Table S1. List of the dogs tested and their age at adoption.

Breed Group	Breed	N	Sex	Age
Herding (n=17)	Australian Cattle Dog	2	F=1, M=1	5.5±2.5
	Australian Shepherd	5	F=3, M=2	5.3±0.97
	Border Collie	3	F=2, M=1	2.42±1.31
	Czechoslovakian Wolfdog	1	M	12 ± 0.0
	Collie	2	F=2	5.5±1.5
	German Shepherd	4	F=2, M=2	5±1.35
Terrier (n=4)	Jack Russell	4	F=1, M=3	7.54±2.14
Pointing (n=4)	Italian Pointer	2	F=1, M=1	4.5±0.5
	Brittany	1	M	3±0.0
	Dachshund	1	M	2±0.0
Ancient-Spitz (n=9)	Alaskan Malamute	1	M	1.17±0.0
	Podengo	1	F	3.5±0.0
	Siberian Husky	5	F=4, M=1	3.9±1.64
	Shiba Inu	2	F=1, M=1	4±1
Retriever-Water dogs (n=22)	Cavalier King	1	F	7±0.0
	Cocker Spaniel	3	F=1, M=2	4±1.15
	Golden Retriever	9	F=7, M=2	4.56±0.71
	Labrador Retriever	2	F=1, M=1	8.75±4.25
	Lagotto Romagnolo	3	F=1, M=2	0.92±0.05
	Papillon	1	F	2±0.0
	Poodle	2	M=2	2.5±0.5
	Springer Spaniel	1	M	0.67±0.0
Sighthound (n=16)	Borzoi	1	F	1.17±0.0
	Galgo	8	F=4, M=4	6.58±1.16
	Greyhound	5	F=1, M=4	2.55±0.82
	Italian Greyhound	1	M	4,5±0.0
	Whippet	1	F	8±0.0
Toy (n=10)	Chihuahua	5	F=1, M=4	4.7±1.75
	Lhasa Apso	1	M	1±0.0

	Maltese	1	M	2±0.0
	Pug	2	F=1, M=1	0.79±0.04
	Shih tzu	1	M	9±0.0
Mastiff (n=19)	American Staffordshire Terrier	1	F	3±0.0
	Bernese Mountain Dog	1	F	0.5±0.0
	Boxer	3	F=2, M=1	6,28±0.86
	French Bulldog	5	F=2, M=3	5±1.14
	Bull terrier	1	M	8.5±0.0
	Corso	1	M	9±0.0
	Dobermann	1	F	5.5±0.0
	English Bulldog	3	F=3	5±1.5
	Hovawart	1	F	5±0.0
	Leonberger	1	M	1.83±0.0
	Saint Bernard	1	F	5±0.0

Table S2. Summary table reporting, for each breed, its corresponding lineage and the number of individuals tested.

Breed Group	Breed	N	Sex	Age
Herding (n=17)	Australian Cattle Dog	2	F=1, M=1	5.5±2.5
	Australian Shepherd	5	F=3, M=2	5.3±0.97
	Border Collie	3	F=2, M=1	2.42±1.31
	Czechoslovakian Wolfdog	1	M	12 ± 0.0
	Collie	2	F=2	5.5±1.5
	German Shepherd	4	F=2, M=2	5±1.35
Ancient- Spitz (n=10)	Alaskan Malamute	1	M	1.17±0.0
	Borzoi	1	F	1.17±0.0
	Podengo	1	F	3.5±0.0
	Siberian Husky	5	F=4, M=1	3.9±1.64
	Shiba Inu	2	F=1, M=1	4±1
Retriever (n=11)	Golden Retriever	9	F=7, M=2	4.56±0.71

	Labrador Retriever	2	F=1, M=1	8.75±4.25
Pointing-Water Dogs(n=15)	Brittany	1	M	3±0.0
	Cavalier King	1	F	7±0.0
	Cocker Spaniel	3	F=1, M=2	4±1.15
	Dachshund	1	M	2±0.0
	Italian Pointer	2	F=1, M=1	4.5±0.5
	Lagotto Romagnolo	3	F=1, M=2	0.92±0.05
	Papillon	1	F	2±0.0
	Poodle	2	M=2	2.5±0.5
	Springer Spaniel	1	M	0.67±0.0
Sighthound (n=15)	Galgo	8	F=4, M=4	6.58±1.16
	Greyhound	5	F=1, M=4	2.55±0.82
	Italian Greyhound	1	M	4,5±0.0
	Whippet	1	F	8±0.0
Toy (n=10)	Chihuahua	5	F=1, M=4	4.7±1.75
	Lhasa Apso	1	M	1±0.0
	Maltese	1	M	2±0.0
	Pug	2	F=1, M=1	0.79±0.04
	Shih tzu	1	M	9±0.0
Mastiff - Terrier (n=23)	American Staffordshire Terrier	1	F	3±0.0
	Bernese Mountain Dog	1	F	0.5±0.0
	Boxer	3	F=2, M=1	6,28±0.86
	French Bulldog	5	F=2, M=3	5±1.14
	Bull terrier	1	M	8.5±0.0
	Corso	1	M	9±0.0
	Dobermann	1	F	5.5±0.0
	English Bulldog	3	F=3	5±1.5
	Jack Russell	4	F=1, M=3	7.54±2.14
	Hovawart	1	F	5±0.0
	Leonberger	1	M	1.83±0.0
	Saint Bernard	1	F	5±0.0

Table S3. Summary of all statistical models used to analyse showing behaviour, indicating for each model the outcome variable, error distribution, and condition contrasts

Model	Outcome variable	Error distribution	Condition contrasts
Model 1	Gazing at the owner (s)	Negative binomial	OWNER+FOOD *vs* OWNER ONLY
Model 2a	Probability of gazing at pots	Binomial	OWNER+FOOD *vs* FOOD ONLY × full *vs* empty pot
Model 2b	Gazing at the baited pot (s)	Negative binomial	OWNER+FOOD *vs* FOOD ONLY
Model 3	Gaze alternation (counts)	Negative binomial	OWNER+FOOD *vs* OWNER ONLY
Model 4	Owners' matching	Binomial	OWNER+FOOD
Model 5	Mouth licking (counts)	Negative binomial	OWNER+FOOD *vs* OWNER ONLY *vs* FOOD ONLY

Table S4. Estimates and SE of the significant models.

Model 2a – Response variable: gazing at one of the pots (N=404)		
Tested variables		
Variable	**Estimate**	**SE**
(Intercept)	-0.759	1.196
Condition	0.950	0.290
Type of pot	1.548	0.311
Cephalic index	-0.018	0.018
Lineage Ancient-Spitz	0.978	0.657
Lineage Retriever	-2.300	0.937
Lineage Pointing-Water dogs	-0.378	0.636
Lineage Sighthound	-0.285	0.632
Lineage Toy	0.579	0.818
Lineage Mastiff-Terrier	0.260	0.625
Control variables		
Sex	0.166	0.373
Age	-0.135	0.065
Trial order	-0.233	0.194
Model 2b – Response variable: time spent gazing at the full pot (N=202)		

Tested variables		
Variable	**Estimate**	**SE**
(Intercept)	1.156	1.607
Condition	1.509	0.425
Cephalic index	-0.030	0.024
Lineage Ancient-Spitz	0.647	0.872
Lineage Retriever	-2.155	1.034
Lineage Pointing-Water dogs	0.444	0.812
Lineage Sighthound	-0.145	0.845
Lineage Toy	0.585	1.100
Lineage Mastiff-Terrier	0.658	0.826
Control variables		
Sex	-0.016	0.492
Age	-0.026	0.090
Trial order	-0.287	0.273
Model 3 – Response variable: number of gaze alternation (N=202)		
Tested variables		
Variable	**Estimate**	**SE**
(Intercept)	-0.967	1.602
Condition	1.663	0.448
Cephalic index	-0.020	0.023
Lineage Ancient-Spitz	0.127	0.885
Lineage Retriever	-0.630	1.036
Lineage Pointing-Water dogs	-0.077	0.859
Lineage Sighthound	-0.153	0.850
Lineage Toy	0.395	1.062
Lineage Mastiff-Terrier	0.480	0.859
Control variables		
Sex	0.060	0.500
Age	-0.121	0.086
Trial order	-0.475	0.885