

**Preferences for facial femininity/masculinity
across culture and the sexual orientation spectrum**

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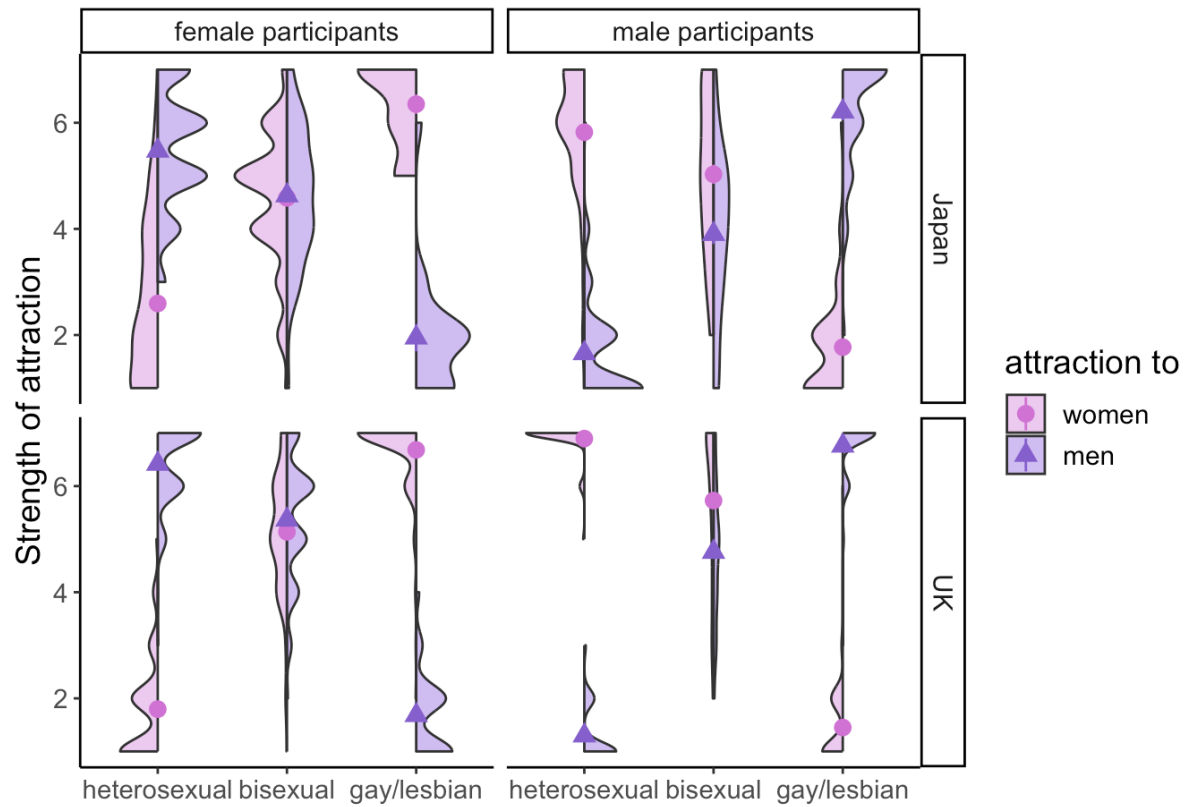
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Supplemental Materials

Figure S1

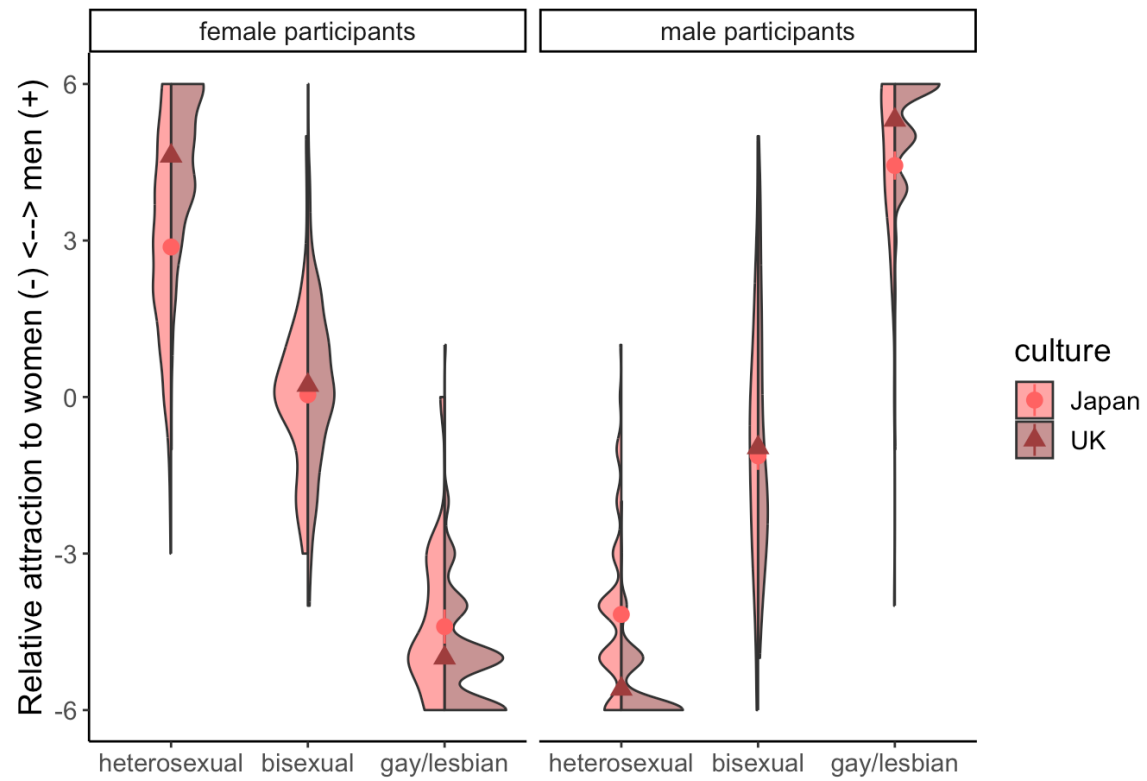
Distribution of Sexual Attraction by Participant Sexual Orientation Category, Culture, and Gender



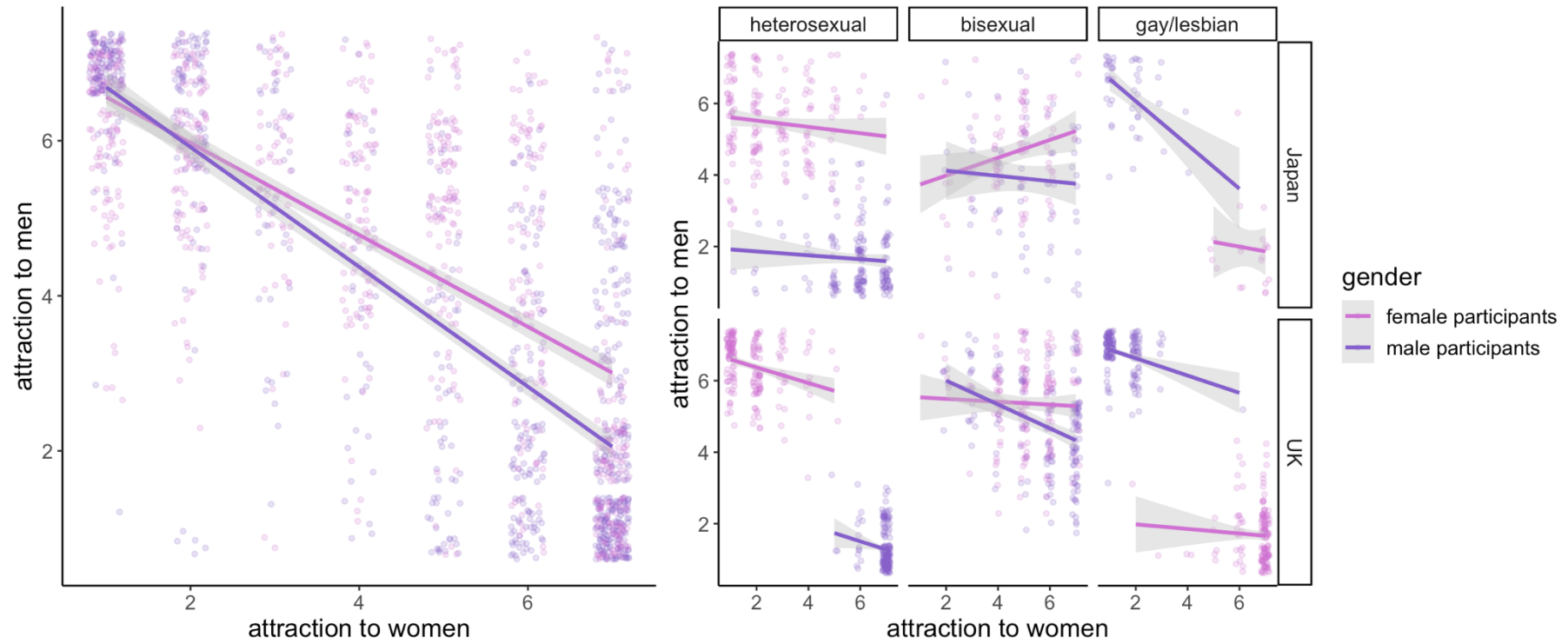
Note. Circular and triangular points represent means

Figure S2

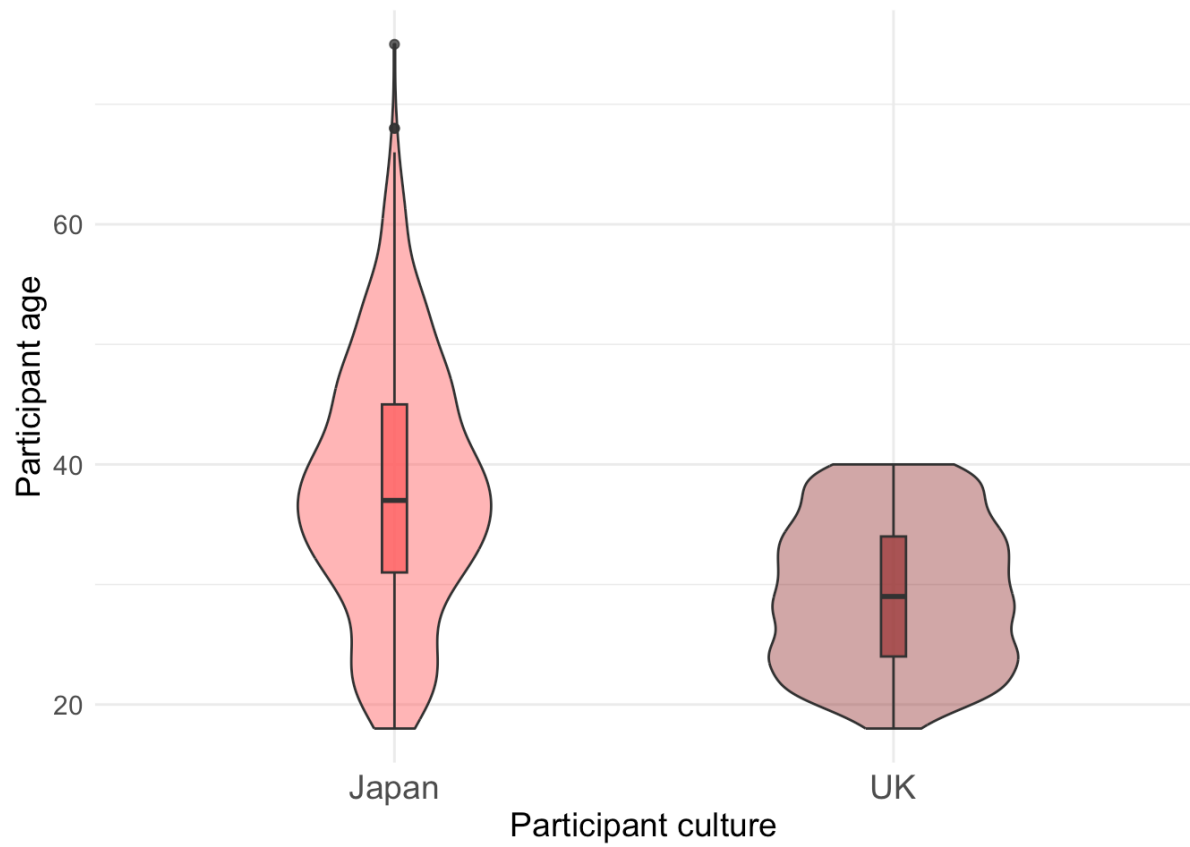
Distribution of Relative Sexual Attraction by Participant Sexual Orientation Category, Culture, and Gender



Note. Circular and triangular points represent means

Figure S3*Relation Between Sexual Attraction to Women and to Men*

Note. Left panel shows relation split by participant gender, right panel shows relation split by participant gender, sexual orientation, and culture.

Figure S4*Age Distributions by Participant Culture*

Note. Boxplots display medians and quartiles. Black points represent outliers

Table S1*Model Estimates for 2AFC Task with Sexual Orientation Category as Predictor*

Predictor	Female participants					Male participants				
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>
Intercept	-14.44	0.81	-16.02 – -12.86	-17.93	<.001	-11.97	0.67	-13.27 – -10.66	-17.98	<.001
Face gender	17.25	0.95	15.40 – 19.11	18.24	<.001	17.09	0.79	15.55 – 18.64	21.69	<.001
Face ethnicity	-0.09	0.95	-1.95 – 1.76	-0.10	.922	0.72	0.79	-0.83 – 2.26	0.91	.362
Participant culture	6.66	1.37	3.98 – 9.34	4.87	<.001	2.59	1.13	0.37 – 4.82	2.29	.022
Participant sexual orientation (bisexual v heterosexual)	2.26	1.15	0.01 – 4.52	1.97	.049	4.84	1.20	2.48 – 7.20	4.02	<.001
Participant sexual orientation (gay/lesbian v heterosexual)	-0.33	1.78	-3.82 – 3.15	-0.19	.851	10.10	1.33	7.50 – 12.71	7.60	<.001
Face gender × face ethnicity	4.52	2.00	0.60 – 8.44	2.26	.024	3.50	1.67	0.23 – 6.77	2.09	.036
Face gender × partic. culture	3.42	0.82	1.81 – 5.02	4.17	<.001	3.56	0.74	2.12 – 5.00	4.84	<.001
Face ethnicity × partic. culture	0.81	0.82	-0.79 – 2.42	0.99	.321	-1.21	0.74	-2.65 – 0.24	-1.64	.101
Face gender × partic. sexual orientation (bi v hetero)	-2.14	0.44	-2.99 – -1.28	-4.88	<.001	-6.39	0.47	-7.32 – -5.47	-13.54	<.001
Face ethnicity × partic. sexual	-0.43	0.44	-1.28 – 0.43	-0.97	.331	0.83	0.47	-0.10 – 1.75	1.75	0.080

orientation (bi v hetero)										
Partic. culture × partic. sexual orientation (bi v hetero)	-3.42	2.30	-7.93 – 1.09	-1.49	.137	-9.27	2.41	-13.99 – -4.55	-3.85	<.001
Face gender × partic. sexual orientation (gay v hetero)	-11.93	0.68	-13.26 – -10.61	-17.62	<.001	4.80	0.52	3.78 – 5.82	9.21	<.001
Face ethnicity × partic. sexual orientation (gay v hetero)	0.37	0.68	-0.96 – 1.70	0.55	.585	3.09	0.52	2.07 – 4.11	5.93	<.001
Partic. culture × partic. sexual orientation (gay v hetero)	-4.41	3.56	-11.39 – 2.57	-1.24	.215	-4.28	2.66	-9.49 – 0.93	-1.61	.107
Face gender × face ethnicity × partic. culture	-4.90	2.08	-8.98 – -0.81	-2.35	.019	-0.64	1.83	-4.23 – 2.96	-0.35	.728
Face gender × face ethnicity × partic. sexual orientation (bi v hetero)	1.88	1.42	-0.90 – 4.66	1.33	.185	-3.73	1.53	-6.73 – -0.72	-2.43	.015
Face gender × partic. culture × partic. sexual orientation (bi v hetero)	-2.62	0.88	-4.34 – -0.90	-2.99	.003	1.83	0.94	-0.02 – 3.68	1.94	.052

Face ethnicity × partic. culture × partic. sexual orientation (bi v hetero)	-2.04	0.88	-3.76 – -0.32	-2.33	.020	2.73	0.94	0.88 – 4.59	2.90	.004
Face gender × face ethnicity × partic. sexual orientation (gay v hetero)	-0.96	2.19	-5.26 – 3.35	-0.44	.663	-3.51	1.69	-6.83 – -0.20	-2.08	.038
Face gender × partic. culture × partic. sexual orientation (gay v hetero)	-3.46	1.35	-6.11 – -0.80	-2.55	.011	-13.90	1.04	-15.95 – -11.86	-13.34	<.001
Face ethnicity × partic. culture × partic. sexual orientation (gay v hetero)	1.59	1.35	-1.06 – 4.25	1.18	.240	-1.97	1.04	-4.01 – 0.07	-1.89	.059
Face gender × face ethnicity × partic. culture × partic. sexual orientation (bi v hetero)	-6.25	2.84	-11.81 – -0.69	-2.20	.028	1.67	3.06	-4.33 – 7.68	0.55	.585
Face gender × face ethnicity × partic. culture × partic. sexual orientation (gay v hetero)	-6.69	4.39	-15.30 – 1.91	-1.52	.127	-0.61	3.38	-7.24 – 6.02	-0.18	.857

Note. Participant sexual orientation was deviation-coded with “heterosexual” as the reference category, i.e., “heterosexual” was coded as -1/3 and “bisexual” and “gay/lesbian” as 2/3 in their respective contrasts. For participant culture, Japan was coded as -0.5 and UK as +0.5; for face gender, female faces were coded as -0.5 and male faces as +0.5; and for face ethnicity, East Asian faces were coded as -0.5 and White faces as +0.5.

Table S2*Model Estimates for Interactive Preference Task with Sexual Orientation Category as Predictor*

Predictor	Female participants					Male participants				
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>
Intercept	-27.51	1.43	-30.33 – -24.70	-19.18	<.001	-28.00	1.32	-30.59 – -25.42	-21.23	<.001
Face gender	13.32	1.82	9.74 – 16.89	7.30	<.001	19.62	1.55	16.57 – 22.66	12.63	<.001
Face ethnicity	-1.51	1.82	-5.09 – 2.07	-0.83	.408	-2.22	1.55	-5.26 – 0.83	-1.43	.154
Participant culture	10.31	2.26	5.88 – 14.73	4.56	<.001	4.22	2.17	-0.02 – 8.47	1.95	.051
Participant sexual orientation (bisexual v heterosexual)	2.79	1.94	-1.01 – 6.58	1.44	.150	6.63	2.36	2.00 – 11.26	2.81	.005
Participant sexual orientation (gay/lesbian v heterosexual)	-2.81	3.00	-8.68 – 3.06	-0.94	.348	16.30	2.61	11.19 – 21.41	6.25	<.001
Face gender × face ethnicity	7.59	3.85	0.05 – 15.12	1.97	.049	7.53	3.28	1.11 – 13.96	2.30	.022
Face gender × partic. culture	12.30	0.90	10.53 – 14.06	13.69	<.001	4.27	0.75	2.80 – 5.75	5.67	<.001
Face ethnicity × partic. culture	-2.59	0.90	-4.36 – -0.83	-2.89	.004	-3.10	0.75	-4.58 – -1.62	-4.12	<.001
Face gender × partic. sexual orientation (bi v hetero)	-8.56	0.53	-9.59 – -7.52	-16.23	<.001	-11.78	0.59	-12.93 – -10.63	-20.11	<.001
Face ethnicity × partic. sexual	0.10	0.53	-0.93 – 1.14	0.20	.843	1.20	0.59	0.05 – 2.35	2.05	.041

orientation (bi v hetero)										
Partic. culture × partic. sexual orientation (bi v hetero)	-3.84	3.87	-11.43 – 3.74	-0.99	.321	-0.74	4.73	-10.01 – 8.52	-0.16	.875
Face gender × partic. sexual orientation (gay v hetero)	-23.41	0.82	-25.01 – -21.81	-28.72	<.001	7.36	0.65	6.09 – 8.63	11.39	<.001
Face ethnicity × partic. sexual orientation (gay v hetero)	-1.94	0.82	-3.54 – -0.34	-2.38	.017	0.04	0.65	-1.23 – 1.30	0.06	.954
Partic. culture × partic. sexual orientation (gay v hetero)	0.49	5.99	-11.25 – 12.24	0.08	.934	7.49	5.22	-2.73 – 17.72	1.44	.151
Face gender × face ethnicity × partic. culture	-2.38	3.02	-8.30 – 3.53	-0.79	.430	-1.53	2.57	-6.57 – 3.51	-0.59	.552
Face gender × face ethnicity × partic. sexual orientation (bi v hetero)	-0.24	2.35	-4.85 – 4.37	-0.10	.920	0.44	2.58	-4.61 – 5.49	0.17	.864
Face gender × partic. culture × partic. sexual orientation (bi v hetero)	-9.96	1.05	-12.03 – -7.90	-9.45	<.001	-3.40	1.17	-5.70 – -1.11	-2.91	.004

Face ethnicity × partic. culture × partic. sexual orientation (bi v hetero)	-2.85	1.05	-4.91 – -0.78	-2.70	.007	3.30	1.17	1.00 – 5.59	2.81	.005
Face gender × face ethnicity × partic. sexual orientation (gay v hetero)	-3.11	3.64	-10.24 – 4.02	-0.86	.392	1.65	2.84	-3.92 – 7.23	0.58	.561
Face gender × partic. culture × partic. sexual orientation (gay v hetero)	-9.78	1.63	-12.97 – -6.58	-6.00	<.001	-22.57	1.29	-25.10 – -20.04	-17.46	<.001
Face ethnicity × partic. culture × partic. sexual orientation (gay v hetero)	4.79	1.63	1.60 – 7.99	2.94	.003	-0.38	1.29	-2.91 – 2.16	-0.29	.771
Face gender × face ethnicity × partic. culture × partic. sexual orientation (bi v hetero)	-1.67	4.70	-10.89 – 7.54	-0.36	.722	15.47	5.15	5.37 – 25.57	3.00	.003
Face gender × face ethnicity × partic. culture × partic. sexual orientation (gay v hetero)	-0.57	7.28	-14.83 – 13.69	-0.08	.937	2.30	5.69	-8.85 – 13.45	0.40	.686

Note. Participant sexual orientation was deviation-coded with “heterosexual” as the reference category, i.e., “heterosexual” was coded as -1/3 and “bisexual” and “gay/lesbian” as 2/3 in their respective contrasts. For participant culture, Japan was coded as -0.5 and UK as +0.5; for face gender, female faces were coded as -0.5 and male faces as +0.5; and for face ethnicity, East Asian faces were coded as -0.5 and White faces as +0.5.

Table S3*Model Estimates for 2AFC Task with Sexual Attraction as Predictor*

Predictor	Female participants					Male participants				
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>
Intercept	-14.33	0.73	-15.77 – -12.90	-19.61	<.001	-12.01	0.66	-13.29 – -10.72	-18.32	<.001
Face gender	17.91	0.94	16.07 – 19.75	19.09	<.001	17.08	0.79	15.54 – 18.62	21.71	<.001
Face ethnicity	-0.23	0.94	-2.07 – 1.61	-0.25	.806	0.67	0.79	-0.88 – 2.21	0.85	.398
Participant culture	6.37	1.19	4.05 – 8.70	5.37	<.001	3.04	1.11	0.86 – 5.21	2.73	.006
Participant sexual attraction to men v women	-0.11	0.17	-0.43 – 0.22	-0.64	.523	1.14	0.13	0.89 – 1.39	9.02	<.001
Face gender × face ethnicity	4.65	1.96	0.81 – 8.48	2.38	.018	3.51	1.66	0.25 – 6.77	2.11	.035
Face gender × partic. culture	1.48	0.78	-0.04 – 3.01	1.91	.057	3.52	0.73	2.09 – 4.95	4.81	<.001
Face ethnicity × partic. culture	1.08	0.78	-0.44 – 2.61	1.39	.164	-1.06	0.73	-2.49 – 0.37	-1.45	.147
Face gender × partic. sexual attr. to men v women	1.14	0.06	1.01 – 1.26	18.00	<.001	0.22	0.05	0.12 – 0.32	4.44	<.001
Face ethnicity × partic. sexual attr. to men v women	0.10	0.06	-0.03 – 0.22	1.55	.122	0.23	0.05	0.14 – 0.33	4.68	<.001
Partic. culture × partic. sexual attr. to men v women	0.73	0.33	0.08 – 1.38	2.20	.028	-0.71	0.25	-1.21 – -0.21	-2.80	.005

Face gender × face ethnicity × partic. culture	-5.24	1.91	-8.98 – -1.50	-2.74	.006	-0.72	1.81	-4.27 – 2.84	-0.40	.693
Face gender × face ethnicity × partic. sexual attr. to men v women	-0.11	0.20	-0.51 – 0.29	-0.53	.595	-0.44	0.16	-0.76 – -0.12	-2.72	.007
Face gender × partic. culture × partic. sexual attr. to men v women	0.80	0.13	0.56 – 1.05	6.38	<.001	-1.05	0.10	-1.24 – -0.85	-10.49	<.001
Face ethnicity × partic. culture × partic. sexual attr. to men v women	-0.37	0.13	-0.61 – -0.12	-2.91	.004	-0.11	0.10	-0.30 – 0.09	-1.08	.280
Face gender × face ethnicity × partic. culture × partic. sexual attr. to men v women	1.06	0.41	0.26 – 1.87	2.59	.010	0.13	0.32	-0.50 – 0.77	0.41	.679

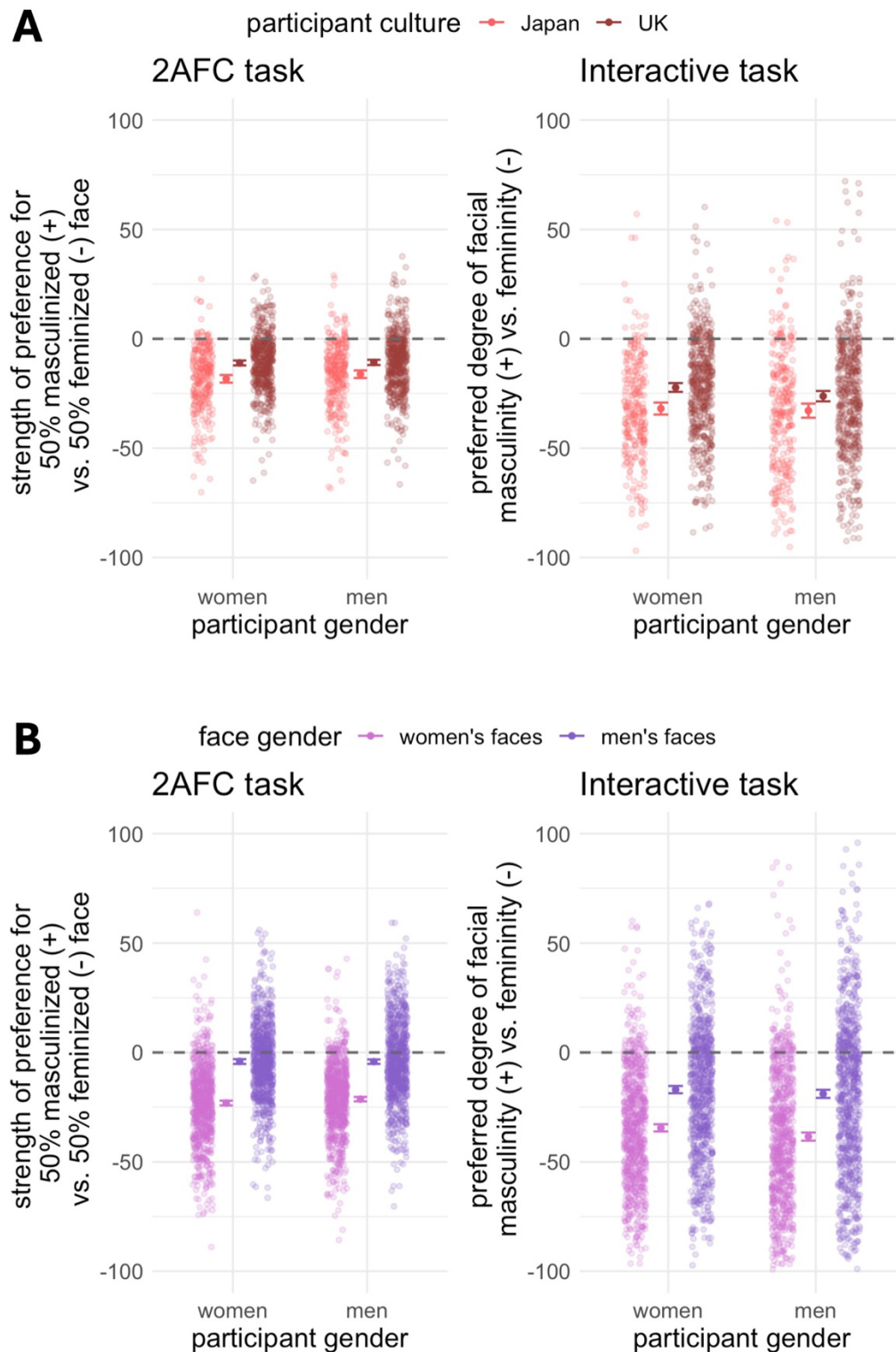
Note. Participant sexual attraction was scored such that negative values indicated greater attraction to women and positive values greater attraction to men. For participant culture, Japan was coded as -0.5 and UK as +0.5; for face gender, female faces were coded as -0.5 and male faces as +0.5; and for face ethnicity, East Asian faces were coded as -0.5 and White faces as +0.5.

Table S4*Model Estimates for Interactive Preference Task with Sexual Attraction as Predictor*

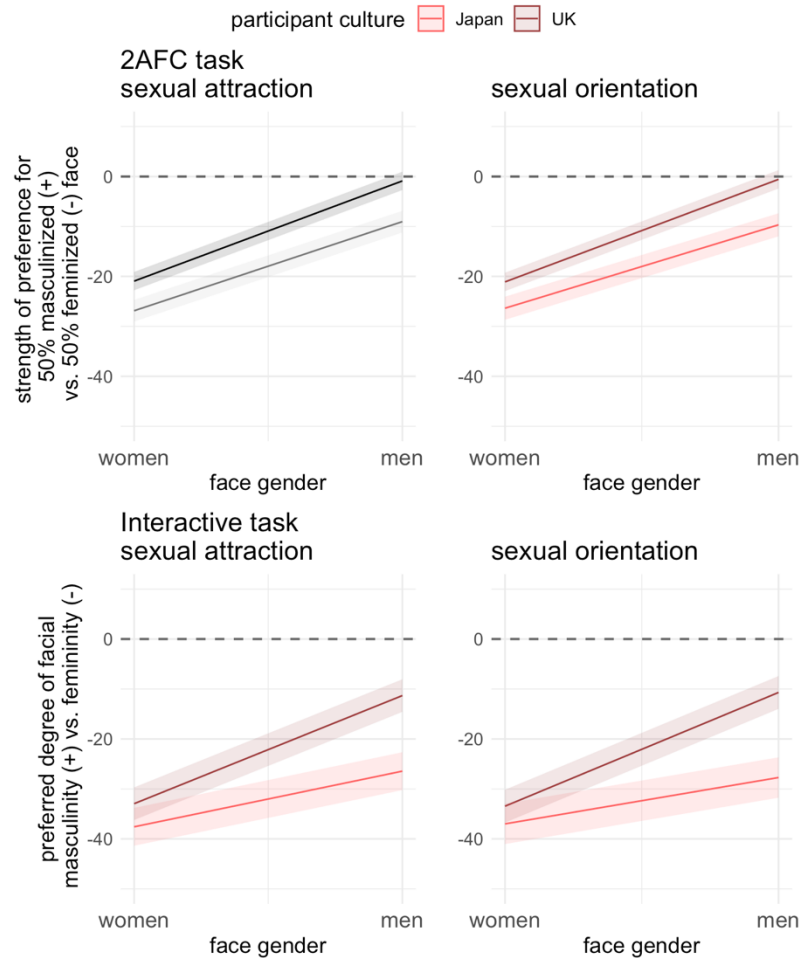
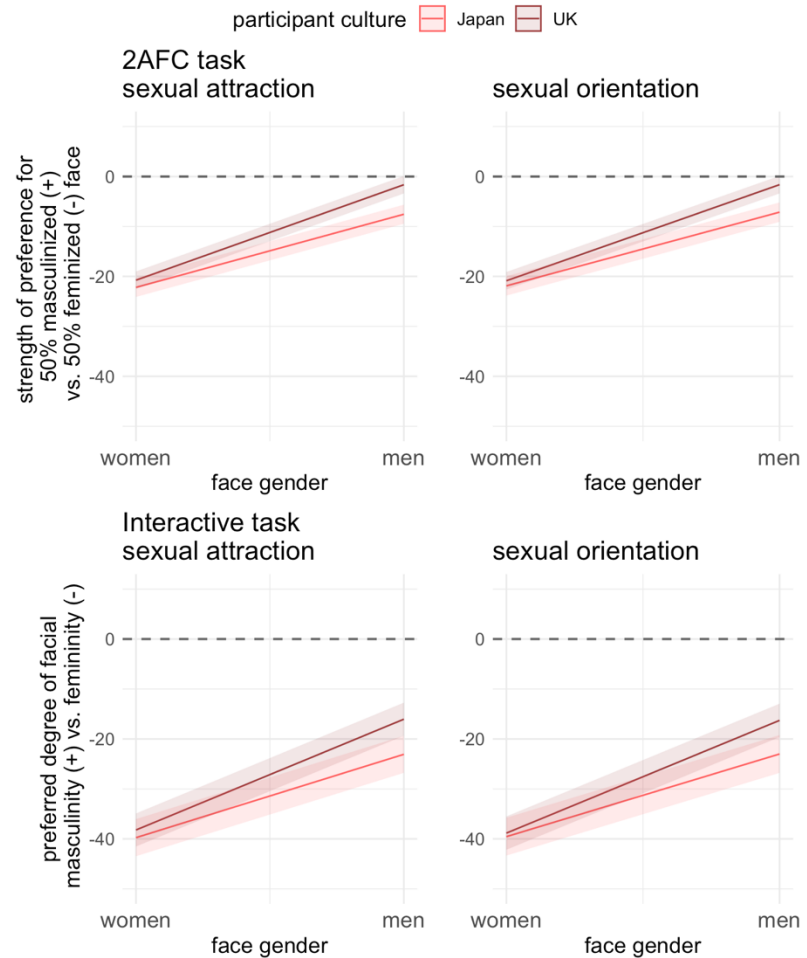
Predictor	Female participants					Male participants				
	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>CI</i>	<i>t</i>	<i>p</i>
Intercept	-27.12	1.31	-29.69 – -24.54	-20.67	<.001	-27.73	1.30	-30.27 – -25.19	-21.38	<.001
Face gender	14.37	1.82	10.80 – 17.94	7.90	<.001	19.94	1.55	16.90 – 22.99	12.84	<.001
Face ethnicity	-1.02	1.82	-4.59 – 2.55	-0.56	.575	-1.95	1.55	-5.00 – 1.09	-1.26	.208
Participant culture	9.38	1.94	5.59 – 13.18	4.84	<.001	4.43	2.11	0.30 – 8.57	2.10	.036
Participant sexual attraction to men v women	0.04	0.28	-0.50 – 0.59	0.16	.874	1.72	0.25	1.24 – 2.21	6.95	<.001
Face gender × face ethnicity	7.23	3.79	-0.19 – 14.64	1.91	.056	7.34	3.27	0.93 – 13.75	2.24	.025
Face gender × partic. culture	8.92	0.84	7.27 – 10.58	10.57	<.001	3.60	0.74	2.14 – 5.06	4.84	<.001
Face ethnicity × partic. culture	-3.56	0.84	-5.22 – -1.91	-4.22	<.001	-3.70	0.74	-5.16 – -2.24	-4.98	<.001
Face gender × partic. sexual attr. to men v women	2.23	0.08	2.08 – 2.37	29.26	<.001	0.57	0.06	0.45 – 0.69	9.15	<.001
Face ethnicity × partic. sexual attr. to men v women	0.03	0.08	-0.12 – 0.18	0.39	.698	0.11	0.06	-0.01 – 0.23	1.79	.073
Partic. culture × partic. sexual attr. to men v women	0.55	0.56	-0.54 – 1.64	0.98	.325	0.17	0.50	-0.80 – 1.14	0.34	.735

Face gender × face ethnicity × partic. culture	-1.57	2.68	-6.82 – 3.67	-0.59	.557	-1.19	2.54	-6.17 – 3.78	-0.47	.639
Face gender × face ethnicity × partic. sexual attr. to men v women	0.61	0.34	-0.06 – 1.27	1.80	.072	-0.16	0.27	-0.70 – 0.37	-0.59	.556
Face gender × partic. culture × partic. sexual attr. to men v women	1.73	0.15	1.43 – 2.03	11.38	<.001	-2.12	0.12	-2.36 – -1.87	-17.08	<.001
Face ethnicity × partic. culture × partic. sexual attr. to men v women	-0.12	0.15	-0.41 – 0.18	-0.76	.448	-0.40	0.12	-0.65 – -0.16	-3.25	.001
Face gender × face ethnicity × partic. culture × partic. sexual attr. to men v women	-0.76	0.68	-2.09 – 0.57	-1.13	.260	0.73	0.55	-0.34 – 1.80	1.34	.181

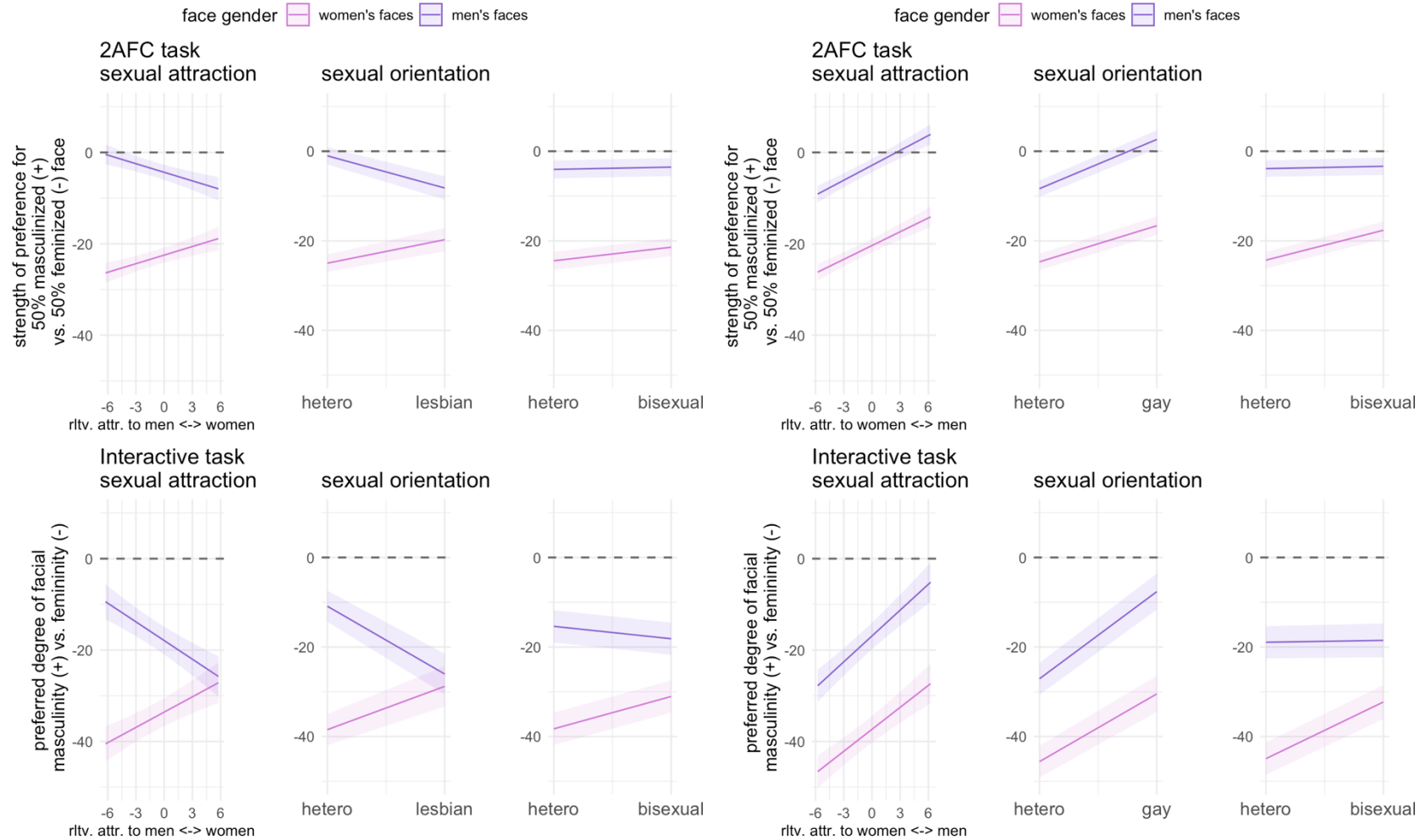
Note. Participant sexual attraction was scored such that negative values indicated greater attraction to women and positive values greater attraction to men. For participant culture, Japan was coded as -0.5 and UK as +0.5; for face gender, female faces were coded as -0.5 and male faces as +0.5; and for face ethnicity, East Asian faces were coded as -0.5 and White faces as +0.5.

Figure S5*Main Effects of (A) Participant Culture and (B) Face Gender*

Note. Plots show participant-level preferences. Translucent points represent individual participants (responses averaged across faces). Points with error bars represent means and 95% CIs. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S6*Interaction Between Face Gender and Participant Culture***Female participants****Male participants**

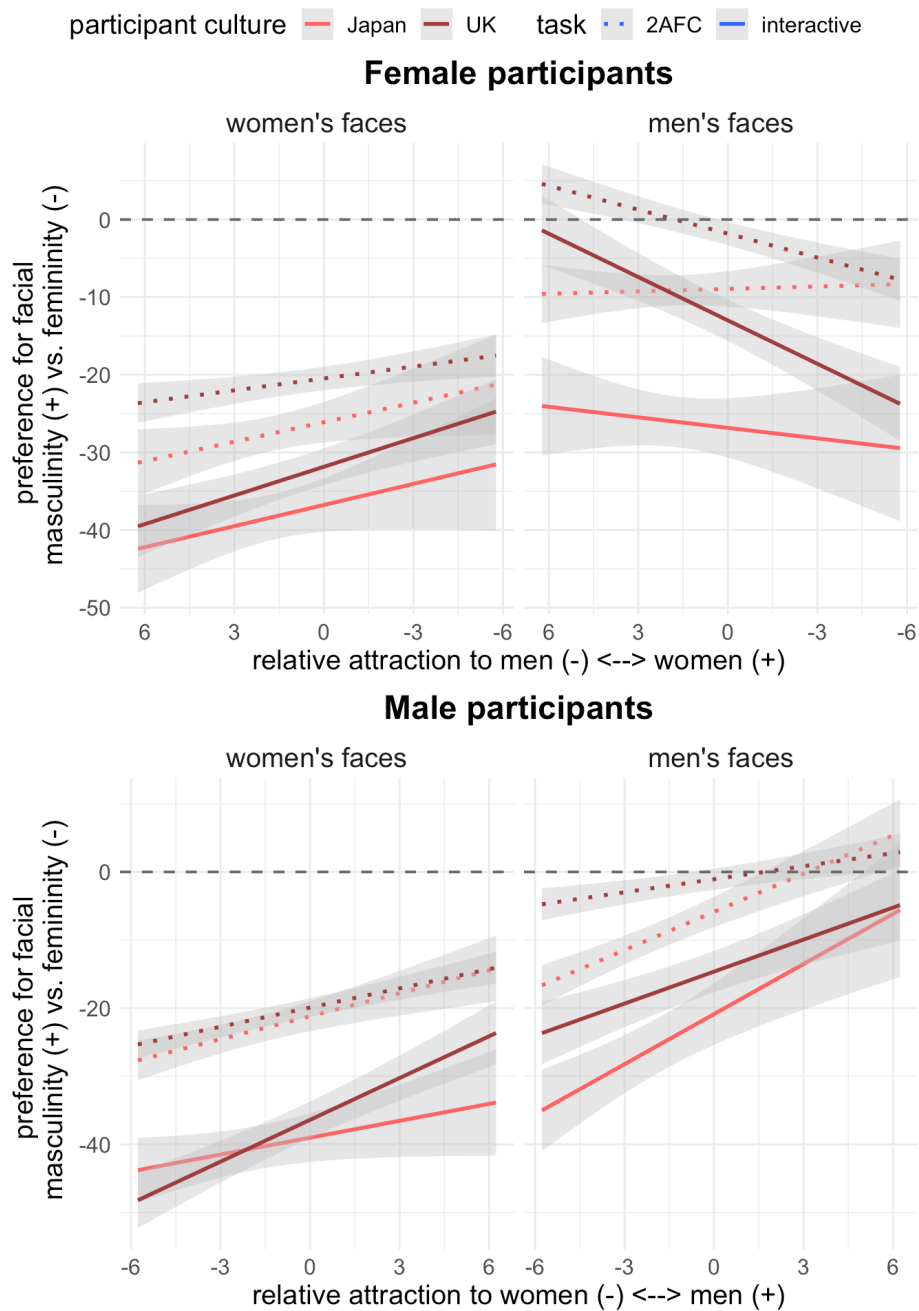
Note. Face gender $\times$ participant culture interaction was not significant when predicting women's preferences in the 2AFC task using sexual attraction and therefore appears in greyscale. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S7*Interaction Between Face Gender and Participant Sexual Attraction/Orientation***Female participants****Male participants**

Note. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S8

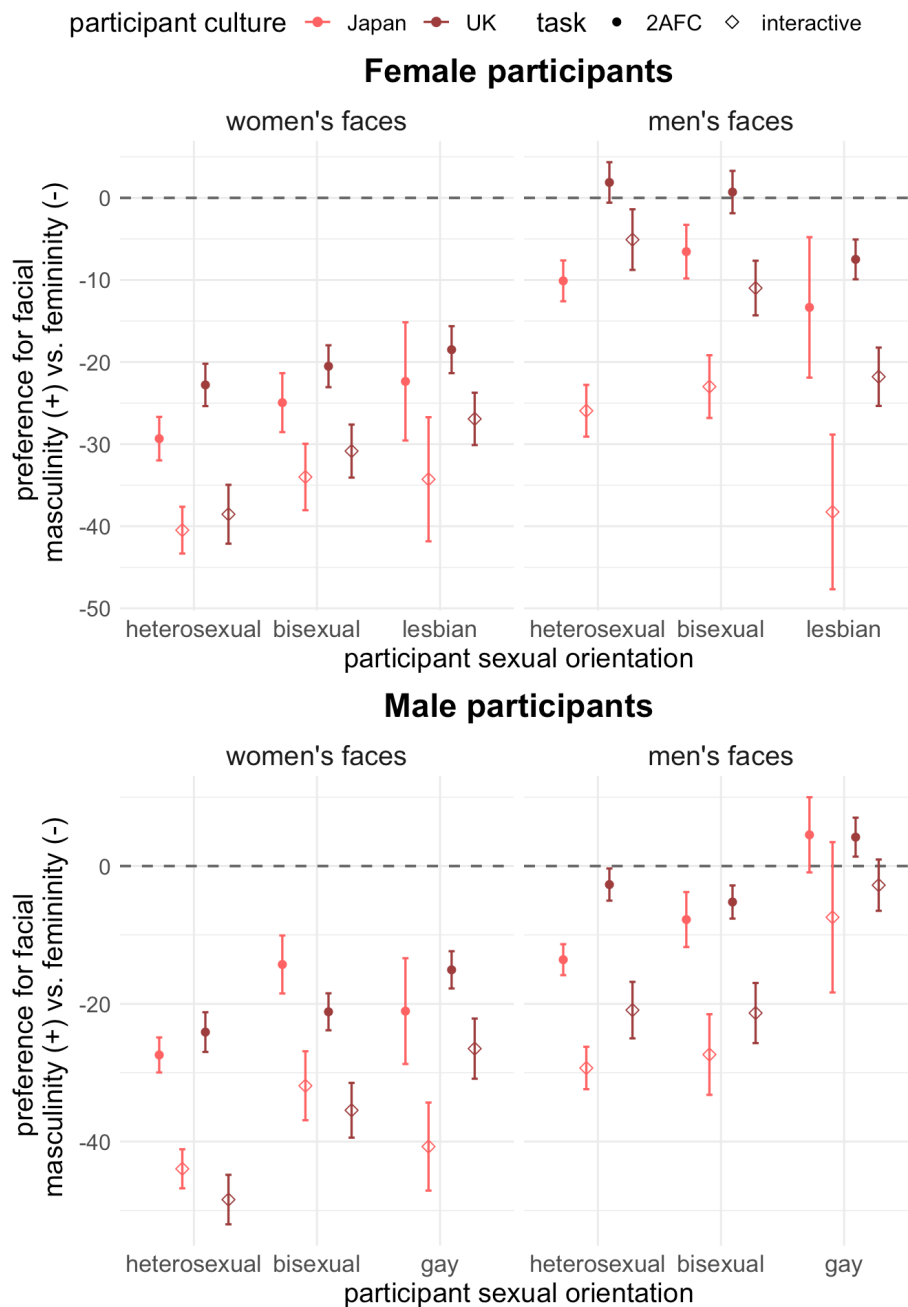
Summary of Interaction Between Face Gender, Participant Culture, and Participant Relative Sexual Attraction



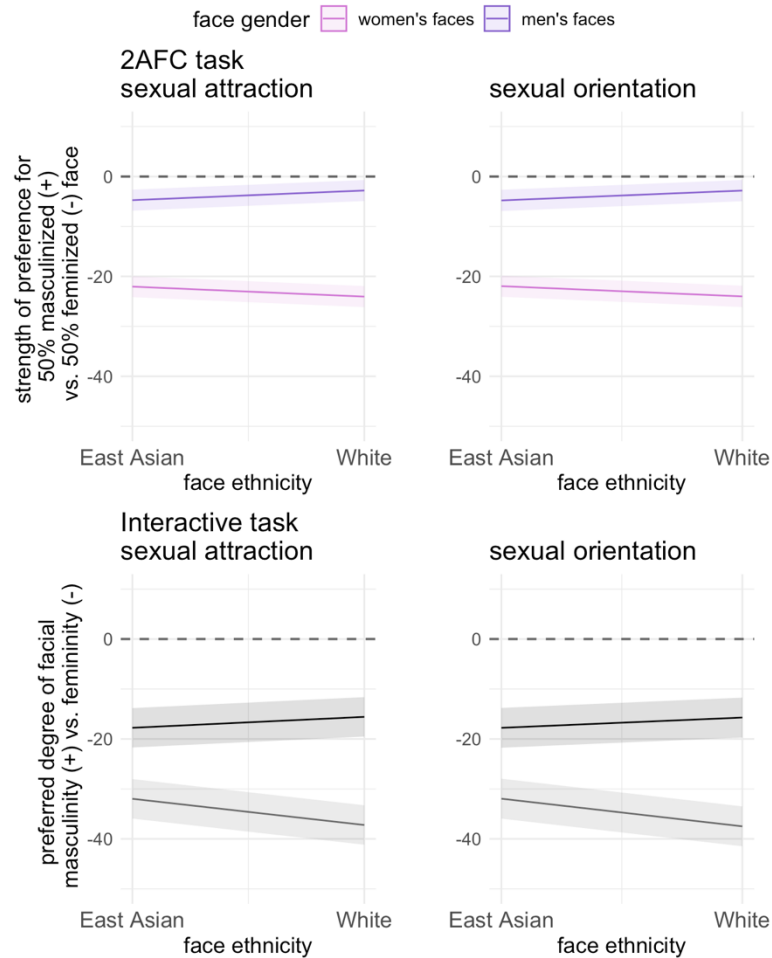
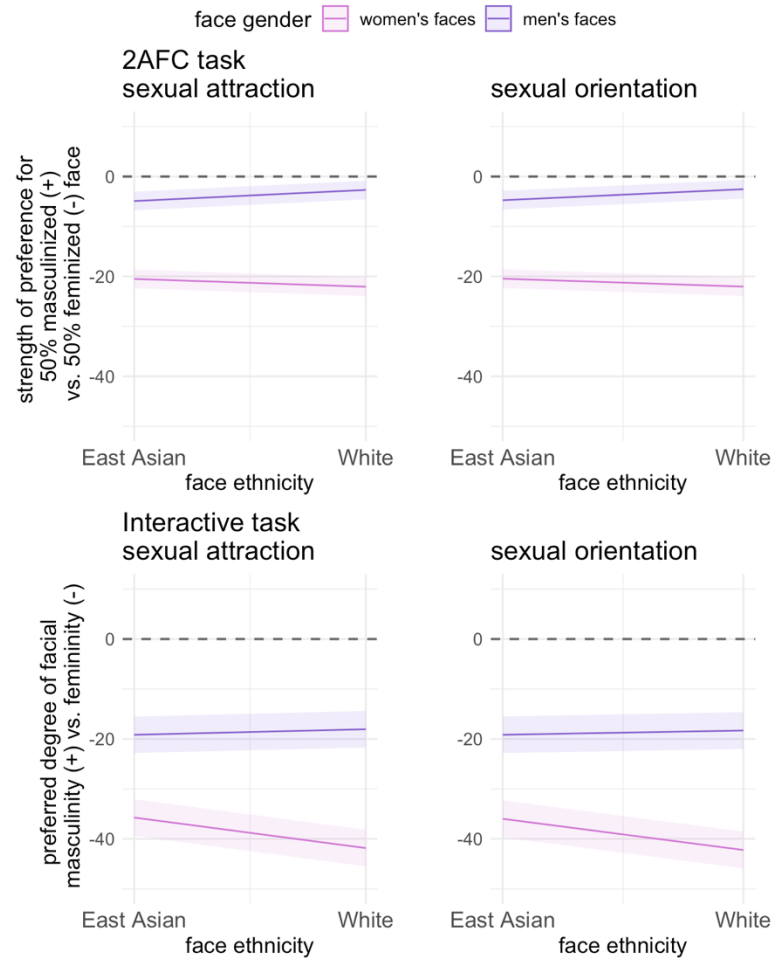
Note. Plots show participant-level preferences (averaged across faces). Gray shading shows 95% CIs. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S9

Summary of Interaction Between Face Gender, Participant Culture, and Participant Sexual Orientation



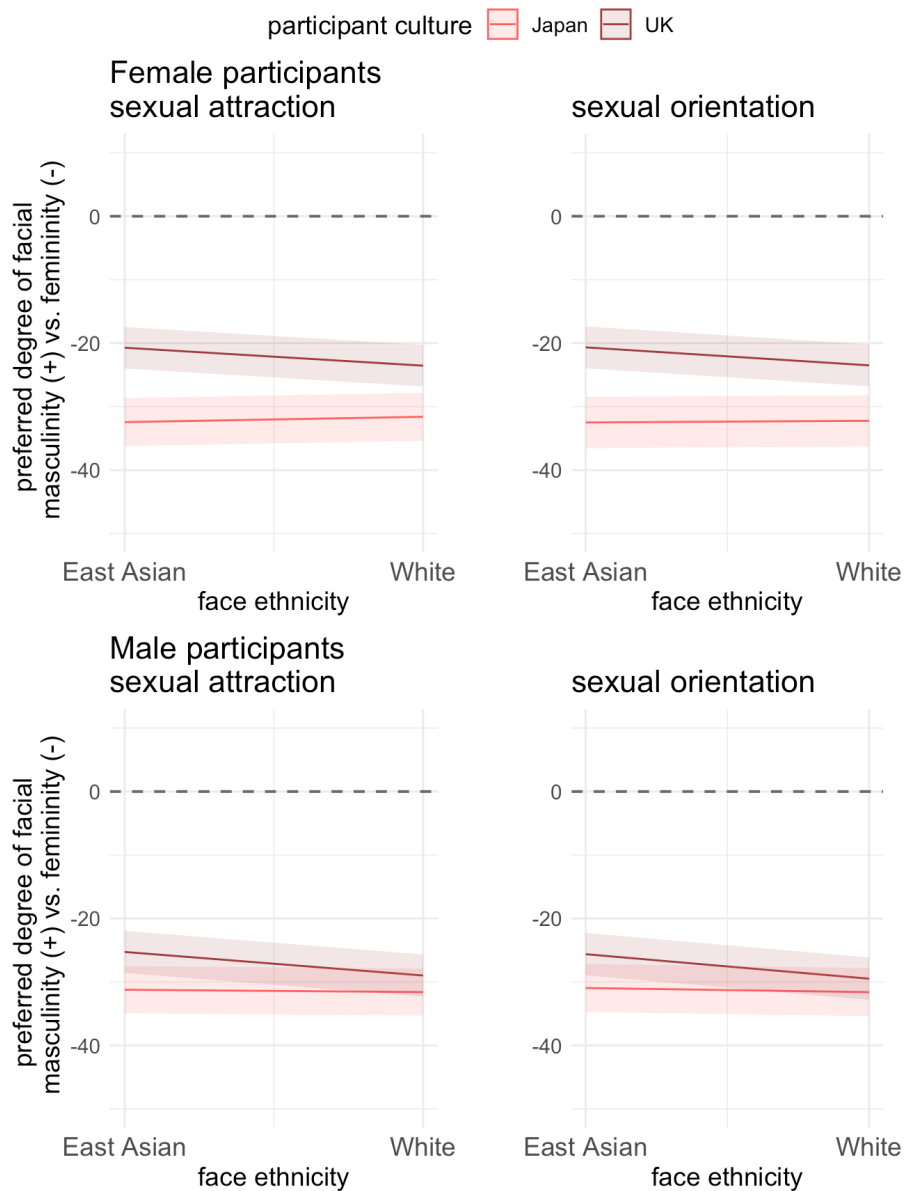
Note. Plots show participant-level preferences (averaged across faces). Points with error bars represent means and 95% CIs. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S10*Interaction Between Face Gender and Face Ethnicity***Female participants****Male participants**

Note. Face gender $\times$ face ethnicity interaction was not significant when predicting women's preferences in the interactive preference task and therefore appears in greyscale. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Figure S11

Interaction Between Face Ethnicity and Participant Culture in the Interactive Preference Task



Note. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.

Table S5*Model Estimates for Models Testing Intercept and Effect of Experimental Task on Degree of Preference for Femininity/Masculinity*

Model				Model estimates					
Participant culture	Participant gender	Participant sexual orientation	Face gender	Predictor	<i>b</i>	<i>SE</i>	95% <i>CI</i>	<i>t</i>	<i>p</i>
Japan	Female	Heterosexual	Female	Intercept	-34.92	1.71	-38.27 – -31.56	-20.40	< .001
				Experimental task	-11.17	2.00	-15.09 – -7.25	-5.58	< .001
Japan	Female	Heterosexual	Male	Intercept	-18.03	1.81	-21.58 – -14.48	-9.96	< .001
				Experimental task	-15.85	2.12	-20.00 – -11.70	-7.48	< .001
Japan	Female	Bisexual	Female	Intercept	-29.48	2.04	-33.47 – -25.49	-14.48	< .001
				Experimental task	-9.08	2.92	-14.80 – -3.36	-3.11	.002
Japan	Female	Bisexual	Male	Intercept	-14.79	2.13	-18.97 – -10.61	-6.94	< .001
				Experimental task	-16.48	2.62	-21.61 – -11.35	-6.30	< .001
Japan	Female	Lesbian	Female	Intercept	-28.31	5.25	-38.61 – -18.02	-5.39	< .001
				Experimental task	-11.91	5.75	-23.17 – -0.65	-2.07	.052
Japan	Female	Lesbian	Male	Intercept	-25.80	5.04	-35.69 – -15.92	-5.12	< .001

				Experimental task	-24.92	7.16	-38.96 – -10.89	-3.48	.002
UK	Female	Heterosexual	Female	Intercept	-30.67	1.58	-33.76 – -27.58	-19.45	< .001
				Experimental task	-15.78	2.00	-19.70 – -11.86	-7.89	< .001
UK	Female	Heterosexual	Male	Intercept	-1.60	1.89	-5.31 – 2.10	-0.85	.397
				Experimental task	-6.97	1.96	-10.81 – -3.13	-3.56	< .001
UK	Female	Bisexual	Female	Intercept	-25.68	1.72	-29.04 – -22.32	-14.97	< .001
				Experimental task	-10.34	1.93	-14.13 – -6.56	-5.36	< .001
UK	Female	Bisexual	Male	Intercept	-5.15	1.97	-9.01 – -1.29	-2.61	.010
				Experimental task	-11.72	1.97	-15.58 – -7.85	-5.94	< .001
UK	Female	Lesbian	Female	Intercept	-22.71	1.90	-26.43 – -19.00	-11.98	< .001
				Experimental task	-8.44	2.09	-12.54 – -4.34	-4.03	< .001
UK	Female	Lesbian	Male	Intercept	-14.65	2.10	-18.76 – -10.55	-6.99	< .001
				Experimental task	-14.33	2.13	-18.50 – -10.16	-6.74	< .001
Japan	Male	Heterosexual	Female	Intercept	-35.70	1.53	-38.69 – -32.70	-23.38	< .001
				Experimental task	-16.54	2.04	-20.54 – -12.55	-8.11	< .001

Japan	Male	Heterosexual	Male	Intercept	-21.46	1.76	-24.92 – -18.00	-12.16	< .001
				Experimental task	-15.74	2.09	-19.83 – -11.65	-7.54	< .001
Japan	Male	Bisexual	Female	Intercept	-23.09	2.36	-27.73 – -18.46	-9.77	< .001
				Experimental task	-17.61	3.28	-24.04 – -11.17	-5.37	< .001
Japan	Male	Bisexual	Male	Intercept	-17.56	2.91	-23.27 – -11.85	-6.03	< .001
				Experimental task	-19.60	3.70	-26.85 – -12.35	-5.30	< .001
Japan	Male	Gay	Female	Intercept	-30.89	3.32	-37.39 – -24.39	-9.31	< .001
				Experimental task	-19.66	3.84	-27.19 – -12.13	-5.12	< .001
Japan	Male	Gay	Male	Intercept	-1.46	5.09	-11.44 – 8.52	-0.29	.775
				Experimental task	-11.99	5.70	-23.15 – -0.82	-2.10	.041
UK	Male	Heterosexual	Female	Intercept	-36.27	1.50	-39.21 – -33.32	-24.11	< .001
				Experimental task	-24.32	2.25	-28.74 – -19.90	-10.79	< .001
UK	Male	Heterosexual	Male	Intercept	-11.80	1.94	-15.60 – -8.01	-6.10	< .001
				Experimental task	-18.23	2.30	-22.74 – -13.72	-7.92	< .001
UK	Male	Bisexual	Female	Intercept	-28.32	1.60	-31.45 – -25.19	-17.73	< .001

				Experimental task	-14.31	2.33	-18.88 – -9.75	-6.15	< .001
UK	Male	Bisexual	Male	Intercept	-13.29	2.19	-17.58 – -9.00	-6.07	< .001
				Experimental task	-16.14	2.39	-20.83 – -11.45	-6.75	< .001
UK	Male	Gay	Female	Intercept	-20.79	2.03	-24.76 – -16.82	-10.26	< .001
				Experimental task	-11.45	2.48	-16.31 – -6.59	-4.62	< .001
UK	Male	Gay	Male	Intercept	0.71	2.18	-3.57 – 4.99	0.33	.745
				Experimental task	-6.97	2.15	-11.18 – -2.76	-3.25	.001

Consistency Between Experimental Tasks ***Preferences as Binary***

Here, we recoded responses on both tasks to reflect a binary choice, i.e., whether participants chose a feminized or a masculinized face in each task, with 0 indicating feminized and 1 masculinized. Given that we observed a consistent interaction between face gender, participant culture, and participant sexual attraction/orientation in our primary analysis, we ran separate models by face gender, participant culture, and sexual orientation category for ease of interpretation. We adjusted the alpha level for 12 comparisons (3 sexual orientation groups, 2 cultures, 2 face genders) using Bonferroni correction ($\alpha = .05/12 = .004$).

We predicted choice (0 = feminized face, 1 = masculinized face) using binomial mixed effects models with type of task (2AFC = -0.5 , interactive preference = $+0.5$) again as the sole predictor (see exploratory analysis script *3a-Task Comparison* on the OSF for full model specifications, <https://osf.io/gr3cn>). Like the pattern observed for the degree of preferences, intercepts were significant and negative for all but four models, indicating an overall preference for feminized faces (see Table S6 for summary; see also Figure S12). The four models with non-significant intercepts were those for judgments of men's faces by British heterosexual women, British bisexual women, British gay men, and Japanese gay men (as for degree of preferences).

Type of task had no effect in any models testing judgments of women's faces (except for judgments by British heterosexual men). There was a significant effect of experimental task for most models testing judgments of men's faces (apart from Japanese lesbian women, Japanese heterosexual men, and both British and Japanese gay men). The significant effects were negative throughout, indicating a higher likelihood of a feminized face (or lower likelihood of a masculinized face) being chosen in the interactive preference task compared to the 2AFC task (see Table S7 for full model estimates).

Alignment Between Tasks and Impact of Task on Previously Reported Effects

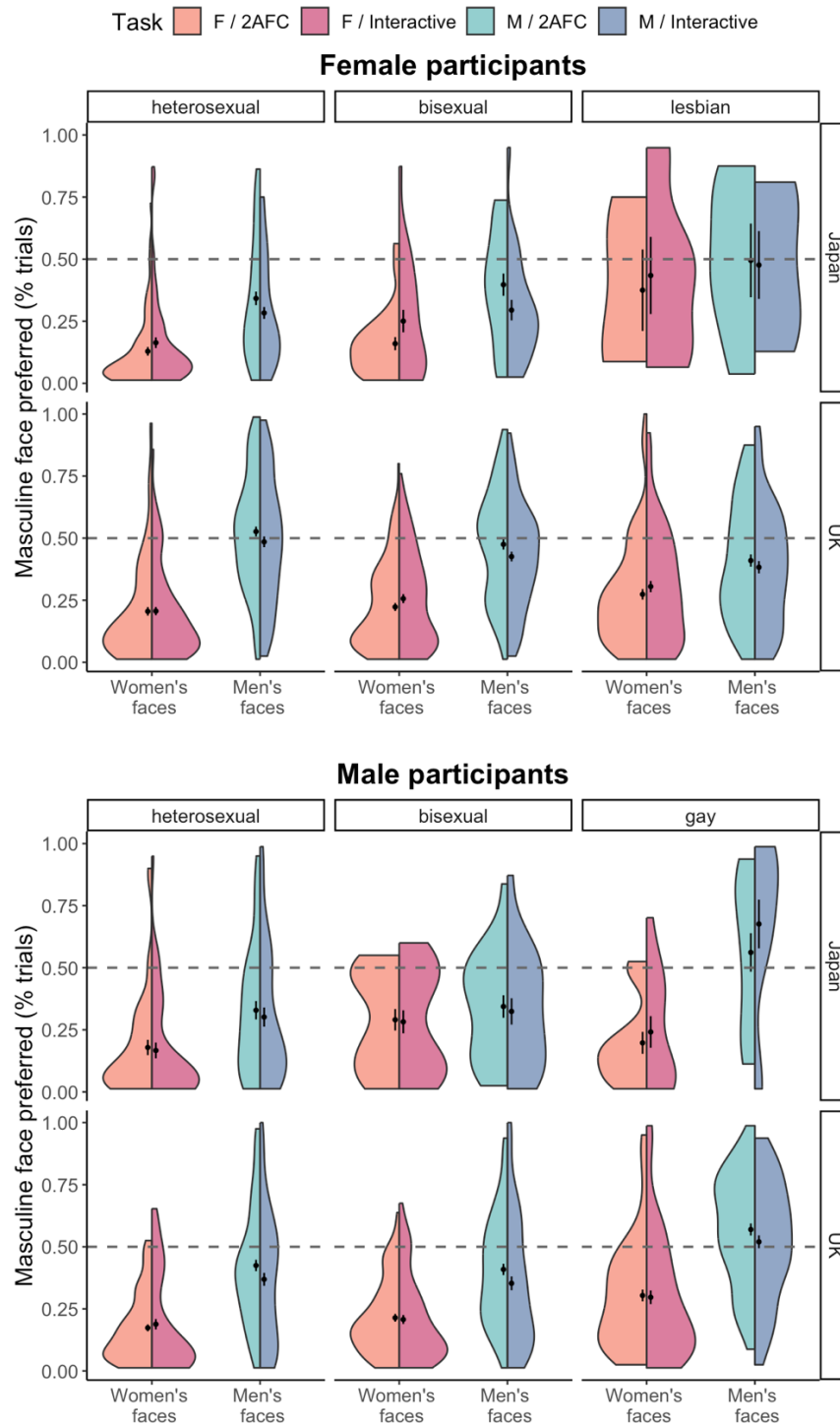
Lastly, we also tested how much preferences in the two tasks aligned, and whether type of task affected some of the previously reported findings in the literature. Overall, preferences for the same stimulus identities in 2AFC vs interactive preference tasks were only weakly correlated, and previously found effects of moderators more pronounced in interactive preference vs 2AFC tasks. Please see exploratory analysis script *3a-Task Comparison* on the OSF for full analyses and results, <https://osf.io/gr3cn>.

Table S6

Summary of Models Testing Intercept and Effect of Experimental Task on Binary Preference for Masculinized vs. Feminized Face

Model				Results	
Participant culture	Participant gender	Participant sexual orientation	Face gender	Intercept	Experimental task
Japan	Female	Heterosexual	Female	—	ns
			Male	—	—
		Bisexual	Female	—	ns
			Male	—	—
		Lesbian	Female	—	ns
			Male	—	ns
UK	Female	Heterosexual	Female	—	ns
			Male	ns	—
		Bisexual	Female	—	ns
			Male	ns	—
		Lesbian	Female	—	ns
			Male	—	—
Japan	Male	Heterosexual	Female	—	ns
			Male	—	ns
		Bisexual	Female	—	ns
			Male	—	—
		Gay	Female	—	ns
			Male	ns	ns
UK	Male	Heterosexual	Female	—	—
			Male	—	—
		Bisexual	Female	—	ns
			Male	—	—
		Gay	Female	—	ns
			Male	ns	ns

Note. Full results including 95% CIs can be found in Table S7. “—” indicates significant negative effect. For the intercept, a negative effect corresponds to a preference for femininity; for the experimental task predictor, a negative effect corresponds to a stronger preference for femininity in the interactive preference compared to the 2AFC task. “ns” denotes a non-significant effect.

Figure S12*Comparing Binary Preferences Across the Two Experimental Tasks*

Note. Responses on both 2AFC and interactive preference tasks were recoded into binary choices, with 1 indicating that a masculinized face and 0 indicating that a feminized face was chosen. Y-axis shows the proportion of trials in which a masculinized face was chosen. Red hues represent preferences for women's faces, blue hues represent preferences for men's faces; lighter hues represent 2AFC task, darker hues represent interactive preference task. Horizontal dashed line at 0.5 indicates equal proportion of choice of masculinized and feminized face.

Table S7*Model Estimates for Models Testing Intercept and Effect of Experimental Task on Binary Preference for Masculinized vs. Feminized Face*

Model				Model estimates					
Participant culture	Participant gender	Participant sexual orientation	Face gender	Predictor	Estimate	SE	95% CI	Z	p
Japan	Female	Heterosexual	Female	Intercept	-2.60	0.14	-2.87 – -2.33	-18.83	< .001
				Experimental task	0.22	0.13	-0.03 – 0.47	1.69	.090
Japan	Female	Heterosexual	Male	Intercept	-1.15	0.13	-1.40 – -0.90	-9.04	< .001
				Experimental task	-0.49	0.11	-0.72 – -0.27	-4.39	< .001
Japan	Female	Bisexual	Female	Intercept	-1.81	0.14	-2.07 – -1.54	-13.32	< .001
				Experimental task	0.18	0.15	-0.11 – 0.46	1.23	.219
Japan	Female	Bisexual	Male	Intercept	-0.77	0.12	-1.01 – -0.53	-6.38	< .001
				Experimental task	-0.44	0.14	-0.71 – -0.18	-3.28	.001
Japan	Female	Lesbian	Female	Intercept	-1.92	0.36	-2.62 – -1.22	-5.38	< .001
				Experimental task	0.21	0.33	-0.44 – 0.86	0.62	.534
Japan	Female	Lesbian	Male	Intercept	-1.58	0.36	-2.29 – -0.87	-4.36	< .001
				Experimental task	-0.78	0.34	-1.44 – -0.12	-2.31	.021

UK	Female	Heterosexual	Female	Intercept	-1.98	0.11	-2.2 – -1.76	-17.52	< .001
				Experimental task	-0.01	0.10	-0.20 – 0.18	-0.13	.895
UK	Female	Heterosexual	Male	Intercept	-0.02	0.12	-0.25 – 0.20	-0.21	.837
				Experimental task	-0.27	0.09	-0.45 – -0.09	-2.97	.003
UK	Female	Bisexual	Female	Intercept	-1.54	0.11	-1.75 – -1.32	-13.98	< .001
				Experimental task	0.02	0.09	-0.16 – 0.20	0.25	.804
UK	Female	Bisexual	Male	Intercept	-0.25	0.11	-0.47 – -0.04	-2.32	.020
				Experimental task	-0.36	0.09	-0.54 – -0.19	-4.14	< .001
UK	Female	Lesbian	Female	Intercept	-1.35	0.13	-1.60 – -1.11	-10.81	< .001
				Experimental task	0.12	0.10	-0.07 – 0.32	1.24	.216
UK	Female	Lesbian	Male	Intercept	-0.86	0.13	-1.12 – -0.61	-6.64	< .001
				Experimental task	-0.30	0.09	-0.48 – -0.12	-3.24	.001
Japan	Male	Heterosexual	Female	Intercept	-2.78	0.13	-3.04 – -2.52	-21.06	< .001
				Experimental task	0.10	0.13	-0.16 – 0.36	0.75	.455
Japan	Male	Heterosexual	Male	Intercept	-1.39	0.13	-1.64 – -1.14	-10.76	< .001

				Experimental task	-0.34	0.12	-0.58 – -0.11	-2.83	.005
Japan	Male	Bisexual	Female	Intercept	-1.40	0.15	-1.70 – -1.10	-9.06	< .001
				Experimental task	-0.04	0.15	-0.33 – 0.25	-0.28	.780
Japan	Male	Bisexual	Male	Intercept	-1.03	0.18	-1.38 – -0.69	-5.88	< .001
				Experimental task	-0.63	0.18	-0.99 – -0.28	-3.53	< .001
Japan	Male	Gay	Female	Intercept	-2.15	0.24	-2.61 – -1.69	-9.11	< .001
				Experimental task	-0.66	0.25	-1.16 – -0.16	-2.59	.010
Japan	Male	Gay	Male	Intercept	-0.16	0.35	-0.84 – 0.51	-0.47	.636
				Experimental task	-0.74	0.31	-1.35 – -0.13	-2.36	.018
UK	Male	Heterosexual	Female	Intercept	-2.38	0.12	-2.61 – -2.14	-20.00	< .001
				Experimental task	-0.55	0.12	-0.79 – -0.32	-4.56	< .001
UK	Male	Heterosexual	Male	Intercept	-0.64	0.12	-0.88 – -0.40	-5.27	< .001
				Experimental task	-0.53	0.11	-0.74 – -0.32	-4.95	< .001
UK	Male	Bisexual	Female	Intercept	-1.57	0.10	-1.76 – -1.38	-16.28	< .001
				Experimental task	-0.10	0.11	-0.30 – 0.11	-0.89	.374

UK	Male	Bisexual	Male	Intercept	-0.69	0.12	-0.92 – -0.45	-5.65	< .001
				Experimental task	-0.50	0.11	-0.71 – -0.29	-4.70	< .001
UK	Male	Gay	Female	Intercept	-1.16	0.12	-1.40 – -0.92	-9.44	< .001
				Experimental task	-0.17	0.11	-0.38 – 0.05	-1.53	.126
UK	Male	Gay	Male	Intercept	0.03	0.12	-0.21 – 0.26	0.24	.811
				Experimental task	-0.23	0.09	-0.41 – -0.05	-2.54	.011

Moderation Results

We detail the highest-order interactions involving the moderator for each model below (see Table S8 for summary). Tables with full model estimates and figures illustrating each significant interaction are available on the OSF.

Table S8

Summary of Moderation Results

Model			Highest-order interaction(s) involving moderator(s)			
Participant gender	Participant sexual orientation	Face gender	Age	Attractiveness	Relationship status	Relationship quality
Female	Heterosexual	Female	age × culture × task	self × task female peers × culture × task male peers × culture × task	status × culture × task × face ethnicity	commit × culture × task happy × culture × task
Female	Heterosexual	Male	age × culture × task	self × culture × task male peers × culture × task	status × task status × culture × face ethnicity	commit × face ethnicity happy × task commit × culture × task happy × culture × face ethnicity
Female	Bisexual	Female	age × task	female peers × culture × task male peers × culture × task	status × culture × task	commit × culture × task commit × culture × face ethnicity happy × culture × task happy × culture × face ethnicity
Female	Bisexual	Male	age × task age × culture × face ethnicity	female peers × face ethnicity self × culture × task	status × culture × task	happy × task commit × culture × task commit × culture × face ethnicity

Female	Lesbian	Female	age × culture × task	male peers × task female peers × culture × task self × culture × task	status × culture × task	
Female	Lesbian	Male	age × task	male peers × culture × task self × culture × task	status × culture × task	
Male	Heterosexual	Female	age × culture × face ethnicity	female peers × culture × task male peers × culture × task self × culture × task × face ethnicity	status × culture × task status × culture × face ethnicity	happy × task commit × culture × face ethnicity happy × culture × face ethnicity
Male	Heterosexual	Male	age × culture × face ethnicity	self × task male peers × task male peers × face ethnicity female peers × culture × task female peers × culture × face ethnicity	status × culture × task status × culture × face ethnicity	commit × task commit × face ethnicity happy × culture × task happy × culture × face ethnicity
Male	Bisexual	Female	age × culture × task	self × task self × face ethnicity male peers × culture × task	status × task	happy × task happy × face ethnicity
Male	Bisexual	Male	age × culture × task	self × task female peers × task	status × culture × task	commit × task commit × culture × face ethnicity happy × culture × task happy × culture × face ethnicity

Male	Gay	Female	age × task	self × culture × task male peers × culture × task	status × culture × task	commit × culture × task happy × culture × task
Male	Gay	Male	age × culture × task	self × culture × task female peers × culture × face ethnicity male peers × culture × face ethnicity male peers × culture × task	status × culture × task	happy × task commit × culture × face ethnicity

Note. Culture = participant culture, task = experimental task, self = self-perceived attractiveness, female peers = female peer-perceived attractiveness, male peers = male peer-perceived attractiveness, status = relationship status, commit = relationship commitment, happy = relationship happiness. Moderation by age, attractiveness, relationship status, and relationship quality tested in separate models.

Participant Age

These models included participant age as a moderator. Full results can be found in the exploratory analysis script 3b-Age on the OSF, <https://osf.io/9ha6m>. Across all models but two (heterosexual men judging women's and men's faces), participant age either interacted with task, or with task and participant culture. All interactions including task were such that participant age emerged as a stronger predictor in the interactive compared to the 2AFC task (with participant age sometimes nonsignificant in the 2AFC task).

Overall, with increasing age, women showed greater femininity preferences. Exceptions to this were heterosexual women in the UK judging men's faces (in line with H7b), lesbian women in Japan judging women's faces, and lesbian women in both cultures judging men's faces; these groups preferred lower levels of femininity (higher levels of masculinity) the higher their age. However, this finding did not generalize across the two participant cultures and different sexual orientation groups (see Tables S8-9). For bisexual women judging men's faces, there was also a three-way interaction of participant age, participant culture, and face ethnicity, indicating that participant age had a slightly larger effect for ethnic in-group faces. Patterns for men also showed variations by culture and sexual orientation. With increasing age, bisexual Japanese men judging women's faces and gay Japanese men judging men's faces preferred lower femininity, whereas other groups preferred either higher femininity with increasing participant age (bisexual British men independent of face gender, gay British men judging men's faces), or participant age had no effect on preferences (bisexual Japanese men looking at men's faces, see Table S9).

Heterosexual men were the only group who showed no interaction between participant age and task (or task and participant culture). Instead, there was a three-way interaction of participant age, participant culture, and face ethnicity. Participant age had no effect on Japanese men's preferences for East Asian women's faces but had a positive effect on their preferences for White women's femininity. In contrast, participant age had a positive effect on White men's preferences for East Asian women's femininity, and a negative effect on their preferences for White women's femininity. When judging men's faces, participant age had no effect for ethnic in-group faces, but a positive effect on preferred femininity levels for ethnic out-group faces.

Table S9

Summary of Participant Age Effects by Participant Gender, Participant Culture, Sexual Orientation, and Face Gender

Participant gender	Participant sexual orientation	Face gender	Japan	UK
With increasing age, preference for:				
Female	Heterosexual	Female	higher femininity	
		Male	higher femininity	lower femininity
	Bisexual	Female	higher femininity	
		Male	higher femininity	
	Lesbian	Female	lower femininity	higher femininity
		Male	lower femininity	
Male	Heterosexual	Female	<i>[effect of age qualified by face ethnicity]</i>	
		Male		
	Bisexual	Female	lower femininity	higher femininity
		Male	<i>[no effect]</i>	higher femininity

Gay	Female	higher femininity	
	Male	lower femininity	higher femininity

Note. Where cells are merged, participant age did not interact with participant culture (i.e., effects were independent of participant culture).

Participant Attractiveness

We averaged across participant self-rated face, body, and overall attractiveness scores separately for attractiveness as perceived by the self, female peers, and male peers, based on the results of a factor analysis (see Table S10 for factor loadings). These models thus included these three composite attractiveness scores as moderators. Full results can be found in the exploratory analysis script *3c-Attractiveness* on the OSF, <https://osf.io/3u4xc>.

Table S10

Factor Loadings for Participant Self-Rated Attractiveness

	Female Peers Factor	Male Peers Factor	Self Factor
Female Peers: Face	.88	.00	.06
Female Peers: Body	.85	.08	-.01
Female Peers: Overall	.99	-.01	.01
Male Peers: Face	.03	.87	.04
Male Peers: Body	.01	.90	.00
Male Peers: Overall	.01	.99	.00
Self: Face	.03	-.02	.85
Self: Body	.00	.07	.79
Self: Overall	.01	-.01	1.00
<i>Proportion Variance Explained</i>	.28	.28	.26

Note. Exploratory factor analysis using promax rotation. Items with bolded loadings were averaged to create composite factor.

Participant attractiveness most consistently interacted with participant culture and experimental task, though whether self-perceived, female peer-perceived, and/or male peer-perceived attractiveness was a significant moderator varied across models. Overall, self-perceived and male peer-perceived attractiveness emerged as moderators more often than female peer-perceived attractiveness, for both female and male participants. Effects of attractiveness moreover varied by the source of perceived attractiveness (self, female peers, male peers) and by experimental task. Throughout, strength (and in some cases, direction) of patterns varied by experimental task.

Heterosexual women (across both cultures) who perceived themselves as more attractive preferred less femininity in men's faces (supporting H7c). Bisexual women also showed this pattern. Results for lesbian women were variable and, across sexual orientation, patterns for female peer-perceived and male peer-perceived attractiveness were mixed and often in opposition to one another or to self-perceived attractiveness.

Japanese heterosexual men who perceived themselves to be more attractive preferred more femininity in women's faces, but British heterosexual men with greater self-perceived attractiveness preferred less femininity in women's faces. Self-rated attractiveness predicted

lower femininity preferences for heterosexual men judging men's faces, and bisexual men and British gay men judging women's and men's faces. Preferences among Japanese gay men, however, varied by experimental task, and patterns for female peer-perceived and male peer-perceived attractiveness were again mixed and often in opposition to one another or to the patterns for self-perceived attractiveness.

Participant Relationship Status

These models included participant relationship status (single or in a relationship, effect-coded) as a moderator. Full model specifications and results can be found in the exploratory analysis script *3d-Relationship Status* on the OSF, <https://osf.io/su2dw>.

Relationship status most consistently interacted with participant culture and experimental task. Single heterosexual and bisexual women in Japan and the UK preferred somewhat less femininity in men's faces compared to women in a relationship (in line with H7a). When judging women's faces, British and Japanese bisexual women and Japanese heterosexual women also showed weaker femininity preferences when single than when partnered, whereas patterns for British heterosexual women varied by both experimental task and face ethnicity. Relationship status had little if any effect on British lesbian women, but Japanese lesbian women showed increased preferences for femininity across face gender when single compared to when in a relationship. Throughout, strength (and in some cases, significance) of patterns varied by experimental task.

Among men, Japanese heterosexual men showed increased preferences for femininity in both women's and men's faces when single, whereas relationship status had little if any effect on preferences of British heterosexual men. Relationships status also did not appear to affect preferences of British bisexual men when judging men's faces, whereas bisexual Japanese men judging men's faces, and bisexual men across both cultures judging women's faces preferred lower femininity. Gay men judging men's faces preferred higher femininity, and for gay men judging women's faces there was a small effect of single men preferring somewhat lower femininity, but strength (and in some case significance) of effects varied again by task.

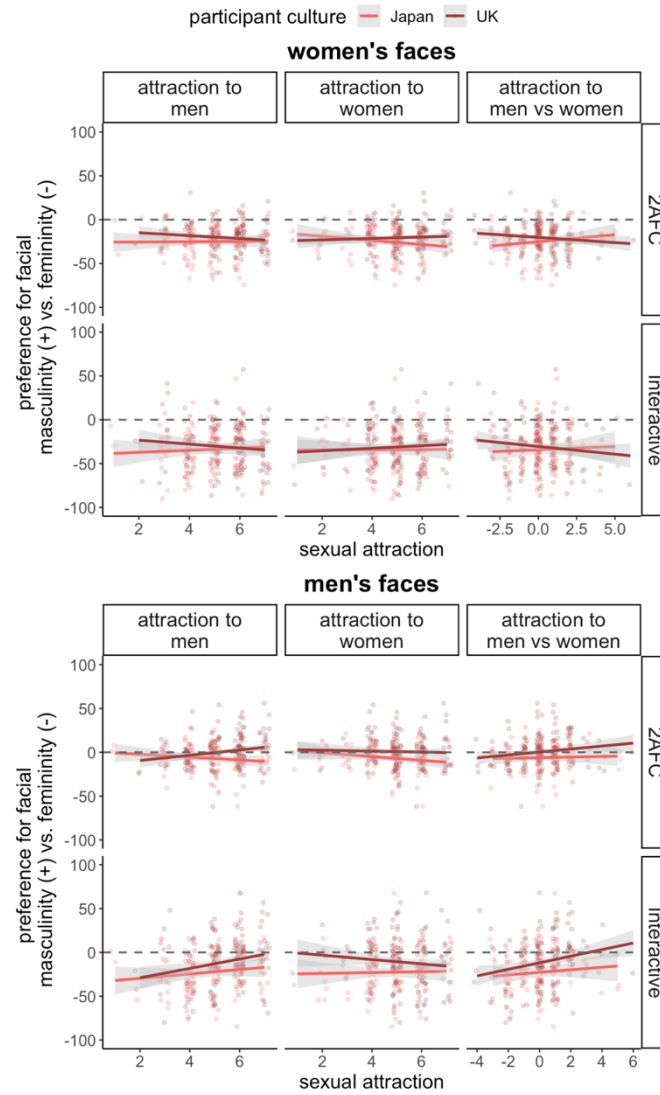
Participant Relationship Quality

In these models, we included participant self-reported commitment to and happiness in their relationship as moderators. Full model specifications and results can be found in the exploratory analysis script *3d-Relationship Status* on the OSF, <https://osf.io/su2dw>. Both relationship happiness and commitment were very skewed, showing ceiling effects and limited range that suggested socially desirable responding (see Figure S13). Overall, commitment and happiness tended to have opposing effects—e.g., greater relationship commitment predicting stronger femininity preference but greater relationship happiness predicting weaker femininity preference. We hesitate to interpret these effects, however, due to the limited range of responses.

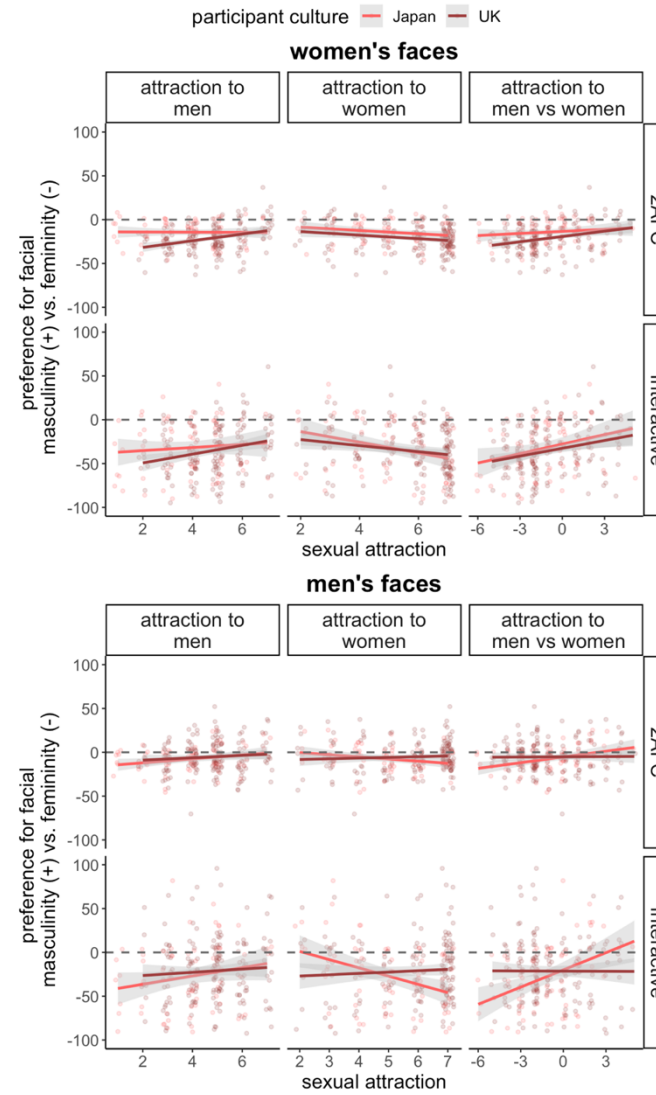
Figure S13*Relationship Commitment and Happiness Distributions by Participant Culture*

Figure S14

Sexual Attraction Predicting Preferences Among Bisexual Participants
Bisexual female participants



Bisexual male participants



Note. Horizontal dashed line at 0 indicates no preference for femininity or masculinity.