Table S2. SAOM model parameter values, meta-analysis and post-hoc goodness-of-fit test results

Final models were run with number of subphases in phase 2, nsub=6, and number of runs in phase 3, n3=6000
For good model fit, need tconv.max < 0.25, and 4x post-hoc GOF tests p > 0.01

(a) Parameter values and meta-analysis

			Overall fit	**Density**		**Degree act + pop**		**Jaccard similarity**		**from.w.ind**		**Boldness ego & alt**		**Bold linear**		**Bold quadratic**		**Average alter effect**	
Source colony	Treatment	Groups	**tconv.max**	Mean	s.e.	Mean	s.e.	Mean	s.e.	Mean	s.e.	Mean	s.e.	Mean	s.e.	Mean	s.e.	Mean	s.e.
1	all bold	3	0.0816	0.3313	0.2781	-0.2203	0.0409	2.5424	0.5388	0.1196	0.0478	-0.0816	0.0401	-1.2921	0.1922	0.4914	0.3144	1.0681	0.504
2	all bold	2	0.0778	-0.9900	0.2079	-0.0772	0.03	4.4013	0.4171	0.029	0.0145	0.0079	0.0469	-1.4076	0.261	0.3874	0.3535	0.4872	0.8307
1	keystone	4	0.1262	-0.2240	0.1981	-0.1449	0.0289	3.0195	0.3283	0.0756	0.0159	0.0809	0.0459	-2.1259	0.2189	1.0814	0.1866	0.0252	0.5894
2	keystone	4	0.107	0.1910	0.3371	-0.2291	0.0454	3.484	0.4199	0.1135	0.0297	0.0853	0.0466	-1.8654	0.3848	0.5062	0.1088	-1.2969	2.1981
3	keystone	3	0.1157	0.0725	0.2889	-0.1855	0.0364	3.2216	0.4938	0.0918	0.029	-0.0171	0.0481	-2.4788	0.3134	1.2565	0.2426	0.9325	0.7006
1	all shy	3	0.0939	-0.2699	0.2241	-0.1423	0.0307	3.4944	0.4482	0.0661	0.0246	0.0304	0.0429	-2.3475	0.3039	1.2662	0.2513	0.8995	0.4702
2	all shy	3	0.0874	-0.2345	0.2094	-0.1734	0.0304	3.7606	0.3244	0.0824	0.0205	-0.0041	0.0703	-3.6575	0.4952	1.5912	0.3226	0.6886	1.0723
3	all shy	2	0.0796	-0.2190	0.2975	-0.1591	0.0445	3.1215	0.5017	0.0866	0.0364	0.0011	0.0698	-3.506	0.4798	1.7168	0.3232	0.7411	0.8996
Mean & s.e., normality assumption				-0.2063	0.1379	-0.16	0.016	3.4278	0.1762	0.0735	0.0108	0.0126	0.0212	-2.2516	0.2699	1.0191	0.1619	0.7118	0.2416
IWLS modification of Snijders & Baerveldt (2003)				-0.2031	0.1444	-0.1607	0.017	3.4229	0.1909	0.073	0.0104	0.0126	0.0209	-2.2664	0.3001	1.0233	0.1775	0.7118	0.164
		two-sided p (normality)		0.178		< 0.001		< 0.001		< 0.001		0.57		< 0.001		< 0.001		0.022	
		two-sided p (IWLS)		0.203		< 0.001		< 0.001		< 0.001		0.566		< 0.001		< 0.001		0.003	

Boldness does not have an effect on the likelihood of forming (or avoiding) ties with other spiders

Social interactions increase boldness, on average

(b) Goodness of fit test results

Monte Carlo Mahalanobis distance test p-values
One tailed test used (i.e. estimated probability of greater distance than observation).
Calculated joint MHD

			Outdegree Distribution		**Geodesic Distribution**		**Triad Census**		**Behavior Distribution**	
Source colony	Treatment	Groups	Joint MHD	p	Joint MHD	p	Joint MHD	p	Joint MHD	p
1	all bold	3	91.52	0.893	73.41	0.884	54.07	0.996	153.54	1
2	all bold	2	498.07	0.281	132.07	0.694	121.59	0.991	142.3	1
1	keystone	4	912.77	0.055	195.09	0.555	238.41	0.962	90.3	1
2	keystone	4	3418.98	0.242	119.28	0.025	195.69	0.972	163.1	0.054
3	keystone	3	253.42	0.203	110.26	0.134	78.97	0.99	99.4	1
1	all shy	3	205.08	0.334	91.56	0.851	59.26	0.997	75.28	1
2	all shy	3	1136.37	0.108	134.61	0.012	113.46	0.959	107.36	1
3	all shy	2	308.55	0.089	86.46	0.978	70.53	0.998	67.55	1