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Racial Preferences in Dating

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We examine racial preferences in dating. We employ a Speed Dating experiment that allows us to directly observe individual decisions and thus infer whose preferences lead to racial segregation in romantic relationships. Females exhibit stronger racial preferences than males. The richness of our data further allows us to identify many determinants of same-race preferences. Subjects' backgrounds, including the racial composition of the ZIP code where a subject grew up and the prevailing racial attitudes in a subject's state or country of origin, strongly influence same-race preferences. Older subjects and more physically attractive subjects exhibit weaker same-race preferences.

1. INTRODUCTION

Interracial marriages in the U.S. are quite rare. For example, data from the 5% sample of the 2000 Census reveal that among married blacks, 94% are married to other blacks. Members of other races are also unlikely to marry outside of their own group. While under random matching 44% of all marriages would be interracial,[1] a mere 4% of marriages in the U.S. are between partners of different race. However, this does not necessarily imply an underlying preference for spouses of the same race: a final match (*i.e.* a marriage) is the outcome of a search process that involves both *finding* and *choosing* a mate. Prior evidence across a range of disciplines reveals extensive racial segregation in the U.S., both geographic and social (see, for example, Cutler, Glaeser, and Vigdor, 1999; Massey, 2001). Interracial matches may be rare simply because members of different races interact relatively infrequently. Rates of interracial marriage thus capture both preferences and socio-geographic segregation. Identifying the separate roles of these two factors would enhance our understanding of racial discrimination in this very important realm of human behaviour.

Moreover, even if we knew the relative importance of preferences and segregation, we might not know *whose* preferences drive the low rates of interracial marriage. For example, suppose we observed an integrated community of whites and blacks with no interracial marriages. This pattern would be consistent with a world where whites have a strong preference for same-race partners and blacks have none, but also consistent with the world where whites are colour-blind but blacks strongly dislike having a white marriage partner. Similarly, the observed pattern would

1. We calculate this number using the overall populations in the U.S., regardless of age. Alternative measures that restrict the calculation to "marriageable" populations yield a similar figure.

be consistent with either gender exhibiting a strong same-race preference. In order to get inside the black box of marital segregation, we need to observe decisions, not just final matches.[2]

Finally, we wish to know what drives racial preferences. Is it different interests, a different sense of aesthetics, or some other factor? Does growing up in a neighbourhood populated with a particular race increase or decrease one's romantic interest in members of that race? Do prevailing racial attitudes in one's home town affect tolerance for partners of a different race many years later?

In this paper, we study these issues through participants' revealed preferences rather than survey responses that served as the basis for earlier work. We study the effect of race on mate selection by analysing the choices of subjects in an experimental Speed Dating service involving students from Columbia University graduate and professional schools.[3] Briefly, in our experimental paradigm subjects meet a number of potential mates for four minutes each, and have the opportunity to accept or reject each partner.[4] If both parties accept, then each receives the other's email address the following day. We emphasize that our design allows us to observe individual preferences of each participant directly (*i.e.* their Yes/No decisions for every partner). Further, during the event, subjects rate their partners on a number of characteristics, which helps us investigate the factors that underlie same-race preferences. Finally, we emphasize that our experiment takes place in a realistic dating environment: we attempted to create a setting as similar as possible to that provided by the private firms operating in the Speed Dating industry.

Our results are as follows. First, we observe a strong asymmetry across genders in racial preferences: women of all races exhibit strong same-race preferences, while men of no race exhibit a statistically significant same-race preference. Since older subjects (who are more likely to attend the Speed Dating sessions in hope of starting a serious relationship)[5] have a weaker same-race preference, this gender difference is unlikely to result from differential dating goals between men and women. Second, our subjects do not find partners of the same race more attractive, so race-specific conceptions of attractiveness cannot account for these same-race preferences. Third, the inclusion of objective measures of shared interests does not affect our estimates of same-race preferences.

We also find that subjects' backgrounds strongly influence their racial preferences. First, we consider the effect of the prevailing attitudes towards interracial marriage in subjects' state or country of origin, based on responses to questions in the General Social Survey (GSS) (for the subjects from the U.S.) and the World Values Survey (WVS) (for non-U.S. subjects). Subjects that come from intolerant places reveal stronger same-race preferences. This is somewhat surprising given that our subjects are graduate students at Columbia University and that many of them attended college away from home. We also consider the effect of early exposure to other races. We find marginally significant evidence that those subjects that grew up in a ZIP code with a larger fraction of inhabitants of a particular race are *less* willing to date someone from this racial group. In other words, familiarity can decrease tolerance. This result is unaffected by controlling

2. In principle, one could estimate a structural model using data on marriages, but with this approach the results are somewhat sensitive to modelling assumptions. Wong (2003) and Bisin, Giorgio and Verdier (2004) estimate structural models of the marriage market; though Wong (2003) examines differences in marriage outcomes across races, neither paper addresses the issue of racial preferences.

3. In order to link our results on dating behaviour to patterns of interracial marriage, we must assume that there is a correlation between characteristics that are desirable in a dating partner and characteristics that are desirable in a marriage partner. Sprecher and Regan (2002) and Stewart, Stinnett and Rosenfeld (2000) both find a close concordance between attributes desired in dating and marriage partners, based on survey data.

4. Throughout the paper, we will refer to the person making the decision as *subject* and the person being decided upon as *partner*. When we wish to refer to both subjects and partners, we use the word *participant*.

5. As revealed in the pre-event survey, described below.

for the average income in the ZIP code. Finally, we also find that more physically attractive people care less about the race of the partner.

Our paper speaks directly to a broad literature in economics, psychology, and particularly sociology on racial preferences in mate choice specifically, and the much larger literature on racial preferences in general. Concurrently with our work, Kurzban and Weeden (2005) also utilize data from Speed Dating events to study mate preferences.[6] Their focus, however, is on measuring the extent of homogeneity in these preferences. While they document the presence of some same-race preferences, they neither examine their determinants nor test for gender differences. Hitsch, Hortaçsu and Ariely (2006) provide the only other methodology for studying dating preferences using actual decisions. They analyse email exchanges on a match-making web site, and report a broad set of findings on the determinants of dating preferences. Among their findings is the existence of same-race preferences, particularly for women. In a previous paper (Fisman, Iyengar, Kamenica and Simonson, 2006), we also mention the finding that women have stronger racial preferences than men. However, our purpose here is not only to document the existence of racial preferences but also to understand their determinants. Thus, in this paper we consider the heterogeneity of preferences across the different races, and much more importantly, we examine which attributes induce stronger preference for a partner of the same race. We thus begin to build a picture of the determinants of racial preferences.

Apart from these recent studies, existing research on interracial marriage and dating relies exclusively on survey responses or population statistics. Our results on gender differences in particular are broadly consistent with these survey-based findings.[7] For example, the survey of Mills, Daly, Longmore and Kilbridge (1995) suggests that both men and women hold negative attitudes towards interracial relationships, but that women are significantly less accepting of interracial romantic relationships than men are.[8] Some earlier survey work also attempts to document heterogeneity of same-race preferences across the different races and the determinants of these racial preferences, but with results that are often at odds with what we report here. For example, South (1991) reports that blacks and Hispanics are more willing to marry someone of another race than whites are. Mok (1999) reports a negative correlation between own-race population density in respondents' place of origin and the likelihood of self-reported interracial dating. The contrast of this result with our finding highlights the importance of our revealed preferences approach since our methodology allows us to distinguish between availability and preference. Yancey (2002) analyses the demographic correlates of self-reported interracial dating, and finds that age is negatively correlated with interracial dating. He also reports that respondents from the American South are less likely to have dated interracially, which is consistent with our findings on home state racism.

There is of course also a vast literature on the determinants of racial tolerance outside of the realm of romantic relationships. The most relevant set of results for our study are those on racism as a function of neighbourhood integration. In particular, Skogan (1995) reports that residential

6. Eastwick, Finkel, Mochon and Ariely (2007) also conducted a Speed Dating event to study dating preferences, though they do not examine the role of race. Further, they report only results based on answers to survey questions rather than on the actual Yes/No decisions.

7. We did also ask the participants how important it is to them that a person they date be of the same racial background. They were somewhat honest in answering this question: we find that those who say racial similarity is more important to them are indeed more likely to be racially discriminating in their revealed preferences. Interestingly, however, we find that subjects from states or countries with high measures of racial intolerance are not more likely to self-report having racial preferences, in contrast to our revealed preference results reported below. Similarly, while women are slightly more likely to self-report having racial preferences, this difference is not significant, and stands in sharp contrast to the strong effects we report below. This underscores the potential reporting biases that we avoid with our revealed preference approach.

8. See Fujino (1997) and Fiebert, Karamol and Kasdan (2000) for additional survey evidence on gender differences in racial preference.

proximity to blacks is associated with greater racial prejudice.[9] This association is confirmed in our study.

The rest of the paper is structured as follows. Section 2 describes our data and methodology. Section 3 reports our empirical results. Section 4 concludes.

2. EXPERIMENTAL DESIGN

Our experimental design is based on meetings through Speed Dating events where participants engage in four-minute conversations to determine whether or not they are interested in one another romantically. If both partners "accept", then each is subsequently provided with the other's contact information to set-up more leisurely dates in the future. Three surveys, described below, were administered to the participants before, immediately after, and 3 weeks after the event.

The main advantage of our design is that it gives us experimental control and yet provides us with data on decisions made in a real-world context. Speed Dating is a well-established format in the U.S., with eight companies in 2004 devoted exclusively to this approach in New York City alone, in addition to the many online match-making companies that offer Speed Dating as one of their services. As previously mentioned, we made a special effort to ensure that our design creates a setting similar to that provided by the private firms operating in this market.[10] The evening's script was based specifically on the format of Hurry Date, the largest Speed Dating company in New York.

Our subjects were drawn from students in graduate and professional schools at Columbia University. Participants were recruited through a combination of mass email and fliers posted throughout the campus and handed out by research assistants. In order to sign up for the Speed Dating events, interested students had to register at a web site by providing their name and email address and completing a pre-event survey.[11]

Setting—The Speed Dating events were conducted in an enclosed room within a popular bar/restaurant near the campus. The table arrangement, lighting, and type and volume of music played were held constant across events. Rows of small square tables were arranged with one chair on either side of each table.

Procedure—Speed Dating events were conducted over weekday evenings during 2002–2004; data from 17 of these sessions are utilized in this study.[12] In general, two sessions were run in a given evening, with participants randomly distributed between them.

Upon checking in, each participant was given a clipboard, pen, and name tag on which only his or her ID number was written. Each clipboard included a score-card with a cover over it so that participants' responses would remain confidential. The score-card was divided into columns in which participants indicated the ID number of each person they met. Participants would then circle "yes" or "no" under the ID number to indicate whether they wanted to see the other person again. Beneath the Yes/No decision was a listing of the six attributes on which the participant has to rate his or her partner on a 1–10 Likert scale: Attractive, Sincere, Intelligent, Fun, Ambitious, Shared Interests.[13]

9. In contrast, however, Welch, Bledsoe, Sigelman and Combs (2001) report that residents of integrated neighbourhoods perceive a greater decline in racism over the previous decade than residents of more segregated neighbourhoods.

10. The only important difference is that we did not serve alcohol.

11. For two of the sessions, the subjects were asked to bring along reading materials. This manipulation might have been informative about the potential role of shared interests in mediating racial preferences, but the estimates of the effect are too imprecise for any firm conclusions.

12. We ran a total of 21 sessions; four have been omitted, one because we imposed a "budget set" (*i.e.* maximum number of acceptances) on participants, and three because we were unable to attract a sufficient number of participants.

13. A number of other responses, which we do not utilize in this paper, were also elicited from the subjects. For the complete survey, please see http://www2.gsb.columbia.edu/faculty/rfisman/Dating_Survey.pdf.

After all participants had arrived, two hosts instructed the participants to sit at the two-person tables. The females were told to sit on one side of the tables, while the males were seated across from them. Males were instructed to rotate from table to table, so that by the end of the dating event they had rotated to all the tables, meeting all the females.[14] Each rotation consisted of four minutes during which the participants engaged in conversation. After the four minutes, the Speed Dating hosts instructed the participants to take one minute to fill out their score-cards for the person with whom they were just speaking.

When all the dating rounds were completed, the hosts concluded by letting the participants know that they would be sent a survey the following day, saying, "You will be receiving an email with a link for the follow-up survey. After you have filled it out, we will send you an email with your match results".

The morning after the Speed Dating event, participants were sent an email requesting that they complete the follow-up online questionnaire. Ninety-one percent of the Speed Dating participants completed this questionnaire in order to obtain their matches. Upon receipt of their follow-up questionnaire responses, participants were sent an email informing them of their match results.

2.1. *Data description*

The main variable of interest is the Yes/No decision of subject i with respect to a partner j, which we denote by Decision_{ij}. We will initially examine gender differences in same-race preferences, and define the indicator variable Male_i denoting whether the subject is male.

We utilize the subjective ratings provided by the Speed Dating participants. We will find it useful to control for the physical attractiveness of both subjects and partners. In each case, we use the average of all attractiveness ratings received by a particular subject (partner), and denote this by Attractiveness_i (Attractiveness_j). This variable was re-scaled to take on values between zero and one to facilitate comparison with the race variables.

We also define a number of race-related variables. First, we define indicator variables denoting each of the four main race classifications: White_i, Black_i, Hispanic_i, and Asian_i. The indicator variable SameRace_{ij} denotes that i and j are of the same race. For our Asian population, we would have liked to differentiate between South Asians and East Asians. Unfortunately, however, we did not allow for this distinction in our survey, though we did record the names and places of origin of our subjects. The vast majority of Asian subjects were of East Asian origin; we omit observations where the subject's place of origin was in South Asia, or where the subject's name was clearly identifiable as South Asian. There were insufficient South Asian subjects to include them as a separate category; therefore, we omit them.[15]

We are interested in whether seriousness in dating objectives might be responsible for differences in racial preferences. In the pre-event survey, we asked the participants, "What is your primary goal in participating in this event?", but since honest revelation is a significant concern for such questions, we prefer to use self-reported Age_i as a proxy for seriousness.[16]

The pre-event survey additionally provides us with information on the participants' ZIP code in the place they grew up for those who were raised in the U.S. Additionally, we obtained information on the participants' countries of birth. For participants raised in the U.S., we match

14. This was the only asymmetry in the experimental treatment of men and women. While we would have preferred to have men and women alternate in rotating, we were advised against this by the owners of HurryDate. We believe this experimental asymmetry is unlikely to account for the observed gender differences in racial preference we report below.

15. If we do not omit South Asian subject, we observe weaker same-race preferences for Asians, but no other results are affected. We also did not distinguish between white and black Hispanics and it is quite possible that Hispanics have stronger same-race preferences than our results imply.

16. The results are qualitatively the same, though somewhat weaker, if we use the indicated intent in place of age.

TABLE 1

Descriptive statistics of participants

	Number of participants	Percentage	Columbia graduate population	Percentage
Race of participant				
White	262	63·59	3978	68·67
Black	25	6·07	424	7·32
Hispanic	40	9·71	416	7·18
Asian	85	20·63	975	16·83
Total	412		5793	
Field of study				
Business	95	24·48	1925	18·21
Law	40	10·31	1530	14·48
Service	78	20·10	2161	20·45
Academic	175	45·10	4953	46·86
Total	388		10,569	
Region of origin				
North America	257	74·28		
Western Europe	31	8·96		
Eastern Europe	7	2·02		
Central Asia	6	1·73		
Middle East	4	1·16		
East Asia	28	8·09		
Latin America	12	3·47		
Africa	1	0·29		
Total	346			

Notes: Statistics for the Columbia graduate student population reflect total (part-time and full-time) enrolment, and are taken from the *Statistical Abstract of Columbia University 2004*, available at http://www.columbia.edu/cu/opir/abstract/enrollment_fte_2004.html. No data are available on students' countries of origin.

the ZIP code to census racial composition and income data in 1990. We choose this year as the closest estimate of the formative years of our subjects, who had a median age of 11 in 1990. We define Income_i as the median income in i's ZIP code in 1990, and construct a variable $\text{Fraction-OthersRace}_{ij}$ that is the fraction of the population in i's ZIP code in 1990 that is of j's race.

We additionally use state and country of origin to match subjects to data on racial attitudes in their places of origin. Note that we do not have such data at the ZIP code level. For subjects that grew up in the U.S., we use responses from the 1988–1991 GSS based on the following question: "Do you think there should be laws against marriages between (Negroes/Blacks/African-Americans) and whites?" to generate the variable MarriageBan_GSS_i. This variable reflects the fraction of respondents from the subject's state of origin that answered yes to this question.[17] For subjects who grew up outside the U.S., we used data from the 1990 WVS. In this survey, respondents were given a list of groups, including "People of a different race", and asked the following: "On this list are various groups of people. Could you please sort out any that you would not like to have as neighbours?" We use this to construct $\text{RacistNeighbours\_WVS}_i$ which reflects, for the subject's country of birth, the fraction of survey respondents who reported that they would not want a neighbour of another race. Unfortunately, the WVS did not have questions specifically on interracial marriage or dating.

Table 1 provides a summary of the basic demographics of our subjects. Where possible, we also provide statistics on the overall population of students in graduate and professional schools

17. Results based on responses to a GSS question about a family member marrying a black person were virtually identical; there was a much larger sample of respondents for the law-based variable we report above.

TABLE 2

Summary statistics

	Mean	Standard deviation	Min	Max	Obs
Income ($1000)	45·768	18·522	8·607	122·978	291
MarriageBan_GSS	0·226	0·021	0·156	0·297	286
RacistNeighbours_WVS	0·122	0·101	0·024	0·579	62
Age	26·229	3·544	19	42	410
Attractiveness	0·624	0·119	0·280	0·869	412
SameRace	0·468	0·499	0	1	5998
FractionOthersRace	0·124	0·213	0	1	4170

Notes: Income is the median income (in $1000) of the partner's ZIP code in 1990, based on U.S. census data. MarriageBan_GSS is the fraction of respondents to the General Social Survey, from the subject's state of origin, who responded affirmatively to the question, "Do you think there should be laws against marriages between (Negroes/Blacks/African-Americans) and whites?" RacistNeighbours_WVS is the fraction of respondents in the World Values Survey, from the subject's country of birth, who did not wish to have a neighbour of a different race. Age is the self-reported age of the participant. Attractiveness is the average rating of the partner by the subjects he or she meets. SameRace is an indicator variable denoting that the subject and the partner are of the same race. FractionOthersRace is the fraction of the population in i's ZIP code in 1990 that is of j's race. For SameRace, the level of observation is a subject–partner meeting. For Income and FractionOthersRace, the level of observation is ZIP code. For MarriageBan_GSS, the level of observation is state. For RacistNeighbour_WVS, the level of observation is country. For Age and Attractiveness, the level of observation is subject.

at Columbia University. In terms of race, our sample very closely mirrors the overall population of Columbia graduate and professional students, though this does mean that we have a relatively small number of black subjects. Approximately 25% of the subjects study business, 10% study law, 20% are in service areas, and 45% are pursuing an academic degree. This well approximates the distribution in the Columbia graduate population as a whole, though business students are somewhat over-represented. Finally, the majority (nearly three quarters) of our subjects grew up in North America (*i.e.* the U.S. and Canada).

Table 2 provides summary statistics on selected subject attributes and also subject–partner-level characteristics. Of particular interest is that approximately 53% of all meetings were between participants of different races.

3. RESULTS

A summary table of the fraction of *Yeses*, that is, affirmative decisions, by subject–partner race, along with the number of observations in each cell, is given in Table 3 for females and males, respectively. The diagonal terms are generally higher than the corresponding fractions in the right-hand column, which gives tentative evidence of same-race preferences. Nonetheless, 47% of all matches in our data are interracial. While this is significantly below the 53% that we would observe under random matching, it is still far above the 4% of interracial marriages observed in the Census data.[18] Even accounting for differential exposure to interracial dating opportunities, our subject pool seems far more tolerant than society at large. This is unsurprising, given the characteristics of our participants. First, they are highly educated, and prior survey-based research finds that same-race preferences are negatively correlated with education. Second, our subjects

18. Ideally, we would compare the figure 47% with the fraction of interracial *dates*, not marriages, but such data are not available. However, our finding in Section 3 that those who are looking for a serious relationship exhibit a weaker same-race preference suggests that the comparison to the 4% figure is still meaningful.

TABLE 3

Fraction Yeses for female and male subjects

Subject race	Partner race				
	White	Black	Hispanic	Asian	All races
Female subjects					
White	**0·38** (1238)	0·27 (95)	0·27 (133)	0·16 (299)	0·33 (1765)
Black	0·48 (141)	**0·89** (9)	0·63 (16)	0·31 (35)	0·48 (201)
Hispanic	0·39 (221)	0·42 (19)	**0·50** (26)	0·23 (71)	0·37 (337)
Asian	0·45 (470)	0·40 (40)	0·42 (55)	**0·44** (131)	0·44 (696)
All races	0·40 (2070)	0·36 (163)	0·36 (230)	0·25 (536)	0·37 (2999)
Male subjects					
White	**0·49** (1238)	0·41 (141)	0·50 (221)	0·35 (470)	0·46 (2070)
Black	0·59 (95)	**0·67** (9)	0·63 (19)	0·43 (40)	0·56 (163)
Hispanic	0·49 (133)	0·38 (16)	**0·46** (26)	0·29 (55)	0·43 (230)
Asian	0·53 (299)	0·37 (35)	0·38 (71)	**0·47** (131)	0·48 (536)
All races	0·50 (1765)	0·41 (201)	0·48 (337)	0·37 (696)	0·46 (2999)

Notes: Number of observations in parentheses.

have self-selected into a dating event where they might expect to encounter potential partners of different races.[19]

3.1. *Gender differences*

We begin by reporting separate regressions for each race and gender based on linear probability models where we allow racial preferences to differ across all races, that is, we allow the off-diagonal terms in Table 3 to differ from one another. For example, for white subjects, we will look at

$$\text{Decision}_{ij} = \alpha_i + \beta_1 \text{Black}_j + \beta_2 \text{Hispanic}_j + \beta_3 \text{Asian}_j + \varepsilon_{ij}, \tag{1}$$

where α_i is a subject fixed effect, and we omit the race indicator variable for the subject's own race. We report these results in Table 4.

We first look at the decisions of female subjects. For all races except Asians, all the coefficients on the race indicator variables are negative, implying a same-race preference. For black and white subjects, these coefficients are jointly significant (p-value $< 0{\cdot}01$); for Hispanics, the joint significance is at the 10% level, with most of the effect derived from a significant ($p < 0{\cdot}05$) preference against Asian males. For Asian subjects, no coefficient is individually significant, nor are they jointly so. Finally, we can reject the hypothesis of equal preference against partners of other races for white, black, and Hispanic subjects, owing largely to the greater preference against Asian males by all other races.

For male subjects, the coefficients on racial preferences are predominantly negative but are not jointly significant at 5% for any race. For white and black subjects, when females and males are pooled and gender–race interactions included we find that the male race coefficients are significantly closer to zero than the female race coefficients. In analogous regressions for Asian and Hispanic subjects, the coefficients are of mixed signs and generally insignificant. Thus on

19. Subjects were not informed of the demographic composition of other Speed Dating participants. They were, however, told that they would be meeting other Columbia graduate students, so it is at least plausible that they would expect to encounter demographics representative of Columbia graduate students overall. This turned out to be the case for our sample, as illustrated in Table 1.

TABLE 4

Racial preferences in dating decisions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
White		−0·458	0·000	0·001		−0·077	−0·023	0·027
		(0·162)	(0·094)	(0·054)		(0·191)	(0·125)	(0·047)
Black	−0·104		−0·029	−0·027	−0·123		−0·209	−0·181
	(0·060)		(0·173)	(0·071)	(0·069)		(0·187)	(0·104)
Hispanic	−0·124	−0·374		0·007	0·040	−0·059		−0·077
	(0·051)	(0·195)		(0·095)	(0·060)	(0·235)		(0·060)
Asian	−0·243	−0·611	−0·224		−0·061	−0·275	−0·188	
	(0·034)	(0·170)	(0·111)		(0·046)	(0·199)	(0·132)	
Gender of subject	Female				Male			
Race of subject	White	Black	Hispanic	Asian	White	Black	Hispanic	Asian
F-test, joint significance	0·00	0·00	0·10	0·97	0·15	0·11	0·16	0·08
F-test, equality	0·02	0·06	0·01	0·89	0·15	0·06	0·10	0·04
Observations	1765	201	337	696	2070	163	230	536
R^2	0·25	0·30	0·24	0·30	0·29	0·30	0·15	0·42

Notes: Linear probability model. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include subject fixed effects, and all observations are weighted by the inverse of the number of observations per subject.

average, women exhibit stronger racial preferences than men. Note that, since our specification includes subject fixed effects, this difference cannot be due to differential selectivity.

One possible reason for this gender difference might be the different dating goals of men and women. In particular, one might be concerned that women are more interested in forming a relationship while men are more interested in casual sex and that race has greater relevance for the former endeavour. However, in Section 3.3, we demonstrate that older subjects (who, based on their self-reported dating goals, are more interested in forming a relationship) exhibit substantially weaker same-race preferences. Thus, the observed difference seems to reflect a genuine disparity in men's and women's willingness to be with a partner of a different race, rather than differing goals.

3.2. *The role of attractiveness*

Might the observed racial preferences arise from racially distinct notions of attractiveness? We analyse the role of attractiveness in racial preferences by asking two questions: (i) Do men and women find partners of same race more attractive than partners of other races and (ii) Do partners of different races receive roughly the same distribution of attractiveness ratings?

In order to study the first question, we run OLS regressions of the form

$$\text{Attractiveness}_{ij} = \alpha_j + \beta_1 \text{Black}_i + \beta_2 \text{Hispanic}_i + \beta_3 \text{Asian}_i + \varepsilon_{ij}, \tag{2}$$

where $\text{Attractiveness}_{ij}$ denotes the attractiveness rating of partner j by subject i and we suppress the indicator variable for partner's race. Note that in these regressions, the independent variables are indicator variables for the race of the *subject* giving the ratings, whereas in all other regressions, the independent variables indicate the race of the *partner*. Table 5 reports the results. We find that most coefficients are not significant, and in fact 10 out of the 24 point estimates are positive. The only coefficients that are negative and individually significant are Hispanic men's ratings

TABLE 5

Effect of subject's race on subjects' attractiveness ratings of partners

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
White		−0·054	0·003	−0·019		−0·097	0·021	−0·034
		(0·065)	(0·046)	(0·024)		(0·039)	(0·057)	(0·020)
Black	0·007		0·046	−0·025	0·055		0·108	0·023
	(0·021)		(0·062)	(0·034)	(0·024)		(0·074)	(0·047)
Hispanic	−0·052	−0·117		−0·115	0·001	−0·089		−0·036
	(0·039)	(0·075)		(0·040)	(0·018)	(0·049)		(0·040)
Asian	−0·027	−0·109	−0·006		0·011	−0·113	0·012	
	(0·018)	(0·068)	(0·050)		(0·022)	(0·047)	(0·061)	
Gender of partner	Female				Male			
Race of partner	White	Black	Hispanic	Asian	White	Black	Hispanic	Asian
Observations	2016	162	228	518	1724	194	324	679
R^2	0·36	0·23	0·29	0·27	0·30	0·43	0·36	0·39

Notes: OLS. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is the subject's rating of the partner's attractiveness. All regressions include partner fixed effects, and all observations are weighted by the inverse of the number of observations per partner. Note that in these regressions, the independent variables are indicator variables for the race of the subjects giving the ratings, whereas in other tables, the independent variables indicate the race of the partner.

of Asian women and white and Asian women's ratings of black men. Given the overall number of coefficients we estimate, however, these three effects are likely to be spurious. Therefore, we conclude that subject's own race does not influence the rating of a partner's attractiveness. This finding gives us confidence that we can meaningfully speak of "objective" attractiveness and that average rating is a reasonable proxy for it.

With this measure in hand, we can address the second question of whether different races receive roughly the same distribution of attractiveness ratings. We do so by running OLS regressions of the average attractiveness rating a partner receives on that partner's race. We run a separate regression for each gender, but pool together subjects of different races for ease of exposition since Table 5 suggests no systematic differences in ratings based on subject's own race. The results are reported in Table 6, with white as the omitted category. For male partners (column (1)), our main finding is that Asians generally receive lower ratings than men of other races.[20] In fact, when we run the regressions separately for each race, we find that even Asian women find white, black, and Hispanic men to be more attractive than Asian men. Given that Asian men were the group that other races expressed strongest preference against, and that Asian women expressed the least preference against other races, the results in Table 6 suggest that attractiveness may play an important role in the determination of racial preferences, especially those against Asian men. We similarly find that female Asian partners are consistently rated as less attractive (column (2)), though we also find that black females receive significantly lower ratings relative to whites. As above, we find that when these regressions are run separately for each race, even Asian men find white, black, and Hispanic women to be more attractive than Asian women.

These results strongly suggest the need to control for attractiveness in our analysis of the effect of race on decisions. Hence, we re-estimate equation (1), with partner's average attractiveness rating (Attractiveness_j) added as a control. The results are reported in Table 7. The main

20. One may worry that race may be correlated with field of study, which in turn may be correlated with attractiveness in our sample. We do not detect any systematic pattern in the relationship between field of study and race, however, and when we include fixed effects for partner's field of study, our results are unaffected.

TABLE 6

Effect of partner's race on subjects' attractiveness ratings of partners

	(1)	(2)
Black	0·007 (0·037)	−0·084 (0·035)
Hispanic	−0·036 (0·027)	0·011 (0·030)
Asian	−0·130 (0·021)	−0·061 (0·020)
Gender of subject	Female	Male
Observations	2924	2921
R^2	0·36	0·36

Notes: OLS. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is the subject's rating of the partner's attractiveness. All regressions include partner fixed effects, and all observations are weighted by the inverse of the number of observations per partner. Note that in these regressions, the independent variables are indicator variables for the race of the partner receiving the rating, whereas in the previous table, the independent variables indicate the race of the subject.

TABLE 7

Racial preferences in dating decisions—effect of attractiveness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
White		−0·414	−0·049	−0·147		−0·202	−0·001	−0·041
		(0·108)	(0·066)	(0·045)		(0·131)	(0·086)	(0·042)
Black	−0·123		−0·073	−0·210	0·004		0·025	−0·135
	(0·044)		(0·116)	(0·074)	(0·046)		(0·140)	(0·093)
Hispanic	−0·092	−0·337		−0·135	0·013	−0·239		−0·147
	(0·031)	(0·143)		(0·072)	(0·029)	(0·147)		(0·053)
Asian	−0·075	−0·401	−0·081		0·051	−0·207	−0·023	
	(0·027)	(0·128)	(0·076)		(0·034)	(0·140)	(0·093)	
Attractiveness	1·433	1·544	1·789	1·483	1·812	2·353	2·210	1·095
	(0·093)	(0·238)	(0·211)	(0·159)	(0·113)	(0·287)	(0·271)	(0·169)
Gender of subject	Female				Male			
Race of subject	White	Black	Hispanic	Asian	White	Black	Hispanic	Asian
F-test, joint significance	0·00	0·00	0·67	0·01	0·71	0·40	0·93	0·11
F-test, equality	0·72	0·71	0·83	0·63	0·81	0·86	0·79	0·06
Observations	1765	201	337	696	2070	163	230	536
R^2	0·35	0·42	0·38	0·40	0·43	0·53	0·32	0·47

Notes: Linear probability model. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include subject fixed effects, and all observations are weighted by the inverse of the number of observations per subject.

changes are that we now get a same-race preference for Asian women, and that the preference against Asian males declines for other races. Both of these changes derive from the fact that our pool of Asian males generally received low attractiveness ratings. Strikingly, we observe almost no residual heterogeneity in racial preferences after controlling for physical attractiveness. In no case can we reject the equality of race coefficients, and furthermore, no two coefficients are significantly different from one another.

Motivated by this homogeneity and in the interest of presentational ease, we collapse our race variables into a single SameRace_{ij} indicator variable that denotes whether a partner is of the same race as the subject. Further, since, with the exception of preferences of black women, we

cannot reject the hypothesis of equal extent of same-race preferences across races, we pool subjects of different races together in specifications that follow. Accordingly, we include fixed effects for the race of the partner.[21] Finally, we find that the results we report below on the *determinants* of racial preferences are virtually identical for males and females. That is, while we find that females' same-race preferences are much stronger than that of males *on average*, the two genders exhibit similar within-gender correlates of racial preferences. We thus pool female and male subjects simply controlling for gender interacted with SameRace_{ij}. The precise specifications are given in each subsection below.

3.3. *The determinants of racial preferences*

Much of the earlier literature on racial attitudes in dating focuses on individuals' personal characteristics as determinants of racial preferences. Here, we bring our revealed preference methodology to bear on this question. We consider regressions of the following form:

$$\text{Decision}_{ij} = \alpha_i + Race_j + \beta_1 \text{Attractiveness}_j + \beta_2 \text{SameRace}_{ij} + \beta_3 \text{SameRace}_{ij} \times \text{Male}_i + \beta_4 \text{SameRace}_{ij} \times X_{ij} + \varepsilon_{ij}, \quad (3)$$

where X_{ij} is a variable that may affect racial preferences and Race_j is a fixed effect for the partner's race.

First, we analyse the effects of upbringing on racial preferences, as emphasized by much of the earlier survey-based literature. A natural starting point for examining the effects of background is to consider the role of the prevailing attitudes on race in subjects' place of origin. For subjects that grew up in the U.S., we use the intensity of support for a ban on interracial marriage in the subject's home state (MarriageBan_GSS_i). For subjects who did not grow up in the U.S., we use the variable $\text{RacistNeighbours\_WVS}_i$, which reflects, for the subject's country of birth, the fraction of survey respondents in the 1990 WVS who reported that they would not want a neighbour of another race.

Columns (1) and (2) of Table 8 show the results for each of the survey-based racial attitudes variables (MarriageBan_GSS_i and $\text{RacistNeighbours\_WVS}_i$) interacted with SameRace_{ij}. In both cases, the interaction is significant and positive, indicating stronger racial preferences for subjects from backgrounds with less tolerance for interracial mixing. The magnitude of the effect of coming from such a background is very large. For example, it implies that a subject from a low tolerance state such as South Carolina ($\text{MarriageBan\_GSS}_i = 0{\cdot}28$) has same-race preferences that are 16% points higher than subjects from a state such as New York ($\text{MarriageBan\_GSS}_i = 0{\cdot}22$). Given the dispersion in $\text{RacistNeighbours\_WVS}_i$, the implied effect of a standard deviation increase in racism in the country of origin has a similar, though slightly smaller, effect for our international subjects. This highlights the persistence of background in dictating racial preferences in dating (and potentially attitudes on race more generally), and is all the more surprising given that our sample consists of graduate students studying at Columbia University who are likely to have been living away from home for some time.

We additionally examine whether growing up in a neighbourhood with people of a different race changes the willingness to date someone from that race. Theoretically, the relationship is ambiguous—familiarity may breed understanding, but may also be a source of racial tension. To examine this effect, we interact SameRace_{ij} with $\text{FractionOthersRace}_{ij}$, which denotes the

21. Note that consequently the coefficient on attractiveness in the specifications that follow calls for a different interpretation than the coefficients in Table 7; the inclusion of fixed effects for the race of the partner means that the coefficient on attractiveness only reflects the effect of within-race differences.

TABLE 8

Subject–partner characteristics and heterogeneity in racial preferences

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SameRace	−0·516	−0·028	0·091	0·228	0·982	0·348	0·686
	(0·155)	(0·096)	(0·027)	(0·364)	(0·334)	(0·074)	(0·449)
MarriageBan_GSS × SameRace	2·743						2·769
	(0·720)						(0·688)
RacistNeighbours_WVS × SameRace		0·431					
		(0·225)					
FractionOthersRace			−0·105				−0·095
			(0·067)				(0·066)
FractionOthersRace × SameRace			0·196				0·151
			(0·118)				(0·120)
log(Income) × SameRace				−0·012			
				(0·034)			
log(Age) × SameRace					−0·270		−0·306
					(0·103)		(0·119)
OwnAttractiveness × SameRace						−0·379	−0·344
						(0·107)	(0·132)
Male × SameRace	−0·048	−0·036	−0·068	−0·052	−0·075	−0·102	−0·078
	(0·025)	(0·096)	(0·031)	(0·031)	(0·026)	(0·027)	(0·034)
Attractiveness	1·620	1·772	1·615	1·623	1·632	1·630	1·620
	(0·092)	(0·154)	(0·072)	(0·072)	(0·062)	(0·061)	(0·073)
Observations	4218	718	4170	4288	5970	5998	3929
R^2	0·40	0·35	0·40	0·39	0·40	0·40	0·40

Notes: Linear probability model. Robust standard errors in parentheses, clustered by partner. The dependent variable in all regressions is Decision, an indicator variable that takes on a value of one if a subject desired contact information for a partner. All regressions include subject fixed effects, and all observations are weighted by the inverse of the number of observation per subject. SameRace is an indicator variable denoting that subject and partner are of the same race. MarriageBan_GSS is the fraction of respondents to the General Social Survey, from the subject's state of origin, who responded affirmatively to the question, "Do you think there should be laws against marriages between (Negroes/Blacks/African-Americans) and whites?" RacistNeighbour_WVS is the fraction of respondents in the World Values Survey, from the subject's country of birth, who did not wish to have a neighbour of a different race. FractionOthersRace is the fraction of the population in i's ZIP code in 1990 that is of j's race. log(Income) is the log of median income in subject's ZIP code in 1990. log(Age) is the log of the subject's age. Own Attractiveness is the subject's average attractiveness rating.

fraction of the population in subject i's ZIP code that is of partner j's race. Column (3) of Table 8 shows that the point estimate indicates that early familiarity with a race *decreases* tolerance, though the effect is only marginally significant ($p = 0{\cdot}10$). Such an effect of exposure would be consistent with the work of Welch *et al.* (2001), though as noted in the introduction other studies find the opposite effect (see, for example, Mok, 1999). Since income differs systematically with the racial composition of neighbourhoods, one potential explanation is that subjects who grew up in predominantly minority neighbourhoods form negative associations with other races. We find, however, that the effect of $\text{FractionOthersRace}_{ij}$ is unchanged if we include the interaction of the log of average income in the ZIP code with the same-race indicator variable. Interestingly, as demonstrated in column (4) of Table 8, we also find that log of income of ZIP code interacted with the same-race indicator variable is quite close to zero, implying that economic background is uncorrelated with same-race preferences.[22]

Next, we turn to a set of additional basic subject attributes and examine whether they are correlated with racial preferences. We first examine the role of age, using $\log(\text{Age}_i)$*SameRace_{ij} as a regressor. As column (5) of Table 8 indicates, older subjects discriminate less on the basis of race. The effect is quite strong and statistically significant ($p < 0{\cdot}01$). This is consistent with

22. These results are consistent with Yancey (2002). In his survey data, income does not predict interracial dating.

earlier survey work suggesting that older persons are more willing to marry someone of another race (South, 1991). Second, we examine the effect of subject's attractiveness in column (6). Interestingly, more attractive people have much weaker same-race preferences.[23] Again, the implied magnitude is very large: a one standard deviation increase in Attractiveness_i (0·12) is associated with a four percentage point decrease in same-race preferences.

We also considered whether differences in shared interests mediate racial preferences. Previous research has identified a vast, and possibly increasing, cultural divide between races in areas such as language and leisure activities. For example, the top 10 TV shows for blacks and whites have only a single show in common.[24] Hence, greater shared interest with partners of one's own race immediately suggests itself as a potentially important determinant of racial preferences in dating. However, controlling for any objective measure of shared interests or similarity (*e.g.* correlation of stated interests, being in the same field of study, similarity of income, proximity of place of origin, etc.) does not affect the coefficient on same-race preference.[25] Additionally, in two of our sessions we asked each subject to bring her favourite book or magazine to heighten the relevance of shared interests. There was no distinguishable effect of this treatment on same-race preferences, though this may be due only to the imprecision of our estimate.

Finally, in column (7) of Table 8 we consider the joint impact of the variables above on same-race preferences.[26] The coefficients are very similar to those in the earlier regressions where each variable was included separately, implying that by and large these background attributes reflect independent and distinct channels for affecting racial preferences. One exception is the impact of $\textit{FractionOthersRace}_{ij}$, which was marginally significant in column (3) but is no longer significant at conventional levels in the comprehensive regression of column (7).

In comparing the magnitudes of coefficients in column (7), we must of course take into account the different standard deviations of our dependent variables. After scaling each coefficient in this way, we find that own attractiveness and the log of age exert similar effects on racial preferences, while the GSS marriage ban variable is approximately 50% greater.

3.4. *Robustness*

Note that even though we have a large number of meetings overall, we have a small number of meetings between subjects of certain races. For this reason, the standard errors implied by the regression framework may be misleading. The standard errors from the regressions are primarily problematic for black subjects, due to the paucity of their same-race meetings. We therefore also calculate the significance of blacks' same-race preferences using an approach that does not invoke large sample theory. In particular, we consider permutation tests with partners' race as the treatment variable. To make the analysis analogous to the regression framework: (i) in the spirit of subject fixed effects, we maintain the racial composition of the partners for each subject across the permutations, and (ii) in the spirit of clustering standard errors by partner, we only allow permutations that maintain the race of a given partner across different subjects. The resulting exact p-values indicate that black women strongly prefer men of their own race ($p < 0{\cdot}001$), while black men do not exhibit a significant preference for black women over others ($p = 0{\cdot}16$).

23. Note that, as before, the inclusion of subject fixed effect implies that these differences cannot be due to differential selectivity.

24. See Fryer and Levitt (2004) for a broader discussion of the white–black cultural gap.

25. Controlling for *self-reported* shared interests, on the other hand, reduces the extent of same-race preference by almost a half. This fact is difficult to interpret, however, as self-reported shared interests might either be a better measure of actual shared interests or be a proxy for things other than interests (*e.g.* self-reported shared interests are highly correlated ($\rho = 0{\cdot}48$) with the attractiveness of the partner).

26. Note that we do not include $\textit{Income}_i$ as it was not significant in earlier regressions. Its inclusion/exclusion does not affect any other coefficients. $\textit{WVS\_Racism}_i$ is also not included since the sample in this specification is based on U.S. residents only.

Given these calculations, we are confident that, even though the standard errors from our regressions are not appropriate given our sample size, our t-statistics are not exaggerated and our results withstand a more careful calculation of the relevant p-values. That said, any interpretation of our results on the racial preferences of blacks must take into account the fact that they are based on a small sample.

In order to interpret the coefficients on the race dummies as racial preferences, we also need to be sure that subjects are more likely to say Yes to those partners with whom they would rather go out on a date. One reason why this might not be the case is fear of rejection. If a subject says No to a particular person, they will not find out what the other person said, while if they say Yes, they will be able to infer the other person's reply. Therefore, a subject might say No to someone they like in order to avoid receiving a rejection. The most straightforward way to address this concern is to control for the decision of the other person.[27] When we include this control, the coefficient on $SameRace_{ij}$ does not change. Therefore, we believe these coefficients are in fact capturing racial preferences rather than fear of rejection by other races.[28]

Finally, to interpret the levels of racial preference implied by our regressions, we need to know whether these levels are sensitive to the racial composition of the room on a given evening. One can imagine a scenario where a black woman identifies more closely with a black man when the two of them are the only black people in the room. If this were the case, we would estimate a different level of racial preferences depending on the racial composition of the participants on a particular evening, which would call for a different interpretation of our estimates. The point estimate indicates that black women do indeed exhibit stronger same-race preferences when there is only one rather than two black men in their session, but the data are too sparse for any firm conclusions. We do, however, have more variation in the number of Asian partners and can reject the possibility of a strong effect of that nature for Asian subjects.

4. CONCLUSION

Our results indicate that even in a population of relatively progressive individuals, we observe strong racial preferences. Therefore, preferences are likely to play at least some role in explaining the low rates of interracial marriages in the U.S. today. Recall, however, that even though the race of the partner strongly influences individual decisions, 47% of all matches in our data are interracial. Schelling's (1971) model of dynamic segregation shows that even an extremely mild preference for neighbours of one's own race may lead to completely segregated neighbourhoods. In our dating market, however, we encounter a different relationship between micromotives and macrobehaviour: our subjects have a strong preference for partners of their own race, yet the overall level of the resulting segregation is quite small.[29]

Our study provides an important methodological innovation for understanding the nature of racial preferences in mate selection.[30] In contrast to observational studies, our experimental approach allows for the direct observation of individual preferences, and in contrast to survey-based evidence, the decisions of our subjects have real consequences. We are able to document

27. The short questionnaire that our subjects completed at the end of each four-minute date also included the question: "How probable do you think it is that this person will say 'yes' for you? (1 = not probable, 10 = extremely probable)". The responses to this question are much more predictive of the subject's decision than their partner's decision, which might be interpreted as evidence that unfounded fear of rejection might play a role. Alternatively, the stated beliefs might be capturing something other than the probability we tried to elicit.

28. Note, however, that this does not rule out the possibility that there may be a differential fear of rejection at a later stage in the dating process. See Fisman *et al.* (2006) for further discussion of this topic.

29. The basic reason why residential and marital segregation are different in this regard is straightforward: the positive feedback process that underlies Schelling's result is not applicable to matching markets.

30. See Finkel, Eastwick and Matthews (2007) for a discussion of this innovation.

convincingly that same-race pairings are the result of preferences rather than exposure to dating opportunities and, more interestingly, that there is a stark gender asymmetry in these revealed preferences. Furthermore, we identify a number of determinants of same-race preferences.

Our results suggest a number of directions for future research. First, we report striking findings on the importance of background, in terms of both prevailing racial attitudes and racial diversity in one's place of origin, in affecting racial preferences. This work could be extended to include more refined measures of racial characteristics of place of origin and other background attributes such as family characteristics. The strength and consistency of our results on age and physical attractiveness also provide some intriguing hints as to the determinants of tolerance across individuals and over the life cycle, and future work may try to better understand the factors driving these findings.

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REFERENCES

BISIN, A., GIORGIO, T. and VERDIER, T. (2004), "Religious Intermarriage and Socialization in the United States", *Journal of Political Economy*, **112**, 615–664.

CUTLER, D., GLAESER, E. and VIGDOR, J. (1999), "The Rise and Decline of the American Ghetto', *Journal of Political Economy*, **107**, 455–506.

EASTWICK, P. W., FINKEL, E. J., MOCHON, D. and ARIELY, D. (2007), "Selective Versus Unselective Romantic Desire", *Psychological Science*, **18**, 317–319.

FIEBERT, M. S., KARAMOL, H. and KASDAN, M. (2000), "Interracial Dating: Attitudes and Experience Among American College Students in California", *Psychological Report*, **87**, 1059–1064.

FINKEL, E. J., EASTWICK, P. W. and MATTHEWS, J. (2007), "Speed Dating as an Invaluable Tool for Studying Romantic Attraction: A Methodological Primer", *Personal Relationships*, **14**, 149–166.

FISMAN, R., IYENGAR, S., KAMENICA, E. and SIMONSON, I. (2006), "Gender Differences in Mate Selection: Evidence From a Speed Dating Experiment", *Quarterly Journal of Economics*, **121**, 673–697.

FRYER, R. and LEVITT, S. (2004), "The Causes and Consequences of Distinctively Black Names", *Quarterly Journal of Economics*, **119**, 767–805.

FUJINO, D. C. (1997), "The Rates, Patterns and Reasons for Forming Heterosexual Interracial Dating Relationships Among Asian Americans", *Journal of Social and Personal Relationships*, **14**, 809–828.

HITSCH, G. J., HORTAÇSU, A. and ARIELY, D. (2006), "What Makes You Click: An Empirical Analysis of Online Dating" (Mimeo, University of Chicago).

KURZBAN, R. and WEEDEN, J. (2005) "HurryDate: Mate Preferences in Action", *Evolution and Human Behavior*, **26**, 227–244.

MASSEY, D. (2001), "Residential Segregation and Neighborhood Conditions in U.S. Metropolitan Areas", in N. J. Smelser, W. J. Watson and F. Mitchell (eds.) *America Becoming: Racial Trends and Their Consequences*, Vol. 1 (Washington, DC: The National Academies Press), 391–434.

MILLS, J. K., DALY, J., LONGMORE, A. and KILBRIDGE, G. (1995), "A Note on Family Acceptance Involving Interracial Friendships and Romantic Relationships", *The Journal of Psychology*, **129**, 349–351.

MOK, T. A. (1999), "Asian American Dating: Important Factors in Partner Choice", *Cultural Diversity and Ethnic Minority Psychology*, **5**, 103–117.

SCHELLING, T. C. (1971), "Dynamic Models of Segregation", *Journal of Mathematical Sociology*, **1**, 143–186.

SKOGAN, W. G. (1995), "Crime and the Racial Fears of White Americans", *Annals of the American Academy of Political and Social Science*, **539**, 59–71.

SOUTH, S. J. (1991), "Sociodemographic Differentials in Mate Selection Preferences", *Journal of Marriage and Family*, **53**, 928–940.

SPRECHER, S. and REGAN, P. C. (2002), "Liking Some Things (in Some People) More Than Others: Partner Preferences in Romantic Relationships and Friendships", *Journal of Social and Personal Relationships*, **19**, 463–481.

STEWART, S., STINNETT, H. and ROSENFELD, L. B. (2000), "Sex Differences in Desired Characteristics of Short-Term and Long-Term Relationship Partners", *Journal of Social and Personal Relationships*, **17**, 843–853.

WELCH, S., BLEDSOE, T., SIGELMAN, L. and COMBS, M. (2001), *Race and Place: Race Relations in an American City* (Cambridge: Cambridge University Press).

WONG, L. Y. (2003), "Structural Estimation of Marriage Models", *Journal of Labor Economics*, **21**, 699–729.

YANCEY, G. (2002), "Who Interracially Dates: An Examination of the Characteristics of Those Who Have Interracially Dated", *Journal of Comparative Family Studies*, **33**, 179–190.