SUPPLEMENTARY INFORMATION - SCELZA & PRALL -
PARTNER PREFERENCES IN THE CONTEXT OF CONCURRENCY: WHAT HIMBA WANT IN FORMAL AND INFORMAL PARTNERS – EVOLUTION AND HUMAN BEHAVIOR

Table S1: Descriptive statistics for rankings

	Trait	Min	Max	Range	Median	Mean	Mode	Variance	Coefficient of Variation
Wife	Attractive	1	7	6	5	4.71	4	3.08	0.37
	Respectful	1	6	5	3	2.87	3	1.74	0.46
	Smart	1	7	6	4	3.74	5	3.39	0.49
	Hardworking	1	6	5	2	2.34	1	2.07	0.61
	Polite	1	7	6	4	4.34	4	1.85	0.31
	Good in bed	2	7	5	7	6.37	7	1.43	0.19
	Fertile	1	7	6	3.5	3.63	2	4.46	0.58
Girlfriend	Attractive	1	7	6	2	2.32	1	3.3	0.78
	Respectful	1	6	5	2	2.61	2	2.03	0.55
	Smart	1	6	5	3	3.16	2	2.41	0.49
	Hardworking	1	7	6	5	4.66	6	2.61	0.35
	Polite	1	7	6	4	4.18	4	1.78	0.32
	Good in bed	1	7	6	6	5.61	7	2.89	0.3
	Fertile	2	7	5	6	5.47	7	2.74	0.3
Husband	Attractive	1	7	6	6	5.62	6	2.4	0.28
	Good in bed	2	7	5	7	6.23	7	1.76	0.21
	Smart	1	6	5	4	3.87	5	2.85	0.44
	Generous	2	7	5	4	4.31	5	2.01	0.33
	Hardworking	1	6	5	3	3.05	3	1.26	0.37
	Wealthy	1	6	5	2	2.31	1	2.48	0.68
	Respectful	1	6	5	3	2.62	1	2.24	0.57
Boyfriend	Attractive	1	7	6	5	4.44	6	4.67	0.49
	Good in bed	2	7	5	7	6.26	7	1.72	0.21
	Smart	1	7	6	4	4.1	6	2.57	0.39
	Generous	1	6	5	3	3.1	1	2.67	0.53
	Hardworking	1	7	6	4	3.82	3	3.52	0.49
	Wealthy	1	7	6	4	3.67	5	2.65	0.44
	Respectful	1	6	5	2	2.62	1	2.56	0.61

Table S2: Otjihimba Translations of Pile Sort Traits

Otjihimba	English
Okupanduka	Fertile (to have children)
Omuhona	Wealthy
Omututa	Hard-working
Omuwa	Good-looking/Attractive
Ongozu	Polite
Unadengero	Respectful
Unazondunge	Smart
Uri po kati kauwa	Good in bed
Uyandja	Generous

Note: One complication is that the Himba translation for fertility (*okupanduka*) is "to have children" and this may conflate the concepts of social and biological fatherhood, in that some men may have limited their thinking about it to the children who would count as theirs, while others used it to think about the actual fecundity of a potential partner. Follow-up studies could be designed to disentangle these ambiguities, especially given that Himba have a purportedly high rate of extra-pair paternity.

Model specifications for the full model M3

The following model was used predict ranks (1-7, 1 being highest), where $\alpha_{respondent\_trait}$ refers to random intercepts for each respondent by trait type (for example, respondent 1 ranking attractiveness receives the same varying intercept for both rankings, formal and informal), α_{trait} refers to random intercepts by trait type, and all β parameters refer to varying slopes [based on standardized age, marital status (Mg, 1=married), and relationship type (R, 1=informal)] for each trait type. This approach doesn't entirely correct for the non-independence in ranks for traits inherent in this data, but does allow for estimates of trait rank and trait rank by relationship type, independent of individual participant responses of each trait type. As an alternate approach, trait ranks were estimated as a continuous variable, with identical random intercepts and varying slopes as below. Results were very similar to those presented here.

$$R_i \sim Ordered(p)$$

$$logit(p_k) = \alpha_k + \alpha_{respondent\_trait} + \alpha_{trait} + \beta_{trait} * R + \beta age_{trait} * Age + \beta age.R_{trait} * Age * R + \beta mg_{trait} * Mg + \beta mg.R_{trait} * Mg * R$$

$$\alpha_k \sim Normal\ (0,2)$$

$$\alpha_{\sigma_{Respondent\_Trait}} \sim Normal\ (0, \sigma)$$

$$\sigma \sim HalfCauchy\ (0,1)$$

$$\begin{bmatrix} \alpha_{trait} \\ \beta_{trait} \\ \beta age_{trait} \\ \beta age.R_{trait} \\ \beta mg_{trait} \\ \beta mg.R_{trait} \end{bmatrix} \sim DMVNormal\ (\sigma_{trait}, \rho)$$

$$\sigma_{trait} \sim HalfCauchy\ (0,1)$$

$$\rho \sim DLKJcorr(4)$$

Table S3: Posteriors for predictors of the full model M3 in Males

Trait	Relationship	Age	Age x Relationship	Marital Status	Marital Status x Relationship
1- Attractive	-2.96	0.30	-0.22	-0.04	-0.39
	[-3.83,-2.13]	[-0.1,0.74]	[-0.67,0.19]	[-0.58,0.44]	[-1.24,0.32]
2 - Fertile	2.27	-0.46	0.18	-0.16	0.29
	[1.45,3.11]	[-0.92,0.04]	[-0.19,0.62]	[-0.7,0.36]	[-0.36,1.08]
3 - Good in bed	-1.07	-0.22	0.02	-0.18	-0.46
	[-2,-0.19]	[-0.63,0.18]	[-0.38,0.38]	[-0.8,0.32]	[-1.34,0.28]
4 - Hardworking	2.63	0.08	0.08	0.20	0.18
	[1.86,3.44]	[-0.28,0.44]	[-0.24,0.44]	[-0.27,0.78]	[-0.46,0.88]
5 - Polite	-0.17 [	0.04	0.01	0.04	0.06
	-0.81,0.5]	[-0.26,0.37]	[-0.28,0.3]	[-0.39,0.47]	[-0.5,0.64]
6 - Respectful	-0.35	0.09	-0.03	0.17	-0.07
	[-1.08,0.34]	[-0.22,0.44]	[-0.35,0.26]	[-0.29,0.67]	[-0.7,0.54]
7 - Smart	-0.69	0.10	-0.10	-0.04	0.22
	[-1.44,0.01]	[-0.21,0.46]	[-0.44,0.21]	[-0.5,0.39]	[-0.36,0.94]

Mean and 89% intervals for posteriors of predictors in the full model predicting rank. Relationship denotes formal or informal partner type, where informal partner type = 1. Married =1.

Table S4: Posteriors for predictors of the full model M3 in Females

Trait	Relationship	Age	Age x Relationship	Marital Status	Marital Status x Relationship
1- Attractive	-1.27	0.19	0.1	0.28	0.18
	[-2.05,-0.51]	[-0.1,0.52]	[-0.18,0.42]	[-0.2,0.9]	[-0.37,0.83]
2 - Generous	-1.11	-0.05	0.03	0.21	0.03
	[-1.8,-0.4]	[-0.3,0.17]	[-0.21,0.3]	[-0.25,0.75]	[-0.47,0.58]
3 - Good in bed	0.03	-0.12	-0.04	0.22	0.08
	[-0.74,0.81]	[-0.43,0.14]	[-0.36,0.23]	[-0.32,0.84]	[-0.48,0.7]
4 - Hardworking	0.75	0	0.02	-0.18	-0.24
	[0.04,1.43]	[-0.23,0.24]	[-0.22,0.29]	[-0.7,0.28]	-0.86,0.26]
5 - Respectful	-0.16	-0.02	-0.09	-0.13	0.12
	[-0.84,0.55]	[-0.26,0.22]	[-0.38,0.18]	[-0.66,0.34]	[-0.38,0.69]
6 - Smart	0.13	0.03	-0.02	0.06	0.14
	[-0.55,0.76]	[-0.2,0.26]	[-0.26,0.22]	[-0.39,0.54]	[-0.33,0.68]
7 - Wealthy	1.56	-0.04	-0.03	-0.44	-0.19
	[0.76,2.32]	[-0.29,0.21]	[-0.3,0.23]	[-1.08,0.13]	[-0.83,0.39]

Mean and 89% intervals for posteriors of predictors in the full model predicting rank. Relationship denotes formal or informal partner type, where informal partner type = 1. Married =1.

Figure S1: Posterior distributions of the varying intercepts for each trait from the initial models M1

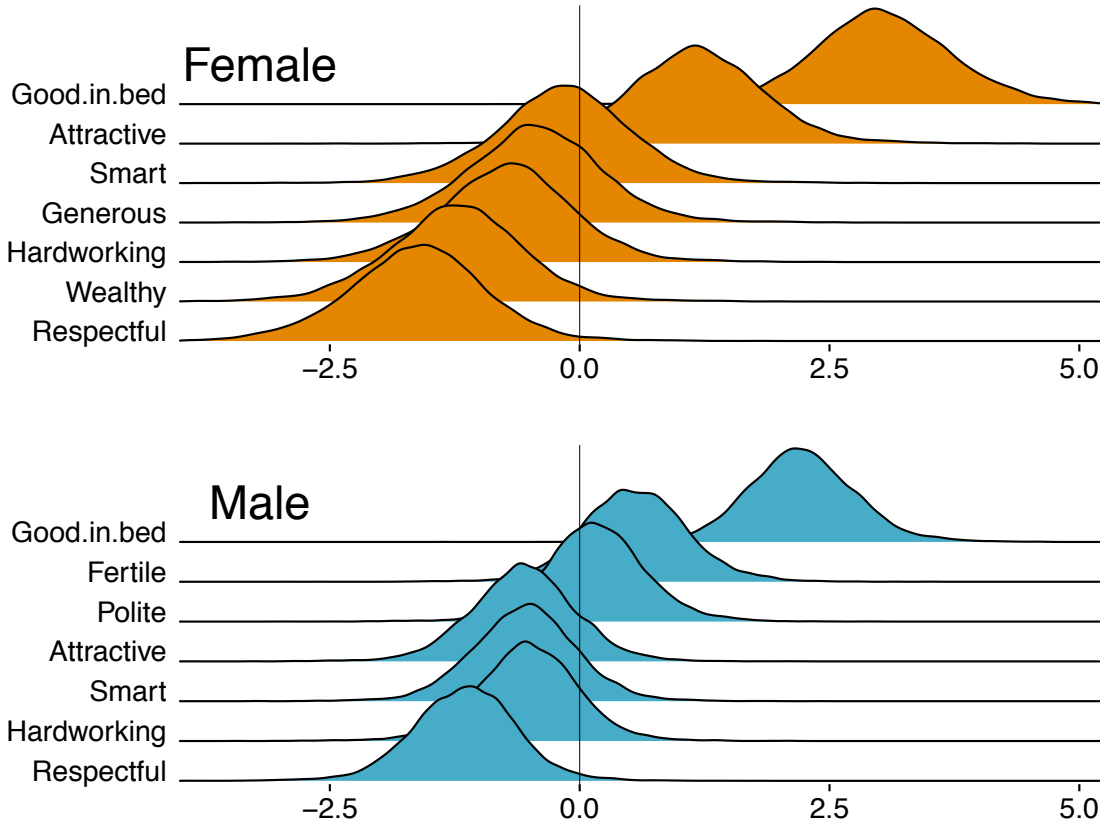
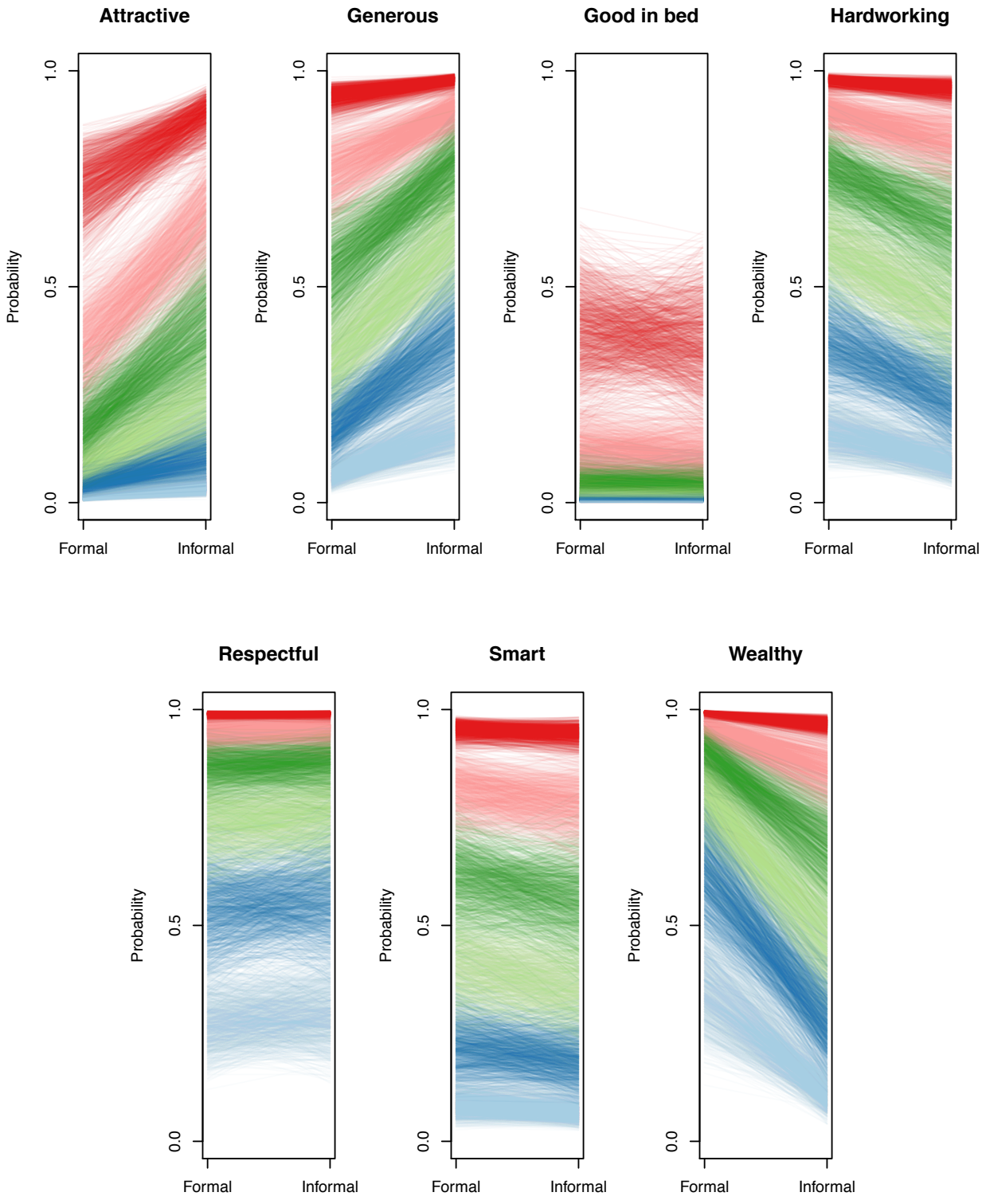
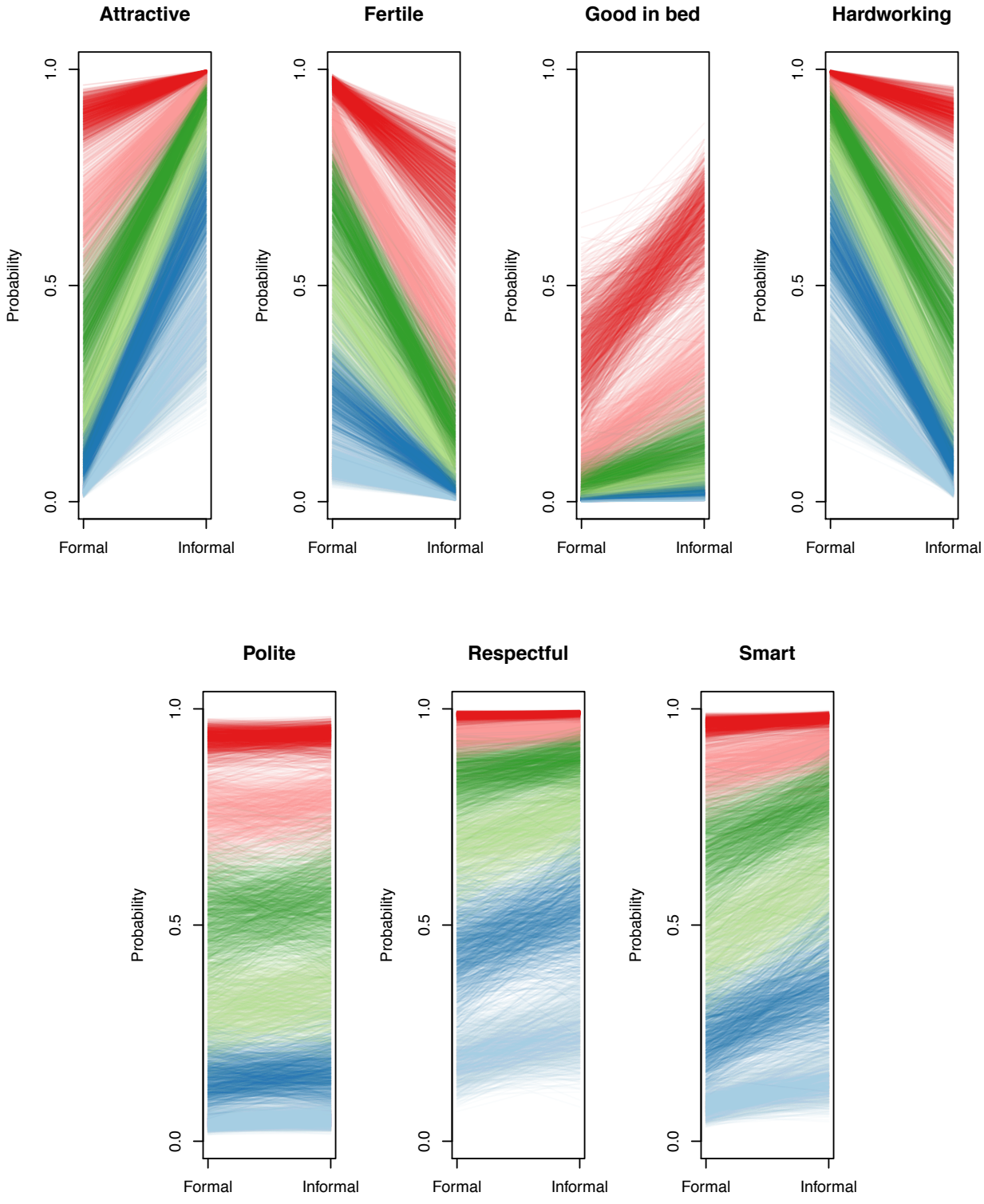


Figure S2: Posterior Predictions of the Ordered Categorical Model for Females



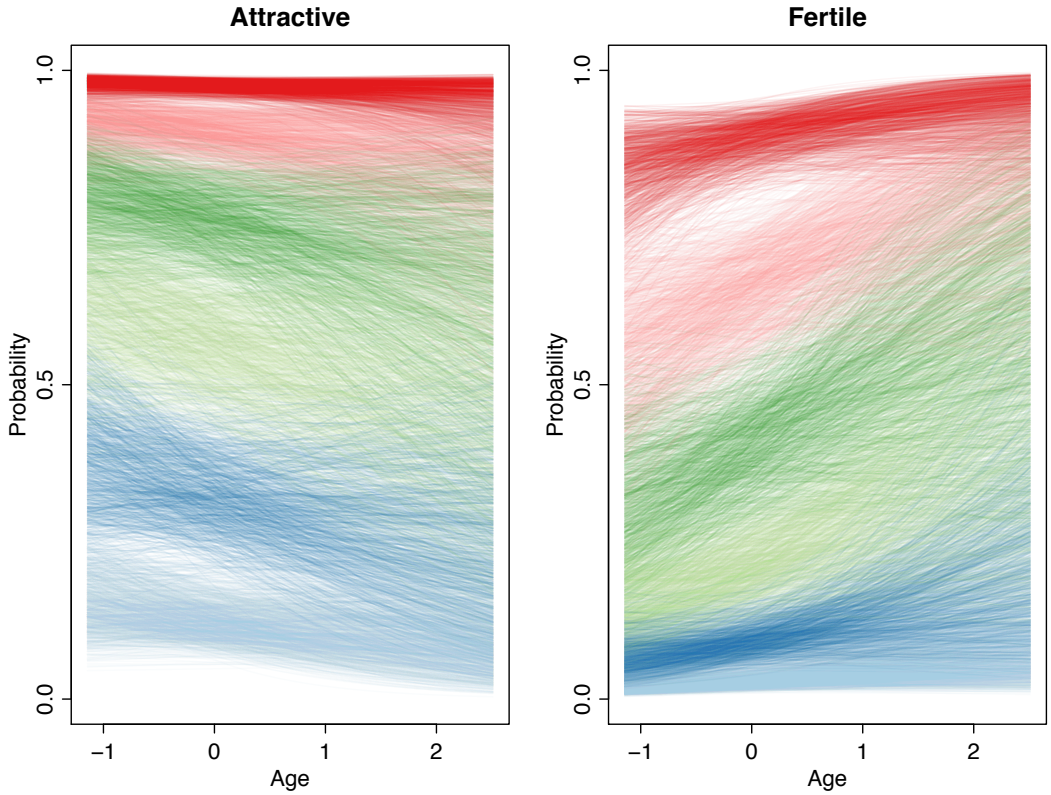
Model results for M3. For each plot, 1000 samples from the posterior representing boundaries between rankings, with estimated boundary between rank 6 and 7 at the top (dark red) and boundary between rank 2 and 1 at the bottom (light blue). Changes in probability space across the x axis represents predicted differences in probability associated with partner type.

Figure S3: Posterior Predictions of the Ordered Categorical Model for Males



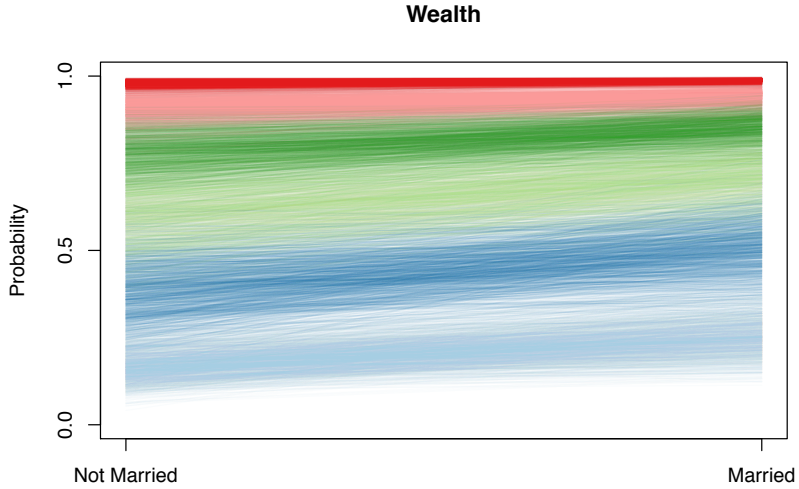
Model results for M3. For each plot, 1000 samples from the posterior representing boundaries between rankings, with estimated boundary between rank 6 and 7 at the top (dark red) and boundary between rank 2 and 1 at the bottom (light blue). Changes in probability space across the x axis represents predicted differences in probability associated with partner type.

Figure S4: Posterior Predictions of the Ordered Categorical Model for Males – Effects of Age on Rank Probability



Model results for M3. For each plot, 1000 samples from the posterior representing boundaries between rankings, with estimated boundary between rank 6 and 7 at the top (dark red) and boundary between rank 2 and 1 at the bottom (light blue). Changes in probability space across the x axis represents predicted differences in probability associated with partner type.

Figure S5: Posterior Predictions of the Ordered Categorical Model for Females – Effects of Marital Status on Rank Probability



Model results for M3. For each plot, 1000 samples from the posterior representing boundaries between rankings, with estimated boundary between rank 6 and 7 at the top (dark red) and boundary between rank 2 and 1 at the bottom (light blue). Changes in probability space across the x axis represents predicted differences in probability associated with partner type.