

# Supporting Information

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## SI Materials and Methods

**Study 1.** One hundred forty-four speed-dates from a heterosexual speed-dating event hosted on Northwestern University's campus in 2007 were examined. In all, there were 24 participants (12 female; median age = 19.6 y; SD = 1.2 y) who each went on consecutive 4-min dates with the 12 participants of the opposite sex. Participants were recruited for the event via informational emails and flyers posted around campus. Racial/ethnic breakdown was 1% African American, 15% Asian, 65% white of European ancestry, 4% Hispanic, 4% South Asian, and 11% other or multiracial. Informed consent was obtained from all study participants, and the study was approved by Northwestern University's Institutional Review Board.

On each date, participants had a chance to meet one another and indicate to the study organizers if they were interested in romantically pursuing any one of their dates in the future. The organizers provided mutually interested individuals with an opportunity to contact each other, presumably to arrange a more traditional date (64). Each participant also completed a variety of self-report measures gathering their impressions, and each date was videorecorded for later behavioral coding.<sup>‡</sup>

**Video-coding details.** Each video recording was coded by trained raters who were blind to the experimental hypothesis/researcher questions on a variety of behaviors known to be linked to love, liking, dominance, and sexual attraction based on previous research on humans and other animals, including postural expansiveness and the affiliative cues of laughing, smiling, and nodding. Table S1 presents the details of each behavior coded, along with interrater reliability statistics for each coded behavior. For each video, individuals were coded without sound (except when coding for laughs), one at a time (visible on-screen partners were occluded).

**Post-interaction self-report measures.** Speed-date participants rated each individual date-partner on a variety of "I think this person is ..." statements, using a scale of 1 (not at all) to 9 (extremely). Statements were grouped into the following characteristics for analyses of personal qualities [physical attractiveness (assessed by the items "sexy/hot" and "physically attractive",  $\alpha = 0.93$ ); earning prospects ("good career prospects," "ambitious/driven",  $\alpha = 0.87$ ); vitality ("fun/exciting," "funny,"  $\alpha = 0.90$ ); warmth ("responsive," "dependable/trustworthy," "friendly/nice,"  $\alpha = 0.81$ ); dominance ("charismatic," "confident," "assertive,"  $\alpha = 0.91$ ); intelligence ("smart," "intellectually sharp,"  $\alpha = 0.89$ )] and for analyses of romantic interest [chemistry ("My interaction partner and I seemed to have similar personalities." "My interaction partner and I had a real connection." "My interaction partner and I seemed to have a lot in common."  $\alpha = 0.92$ ) and romantic attraction ("I really liked my interaction partner," "I was sexually attracted to my interaction partner," "I am likely to say 'yes' to my interaction partner,"  $\alpha = 0.90$ )]. Finally, the success of a date was measured by each individual's self-report indicating if he or she wanted the opportunity to contact each of the dates at a later time, with a forced-choice "yes" or "no."

**Study 2a.** An online field experiment was conducted using a free and widely used dating application for mobile devices. This GPS-based application matches nearby single persons with one another. This

experiment was conducted in the San Francisco/Bay Area in California. Because we were interested in merely observing users' responses to a stimulus in an online public space, informed consent was not required or collected. A full-board review by University of California, Berkeley's Institutional Review Board reasoned that there were minimal risks associated with the study and that user data anonymity and dissociation from any identifying demographic information warranted a waiver of informed consent.

Profiles on this application simply feature a primary photograph<sup>§</sup> and the user's first name and age. Based on one's GPS location, users are presented with profiles of other users within a specified radius. One profile is presented at a time. Users have the on-screen option of anonymously indicating sexual/romantic interest in each profile with a forced-choice "yes" or "no" response, at which point the next profile is presented. Profiles do not remain idle for browsing on this application—when a profile is presented, the user must respond to have the next profile revealed, and once the user has responded to a profile, it is not presented again. This initial response of "yes" or "no" is never communicated directly to the other user. Instead, much as in speed-dating, only if two users mutually indicate "yes" to one another will the application connect them to a messaging portal where they can begin communicating privately. If one user responds "yes" and the other responds "no," the application does not alert either user of the other's decision.

We launched profiles of six different confederates<sup>¶</sup> (three white men and three white women) onto the dating application. Two different profiles—an expansive and contracted version—were created for each confederate, resulting in 12 profiles total. Each profile featured four different photographs of the confederate in various scenes; depending on the profile condition, all the photographs were of the confederate in either an expanded or contracted pose (Fig. S1). To configure confederates' postures, we drew on past research describing expansive, open postures as widespread limbs and enlargement of occupied space; contracted, closed postures entailed limbs held close to the torso and minimization of occupied space by collapsing the body inward (15, 17, 18, 65–71). All confederates were listed as being 25 y old, each male confederate was named "Michael," each female confederate was named "Jessica,"<sup>#</sup> and primary photographs were counterbalanced across all profiles.

The study was run over a 48-h period (i.e., Thursday night through Saturday night) on two consecutive weeks. For each confederate, either the expansive or contracted profile was active for the first 48-h period to collect potential matches, and their other profile was active for the second 48-h period. Preferences for a romantic partner were set to be within a 50-mile user radius and within the ages of 20–30 y. Because the only way to tell if other users were interested in the study confederates was to obtain a mutual match, we initiated the possibility of a connection by creating "yes" responses to the first 125 profiles presented each night. The total number of matches (i.e., reciprocated "yes" responses visible in the messaging portal) was tallied at the end of

<sup>‡</sup>P.W.E. and E.J.F. hosted several speed-dating events. However, only one event was coded; this event was chosen because data were reasonably complete and it had an equal number of men and women. Other articles draw from this same speed-dating dataset (74–77).

<sup>§</sup>Additional photographs can be added to a person's profile, although only the primary one appears when a profile is initially presented.

<sup>¶</sup>Confederates provided consent to be photographed and being featured on a profile under a pseudonym (e.g., "Jessica" or "Michael"). Research assistants who were blind to study hypotheses handled confederates' profiles.

<sup>#</sup>The most popular male and female names in the United States in 1989 (<https://www.socialsecurity.gov/babynames>), the year corresponding with each confederate's listed age of 25 years.

each week for each profile. The number of “yes” responses received for each profile type (i.e., expansive vs. contracted) served as our dependent variable—a behavioral, consequential measure of other users’ interest.

**Study 2b.** A total of 853 participants (59% male; median age = 34.26 y, SD = 10.90 y) were recruited using Amazon Mechanical Turk. Each participant was compensated \$0.40 for completing a 4-min survey about a collage of photographs. Informed consent was obtained from all study participants, and the study was approved by The Institutional Review Board of the University of California, Berkeley.

Each participant was presented with one of 12 photograph collages. Each photograph collage comprised the photo-

graphs from each target’s profile used in study 2a. Thus, there were two photograph collages representing each target: one expanded version and the other contracted. Participants were randomly assigned to view one collage and were randomly assigned to rate it on either dominance or openness, using a scale from 1 (“strongly disagree”) to 5 (“strongly agree”). Assessments for dominance were made using the eight-item social dominance subscale of the Trait Dominance Measure (72),  $\alpha = 0.95$ . Assessments for openness were made using the 10 openness items from the Big Five Inventory (73),  $\alpha = 0.84$ . The order of questions was randomized across participants.

### a) Expansive



### b) Contractive



Fig. S1. Examples of dating profile photographs used in study 2.

**Table S1. Study 1: Coded behavior descriptions and inter-rater reliabilities**

Behavior	Description/coder instruction	Interrater reliability, <i>r</i>
Expansiveness	Raters used a seven-point scale (-3 "closed" through +3 "expanded") to code expansive displays once at the beginning of the date and again at the end. Expansiveness scores were averaged across the two time points ( $\alpha = 0.72$ ).	0.78
Affiliation cues		
Smiles	No. of times each participant smiled on each date. All types of smiles (e.g., genuine, range of intensities) were included.	0.81
Laughs	No. of times each participant laughed on each date.	0.95
Nods	No. of times each participant nodded on each date. A nod was counted each time a person's chin dipped down and then lifted upward.	0.95

Scores for laughing, smiling, and nodding were all standardized and averaged together to create a composite affiliative behavior score for each participant ( $\alpha = 0.53$ ).