Supplementary information for:

Women choose romantic partners resembling their father in body odour

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Pilot study

The pilot study was designed to evaluate the suitability of the collection procedure for the chemical analysis. The samples were collected from six male participants (mean age 24.6 ± 2.5 years). Each subject provided three samples from the left and three samples from the right axilla giving together 36 samples. The entire workflow followed the same procedure as described for the main analysis. The results of the Pilot study are shown at Extended data Fig. 5.

Participants recruitment

Participants (either women or their romantic partners) interested in taking part in the study were asked to complete an online contact form in Qualtrics platform to check whether they fulfil study enrolment criteria (see Methods section). In total, the form was completed by ca. 350 candidates, the conditions were met by 127 candidates. These individuals were contacted via e-mail for participation in the study. However, 36 of them did not reply to our invitation. Another 24 dyads dropped out during data collection. In total, 67 individuals were willing to participate in the study together with their romantic partner and father.
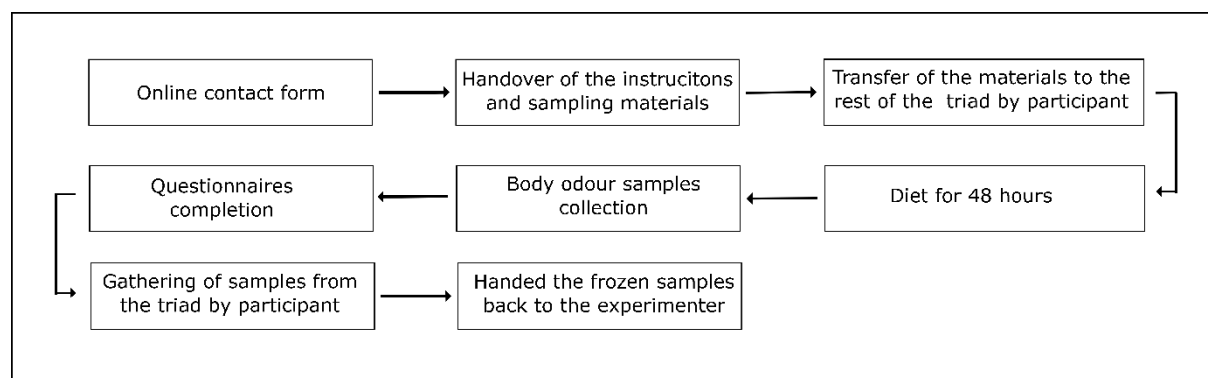
**Supplementary Fig. 1:** Overview of the data collection procedure.

	Fathers violated/complied		Partners violated/complied		Specification
Restrictions	48h	24h	48h	24h	
Smoking	1/66	0/67	4/63	0/67	up to 2 cigarettes
Food	3/64	0/67	3/64	0/67	up to one clove of garlic, spoon of mayonnaise, a pinch of spice, one fish
Alcohol	4/63	0/67	3/64	0/67	up to 0.5 l of beer or wine
Cosmetics	4/63	0/67	5/62	0/67	perfume, deodorant, antiperspirant, shower gel; in the morning of the first day
Combination	6/61	0/67	6/61	0/67	smoking-cosmetic; food-alcohol; food-cosmetic; alcohol-cosmetic
In total	18/49	0/67	21/47	0/67	

Supplementary Table 1: Results of the survey on rule compliance.

Number of participants who reported smoking, consuming aromatic food, using cosmetics or their combination. The number of participants complying given rules is written after slash. 48h/24h denotes period before body odour samples collection. Note that none of the violations occurred in the 24h period leading up to the sampling.

Perceptual rating

After assessing similarity of the all 5(6) sets, raters took 5 minutes break to minimize smell adaptation and exhaustion. Subsequently, raters assessed all samples in randomized order for their attractiveness and masculinity on a 7-point, verbally anchored scale (ranging from 1— 'low attractive/masculine' to 7— 'highly attractive/masculine'. The attractiveness and masculinity rating is available for 47 dyads due to the technical problems within the first 5 sessions. To explore which perceptual characteristics affect similarity ratings we computed differences in absolute values between the average attractiveness, and masculinity ratings of the targets and match samples. We found that perceived masculinity (Spearman's rho = -0.32, p = 0.04) but not attractiveness (Spearman's rho = 0.03; p = 0.83) correlated with rated similarity.
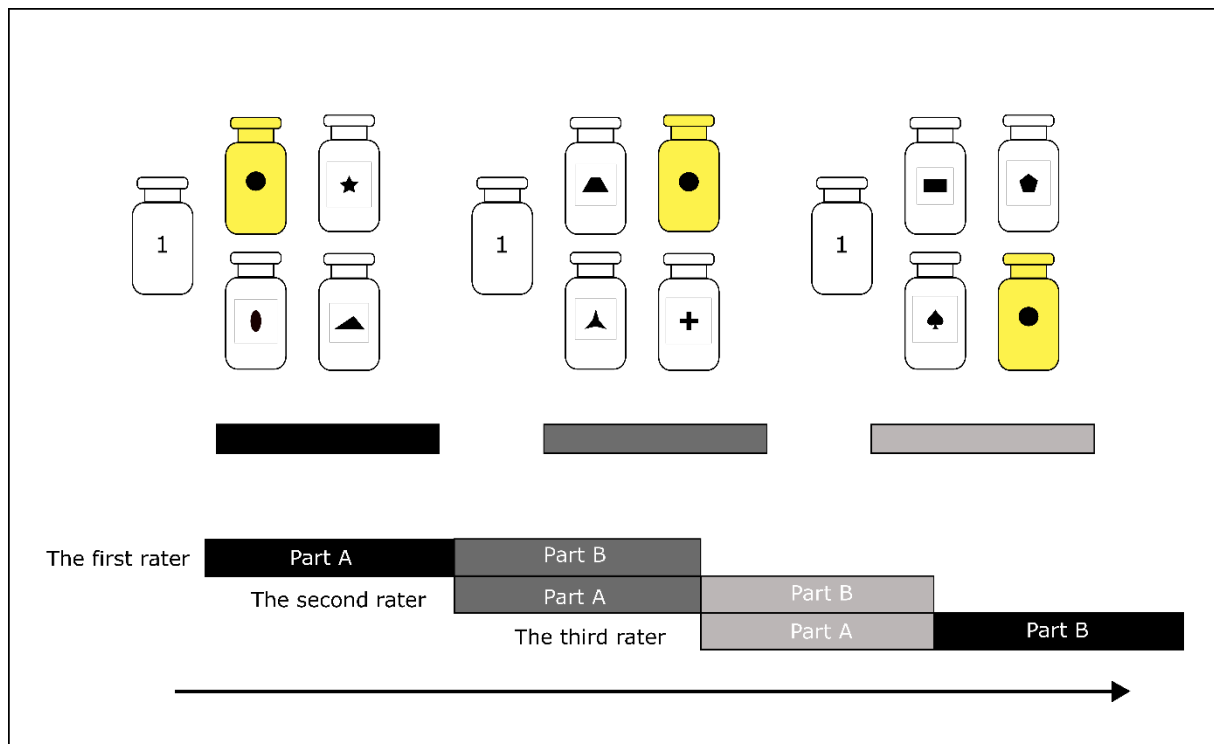
Supplementary Fig. 2: One set of body odour samples for perceived similarity rating task in three different randomization settings. To avoid possible bias related to samples positions and to ensure uniform distribution of the initial position, the partner sample (yellow symbol) was rotated clockwise within each randomization. The distractor samples (white symbols) were randomly chosen from the pool of distractor samples used in the given rating session. The template (target father) was labelled with a number. Each rater assessed samples in two randomizations – the first randomization for similarity rating task (Part A) and the second for masculinity and attractiveness rating task (Part B).

	Bray-Curtis		Jaccard	
Data	p	SES	p	SES
All data	0.003	-2.886	0.006	-3.398
Without missing samples	0.007	-2.682	0.002	-2.954

Supplementary Table 2: Results of permutation-based analyses testing similarity within father-partner dyads.

Testing was conducted on prevalence (Jaccard) and relative abundance-based dissimilarities (Bray-Curtis) on the complete dataset including all samples (All data) as well as on the data subset containing just parent-father dyads with no missing samples (Without missing samples).

	s-EMBU Emotional Warmth		s-EMBU Overprotection		s-EMBU Rejection		ECR-RS Avoidance		ECR-RS Anxiety		Overall relationship quality	
	rho	p	rho	p	rho	p	rho	p	rho	p	rho	p
s-EMBU Emotional Warmth	-	-	0.07	0.58	-0.41	<0.001	-0.42	<0.001	-0.30	0.02	0.57	<0.001
s-EMBU Overprotection	0.07	0.58	-	-	0.39	<0.001	-0.14	0.25	0.09	0.48	-0.18	0.15
s-EMBU Rejection	-0.41	<0.001	0.39	<0.001	-	-	0.28	0.02	0.27	0.03	-0.59	<0.001
ECR-RS Avoidance	-0.42	<0.001	-0.14	0.25	0.28	0.02	-	-	0.28	0.02	-0.28	0.02
ECR-RS Anxiety	-0.30	0.02	0.09	0.48	0.27	0.03	0.28	0.02	-	-	-0.29	0.02
Overall relationship quality	0.57	<0.001	-0.18	0.15	-0.59	<0.001	-0.28	0.02	-0.29	0.02	-	-

Supplementary Table 3: Correlation matrix between the s-EMBU and ECR-RS scales and overall relationship quality.