.030	129.928	0.538	0.591
Observer 6	0.001	0.024	126.403	0.062	0.951
Training	-0.003	0.020	30.971	-0.158	0.876
Postures					
Intercept	0.330	0.129	154.317	2.563	0.011*
Room ACC	-0.223	0.109	122.2509	-2.043	0.043*
Room DOI	-0.365	0.1089	129.985	-3.382	0.0009*
Room EXP	-0.218	0.106	139.794	-2.051	0.042*
Observer 2	0.300	0.122	137.706	2.459	0.015*
Observer 3	0.259	0.111	122.134	2.337	0.021*
Observer 4	0.013	0.111	123.517	0.116	0.908
Observer 5	-0.173	0.144	134.195	-1.199	0.233
Observer 6	-0.100	0.115	129.297	-0.872	0.384
Training	-0.046	0.085	31.474	-0.548	0.588