

Supplementary Information for: 'The evolved nest in childhood: relation to adult well-being and social capital across cultures'

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H1: Developmental nestedness will be positively associated with personal well-being, social relationships, and general prosociality across cultures

Table S1. Developmental Nestedness and Personal Well-being After Controls

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Term	Estimate	CI Low	CI High	SE	t	p
All	(Intercept)	-0.47	-0.65	-0.29	0.09	-5.05	< .001***
	Evolved Nest Experience	0.43	0.38	0.48	0.03	16.76	< .001***
	Income	0.17	0.10	0.24	0.04	4.69	< .001***
	Education	0.02	-0.01	0.05	0.01	1.39	.166
Japan	(Intercept)	-0.41	-0.75	-0.06	0.18	-2.32	.021*
	Evolved Nest Experience	0.40	0.29	0.50	0.05	7.46	< .001***
	Income	0.11	-0.02	0.23	0.06	1.66	.097
	Education	0.07	0.00	0.14	0.04	1.86	.064
UK	(Intercept)	-0.70	-1.04	-0.36	0.17	-4.04	< .001***
	Evolved Nest Experience	0.48	0.40	0.56	0.04	11.71	< .001***
	Income	0.18	0.05	0.31	0.07	2.71	.007**
	Education	0.07	0.02	0.12	0.03	2.58	.01*
US	(Intercept)	-0.78	-1.18	-0.38	0.21	-3.81	< .001***
	Evolved Nest Experience	0.41	0.32	0.49	0.04	9.47	< .001***
	Income	0.24	0.13	0.35	0.06	4.27	< .001***
	Education	0.03	-0.03	0.09	0.03	0.90	.367

Table S2. Developmental Nestedness and Personal Well-being Measures

Results from mixed-effects models that include evolved nest experience, current household income, and highest level of education as fixed effects, and random intercepts at the country level to account for differences across regions. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Model	Term	Estimate	CI Low	CI High	SE	t	p
Health	(Intercept)	-0.64	-0.94	-0.34	0.14	-4.64	.001**
	Evolved Nest Experience	0.31	0.26	0.37	0.03	11.20	< .001***
	Income	0.15	0.07	0.22	0.04	3.84	< .001***
	Education	0.07	0.03	0.10	0.02	3.58	< .001***
Life Satisfaction	(Intercept)	-0.80	-1.09	-0.51	0.13	-6.06	< .001***
	Evolved Nest Experience	0.32	0.27	0.37	0.03	12.05	< .001***
	Income	0.26	0.19	0.33	0.04	7.10	< .001***
	Education	0.05	0.01	0.08	0.02	2.69	.007**
Life Worthwhile	(Intercept)	-0.53	-0.81	-0.25	0.13	-4.03	.001**
	Evolved Nest Experience	0.29	0.23	0.34	0.03	10.26	< .001***
	Income	0.16	0.08	0.23	0.04	4.06	< .001***
	Education	0.04	0.01	0.08	0.02	2.30	.022*
Happiness Yesterday	(Intercept)	-0.62	-0.86	-0.38	0.12	-5.34	< .001***
	Evolved Nest Experience	0.34	0.29	0.39	0.03	12.71	< .001***
	Income	0.23	0.16	0.30	0.04	6.17	< .001***
	Education	0.02	-0.01	0.06	0.02	1.36	.176
Anxiety Yesterday (Reverse Scored)	(Intercept)	-0.06	-0.26	0.15	0.10	-0.54	.592
	Evolved Nest Experience	0.28	0.22	0.34	0.03	9.80	< .001***0
	Income	0.05	-0.03	0.13	0.04	1.31	.192
	Education	-0.02	-0.05	0.02	0.02	-0.91	.362
Belief World is Good	(Intercept)	-0.37	-0.62	-0.13	0.12	-3.14	.005**
	Evolved Nest Experience	0.34	0.28	0.39	0.03	12.13	< .001***
	Income	0.08	0.00	0.15	0.04	2.00	.046*
	Education	0.04	0.01	0.08	0.02	2.51	.013*
Belief World is Safe	(Intercept)	-0.64	-0.95	-0.33	0.14	-4.58	.001**
	Evolved Nest Experience	0.28	0.23	0.34	0.03	9.88	< .001***
	Income	0.11	0.04	0.19	0.04	2.86	.004**
	Education	0.08	0.05	0.12	0.02	4.48	< .001***
Belief World is Enticing	(Intercept)	0.11	-0.09	0.31	0.10	1.05	.295
	Evolved Nest Experience	0.29	0.24	0.35	0.03	10.29	< .001***
	Income	-0.01	-0.09	0.07	0.04	-0.29	.772
	Education	-0.01	-0.04	0.02	0.02	-0.80	.425
Belief World is Alive	(Intercept)	-0.38	-0.61	-0.14	0.11	-3.36	.003**
	Evolved Nest Experience	0.16	0.10	0.21	0.03	5.32	< .001***
	Income	0.11	0.03	0.19	0.04	2.72	.007**
	Education	0.02	-0.01	0.06	0.02	1.33	.196
Relative Deprivation (Reverse Scored)	(Intercept)	-0.07	-0.29	0.14	0.11	-0.69	.496
	Evolved Nest Experience	0.28	0.23	0.34	0.03	9.99	< .001***
	Income	0.03	-0.04	0.11	0.04	0.82	.414
	Education	0.00	-0.03	0.03	0.02	0.06	.951

Table S3. Developmental Nestedness and Social Relationships After Controls

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Term	Estimate	CI Low	CI High	SE	t	p
All	(Intercept)	-0.37	-0.56	-0.19	0.09	-3.95	< .001***
	Evolved Nest Experience	0.45	0.40	0.50	0.03	17.40	< .001***
	Income	0.13	0.06	0.20	0.04	3.74	< .001***
	Education	0.02	-0.01	0.04	0.02	1.10	.273
Japan	(Intercept)	-0.30	-0.65	0.04	0.18	-1.73	.085
	Evolved Nest Experience	0.33	0.23	0.44	0.05	6.28	< .001***
	Income	0.12	-0.01	0.24	0.06	1.85	.065
	Education	0.02	-0.05	0.09	0.04	0.57	.573
UK	(Intercept)	-0.70	-1.05	-0.35	0.18	-3.94	< .001***
	Evolved Nest Experience	0.51	0.43	0.59	0.04	12.22	< .001***
	Income	0.18	0.04	0.31	0.07	2.60	.01*
	Education	0.07	0.02	0.13	0.03	2.70	.007**
US	(Intercept)	-0.38	-0.79	0.02	0.21	-1.86	.063
	Evolved Nest Experience	0.49	0.40	0.57	0.04	11.25	< .001***
	Income	0.16	0.05	0.27	0.06	2.81	.005**
	Education	0.00	-0.06	0.06	0.03	0.00	.999

Table S4. Developmental Nestedness and Social Relationships Measures

Results from mixed-effects models that include evolved nest experience, current household income, and highest level of education as fixed effects, and random intercepts at the country level to account for differences across regions. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Model	Term	Estimate	CI Low	CI High	SE	t	p
Trust	(Intercept)	-0.46	-0.73	-0.19	0.13	-3.65	.003**
	Evolved Nest Experience	0.38	0.33	0.43	0.03	14.08	< .001***
	Income	0.07	0.00	0.14	0.04	1.95	.051
	Education	0.07	0.03	0.10	0.02	3.90	< .001***
Relationships Satisfaction	(Intercept)	-0.41	-0.63	-0.19	0.11	-3.78	.001***
	Evolved Nest Experience	0.40	0.35	0.45	0.03	14.90	< .001***
	Income	0.16	0.09	0.23	0.04	4.38	< .001***
	Education	0.01	-0.02	0.05	0.02	0.72	.476
Secure Attachment	(Intercept)	-0.29	-0.55	-0.03	0.12	-2.35	.029*
	Evolved Nest Experience	0.20	0.14	0.25	0.03	6.77	< .001***
	Income	0.05	-0.03	0.13	0.04	1.32	.189
	Education	0.04	0.00	0.08	0.02	2.18	.03*
Avoidant Attachment (Reverse Scored)	(Intercept)	0.18	-0.07	0.42	0.12	1.49	.15
	Evolved Nest Experience	0.02	-0.04	0.08	0.03	0.78	.434
	Income	-0.07	-0.15	0.01	0.04	-1.67	.095
	Education	-0.01	-0.04	0.03	0.02	-0.35	.728
Anxious Attachment (Reverse Scored)	(Intercept)	-0.01	-0.22	0.20	0.11	-0.11	.91
	Evolved Nest Experience	0.11	0.06	0.17	0.03	3.85	< .001***
	Income	0.03	-0.05	0.10	0.04	0.63	.526
	Education	-0.02	-0.05	0.02	0.02	-0.92	.36
Fearful Attachment (Reverse Scored)	(Intercept)	-0.26	-0.46	-0.06	0.10	-2.50	.013*
	Evolved Nest Experience	0.25	0.19	0.30	0.03	8.72	< .001***
	Income	0.12	0.04	0.20	0.04	3.08	.002**
	Education	0.00	-0.03	0.03	0.02	-0.18	.854
Neighbourhood Belonging	(Intercept)	-0.45	-0.67	-0.22	0.11	-4.05	.001**
	Evolved Nest Experience	0.29	0.24	0.35	0.03	10.39	< .001***
	Income	0.15	0.07	0.22	0.04	3.82	< .001***
	Education	0.03	-0.01	0.06	0.02	1.50	.141
Ability to Rely on Others	(Intercept)	-0.19	-0.38	0.01	0.10	-1.89	.059
	Evolved Nest Experience	0.36	0.31	0.41	0.03	13.03	< .001***
	Income	0.09	0.01	0.16	0.04	2.26	.024*
	Education	0.00	-0.03	0.03	0.02	0.10	.924

Table S5. Developmental Nestedness and General Prosociality After Controls

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Term	Estimate	CI Low	CI High	SE	t	p
All	(Intercept)	-0.23	-0.43	-0.03	0.10	-2.24	0.026*
	Evolved Nest Experience	0.21	0.16	0.27	0.03	7.44	< .001***
	Income	0.13	0.05	0.20	0.04	3.25	.001**
	Education	-0.01	-0.04	0.02	0.02	-0.62	.535
Japan	(Intercept)	-0.19	-0.55	0.17	0.19	-1.03	.305
	Evolved Nest Experience	0.20	0.09	0.31	0.06	3.61	< .001***
	Income	0.09	-0.04	0.22	0.07	1.32	.187
	Education	0.02	-0.05	0.09	0.04	0.50	.615
UK	(Intercept)	-0.30	-0.70	0.10	0.20	-1.50	.135
	Evolved Nest Experience	0.21	0.12	0.31	0.05	4.41	< .001***
	Income	0.11	-0.04	0.27	0.08	1.43	.153
	Education	0.01	-0.05	0.07	0.03	0.40	.693
US	(Intercept)	-0.36	-0.80	0.08	0.22	-1.63	.105
	Evolved Nest Experience	0.22	0.13	0.31	0.05	4.66	< .001***
	Income	0.18	0.06	0.30	0.06	3.01	.003**
	Education	-0.02	-0.08	0.05	0.03	-0.51	.611

Table S6. Developmental Nestedness and General Prosociality Measures

Results from mixed-effects models that include evolved nest experience, current household income, and highest level of education as fixed effects, and random intercepts at the country level to account for differences across regions. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Model	Term	Estimate	CI Low	CI High	SE	t	p
Altruism	(Intercept)	-0.04	-0.25	0.16	0.11	-0.41	.679
	Evolved Nest Experience	0.12	0.06	0.18	0.03	3.99	< .001***
	Income	0.03	-0.05	0.11	0.04	0.82	.412
	Education	-0.01	-0.04	0.03	0.02	-0.40	.692
Positive Reciprocity	(Intercept)	0.02	-0.18	0.23	0.11	0.21	.834
	Evolved Nest Experience	0.12	0.07	0.18	0.03	4.30	< .001***
	Income	0.06	-0.02	0.13	0.04	1.41	.159
	Education	-0.03	-0.06	0.00	0.02	-1.78	.075
Strong Negative Reciprocity (Reverse Scored)	(Intercept)	0.16	-0.04	0.37	0.11	1.54	.123
	Evolved Nest Experience	0.13	0.07	0.19	0.03	4.52	< .001***
	Income	-0.02	-0.10	0.06	0.04	-0.45	.656
	Education	-0.02	-0.06	0.01	0.02	-1.46	.146
Weak Negative Reciprocity (Reverse Scored)	(Intercept)	0.06	-0.15	0.27	0.11	0.52	.602
	Evolved Nest Experience	0.06	0.00	0.12	0.03	1.98	.048*
	Income	-0.02	-0.10	0.06	0.04	-0.48	.63
	Education	-0.01	-0.04	0.03	0.02	-0.36	.722
Risk Attitude (Self-Reported)	(Intercept)	-0.41	-0.66	-0.17	0.12	-3.49	.002**
	Evolved Nest Experience	0.10	0.04	0.16	0.03	3.38	.001**
	Income	0.14	0.06	0.21	0.04	3.36	.001**
	Education	0.02	-0.01	0.06	0.02	1.35	.182
Risk Attitude (Elicited)	(Intercept)	-0.22	-0.42	-0.02	0.10	-2.13	.034*
	Evolved Nest Experience	0.04	-0.02	0.10	0.03	1.42	.156
	Income	0.10	0.02	0.18	0.04	2.58	.01*
	Education	-0.01	-0.04	0.03	0.02	-0.30	.768
Patience (Self-Reported)	(Intercept)	-0.16	-0.36	0.05	0.11	-1.48	.138
	Evolved Nest Experience	0.13	0.07	0.18	0.03	4.29	< .001***
	Income	0.11	0.03	0.19	0.04	2.73	.006**
	Education	-0.02	-0.05	0.02	0.02	-0.91	.364
Patience (Elicited)	(Intercept)	-0.34	-0.59	-0.09	0.12	-2.78	.011*
	Evolved Nest Experience	0.07	0.01	0.13	0.03	2.43	.015*
	Income	0.02	-0.06	0.10	0.04	0.45	.655
	Education	0.06	0.02	0.10	0.02	3.27	.002**
Volunteered	(Intercept)	-0.44	-0.76	-0.13	0.15	-3.06	.01*
	Evolved Nest Experience	0.08	0.02	0.14	0.03	2.63	.009**
	Income	0.05	-0.04	0.13	0.04	1.11	.268
	Education	0.08	0.04	0.12	0.02	3.90	< .001***
No Say in Government	(Intercept)	0.32	0.05	0.60	0.13	2.48	.023*
	Evolved Nest Experience	-0.06	-0.12	0.00	0.03	-1.97	.049*
	Income	0.02	-0.06	0.10	0.04	0.41	.683
	Education	-0.07	-0.11	-0.04	0.02	-3.90	< .001***

H2: Developmental nestedness will be positively associated with incentivised prosociality across cultures

Table S7. Developmental Nestedness and Incentivised Prosociality After Controls

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Term	Estimate	CI Low	CI High	SE	t	p
All	(Intercept)	0.06	-0.16	0.27	0.11	0.53	.598
	Evolved Nest Experience	0.04	-0.02	0.10	0.03	1.36	.175
	Income	-0.02	-0.10	0.06	0.04	-0.43	.667
	Education	0.00	-0.03	0.03	0.02	-0.09	.929
Japan	(Intercept)	-0.09	-0.47	0.29	0.19	-0.46	.646
	Evolved Nest Experience	0.00	-0.12	0.11	0.06	-0.03	.977
	Income	0.06	-0.07	0.20	0.07	0.93	.353
	Education	0.00	-0.08	0.08	0.04	-0.02	.981
UK	(Intercept)	0.15	-0.26	0.57	0.21	0.72	.473
	Evolved Nest Experience	0.06	-0.03	0.16	0.05	1.29	.197
	Income	-0.07	-0.22	0.09	0.08	-0.81	.420
	Education	0.00	-0.06	0.06	0.03	0.05	.961
US	(Intercept)	-0.05	-0.52	0.42	0.24	-0.21	.837
	Evolved Nest Experience	0.04	-0.06	0.13	0.05	0.69	.489
	Income	-0.05	-0.18	0.08	0.07	-0.79	.432
	Education	0.03	-0.04	0.09	0.04	0.72	.473

Table S8. Developmental Nestedness and Incentivised Prosociality Measures

Results from mixed-effects models that include evolved nest experience, current household income, and highest level of education as fixed effects, and random intercepts at the country level to account for differences across regions. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Model	Term	Estimate	CI Low	CI High	SE	t	p
Trust (Amount Sent in TG)	(Intercept)	-0.14	-0.51	0.23	0.18	-0.81	.426
	Evolved Nest Experience	0.03	-0.06	0.12	0.05	0.70	.482
	Income	-0.01	-0.14	0.11	0.06	-0.22	.824
	Education	0.05	-0.01	0.11	0.03	1.69	.112
Positive Reciprocity (% Returned in TG)	(Intercept)	-0.12	-0.46	0.22	0.17	-0.69	.491
	Evolved Nest Experience	0.00	-0.09	0.10	0.05	0.06	.953
	Income	0.01	-0.12	0.14	0.07	0.15	.882
	Education	0.01	-0.04	0.06	0.03	0.50	.621
Altruism I (Given in DG)	(Intercept)	-0.03	-0.24	0.18	0.11	-0.27	.784
	Evolved Nest Experience	0.06	0.00	0.12	0.03	1.94	.052
	Income	0.01	-0.08	0.09	0.04	0.13	.896
	Education	0.00	-0.03	0.03	0.02	0.09	.932
Altruism II (Taken in DG)	(Intercept)	0.12	-0.09	0.33	0.11	1.13	.259
	Evolved Nest Experience	0.02	-0.04	0.08	0.03	0.65	.519
	Income	-0.07	-0.15	0.01	0.04	-1.71	.088
	Education	0.00	-0.03	0.04	0.02	0.12	.902
Altruism III (Offered in UG)	(Intercept)	0.22	-0.15	0.58	0.19	1.17	.244
	Evolved Nest Experience	0.03	-0.07	0.12	0.05	0.55	.585
	Income	-0.09	-0.23	0.05	0.07	-1.23	.22
	Education	0.00	-0.06	0.05	0.03	-0.03	.98
Negative Reciprocity (Min Offer Accepted in UG)	(Intercept)	0.07	-0.28	0.41	0.18	0.40	.691
	Evolved Nest Experience	-0.06	-0.16	0.04	0.05	-1.23	.221
	Income	0.00	-0.13	0.13	0.07	0.05	.959
	Education	-0.01	-0.06	0.05	0.03	-0.31	.754
Cooperation (Expectation in PGG)	(Intercept)	0.23	-0.05	0.50	0.14	1.60	.111
	Evolved Nest Experience	0.03	-0.04	0.10	0.04	0.80	.424
	Income	-0.03	-0.13	0.08	0.05	-0.51	.613
	Education	-0.03	-0.07	0.01	0.02	-1.47	.142
Cooperation (Contribution in PGG)	(Intercept)	0.18	-0.10	0.45	0.14	1.24	.216
	Evolved Nest Experience	0.01	-0.07	0.08	0.04	0.16	.871
	Income	-0.01	-0.12	0.09	0.05	-0.25	.803
	Education	-0.03	-0.07	0.01	0.02	-1.32	.188
Honesty (Heads Reported in CF)	(Intercept)	-0.17	-0.40	0.06	0.11	-1.55	.133
	Evolved Nest Experience	0.03	-0.03	0.09	0.03	0.94	.349
	Income	0.07	0.00	0.15	0.04	1.86	.063
	Education	0.01	-0.03	0.04	0.02	0.30	.77

H3: Associations between childhood evolved nest experiences and adult well-being and social capital will be similar across cultures

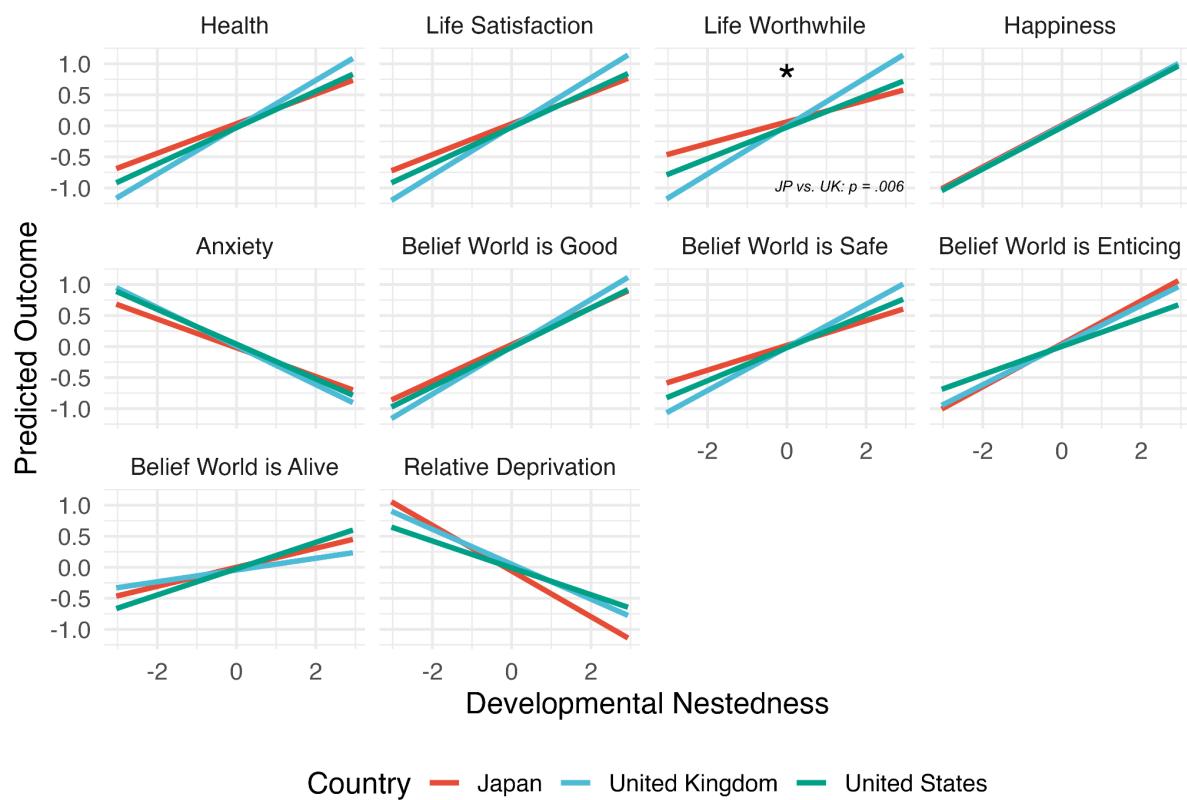


Figure S1. Nestedness and Personal Well-being Slopes Across Countries

Plots show relationships between standardised developmental nestedness scores and standardised measures of personal well-being in each country. Slopes were equivalent across countries for all measures except life being worthwhile, where the slope was significantly steeper in the UK compared with Japan.

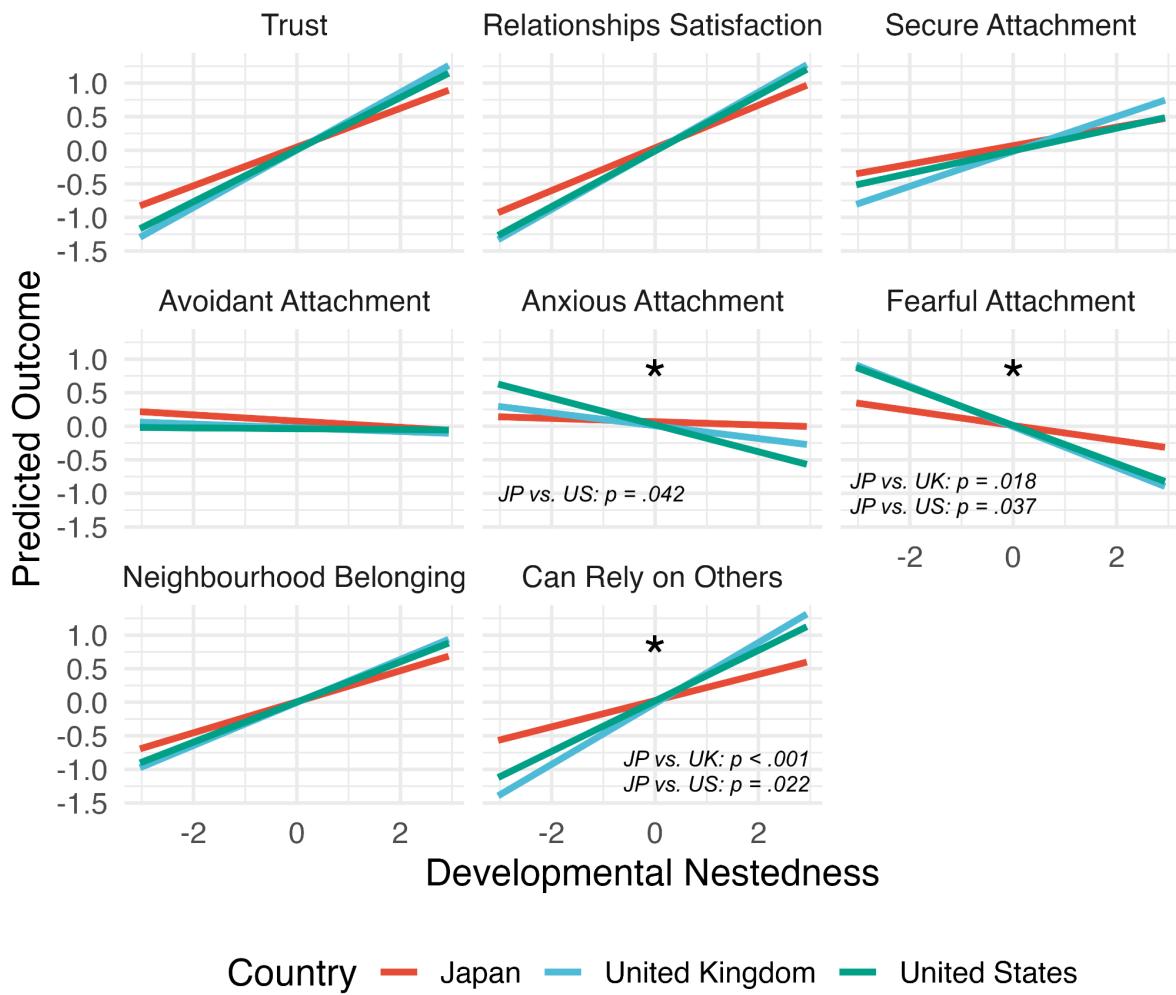


Figure S2. Nestedness and Social Relationships Slopes Across Countries

Plots show relationship between standardised developmental nestedness scores and standardised measures of social relationships in each country. Slopes were equivalent for trust, satisfaction with relationships, secure attachment, avoidant attachment, and neighbourhood belonging. Nestedness was more strongly associated with significantly less anxious and fearful attachment in the US vs. Japan. It was also more strongly associated with less fearful attachment in the UK than in Japan. Lastly, nestedness more strongly predicted people's ability to rely on others in the UK and the US compared with Japan.

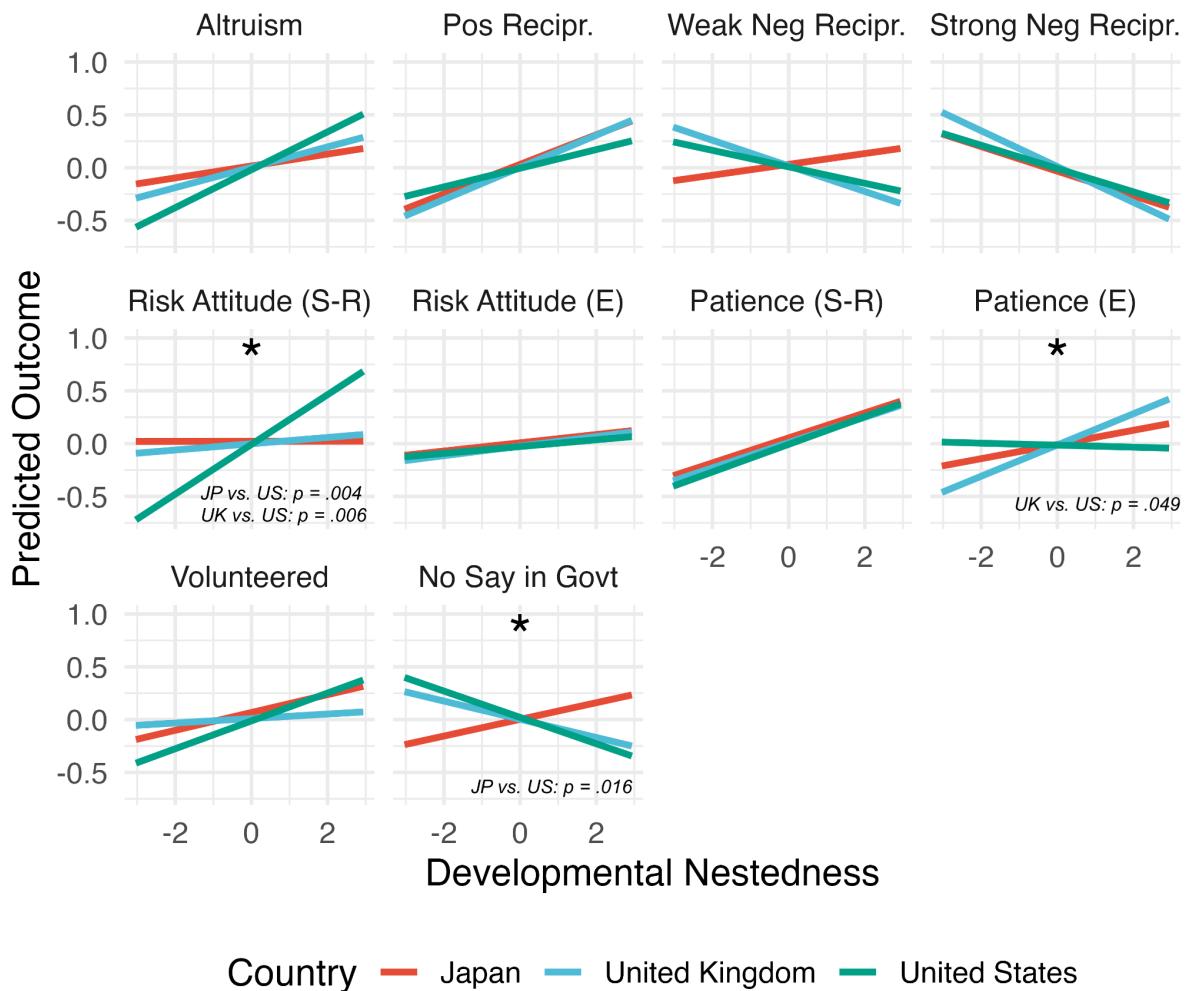


Figure S3. Nestedness and General Prosociality Slopes Across Countries

Plots show relationship between standardised developmental nestedness scores and standardised measures of general prosociality in each country. Slopes were statistically equivalent for altruism, positive reciprocity, weak and strong negative reciprocity, elicited (E) risk attitudes, self-reported (S-R) patience, and volunteering. Nestedness was more strongly associated with self-reported (S-R) risk attitudes in the US compared with Japan and the UK. It was more strongly associated with elicited (E) patience in the UK than in the US. People's nestedness was negatively associated with their feeling like they had no say in what the government did in the UK and the US, unlike in Japan.

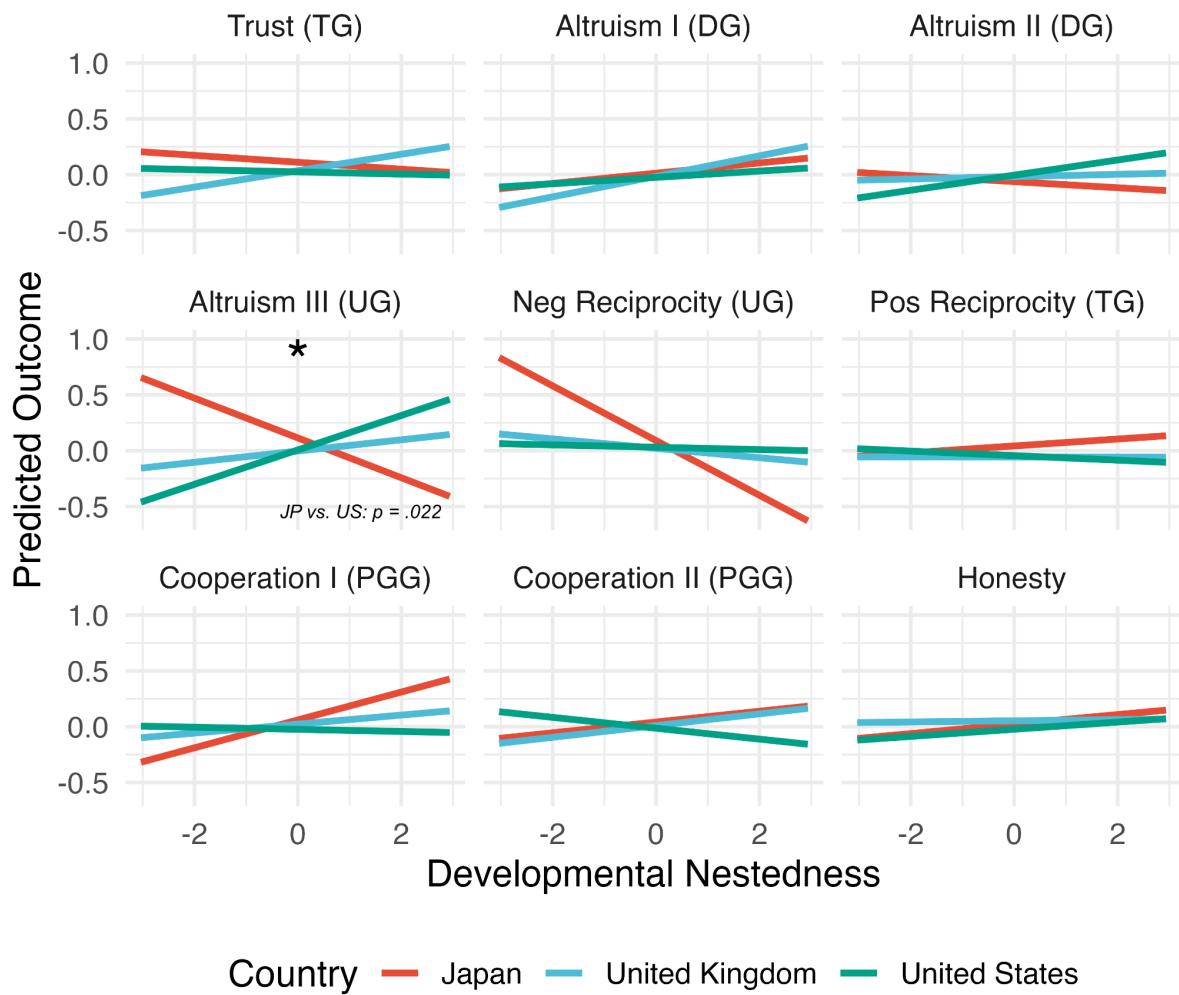


Figure S4. Nestedness and Incentivised Prosociality Slopes Across Countries
 Plots show relationship between standardised developmental nestedness scores and standardised measures of incentivised prosociality in each country. Slopes were statistically equivalent for behaviour in the trust game (TG), dictator games (DG), and public goods games (PGG), and honesty in the coin-flip game. They were also equivalent for negative reciprocity in the ultimatum game (UG) but not altruism in this game, where more nested participants offered less in Japan, unlike in the US and the UK.

H4: Latent factors in evolved nest experiences will predict adult well-being and social capital

Table S9. Evolved Nest Component and Factor Correlations

Correlation coefficients representing associations between evolved nest component scores and positive and negative experience factor scores. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Evolved Nest Component	Japan		UK		US	
	Positive	Negative	Positive	Negative	Positive	Negative
Positive Climate	.64***	-.20***	.84***	-.71***	.87***	-.60***
Positive Touch	.70***	.13*	.74***	-.39***	.71***	-.38***
Responsive Care	.92***	-.40***	.95***	-.81***	.97***	-.70***
Social Embeddedness	.72***	-.03	.82***	-.46***	.73***	-.29***
Play	.64***	-.02	.59***	-.38***	.45***	-.16***
Negative Climate	-.44***	.74***	-.64***	.98***	-.66***	.92***
Negative Touch	-.08	.91***	-.30***	.52***	-.24***	.70***

Table S10. Positive and Negative Experiences and Personal Well-being

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Factor	Term	Estimate	CI Low	CI High	SE	t	p
Japan	Positive Experiences	(Intercept)	-0.36	-0.71	-0.02	0.17	-2.10	.037*
		Pos Exp	0.43	0.33	0.53	0.05	8.12	< .001***
		Income	0.11	-0.01	0.23	0.06	1.79	.075
	Negative Experiences	Education	0.05	-0.02	0.12	0.04	1.44	.151
		(Intercept)	-0.72	-1.08	-0.36	0.18	-3.94	< .001***
		Neg Exp	-0.17	-0.28	-0.06	0.06	-3.03	.003**
UK	Positive Experiences	Income	0.20	0.07	0.33	0.07	3.01	.003**
		Education	0.09	0.02	0.17	0.04	2.50	.013*
		(Intercept)	-0.65	-0.99	-0.32	0.17	-3.81	< .001***
	Negative Experiences	Pos Exp	0.50	0.42	0.58	0.04	12.22	< .001***
		Income	0.16	0.03	0.29	0.07	2.37	.018*
		Education	0.07	0.02	0.12	0.03	2.64	.009**
US	Positive Experiences	(Intercept)	-0.72	-1.07	-0.37	0.18	-4.03	< .001***
		Neg Exp	-0.42	-0.50	-0.34	0.04	-9.97	< .001***
		Income	0.20	0.06	0.33	0.07	2.89	.004**
	Negative Experiences	Education	0.06	0.01	0.12	0.03	2.35	.019*
		(Intercept)	-0.68	-1.09	-0.28	0.21	-3.30	.001**
		Pos Exp	0.40	0.31	0.49	0.04	9.14	< .001***
	Positive Experiences	Income	0.21	0.10	0.32	0.06	3.77	< .001***
		Education	0.02	-0.04	0.08	0.03	0.63	.526
		(Intercept)	-1.04	-1.45	-0.63	0.21	-5.01	< .001***
	Negative Experiences	Neg Exp	-0.29	-0.38	-0.21	0.04	-6.82	< .001***
		Income	0.27	0.16	0.39	0.06	4.68	< .001***
		Education	0.05	-0.01	0.12	0.03	1.75	.081

Table S11. Positive and Negative Experiences and Social Relationships

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Factor	Term	Estimate	CI Low	CI High	SE	t	p
Japan	Positive Experiences	(Intercept)	-0.26	-0.60	0.08	0.17	-1.49	.139
		Pos Exp	0.37	0.27	0.47	0.05	7.05	< .001***
		Income	0.12	0.00	0.24	0.06	1.92	.056
	Negative Experiences	Education	0.01	-0.06	0.07	0.04	0.17	.863
		(Intercept)	-0.56	-0.91	-0.21	0.18	-3.17	.002**
		Neg Exp	-0.14	-0.24	-0.03	0.05	-2.49	.013*
UK	Positive Experiences	Income	0.20	0.07	0.32	0.07	3.03	.003**
		Education	0.04	-0.03	0.12	0.04	1.18	.239
		(Intercept)	-0.65	-1.00	-0.31	0.18	-3.71	< .001***
	Negative Experiences	Pos Exp	0.52	0.44	0.61	0.04	12.60	< .001***
		Income	0.15	0.02	0.29	0.07	2.26	.025*
		Education	0.07	0.02	0.13	0.03	2.76	.006**
US	Positive Experiences	(Intercept)	-0.72	-1.08	-0.36	0.18	-3.92	< .001***
		Neg Exp	-0.45	-0.54	-0.37	0.04	-10.49	< .001***
		Income	0.20	0.06	0.33	0.07	2.78	.006**
	Negative Experiences	Education	0.07	0.01	0.12	0.03	2.47	.014*
		(Intercept)	-0.27	-0.68	0.15	0.21	-1.28	.203
		Pos Exp	0.48	0.40	0.57	0.04	10.91	< .001***

Table S12. Positive and Negative Experiences and General Prosociality

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Factor	Term	Estimate	CI Low	CI High	SE	t	p
Japan	Positive Experiences	(Intercept)	-0.14	-0.50	0.23	0.18	-0.74	.462
		Pos Exp	0.26	0.15	0.37	0.06	4.57	< .001***
		Income	0.08	-0.05	0.21	0.07	1.24	.217
	Negative Experiences	Education	0.01	-0.07	0.08	0.04	0.21	.832
		(Intercept)	-0.38	-0.74	-0.03	0.18	-2.10	.036*
		Neg Exp	0.06	-0.05	0.17	0.06	1.09	.277
UK	Positive Experiences	Income	0.16	0.03	0.29	0.07	2.45	.015*
		Education	0.03	-0.05	0.10	0.04	0.70	.487
		(Intercept)	-0.26	-0.66	0.14	0.20	-1.30	.195
	Negative Experiences	Pos Exp	0.26	0.17	0.36	0.05	5.49	< .001***
		Income	0.09	-0.06	0.24	0.08	1.16	.248
		Education	0.01	-0.05	0.07	0.03	0.43	.667
US	Positive Experiences	(Intercept)	-0.35	-0.76	0.06	0.21	-1.69	.092
		Neg Exp	-0.12	-0.21	-0.02	0.05	-2.41	.016*
		Income	0.14	-0.02	0.29	0.08	1.71	.088
	Negative Experiences	Education	0.01	-0.05	0.07	0.03	0.33	.745
		(Intercept)	-0.34	-0.78	0.10	0.23	-1.51	.131
		Pos Exp	0.18	0.09	0.28	0.05	3.86	< .001***
	Positive Experiences	Income	0.17	0.05	0.29	0.06	2.70	.007**
		Education	-0.02	-0.08	0.05	0.03	-0.51	.609
		(Intercept)	-0.48	-0.90	-0.05	0.22	-2.20	.028*
	Negative Experiences	Neg Exp	-0.17	-0.26	-0.08	0.05	-3.69	< .001***
		Income	0.19	0.07	0.31	0.06	3.12	.002**
		Education	0.00	-0.07	0.06	0.03	-0.11	.912

Table S13. Positive and Negative Experiences and Incentivised Prosociality

Results from adjusted linear regression models that include controls for current household income and highest level of education. Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Country	Factor	Term	Estimate	CI Low	CI High	SE	t	p
Japan	Positive Experiences	(Intercept)	0.02	-0.36	0.39	0.19	0.09	.932
		Pos Exp	0.11	0.00	0.23	0.06	1.93	.055
		Income	0.03	-0.10	0.17	0.07	0.48	.633
	Negative Experiences	Education	-0.01	-0.09	0.07	0.04	-0.27	.787
		(Intercept)	-0.15	-0.50	0.21	0.18	-0.82	.412
		Neg Exp	0.25	0.14	0.36	0.06	4.58	< .001***
UK	Positive Experiences	Income	0.11	-0.02	0.24	0.07	1.68	.094
		Education	-0.01	-0.09	0.06	0.04	-0.35	.728
		(Intercept)	0.17	-0.25	0.58	0.21	0.79	.431
	Negative Experiences	Pos Exp	0.08	-0.02	0.18	0.05	1.64	.101
		Income	-0.07	-0.23	0.09	0.08	-0.90	.370
		Education	0.00	-0.06	0.07	0.03	0.06	.953
US	Positive Experiences	(Intercept)	0.14	-0.28	0.55	0.21	0.64	.521
		Neg Exp	-0.03	-0.13	0.07	0.05	-0.62	.536
		Income	-0.06	-0.22	0.10	0.08	-0.70	.482
	Negative Experiences	Education	0.00	-0.06	0.06	0.03	0.03	.977
		(Intercept)	-0.04	-0.52	0.44	0.24	-0.17	.863
		Pos Exp	0.04	-0.06	0.14	0.05	0.72	.470
US	Positive Experiences	Income	-0.06	-0.19	0.07	0.07	-0.88	.379
		Education	0.03	-0.04	0.10	0.04	0.74	.457
		(Intercept)	-0.12	-0.58	0.34	0.23	-0.52	.602
	Negative Experiences	Neg Exp	0.03	-0.07	0.13	0.05	0.64	.522
		Income	-0.05	-0.18	0.08	0.07	-0.72	.474
		Education	0.04	-0.03	0.10	0.04	0.99	.321

Incentivised Prosociality Across Countries

In the main text, we stated that participants' decisions in the economic games were broadly consistent with those made by previous participants.

In a meta-analysis of Trust Game results, for example, participants from Japan, the UK, and the US were found on average to send 58%, 54%, and 51% of their endowment; and to return 32%, 28%, and 34% of whatever was sent, respectively (Johnson & Mislin, 2011). This was similar to the average proportion sent and returned by participants in Japan (sent: 52%; returned: 37%), the UK (sent: 46%; returned: 28%), and the US (sent: 51%; returned: 31%) in the present study. Relatedly, in a study of 600 non-student residents of Tokyo, 19.2% of senders sent nothing, 22.3% sent half of their endowment, and 16.8% sent the full amount (Yamagishi et al., 2015). In comparison, senders in our Japanese sample were more likely to send half (33.1%) than nothing (8.7%) or everything (8.7%). In the UK (US), 16.2% (10.3%) sent nothing, 39.9% (42.6%) sent half, and 12.6% (14.7%) sent everything. These results are consistent with previous findings that American (vs. Japanese) respondents are more trusting of other people in general (Yamagishi & Yamagishi, 1994).

In the Dictator Game, a recent meta-study reported that non-students on average give 40% of their endowment, which was similar to the proportion given by participants in our study (Engel, 2011). Another study in Japan reported that 514 non-student participants on average gave 29.3% of their endowment (Ogawa et al., 2020), which was less than Japanese participants in our sample gave in the standard version of the Dictator Game (43.0%). These participants were also more altruistic than British (33.6%) and American (39.2%) participants in this study.

In the Ultimatum Game, the most common offer from proposers is a 50-50 split and around half of responders reject 'unfair' offers of less than 30% of the total sum (Camerer, 2003). Previous authors have reported that 43% of participants in Japan rejected unfair offers (Yamagishi et al., 2012). Here, 40.3% of Japanese participants stated that they would reject 'unfair' offers, which was consistent with previous findings and higher than the proportion of British (28.1%) and American (32.8%) who did so.

In the Public Goods Game, participants in the UK contributed 47.4% of their endowment (£4.74) and those in the US contributed 52.8% (\$5.28). These figures were not significantly different ($t(444) = 1.70, p = .090$). This is consistent with previous findings that participants from the UK and the US contributed similarly (35-40% of their endowment) to a common pot (Weber et al., 2023). Participants in Japan contributed more in this study (50.6%) than in a previous study (36.0%) although this was based on a smaller sample size ($n = 96$).

Lastly, in the coin-flip game, Japanese participants appeared to be more honest (reporting an average of 4.99, or 49.9% heads) than British (5.80, or 58.0% heads) and American (5.68 heads) participants. In a previous cross-cultural study (Hugh-Jones, 2016) participants from these countries reported 81%, 52%, and 66% heads, respectively.

Developmental Nestedness and Socioeconomic Status

An important empirical question is whether differences in developmental nestedness simply reflect differences in socioeconomic status. Is it the case that people from higher socioeconomic backgrounds are more developmentally nested? And what is the nature of this relationship? We investigated this by comparing a linear model of the relationship between participants' subjective socioeconomic status when they were growing up and their developmental nestedness with a model that included a quadratic term. We used subjective socioeconomic status rather than reported income as this is more easily comparable across countries. The addition of the quadratic term significantly improved model fit ($F(1,1282) = 53.93, p < .001$). The coefficient estimates from this model highlighted a positive effect of perceived family socioeconomic status ($\beta = 0.46, SE = 0.05, t = 10.0, p < .001$) but a negative quadratic term ($\beta = -0.03, SE = 0.00, t = 7.34, p < .001$) indicated a curvilinear relationship. This relationship is illustrated in Figure S5a. We also compared linear and quadratic models of the relationship between participants' subjective socioeconomic status and their positive and negative experience factor scores. As before, the addition of the quadratic term improved model fit for both positive experiences ($F(1,1272) = 35.78, p < .001$) and negative experiences ($F(1,1272) = 37.78, p < .001$). For positive experiences, we detected a positive linear effect of family socioeconomic status ($\beta = 0.56, SE = 0.06, t = 9.1, p < .001$) and a negative quadratic effect ($\beta = -0.04, SE = 0.01, t = 6.0, p < .001$). For negative experiences, we detected a negative linear effect ($\beta = -0.51, SE = 0.06, t = 7.8, p < .001$) and a positive quadratic effect ($\beta = 0.04, SE = 0.01, t = 6.1, p < .001$). These results similarly indicated that the relationships between family socioeconomic status and positive and negative childhood experiences were both curvilinear, as shown in Figure 5b.

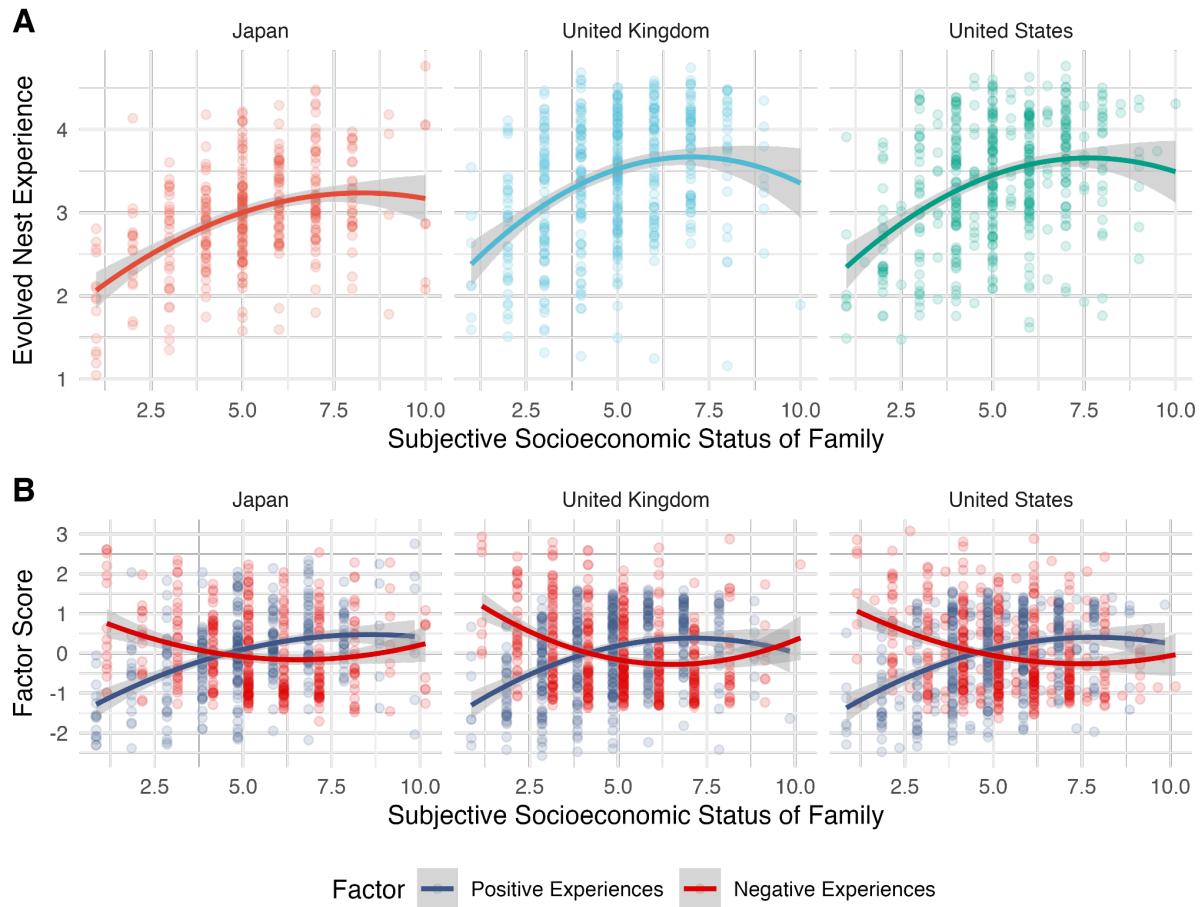


Figure S5. Early Life Experience and Subjective Socioeconomic Status

Plots show the non-linear relationships between family subjective socioeconomic status and developmental nestedness. Plot A shows that developmental nestedness increases with socioeconomic status and then starts to fall. Plot B shows that positive experiences follow a similar trend, whereas negative experiences decrease with socioeconomic status before increasing again at the higher end of the scale. Lines are from models with quadratic terms.

Developmental Nestedness and Trust

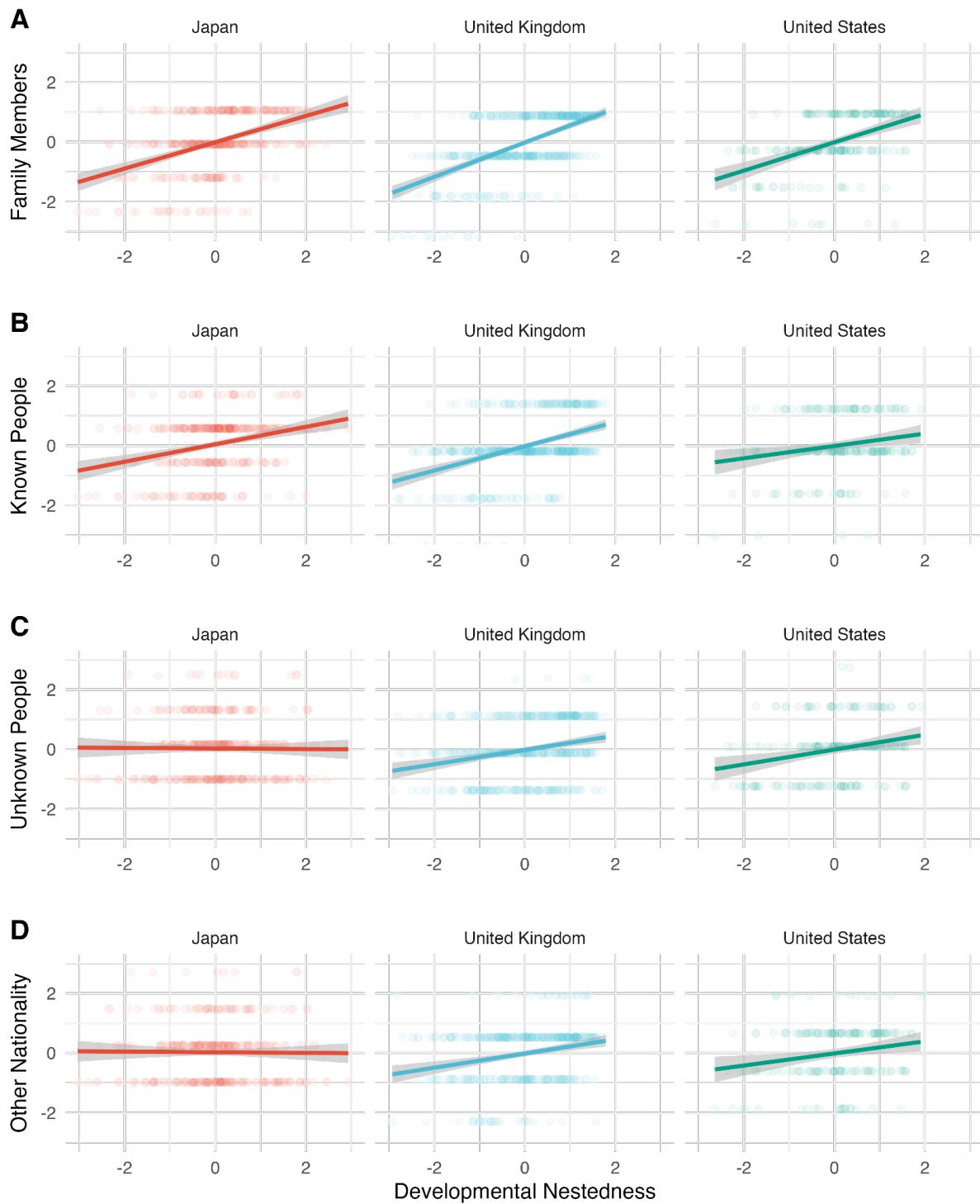


Figure S6. Developmental Nestedness and Trust in Others

Plots show the relationship between people's developmental nestedness and their trust in family members (A), people they know (B), people they don't know (C), and people from another nationality (D). These relations remain positive in the UK and the US, but not in Japan, where trust in unknown people and those from another nationality does not increase with developmental nestedness.

Self-Reported vs. Incentivised Prosociality

In the main text, we discussed the association between self-reported and incentivised measures of prosociality. Overall, we detected weak positive correlation between standardised scores of prosociality and incentivised prosociality across countries ($r = .18$, $t(1,399) = 6.77$, $p < .001$). Within countries, this correlation was strongest in Japan ($r = .27$, $t(418) = 5.83$, $p < .001$), weaker in the UK ($r = .15$, $t(487) = 3.36$, $p < .001$), and weakest in the US ($r = .12$, $t(490) = 2.74$, $p = .006$). These results are visualised in Figure S7, along with correlations between individual measures of self-reported and incentivised prosociality, all of which were standardised within each country.

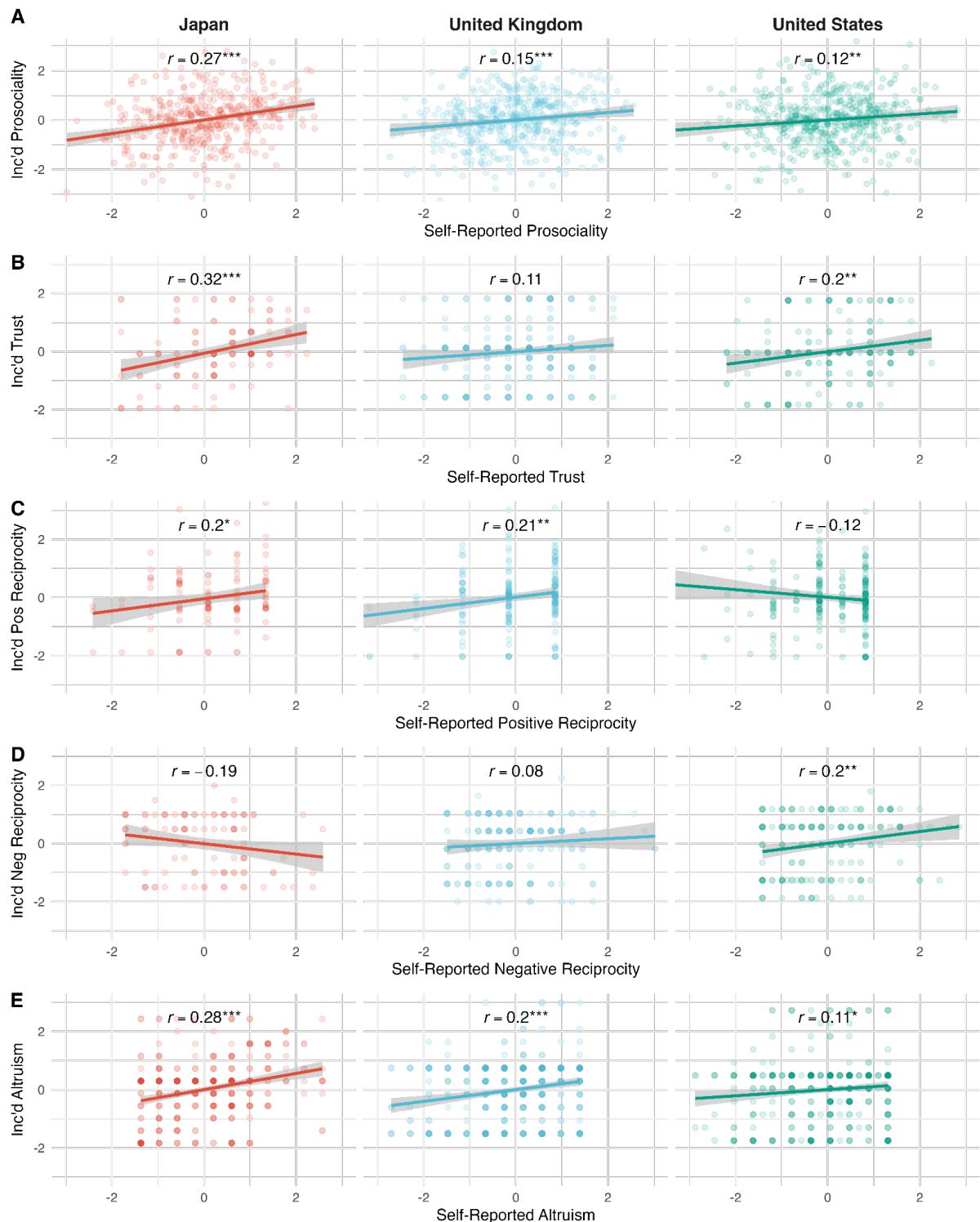


Figure S7. Self-Reported and Incentivised Measures

Plots show correlations between standardised self-reported and incentivised measures of prosociality in each country. Points represent raw data and lines are linear regression lines. Plot A shows that the relationship between overall prosociality scores is strongest in Japan. Plot B shows self-reported and incentivised trust (average funds sent in the Trust Game). Plot C shows self-reported and incentivised positive reciprocity (the average proportion of funds returned in the Trust Game). Plot D shows self-reported and incentivised negative reciprocity (minimum offer accepted in the Ultimatum Game). Plot E shows self-reported and incentivised altruism (amount given in the Dictator Game).

References

Camerer, C. (2003). *Behavioral Game Theory: Experiments in Strategic Interaction*. Princeton University Press.

Engel, C. (2011). Dictator games: A meta study. *Experimental Economics*, 14(4), 583–610.

Hugh-Jones, D. (2016). Honesty, beliefs about honesty, and economic growth in 15 countries. *Journal of Economic Behavior & Organization*, 127, 99–114.

Johnson, N. D., & Mislin, A. A. (2011). Trust games: A meta-analysis. *Journal of Economic Psychology*, 32(5), 865–889.

Ogawa, K., Kawamura, T., & Matsushita, K. (2020). Effects of cognitive ability and age on giving in dictator game experiments. *Research in Economics*, 74(4), 323–335.

Weber, T. O., Schulz, J. F., Beranek, B., Lambarraa-Lehnhardt, F., & Gächter, S. (2023). The behavioral mechanisms of voluntary cooperation across culturally diverse societies: Evidence from the US, the UK, Morocco, and Turkey. *Journal of Economic Behavior & Organization*, 215, 134–152. <https://doi.org/10.1016/j.jebo.2023.09.006>

Yamagishi, T., Akutsu, S., Cho, K., Inoue, Y., Li, Y., & Matsumoto, Y. (2015). Two-component model of general trust: Predicting behavioral trust from attitudinal trust. *Social Cognition*, 33(5), 436–458.

Yamagishi, T., Horita, Y., Mifune, N., Hashimoto, H., Li, Y., Shinada, M., Miura, A., Inukai, K., Takagishi, H., & Simunovic, D. (2012). Rejection of unfair offers in the ultimatum game is no evidence of strong reciprocity. *Proceedings of the National Academy of Sciences*, 109(50), 20364–20368.

Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion*, 18(2), 129–166.