A Historical Examination of the Impact of Forces of Attraction and Supply on Marriage in the United States *

Audrey Beck

Duke University

Department of Sociology

Box 90088

Durham, NC 27708

abeck@soc.duke.edu

Whether and how individuals shift their marriage market in response to the relative availability of partners is a largely unaddressed and underlying issue in the literature on marriage markets and assortative mating. An investigation into this issue can shed considerable light not only on our understanding of marital behavior but also on the lingering racial differences in the propensity to marry. Racial differences in marriage formation are a crucial issue in stratification, intertwined with income inequality and child well being.

This paper will utilize a method developed by Qian and Preston (1993) to decompose age, race and education- specific marriage groups into the proportion due to supply within groups and attraction within a group. This two-sex model has the distinct advantage of being able to include not just married partners, as is common in the assortative mating literature, but also the supply of available mates. This method has a number of additional advantages in that it more accurately can specify marriage rates and can move beyond much of the research that can only look at the chance of marriage and cannot examine the chance of meeting in conjunction with the chance of marrying. Using weighted least squares regression, I will then examine the extent to which black and white women shift their marriage choices in response to supply of men. This paper will utilize 1940 through 1980 census data to understand the historical evolution of marriage market dynamics over the century. Whether a group of women is likely, or unlikely to look outside their group to find a suitable partner has important long-run implications on trends in marriage by race, age and education. Lastly, I will use a geographic definition of marriage market in keeping both with theoretical interest and data availability.

The *Flexible Hypothesis* suggests that a shortage of "ideal" mates may cause an individual to be more flexible on certain characteristics. Which characteristics are the most *flexible* over time and which individuals are the most likely to be flexible will be investigated here. Individuals can be flexible laterally (race) or vertically (education, socioeconomic status). Important differences may exist in the propensity to be flexible on ascribed versus achieved characteristics. A number of authors have suggested that marriage market squeezes have increased intermarriage (Ben-Moshe 1989, Stier and Shavit 1994). However, it is not clear in these studies whether these changes are a result of compositional changes of rates of intermarriage (Okun, 2001:50). Conversely, when women face a surplus of eligible mates they may restrict their pool to a more selective group either within the same characteristics they have or within a vertically more favorable group, in this case they would also be less likely to marry outside of their group, or those most closely matching themselves. Alternatively, the *Postponement Hypothesis* suggests that when women experience a shortage of mates in their group they are likely to postpone marriage until they can find a suitable mate. Over time, these individuals may become more *flexible* if they value getting married. Mare (1991) finds that with increased time out of school, marital homogamy by education decreases suggesting that such a force may be at work.

This relates to long-standing work on racial differences in marriage in a number of ways. First, it has been hypothesized that black women experience a shortage of eligible men resulting from differential mortality, incarceration rates and lower economic prospects of the men within their marriage market, and in fact a number of studies document a lower sex ratio for blacks. The lower marriage rate among blacks may be due

in part to this shortage and also the inability of women to expand their pool and find a mate. Some women are likely to marry within their ideal, however during a shortage more individuals will forgo marriage and more marriages will consist of individuals with characteristics further apart from one another than in a time of equilibrium. It is also likely that racial segregation serves to restrict women's opportunity to expand their market laterally by race. However, whites do not experience a lower sex ratio, and in some cases there are a surplus of eligible men. By investigating to what extent individuals choose not to marry even given that there mates slightly outside their ideal, we may observe underlying values of marriage relative to single status and preference systems. These dynamics can serve to compound disadvantage if women are unable to find suitable partners and will then spend more time at-risk for an unwed birth. Expanding one's marriage market to find a partner could be a double edged sword, on one hand market expansion could lead to a marriage and all the benefits that come with it, however, there is some evidence to suggest that less homogamous marriages are more prone to disruption thus disadvantaging both partners.

Data and Methods

The current analysis will utilize the IPUMS samples in 1940, 1960, 1970 and 1980. Future work will incorporate CPS samples from 1970 to 1996 to extend the historical period under study and to provide more detail. To conduct an analysis similar to Qian and Preston (1993) I will isolate those individuals who married for the first time in the two years prior to the census. I can determine this by restricting the married population to women who indicate they are currently married and on their first marriage and the age at first marriage is within two years of their current age. There is no similar

restriction on men. This procedure can be done for 1940 through 1980, however not in 1990 and 2000. The MSA code is only available for 1940,1970, and 1980, it is not available in 1960. While these data constraints are not ideal, it is a good starting point to understand how these dynamics work.

Schoen's Harmonic Mean

Numerous researchers have argued of the importance in taking the marriageable population into account. South and Lloyd (1992) argue that many previous studies suffer from the problem of only measuring the prevalence (percentage of women who are married) rather than the incidence (marriage rate) (442). Some, like Lichter et al. (1991) attempt to ameliorate this problem by only considering young women, but then they must exclude older women (South and Lloyd 1992). However, even South and Lloyd (1992) are only able to use state level data as they want to incorporate incidence measures which are not available at the metropolitan level from the National Center for Health Statistics, a further limitation is that such data are not available for every state (443). Likewise, studies on marriage have often grappled with "the two sex problem", that is that complications "arise because observed age-specific male and female occurrence/exposure rates are influenced by the age-sex composition of the population" (Schoen and Wooldredge 1989:467). Schoen and Wooldredge (1989) argue that the "ability of a male or female marriage rate alone to reflect an underlying attraction to marriage for marriage is compromised because those rates are not sensitive to the number of eligible persons of the other sex" (468). Schoen's harmonic mean is a method, which will be utilized to address both of these common concerns in the marriage literature. This method is able to

determine the magnitude of mutual attraction to marriage that is independent of the composition of the population (Schoen and Wooldredge 1989).

Schoen's harmonic mean function can be written as:

$$N_{ij} = \alpha_{ij} \frac{M_i F_j}{nM_i + mF_j} \quad (1)$$

where N_{ij} is the number of marriages between males aged i and females aged j in a time period (characteristics i and j could be any characteristic, age is used as an illustrative example). M_i is the number of eligible[1] males aged i during a time period. F_j is the number of eligible females aged j during a time period and m and n are the lengths of the ith and jth intervals in years. α_{ij} is the force of attraction between males aged i and females aged j (Qian and Preston 1993). This function was written for the simple case of one characteristic. From equation 1, I can then determine the force of attraction for the different combinations of individual characteristics.

$$\alpha_{ij} = N_{ij} \times [n/M_i + m/F_j] \quad (2)$$

Written another way, the force of attraction can also be expressed as:

$$\alpha_{ij} = n \times W_m(I,J) + m \times W_f(I,J) \quad (3)$$

where $W(I,J)$ is the rate for I, J marriages, and subscripts m and f represent males and females. In equation 3, it becomes more evident that the magnitude of attraction is a weighted sum of the male- and female-specific marriage rates.

I will calculate the force of attraction using Schoen's harmonic mean for a number of characteristics. I will examine the force of attraction for white and black men

---

[1] Eligible is either the number of unmarried or unmarried and non-cohabitating individuals depending on the specification.

and women in the following age categories: the youngest age category will be those age 24 and younger, where women can be as young as 17 and men as young as 14. While marriages at the younger end of this category diminish over the historical period under study, it is important to include them to understand historical trends. The second category will be men and women between the ages of 25 and 34. The last category will be women ages 35 to 43, while men can be 35 to as old as 70. While the age ranges could be constructed in a symmetrical manner between the sexes, because I am examining women's first marriages I want to limit the analysis to the years in which women are most likely to marry for the first time, while this could not necessarily be the man's first marriage. The construction of this age range is in line with Qian and Preston's (1993) work, though they included more age categories. The further one sub-divides the population into more specific marriage categories, the necessarily smaller the number of marriages within each cell becomes. As one of the primary advances of this study is to bring geography back into the study of marriage attraction, it was necessary to collapse some of the age and education categories. Further, Fossett and Kiecolt (1993) find that "measures of mate availability based on brad age range predict measures of family structure as well as or better than measures based on narrow age ranges" (Fossett and Kiecolt 1993:293; Fossett and Kiecolt 1991).

To determine the reference point for the number of eligible partners Qian and Preston use the point one year before the interview or the midpoint of the two-year period under study. Qian and Preston (1993) consider a man eligible if he is never married, divorced or widowed at the time of the survey and one-half of those married to women

whose first marriage occurred in the two-year period[2] (485). Eligible females are never married women and one-half of those married at the time of the interview (485).

In this paper, I calculate marriageability as educational attainment. Two education categories were created, those with a high school degree or less, and those with more than high school. Given the possible issues of confounding those still enrolled in college given the age range under study, Qian and Preston (1993) and the present study will not separate out categories of those with more than high school degrees. Future study could attempt to parse out the dynamics of those with some college versus those with a college degree. I also choose to collapse the less than high school degree and high school degree that Qian and Preston (1993) use in order to include geography over the entire historical period.

Descriptives

Table 1 shows summary statistics of changes in union rates, availability and attraction. These measures have been calculated at the MSA level and then summarized over all MSAs.

[Table 1 Here]

The first section of Table 1, which illustrates summary statistics weighted by MSA size, shows the changes in marriage rates by age, education and race for men and women. The rate for one time period is calculated by dividing the number of marriages within a category by twice the mid-period population for that category (Qian and Preston 1993). From 1940 to 1970 marriage rates increased dramatically for white men in the youngest age categories, and increased to a slightly lesser degree for white men in the

---

[2] Adding one-half of newlyweds is based on the assumption that marriages that occurred during the period of study, occurred on average at the midpoint (Okun, 2001:54).

oldest ages groups. Marriage rates increased more for those some college. Black men with high school degrees or less in the younger age categories also saw increases in marriage rates, though not as dramatically as for whites. However, for college educated black men aged 25 to 34 marriage rates actually decreased over this period on average. So while few black men in that age range were college educated in 1940, proportionally more of them were marrying than in 1970 when proportionally more of the black male population was attaining at least some college. This could also illustrate shifting trends to a younger age at marriage over this time period. Large increases in the marriage rate occurred for white women as well, particularly for those younger than 25. For black women, increases occurred for the two younger age categories for those with a high school degree or less, while women aged 35 to 43 experienced declines[3]. Between 1970 and 1980 this trend of increasing marriage rates had reversed, with almost groups showing marked declines. White men in the youngest age category with a high school degree or less and college educated white women aged 25 to 34 were the only two groups for which marriage rates increased over this period. Declines were slightly larger for college educated white men than for white men with high school degrees or less. Black men experienced some of the greatest declines, second only to black women, illustrating the slightly greater likelihood for black men to marry white women in this analysis. Black men show a u-shaped pattern among those with some college, where those in the middle age range have the highest marriage rate, or the lowest decline in the marriage rate, in this case. Young white women with high school or less education had larger declines than did their white male counterparts. White women with some college in the oldest and

---

[3] Missing values indicate that there were not a significant number of marriages in the 1940 period to be able to calculate a marriage rate.

youngest age categories also experienced declines, but slightly less so than comparable white men under 35. Black men and women had the largest declines in marriage rates across all education and age groups. The largest declines for black women were for those under 25 and over 35 in both education groups. While for black men, all rates dropped precipitously, however those that had a high school degree or less generally saw the most dramatic declines.

The next two panels illustrate to what extent these changes are due to changes in the availability of partners and the attraction to marriage. First, in accordance with Qian and Preston (1993), the force of attraction is calculated for all possible combinations of partners. Then I predict how many marriages would have occurred in 1970 (given the availability of partners in that year) if the force of attraction had remained at the 1940 level, and how many marriages would have occurred in 1980 (given the availability of partners in that year) if the force of attraction had remained at the 1970 level. The measure of the change in availability is the ratio of the predicted marriage rate in the later period to the actual marriage rate in the earlier period. This ratio is the factor by which marriage rates for a particular sex/age/race/education group would have changed between the two time periods if all forces of attraction between that group and each age/race/education group of the opposite sex had remained constant at the earlier time level (Qian and Preston, 487). "The ratio gives greater weight to groups into which a particular category is more likely to marry by virtue of the fact that the force of attraction is greater" (487). So while in this analysis black women have in their eligible pool white men, these possible pairings are given almost no weight given that the force of attraction between almost all of these interracial pairings is zero. Later analysis will further explore

the idea that blacks and white operate in largely segregated marriage markets, however in the present table such an effect should not be affecting the results. Availability of spouses remained largely stable, or declined slightly, for white men of both education levels and for black men with a high school degree or less. Black men with some college experienced the greatest increases in available spouses, due likely in part to women's educational upgrading during that time period. The availability of spouses declined slightly for white women in the older age categories as well as for black women in the oldest age categories. As women were beginning to marry later toward the end of this time period, the decrease in available spouses for those age groups would be a concern. However, it appears that white women were able to take advantage of the tight marriage market to a greater extent than their black counterparts, as white women in these groups still experienced an increase in their marriage rate over this period. To a certain extent this may also reflect the degree to which education does not capture all that it means to be marriageable. There is strong evidence to support the contention that the typical black man with a high school degree or less is in a much more economically precarious position than his white counterpart, a fact that would be obscured by measuring the marriage market based only on education. Later work will examine the combination of education and employment, but as a caveat it may very well be true that the availability of spouses for black women would be significantly less if I excluded the eligible pool to only employed men. It may also be true that declines in eligible partners in one time period can set in motion marital behavior that even later increases in eligible partners would have a hard time reversing. Between 1970 and 1980 all groups of white men experienced either slight increases or stability in the pool of eligible women, whereas

black men experienced much larger increases in the pool of eligible women. A small degree of this increase could be explained by the increased attraction to interracial marriage and consequently having more available white partners. Likewise, given the available number of partners, marriage should have increased for most groups of black and white women over this period. White women with high school degrees or less in the oldest age category were the only group of women to experience declines in their eligible pool of men. Black women with some college education should have seen increases in their marriage rates of approximately 50 to 90 %, while black women with high school or less education should have seen increases on the magnitude of 6 to 31%. Goldman, Westoff, and Hammerslough (1984) find that over this period the availability ratio was favorable to black and white women under 25. Its interesting that even in the face of predictions of increased or stable marriage rates due to the availability of partners the marriage rate for most groups fell. According to Wilson (1987) we should anticipate a decline in supply for black women that should predict some if not a substantial part of the decline in marriage over this period. The descriptive statistics illustrate the problem with calculating statistics at the national level, as the average situation for black women would suggest otherwise. While these results are calculated for each metropolitan area, what are presented in the tables are the mean changes over all of these marriage markets. Indeed, in defense of Wilson there are approximately 55 MSAs where at least one type of marriage that included a black woman as a spouse experienced a change in availability over the period that would predict a lower marriage rate. Of these cases, 75% of these were for women with a high school degree or less, and approximately 65% included a male spouse that had a high school degree or less. 48% of these cases were for marriage

combinations in which the wife was younger than 25. What also becomes clear is that the story is much more complex than often portrayed, it is not just black women that experience deficits that would predict lower marriage, but white women as well. So the question then becomes why under similar appearing circumstances are white women more likely to get married? One likely possibility is that education only captures one dimension of marriageabilty, there may be other qualities such as chronic underemployment, higher risk of incarceration and higher mortality risk that come with the structural position of black men that is not the same for white men. It could also be the case that additionally, white women are more likely to seek marriage outside their homogamous group in order to marry. For example, statistics illustrate that white women are more likely to marry outside their race than black women. We know that marriage as an institution appears to be a desirable outcome for both white and black women in attitudinal and interview data (Edin, in progress). However, there may be differences in what expectations a woman is willing to forgo in order to get married. Yet, even this is intertwined with the precarious economic position of black men. By trying to ascertain whether and to what extent this dynamic is occurring, we can begin to parse out these dynamics of marriage decision-making. This is one piece of a larger body of work that can go into forming a more cohesive sociological theory on contemporary marriage choice and timing.

While some of the predicted increases in the marriage rate are quite large, they are often not large enough to explain the large declines in the marriage rate, regardless of whether more partners leads to higher marriage (in which case they would lead to the expectation that marriage rates should have increased), or whether more partners for one

sex can lead to the decrease in marriage for the other. While Qian and Preston (1993) found that for most groups availability improved or remained stable, they did find that for a small number of groups availability went down. However, even most of these groups only experienced modest declines, generally less than 10%. These differences could be due to the different samples and years, census (1970 to 1980) versus CPS (1972 to 1979), that these results are calculated and summarized over MSAs, or differences in aggregation of age and education categories.

Finally, given that it appears that the change in availability is not enough on its own to explain all of the change in the marriage rate, the change in the force of attraction is presented in the last panel. This is the ratio of the actual marriage rate in the later year to the predicted marriage rate (based on earlier force of attraction and later supply). For the period of 1940 to 1970, all groups of white men and women experienced large increases in the attraction to marriage, with the largest being at the youngest ages for both men and women and both less and more educated individuals. Black men and women with a high school degree or less and who were younger than 35 also experienced an increase in the attraction to marriage over this period. However black men and women at the oldest ages experienced large declines, though there are relatively few first marriages for women in these age ranges during this time period. Also, college educated blacks experienced declines in the attraction to marriage over this time period on the order of 70% of what would be predicted on the 1940 forces of attraction. From 1970 to 1980 the declines in attraction to marriage were much more severe. For white men marriage rates were anywhere from approximately 80 to 50 percent of what they would have been as predicted by the 1970 force of attraction. For black men, declines in the propensity to

marry were approximately 30 to 40 percent of what would be expected, with men of both lower and higher education levels faring similarly. White women of all ages and education levels also experience declines in the propensity to marry, with the lowest propensity being college-educated women over 35. The magnitude of change is more similar to their white male counterparts than their black female counterparts. Black females also experienced declines, though again there are no clear patterns by education level. It appears that for black women in the oldest age group regardless of education level, the propensity to marry is the lowest as to what would have been predicted by the 1970 forces of attraction. This may reflect the growing trend that marriage delayed for many women is marriage forgone. Also, future work will consider cohabitating couples, to determine to what extent these patterns hold for union formation more generally. There is reason to believe that at least some of these precipitous declines can be in part explained by cohabitation, so that individuals may be forming all types of unions at a declining rate, but that increases in forming cohabitating unions would suggest the decline is not nearly as severe as would be suggested by the decline in forming marital unions.

One might be concerned that by summarizing change over 1940 to 1970 you would obscure the different dynamics occurring during this time period, for example the increases in union formation during the 1950s may be washed out by the declines during the 1960s, or vice versa. To examine this, I also calculate the force of attraction, marriage rates, and supply measures for all metropolitan areas in 1940, 1960,1970 and 1980. As the MSA code is not available in 1960, these are calculated nationally and restricted to

only those areas that are metropolitan. This ensures that they are most similar to those calculated at the MSA level. Table 2 calculates similar descriptive statistics to Table 1.

[Table 2 Here]

Indeed it does appear that the largest increases in the marriage rate are primarily for the 1940 to 1960 period, while from 1960 to 1970 many groups still experienced increases, but more groups experienced slight decreases or stability over the period. It should also not be surprising given what we know about the 1950s that the availability of men and women would predict a decline in marriage over the period, when in fact the marriage rate dramatically increased. The period of 1940 to 1960 was primarily a story of increased attraction to marriage, if attraction to marriage had been stable and no other forced had been operating we would have expected to see a decline in the marriage rate. During the 1960 to 1970 period we also begin to see decreases in attraction to marriage that were not evident in the aggregated tables. For example, for black women attraction remained roughly stable for those who were 25 to 34, but for women older and younger, attraction declined precipitously. By 1970, marriage rates were anywhere from 36 to 90 percent of what would be predicted by the 1960 force of attraction for black women who were not in the 25 to 34 year old category.

The issue of marriage market measurement is an important one, particularly given data constraints. As a related part of this project I am investigating this issue, however, for the current analyses the results are not available. Given this caveat, I will focus more of my attention on the MSA level results on change from 1970 to 1980. I will spend some time commenting on the change from 1940 to 1970, but with the caveat that there may be two opposing trends being collapsed together that may make the results less useful.

Weighted Least Squares Analysis: Discussion of Model

I estimate a multivariate model to determine for which groups and under which conditions the change in the force of attraction was the greatest from the periods 1940 to 1970, 1970 to 1980. These analyses will also incorporate how the supply of available partners interacts with homogamy.

Dependent Variable

When examining historical change, the dependent variable will be the log of the ratio of the force of attraction in the later year to that in the earlier year.

$$\log\left(\frac{\alpha^{t2}_{ijklop}}{\alpha^{t1}_{ijklop}}\right) = a + \sum b_i X_i + \sum b_j X_j + \sum b_k X_k + \sum b_l X_l + \sum b_o X_o + \sum b_p X_p,$$

$$\text{where } \alpha = e^{Xb+\upsilon},$$

t1 and *t2* represent the first and second time points under study, respectively.

This analysis will use weighted least squares to correct for heteroscedasticity, or unequal variances resulting from different numbers of individuals within each cell (Pindyck and Rubinfield 1991; Qian and Preston 1993). Qian and Preston (1993) argue that the best weighting scheme, in accordance with Agresti (1990:5) is the inverse of the variance of the dependent variable. The log of the ratio of the force of attraction of *t1* to *t2* is:

$$\sigma^2 = \left\{\frac{1 - \tilde{a}^{t1}_{ijklop}}{N^{t1}_{ijklop}}\right\} + \left\{\frac{1 - \tilde{a}^{t2}_{ijklop}}{N^{t2}_{ijklop}}\right\}.$$

The reciprocal of these variances are used to weight the observation in each cell. The omitted categories are whites with less than a high school degree that are aged 25 to 34.

Homogamy Measures

The second model adds measures of homogamy, used to indicate the extent to which individuals marry those similar to themselves. The omitted category is a nonhomogamous pair. Three measures of homogamy are examined, one measuring marriages that are homogamous on all three dimensions (race, age, education), and two measures of homogamous marriages on only two dimensions, race and age, and race and education.

In accordance with my interest in understanding how the supply of men in a woman's "homogamous category" affects whether women marry heterogamously, I interact the measure of supply with indicators of homogamy. As the omitted category is marrying nonhomogamously, the interactions show how a woman's supply of available men affect her decision to marry within her group. This coefficient for the measure of supply of men will be interpreted as whether attraction is higher/lower to homogamous men given the supply in one's homogamous category. When examining historical changes, I will be able to examine how changes in structural factors, homogamy patterns and supply dynamics affect the force of attraction. I will also be able to speak more to whether changes in attraction to heterogamous matches are driven by underlying changes in supply.

Structural Characteristics

Measures of structural characteristics will be created for each point in time under study, these measures will be transformed into ratios of time 1 to time 2 to be incorporated into the analysis of change over time.

Murray Thesis

Murray (1986) from his work *Losing Ground* suggests that the generosity of welfare payments would be a deterrent to marriage. To test this thesis, I draw from work like Lichter et al. (1991) and O'Hare (1988) and measure this by using mean public assistance in the MSA. This measure is "preferred to the proportion receiving public assistance, which is affected by the local marital status composition and economic conditions" (Lichter et al. 1991:850).

Wilson Thesis

I test the Wilson thesis in a number of ways, first by examining how the force of attraction differs between white and black women independent of the supply of available men in the descriptive portion of this study. I will also test whether men's aggregate economic independence (discussed below) as measured in part by the MSA level employment/nonemployment rate exerts any effects on marriage market dynamics.

Massey and Denton Thesis

Massey and Denton (1993) argue that the creation of an underclass, which exhibits an increased likelihood of experiencing a premarital birth and the decreased likelihood of marriage are just a few characteristics created by geographic economic depression. To measure this I will use one of the primary measures of residential segregation, either the dissimilarity index or the isolation index. These measures created are available on a website maintained for public use by Cutler, Glaeser and Vigdor (1999).

Women's Aggregate Economic Independence

Lichter et al. (1991) measure this by the labor-force participation rate of unmarried women aged 20-29 in each geographic area, as well as mean female earnings

for full-time, full-year workers aged 20-29 (850). I will use similar measures, however, I will broaden the age range to match the ages of women under study here, 17 to 42.

Men's Aggregate Economic Independence

Similarly, I will measure men's aggregate economic independence through a measure of labor force participation rate and mean earnings for full-time, full-year workers.

Results

[Insert Table 3 Here]

Model 1 in Table 3 is the main effects model and indicates which age, race, and education groups experienced the largest declines or increases in the force of attraction among the marital combinations from 1970 to 1980. Similar to Qian and Preston (1993), with an R^2 of 0.108, it also appears from this initial model that most of the changes in the propensity to marry were universal and did not vary by these three dimensions. Later models will attempt to elaborate on these universal dimensions. The significant intercept illustrates the significant decline in the mean force of attraction for the reference category (high school or less educated white men and women who were 24 to 35). Over this period, relative to white women, attraction declined by 43% (1-exp{-.569}) for black women, while the effect of race was not significant for men. The force of attraction for women aged 35 to 43 increased by 71% (1-exp{0.534}) in comparison to women aged 25 to 34. Qian and Preston find that for white women this trend is negative for this age group, but this effect is not significant. Later results will indicate whether this effect is primarily driven by the changes in force of attraction for white or black women. The effect for men of some college is virtually identical in my results and Qian and Preston's,

I also find that over this period the force of attraction for college educated men decreased by 20%. The contributions of all other coefficients to explaining changes in the propensity to marry are not significant. Model 2 includes the first measure of homogamy, this measure indicates whether a particular marriage combination included men and women who were the same age, race and education. It appears that homogamy on all three dimensions increased over this time period by approximately 11%. Models 3 and 4 include a measure of homogamy in which partners are the same race and education but not the same age, or the same race and age but do not have the same education, respectively. Both of these effects are negative, but nonsignificant, this may suggest that homogamy based only on two dimensions decreased over time, and that individuals are matching more closely on all three dimensions but as the effect is nonsignificant we cannot be sure. Model 5 adds an indicator of the change in residential segregation (dissimilarity). This does not appear to be independently significant. Model 6 includes indicators of the change in women's economic independence. The change in women's labor force participation rates at the MSA level appears to significantly decrease attraction to marriage (what are explanations of this in the literature). Model 7 includes indicators of changes in men's economic independence. The effect of changes in women's aggregate labor force participation remains stable, however after controlling for aggregate changes in men's characteristics, the effect of changes in mean welfare benefits becomes significant and appears to decrease attraction to marriage. Changes in men's mean income appear to increase attraction over this period, while changes in men's labor force participation in the aggregate appear to increase attraction and this effect is significantly larger than any other effect. Model 8 is slightly better fitting than model 7

and includes an indicator of the change in the male nonemployment rate over this period. Changes in this rate decreased attraction to marriage over this time period. After including this indicator, the effect of women's labor force participation is still negative, but substantially smaller. Also, the effect of the change in women's mean income in an MSA becomes significant and negative, and the effect of dissimilarity becomes significant and positive. Changes in dissimilarity largely decreased over this time period, such that the reduction in residential segregation may have provided more available partners, though whether this was equally true for whites and blacks will be investigated later. Though homogamous marriages increased over this period, at least in terms of absolute magnitude interracial marriages also increased.

[Insert Table 5 Here]

Table 5 shows analyses restricted to marriages in which the wife was white. Results are reasonably similar to the results that include all women's pairings, with a few notable exceptions. First, most of the shifts are one of degree rather than direction. For example, college educated males, primarily white men have a larger decline in attraction than shown in the previous table. This could be because the effect for black college educated men is positive and nonsignificant as shown in Table 7, an analysis of black women's pairings. The structural characteristics appear to exert largely the same effect, segregation has a positive effect and changes in women's labor force participation, welfare generosity and men's nonemployment rate all exert negative effects. Finally, slightly less of the variance in the propensity to marry is explained for white women, then women more generally.

[Insert Table 7 Here]

Table 7 illustrates results from an analysis conducted on marriage pairings in which the wife was a black female. In the man effects model, as well as models 2 through 5, the increasing attraction to marriage for women 35+ appears much stronger than in the results for all marriages. However, this effect becomes nonsignificant once I include structural factors such as the change in women's labor force participation and men's characteristics. For men married to black women, primarily black men, there appear to be no significant differences on education in the attraction to marriage over this time period. This is inline with many of the critiques of the marriage market literature that suggest that analyzing only those marriage choices of blacks with lower educational attainment ignores concurrent declines in marriage for highly educated black men. Finally, trends in marriage attraction appear more universal in nature for black women, as even the effect of age becomes nonsignificant once I control for changes in neighborhood characteristics. Changes in welfare generosity do not appear to be exerting any effect on marriage attraction, nor do changes in women's labor force participation rate once changes in men's economic characteristics are taken into account. This supports Oppenheimer's contention that declines in marriage may have more to do with the unstable employment circumstances of young men than aggregate changes in women's labor force participation. Also, changes in segregation appear to negatively affect attraction to marriage, but this effect is nonsignificant. It could be for blacks, that segregation itself has a negative impact on family formation, but there is a threshold effect such that once it is relatively high any changes even in a positive direction do not alter attraction to marriage to a significant degree. Lastly, it appears that the structural characteristics

appear to explain changes in black women's attraction to marriage better than for white women.

Supply Dynamics

[Insert Table 4 Here]

Table 4 shows results from a weighted least squares analysis, these models use the full model from the previous discussion and then explore supply dynamics by including the three measures of homogamy, as well as interactions of the measures of homogamy with the measure of supply of men is a woman's homogamous category. For example, women of a specific type, we will call it A, can marry various types of men (A, B, C…). The supply of men in their "own" category would be the available partners of type A. The primary question is how do the available partners of type A, in this case similar along the three dimensions of race, age and education affect attraction to various types of homogamous pairings? We see as illustrated before, homogamous marriages along all three dimensions appear to be increasing over this period, while marriages that are only homogamous on race and age (Model 3) appear to be decreasing over this period. Marriages that are homogamous on only race and education do not appear to be changing significantly over this period. Model 4 illustrates that the change over the period in the supply of men increases attraction to homogamous pairings, while it decreases attraction to marriages that are only homogamous on two dimensions. When there are a larger number of available men in one's own category this increases mutual attraction to marriages that are the most homogamous, marriages in which there is a larger distance between one of these characteristics becomes less desirable.

[Insert Table 6]

Results restricted to marriage categories including a white female also show a pattern of increasing homogamy on race, age, and education, though the trend appears slightly stronger for white women than for all women. Attraction significantly declined for marriages that were only homogamous on race and education, this may indicate not only that white women over time are more attracted to partners that are similar on three measured dimensions, but they are increasingly less likely to marry substantially outside their age range. Like in Table 4, the supply of "own" men increases attraction to homogamous marriages (on race, age, education), however it decreases the attractiveness of marriage pairings that include a partner that is not homogamous on all three of these dimensions.

[Insert Table 8 Here]

As illustrated in a previous table, homogamy on all three dimensions appears to be increasing for black women, but this effect is not significant; this is also the case for homogamy based on race and education. Homogamy based only on similarity of race and age decreased over this time period and this effect was significant. This may indicate that black women are increasingly less likely to be attracted to a potential partner of the same age if he has a lower level of education, this may also illustrate that black women with less education are less able to marry up on education over this decade. It should also be noted when these two later measures of homogamy are included, and structural factors are controlled for, there appears to be a significant decline in attraction to marriage for black women in the youngest age group. Not only do black women not have the significant positive trend in the most restrictive form of homogamy, but it also evident that the change in supply of "own" men over this period does not significantly affect

attraction in either direction. It could be, that particularly for young women with less education, their "own" pool of men is largely unattractive in terms of future earning potential, employment stability, incarceration risk, and that attraction to this category would be less sensitive to changes in supply. It could also be that black women, particularly at the youngest ages are postponing marriage, even within their own category until they find a partner more suitable on dimensions that are not captured here. The effect of supply on homogamy of race and education is positive, but nonsignificant. The effect of supply on homogamous marriages on race and age is similar to white women in that it is negative and significant, but it is slightly more modest for black women. Supply in one's own category appears to decrease attraction to men who are not of a similar education level.

Discussion

Looking at these patterns without taking into account the supply of available partners will give us only a partial understanding of marriage patterns over the century. This analysis attempted to understand whether these patterns are a result of shifting preferences for partners of different ages and education levels or are a result of structural constraints limiting the available men within different education and age categories, or some combination of the two. To an extent, this analysis raises more questions that it answers. There is evidence that indicates that shifts in potential partners affect attraction to different types of pairings, though much more work can be done to further investigate these findings and tease out more specific dynamics.

Like Qian and Preston (1993) and Schoen and Kluegel (1988), I find that changes in attraction to marriage are the predominant force of change in marriage rates over much

of this century. The addition of changes in structural factors explains a modest amount of the variation, but it appears that much of this change is either universal in nature or cannot be explained with our popular theoretical explanations. This highlights the need to consider new explanations. Understanding the interaction between structural constraints and attraction to marriage might be a useful proximal link between our current thinking on structure and agency.

The next steps of this analysis will be an analysis of different forms of geographic aggregation and the degree of reliability between measures calculated at different levels. I will also investigate disaggregating education categories further to explore in more depth how supply affects propensity to marry.

References

Agresti, Alan. 1990. *Categorical Data Analysis*. New York:John Wiley and Sons.

Ben-Moshe, Eliahu. 1989. "Marriage Squeeze and Marriage Patterns in Israel" in U.O. Schmelz and S. Della Pergola (eds.) *Papers in Jewish Demography*, 1985. Jerusalem: The Institute of Contemporary Jewry, The Hebrew University of Jerusalem.

Edin, Kathryn. "What Do Low-Income Single Mothers say about Marriage?". Working paper.

Fossett, Mark A. and K. Jill Kiecolt. 1991. "A Methodological Review of the Sex Ratio: Alternatives for Comparative Research." *Journal of Marriage and the Family*. 53:941-957.

Fossett, Mark A. and K. Jill Kiecolt. 1993. "Mate Availability and Family Structure Among African Americans in U.S. Metropolitan Areas." *Journal of Marriage and the Family*. 55:288-302.

Goldman, Noreen, Charles F. Westoff, and Charles Hammerslough. 1984. "Demography of the Marriage Market in the United States." *Population Index* 50(1):5-25.

Lichter, Daniel T., Felicia B. LeClere, and Diane K. McLaughlin. 1991. "Local Marriage Markets and the Marital Behavior of Black and White Women." *American Journal of Sociology*. 96(4):843-867.

Mare, Robert D. 1991. "Five Decades of Assortative Mating." *American Sociological Review*. 56:15-32.

Murray, Charles. 1986. *Losing Ground.* New York:Basic.

O'Hare, William. 1988. "An Evaluatin of Three Theories regarding the Growth of Black Female-headed Families." *Journal of Urban Affairs*. 10:183-97.

Okun, Barbara S. 2001. "The Effects of Ethnicity and Educational Attainment on Jewish Marriage Patterns: Changes in Israel, 1957-1995." *Population Studies*. 55:49-64.

Pindyck, Robert S. and Daniel L. Rubinfeld. 1991. *Econometric Models and Economic Forecasts*. 3rd ed. New York:McGraw Hill.

Qian, Zhenchao and Samuel H. Preston. 1993. "Changes in American Marriage, 1972 to 1987: Availability and Forces of Attraction by Age and Education." *American Sociological Review*. 58(4):482-495.

Schoen, Robert and John Wooldredge. 1989. "Marriage Choices in North Carolina and Virginia, 1969-71 and 1979-1981." *Journal of Marriage and the Family*. 51(2):465-481.

South, Scott J. and Kim Lloyd. 1992. "Marriage Opportunities and Family Formation: Further Implications of Imbalanced Sex Ratios." *Journal of Marriage and the Family*. 54:440-451.

Stier, Haya and Yossi Shavit. 1994. "Age at Marriage, Sex-Ratios, and Ethnic Heterogamy." *European Sociological Review*. 10(1):79-87.

Wilson, William Julius. 1987. *The Truly Disadvantaged*. Chicago: The University of Chicago Press.

Table 1: Change in Union Rates, Availability of Eligible Partners, Absolute Change in Availability and Force of Attraction to Union by Sex, Age, Race, and Educational Attainment, 1940-1970, 1970-1980, Summarized over MSAs (weighted),

| | 1940-1970 | | | | 1970-1980 | | | |
| | White | | Black | | White | | Black | |
Sex and Age	High School or less	Some College	High School or less	Some College	High School or less	Some College	High School or less	Some College
Change in Union Rate (Ratio of Union Rate in Later Year to Union Rate in Earlier Year)								
Male 14-24	4.25	7.76	2.30	1.26	1.03	0.74	0.47	0.38
25-34	2.83	3.40	2.39	0.40	0.78	0.68	0.39	0.57
35 +	1.89	1.74	0.93	.	0.80	0.72	0.42	0.47
Female 14-24	4.45	5.77	2.08	1.73	0.68	0.80	0.52	0.55
25-34	2.11	2.75	2.11	.	0.81	1.14	0.61	0.50
35-43	1.92	2.12	0.21	.	0.57	0.58	0.37	0.29
Change in Availability (Ratio of Predicted Union Rate in Later Year to Actual Union Rate in Earlier Year)								
Male 14-24	1.02	1.08	0.95	3.31	1.25	1.23	1.37	1.32
25-34	1.07	1.04	1.36	3.79	1.10	1.07	1.25	1.77
35 +	1.09	0.80	0.87	1.11	1.32	1.02	1.48	1.17
Female 14-24	.96	1.56	1.08	1.85	1.12	1.13	1.27	1.61
25-34	0.68	1.37	0.81	1.92	1.10	1.50	1.27	2.01
35-43	0.77	0.97	0.84	.	0.70	1.20	1.06	2.28
Change in Force of Attraction to Union (Ratio in Later Year to Predicted Union Rate in Later Year)								
Male 14-24	4.38	6.55	2.52	0.40	0.85	0.61	0.34	0.34
25-34	2.67	3.23	2.39	0.16	0.73	0.64	0.33	0.43
35 +	2.22	2.13	1.15	.	0.67	0.77	0.31	0.43
Female 14-24	4.45	4.23	2.26	1.13	0.62	0.73	0.42	0.50
25-34	3.14	2.23	2.44	.	0.77	0.80	0.50	0.34
35-43	2.61	2.29	0.21	.	0.84	0.53	0.42	0.18

Table 2: Change in Union Rates, Availability of Eligible Partners, Absolute Change in Availability and Force of Attraction to Union by Sex, Age, Race, and Educational Attainment, 1940-1960, 1960-1970, 1970-1980, Summarized for metropolitan areas, nationally

| | | 1940-1960 | | | | 1960-1970 | | | | 1970-1980 | | | |
| | | White | | Black | | White | | Black | | White | | Black | |
Sex and Age		High School or less	Some College	High School or less	Some College	High School or less	Some College	High School or less	Some College	High School or less	Some College	High School or less	Some College
Change in Union Rate (Ratio of Union Rate in Later Year to Union Rate in Earlier Year)													
Male	14-24	4.90	7.80	4.31	5.45	0.73	0.68	0.64	1.55	1.08	0.70	1.09	0.98
	25-34	3.76	3.69	3.21	7.26	0.82	0.91	1.38	1.29	0.83	0.72	0.77	0.99
	35 +	2.77	3.20	2.51	.	.	0.91	0.95	0.75	0.84	0.81	0.73	0.82
Female	14-24	4.77	5.55	4.43	4.02	1.09	1.21	0.72	1.27	1.00	0.84	0.82	0.54
	25-34	2.64	3.80	3.06	3.93	0.61	1.70	1.16	1.21	1.04	0.98	0.74	1.05
	35-43	4.21	2.69	6.15	.	0.42	0.76	0.38	0.47	0.59	0.81	0.76	1.07
Change in Availability (Ratio of Predicted Union Rate in Later Year to Actual Union Rate in Earlier Year)													
Male	14-24	1.11	0.95	1.23	2.26	1.11	0.75	1.02	1.24	1.29	1.34	1.40	1.24
	25-34	1.15	0.96	1.28	1.31	1.09	0.96	1.21	0.97	1.17	0.98	1.20	1.68
	35 +	0.96	0.89	0.76	0.92	1.37	0.91	1.22	1.05	1.44	1.10	1.55	1.07
Female	14-24	1.18	1.32	1.39	1.25	1.12	1.11	1.18	1.45	1.32	1.26	1.23	1.53
	25-34	.99	0.92	0.75	1.07	0.88	1.15	1.18	1.21	1.01	1.30	1.19	1.91
	35-43	0.86	0.92	0.76	.	0.73	0.78	1.11	1.16	0.58	1.10	0.88	1.69
Change in Force of Attraction to Union (Ratio in Later Year to Predicted Union Rate in Later Year)													
Male	14-24	4.56	8.19	3.52	2.41	0.66	0.80	0.57	1.34	0.90	0.55	0.84	0.81
	25-34	3.27	3.92	3.50	6.12	0.76	0.99	1.22	1.34	0.80	0.80	0.66	0.67
	35 +	3.13	3.63	3.57	.	0.59	1.01	0.67	0.74	0.67	0.79	0.44	0.76
Female	14-24	4.26	4.41	3.15	2.85	1.04	1.13	0.64	0.90	0.77	0.69	0.70	0.42
	25-34	3.23	4.51	4.08	4.18	0.69	1.58	1.00	1.02	1.01	0.75	0.65	0.62
	35-43	4.81	3.17	7.84	.	0.54	0.95	0.36	0.38	1.02	0.80	0.85	0.64

Table 3: Weighted Least-Squares Coefficients for Regression of Change in the Force of Attraction to Marriage, 1970-1980

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	-0.590**	-0.622**	-0.575**	-0.571**	-0.357	1.330**	-5.668**	0.754
	(0.049)	(0.051)	(0.051)	(0.050)	(0.219)	(0.369)	(1.096)	(0.479)
Black Male	0.012	0.014	0.002	0.006	0.009	-0.025	-0.025	-0.031
	(0.192)	(0.192)	(0.192)	(0.192)	(0.192)	(0.189)	(0.185)	(0.185)
Black Female	-0.569**	-0.584**	-0.560**	-0.567**	-0.576**	-0.545**	-0.530**	-0.524**
	(0.193)	(0.193)	(0.193)	(0.193)	(0.193)	(0.190)	(0.186)	(0.186)
Male: 14-24	0.009	-0.017	-0.003	0.029	-0.018	-0.021	-0.036	-0.039
	(0.045)	(0.046)	(0.046)	(0.046)	(0.046)	(0.046)	(0.045)	(0.045)
35 +	0.015	0.041	0.033	0.001	0.038	0.016	0.016	0.024
	(0.061)	(0.062)	(0.063)	(0.061)	(0.062)	(0.061)	(0.060)	(0.060)
Female, 17-24	-0.062	-0.043	-0.025	-0.070	-0.041	-0.047	-0.050	-0.045
	(0.045)	(0.046)	(0.040)	(0.046)	(0.046)	(0.045)	(0.044)	(0.044)
35-43	0.534**	0.492**	0.518**	0.546**	0.491**	0.420**	0.437**	0.428**
	(0.106)	(0.107)	(0.107)	(0.106)	(0.107)	(0.106)	(0.104)	(0.104)
Male, Some College	-0.231**	-0.229**	-0.234**	-0.228**	-0.230**	-0.230**	-0.224**	-0.217**
	(0.041)	(0.041)	(0.041)	(0.041)	(0.041)	(0.040)	(0.039)	(0.039)
Female, Some College	-0.026	-0.028	-0.025	-0.028	-0.029	-0.024	-0.022	-0.028
	(0.040)	(0.040)	(0.040)	(0.040)	(0.040)	(0.040)	(0.039)	(0.039)
Homogamy								
on race, age, education		0.107*			0.109*	0.135**	0.132**	0.139**
		(0.046)			(0.046)	(0.045)	(0.044)	(0.044)
on race, education			-0.051					
			(0.047)					
on race, age				-0.081				
				(0.049)				
Structural Factors								
Dissimilarity					-0.300	0.034	0.451	0.604*
					(0.241)	(0.248	(0.248)	(0.252)
Mean Public Assistance						-0.085	-0.099	-0.136*
						(0.053)	(0.052)	(0.053)
Mean Female Earnings						-0.079	-0.351*	-0.387*
						(0.161)	(0.166)	(0.165)
Labor Force Participation Rate of Female Workers						-1.059**	-1.067**	-0.847**
						(0.153)	(0.156)	(0.152)
Mean Male Earnings							0.495**	0.601**
							(0.157)	(0.144)
Labor Force Participation Rate of Male Workers							5.997**	-0.774**
							(1.146)	(0.138)
Nonemployment Rate of Male Workers								
R	0.108	0.111	0.108	0.109	0.111	0.141	0.178	0.180
Adjusted R	0.104	0.106	0.104	0.105	0.106	0.135	0.171	0.173
Number of Cases	1804	1804	1804	1804	1804	1804	1804	1804

Table 4: Weighted Least-Squares, Analysis of Supply Dynamics

Intercept	0.754	0.711	0.720	0.871	0.647	0.695
	(0.479)	(0.480)	(0.479)	(0.483)	(0.478)	(0.477)
Black Male	-0.031	-0.041	-0.039	-0.039	-0.042	-0.033
	(0.185)	(0.186)	(0.185)	(0.185)	(0.185)	(0.185)
Black Female	-0.524**	-0.498**	-0.504**	-0.524**	-0.492**	-0.489**
	(0.186)	(0.186)	(0.186)	(0.186)	(0.186)	(0.185)
Male: 14-24	-0.039	-0.017	0.017	-0.006	-0.010	0.001
	(0.045)	(0.045)	(0.045)	(0.043)	(0.043)	(0.043)
35 +	0.024	0.009	0.024	0.021	0.048	-0.050
	(0.060)	(0.061)	(0.059)	(0.060)	(0.062)	(0.059)
Female, 17-24	-0.045	-0.065	-0.079	-0.041	-0.082	-0.105*
	(0.044)	(0.044)	(0.044)	(0.045)	(0.044)	(0.044)
35-43	0.428**	0.469**	0.499**	0.477**	0.432**	0.490**
	(0.104)	(0.103)	(0.102)	(0.102)	(0.104)	(0.102)
Male, Some College	-0.217**	-0.222**	-0.216**	-0.231**	-0.214**	-0.231**
	(0.039)	(0.040)	(0.039)	(0.039)	(0.039)	(0.039)
Female, Some College	-0.028	-0.024	-0.027	-0.036	-0.016	-0.009
	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)	(0.039)
Homogamy						
on race, age, education	0.139**					
	(0.044)					
on race,education		-0.050				
		(0.045)				
on race, age			-0.092*			
			(0.047)			
*"Own" Supply of Men*Hom.*						
on race, age, education				0.030**		
				(0.011)		
on race,education					-0.054**	
					(0.018)	
on race, age						-0.058**
						(0.014)
Structural Factors						
Dissimilarity	0.604*	0.602*	0.611*	0.648**	0.554*	0.559*
	(0.252)	(0.253)	(0.252)	(0.252)	(0.253)	(0.252)
Mean Public Assistance	-0.136*	-0.133*	-0.133*	-0.134*	-0.118*	-0.135*
	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)
Mean Female Earnings	-0.387*	-0.401*	-0.392*	-0.431**	-0.394*	-0.372*
	(0.165)	(0.165)	(0.165)	(0.166)	(0.165)	(0.165)
Labor Force Participation	-0.847**	-0.809**	-0.821**	-0.873**	-0.775**	-0.777**
Rate of Female Workers	(0.152)	(0.152)	(0.152)	(0.153)	(0.152)	(0.151)
Mean Male Earnings	0.601**	0.622**	0.619**	0.617**	0.621**	0.602**
	(0.144)	(0.145)	(0.145)	(0.144)	(0.144)	(0.144)
Nonemployment Rate	-0.774**	-0.752**	-0.755**	-0.822**	-0.732**	-0.726**
of Male Workers	(0.138)	(0.138)	(0.139)	(0.141)	(0.138)	(0.138)
R	0.180	0.176	0.177	0.179	0.179	0.183
Adjusted R	0.173	0.169	0.170	0.172	0.172	0.176
Number of Cases	1804	1804	1804	1804	1804	1804

Table 5: Weighted Least-Squares Coefficients for Regression of Change in the Force of Attraction to Marriage, White Women,1970-1980

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	-0.552**	-0.588**	-0.513**	-0.537**	-0.629**	0.906*	-3.473**	0.716
	(0.051)	(0.053)	(0.053)	(0.053)	(0.230)	(0.420)	(1.252)	(0.557)
Black Male	0.309	0.337	0.265	0.296	0.339	0.262	0.293	0.277
	(0.211)	(0.211)	(0.211)	(0.211)	(0.211)	(0.210)	(0.209)	(0.208)
Black Female								
Male: 14-24	0.002	-0.019	-0.023	-0.017	-0.019	-0.025	-0.032	-0.036
	(0.049)	(0.049)	(0.049)	(0.051)	(0.049)	(0.049)	(0.049)	(0.048)
35 +	-0.014	0.015	0.026	-0.023	0.016	0.002	0.006	0.006
	(0.065)	(0.066)	(0.067)	(0.066)	(0.066)	(0.066)	(0.065)	(0.065)
Female, 17-24	-0.034	-0.015	-0.026	-0.038	-0.016	-0.017	-0.014	-0.006
	(0.048)	(0.049)	(0.048)	(0.048)	(0.049)	(0.048)	(0.048)	(0.048)
35-43	0.503**	0.454**	0.462**	0.513**	0.454**	0.402**	0.427**	0.423**
	(0.110)	(0.111)	(0.110)	(0.110)	(0.111)	(0.111)	(0.110)	(0.110)
Male, Some College	-0.316**	-0.314**	-0.322**	-0.314**	-0.314**	-0.308**	-0.306**	-0.299**
	(0.044)	(0.043)	(0.044)	(0.044)	(0.044)	(0.043)	(0.043)	(0.043)
Female, Some College	-0.029	-0.039	-0.022	-0.035	-0.039	-0.031	-0.026	-0.030
	(0.043)	(0.044)	(0.043)	(0.044)	(0.044)	(0.043)	(0.043)	(0.043)
Homogamy								
on race, age, education		0.127*			0.127*	0.138**	0.132**	0.138**
		(0.051)			(0.051)	(0.050)	(0.050)	(0.050)
on race,education			-0.127*					
			(0.050)					
on race, age				-0.059				
				(0.053)				
Structural Factors								
Dissimilarity					0.047	0.292	0.643*	0.803**
					(0.254)	(0.262)	(0.271)	(0.277)
Mean Public Assistance						-0.110	-0.109	-0.139*
						(0.056)	(0.056)	(0.057)
Mean Female Earnings						-0.186	-0.366*	-0.399*
						(0.176)	(0.184)	(0.183)
Labor Force Participation Rate of Female Workers						-0.733**	-0.800**	-0.695**
						(0.169)	(0.177)	(0.169)
Mean Male Earnings							0.350*	0.376*
							(0.172)	(0.162)
Labor Force Participation Rate of Male Workers							3.684**	-0.630**
							(1.276)	(0.166)
Nonemployment Rate of Male Workers								
R	0.058	0.063	0.063	0.060	0.063	0.083	0.097	0.101
Adjusted R	0.054	0.058	0.058	0.054	0.057	0.075	0.088	0.092
Number of Cases	1429	1429	1429	1429	1429	1429	1429	1429

Table 6: Weighted Least-Squares, Analysis of Supply Dynamics, White Women

Intercept	0.716	0.736	0.666	0.780	0.661	0.622
	(0.557)	(0.558)	(0.558)	(0.559)	(0.555)	(0.555)
Black Male	0.277	0.210	0.238	0.269	0.216	0.221
	(0.208)	(0.209)	(0.209)	(0.208)	(0.208)	(0.208)
Black Female						
Male: 14-24	-0.036	-0.035	0.002	-0.010	-0.012	-0.001
	(0.048)	(0.049)	(0.050)	(0.048)	(0.048)	(0.048)
35 +	0.006	0.011	-0.034	0.017	0.041	-0.069
	(0.065)	(0.066)	(0.065)	(0.066)	(0.067)	(0.065)
Female, 17-24	-0.006	-0.019	-0.030	0.010	-0.051	-0.058
	(0.048)	(0.048)	(0.048)	(0.049)	(0.048)	(0.048)
35-43	0.423**	0.441**	0.488**	0.455**	0.409**	0.492**
	(0.110)	(0.109)	(0.109)	(0.108)	(0.110)	(0.108)
Male, Some College	-0.299**	-0.307**	-0.299**	-0.309**	-0.293**	-0.312**
	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)
Female, Some College	-0.030	-0.013	-0.030	-0.035	-0.002	-0.018
	(0.043)	(0.043)	(0.048)	(0.043)	(0.043)	(0.043)
Homogamy						
on race, age, education	0.138**					
	(0.050)					
on race,education		-0.114*				
		(0.049)				
on race, age			-0.059			
			(0.052)			
*"Own" Supply of Men*Hom.*						
on race, age, education				0.057**		
				(0.021)		
on race,education					-0.074**	
					(0.021)	
on race, age						-0.081**
						(0.023)
Structural Factors						
Dissimilarity	0.803**	0.765**	0.805**	0.812**	0.744**	0.783**
	(0.277)	(0.288)	(0.278)	(0.277)	(0.277)	(0.277)
Mean Public Assistance	-0.139*	-0.136*	-0.136*	-0.139*	-0.119*	-0.125*
	(0.057)	(0.057)	(0.057)	(0.057)	(0.057)	(0.057)
Mean Female Earnings	-0.399*	-0.402*	-0.399*	-0.412*	-0.404*	-0.383*
	(0.183)	(0.183)	(0.183)	(0.183)	(0.183)	(0.183)
Labor Force Participation	-0.695**	-0.674**	-0.673**	-0.730**	-0.652**	-0.632**
Rate of Female Workers	(0.169)	(0.169)	(0.170)	(0.170)	(0.169)	(0.169)
Mean Male Earnings	0.376*	0.389*	0.400*	0.376*	0.410*	0.399*
	(0.162)	(0.162)	(0.162)	(0.162)	(0.161)	(0.161)
Nonemployment Rate	-0.630**	-0.598**	-0.614**	-0.623**	-0.613**	-0.621**
of Male Workers	(0.166)	(0.166)	(0.166)	(0.166)	(0.165)	(0.165)
R	0.101	0.099	0.097	0.101	0.104	0.104
Adjusted R	0.092	0.090	0.088	0.092	0.095	0.095
Number of Cases	1429	1429	1429	1429	1429	1429

Table 7: Weighted Least-Squares Coefficients for Regression of Change in the Force of Attraction to Marriage, Black Women,1970-1980

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	-0.485	-0.483	-0.519	-0.501	0.485	1.996*	-8.725**	0.396
	(0.444)	(0.444)	(0.441)	(0.443)	(0.684)	(0.880)	(2.549)	(1.007)
Black Male	-0.772	-0.824	-0.816	-0.730	-0.738	-0.620	-0.774	-0.797
	(0.441)	(0.445)	(0.439)	(0.442)	(0.446)	(0.433)	(0.404)	(0.408)
Black Female								
Male: 14-24	0.098	0.055	0.209	0.136	0.058	0.035	0.009	0.014
	(0.110)	(0.120)	(0.119)	(0.231)	(0.119)	(0.117)	(0.108)	(0.109)
35 +	0.175	0.207	0.060	0.152	0.179	0.145	0.113	0.154
	(0.149)	(0.153)	(0.156)	(0.149)	(0.153)	(0.149)	(0.139)	(0.139)
Female, 17-24	-0.146	-0.115	-0.224	-0.173	-0.125	-0.140	0.190	-0.194
	(0.113)	(0.118)	(0.117)	(0.115)	(0.118)	(0.114)	(0.106)	(0.107)
35-43	0.717*	0.680*	0.812**	0.731*	0.628*	0.533	0.397	0.403
	(0.285)	(0.288)	(0.287)	(0.285)	(0.289)	(0.281)	(0.262)	(0.265)
Male, Some College	0.044	0.043	0.064	0.047	0.029	0.022	0.029	0.032
	(0.103)	(0.103)	(0.103)	(0.103)	(0.103)	(0.100)	(0.093)	(0.094)
Female, Some College	-0.030	-0.018	0.002	-0.003	-0.004	-0.007	-0.019	-0.013
	(0.100)	(0.100)	(0.100)	(0.102)	(0.100)	(0.098)	(0.092)	(0.093)
Homogamy								
on race, age, education		0.100			0.113	0.187	0.194	0.200*
		(0.109)			(0.109)	(0.107)	(0.099)	(0.100)
on race,education			0.284*					
			(0.123)					
on race, age				-0.163				
				(0.123)				
Structural Factors								
Dissimilarity					-1.172	-0.588	-0.746	-0.595
					(0.632)	(0.654)	(0.610)	(0.622)
Mean Public Assistance						0.076	-0.021	-0.002
						(0.135)	(0.133)	(0.138)
Mean Female Earnings						0.218	-0.021	-0.426
						(0.373)	(0.133)	(0.380)
Labor Force Participation						-1.794**	-0.261	-0.969**
Rate of Female Workers						(0.352)	(0.382)	(0.352)
Mean Male Earnings							0.835*	1.329**
							(0.382)	(0.330)
Labor Force Participation							9.443**	-0.673*
Rate of Male Workers							(2.725)	(0.293)
Nonemployment Rate								
of Male Workers								
R	0.046	0.048	0.060	0.050	0.057	0.122	0.245	0.232
Adjusted R	0.023	0.027	0.039	0.030	0.034	0.093	0.216	0.202
Number of Cases	375	375	375	375	375	375	375	375

Table 8: Weighted Least-Squares, Analysis of Supply Dynamics, Black Women

Intercept	-8.725**	-8.518**	-8.272**	-9.461**	-8.827**	-8.280**
	(2.549)	(2.554)	(2.561)	(2.586)	(2.563)	(2.561)
Black Male	-0.774	-0.715	-0.608	-0.716	-0.687	-0.629
	(0.404)	(0.402)	(0.403)	(0.403)	(0.404)	(0.403)
Black Female						
Male: 14-24	0.009	0.178	0.149	0.080	0.101	0.104
	(0.108)	(0.109)	(0.103)	(0.100)	(0.102)	(0.099)
35 +	0.113	-0.029	0.018	0.088	0.037	0.006
	(0.139)	(0.143)	(0.137)	(0.137)	(0.146)	(0.138)
Female, 17-24	0.190	-0.304**	-0.288**	-0.199	-0.252*	-0.300**
	(0.106)	(0.107)	(0.104)	(0.106)	(0.103)	(0.105)
35-43	0.397	0.543*	0.486	0.469	0.485	0.460
	(0.262)	(0.262)	(0.259)	(0.260)	(0.264)	(0.260)
Male, Some College	0.029	0.046	0.034	0.003	0.031	0.007
	(0.093)	(0.093)	(0.093)	(0.095)	(0.093)	(0.094)
Female, Some College	-0.019	-0.020	-0.003	-0.058	-0.042	0.0004
	(0.092)	(0.092)	(0.093)	(0.092)	(0.091)	(0.093)
Homogamy						
on race, age, education	0.194					
	(0.099)					
on race,education		0.209				
		(0.112)				
on race, age			-0.226*			
			(0.113)			
"Own" Supply of Men*Hom.						
on race, age, education				0.025		
				(0.015)		
on race,education					0.013	
					(0.037)	
on race, age						-0.042*
						(0.021)
Structural Factors						
Dissimilarity	-0.746	-0.665	-0.802	-0.660	-0.668	-0.806
	(0.610)	(0.609)	(0.612)	(0.610)	(0.612)	(0.612)
Mean Public Assistance	-0.021	-0.047	-0.018	-0.023	-0.037	-0.050
	(0.133)	(0.133)	(0.133)	(0.133)	(0.134)	(0.133)
Mean Female Earnings	-0.021	-0.269	-0.283	-0.353	-0.305	-0.278
	(0.133)	(0.382)	(0.382)	(0.384)	(0.384)	(0.382)
Labor Force Participation	-0.261	-1.204**	-1.287**	-1.331**	-1.214**	-1.152**
Rate of Female Workers	(0.382)	(0.342)	(0.344)	(0.352)	(0.347)	(0.342)
Mean Male Earnings	0.835*	0.825*	0.854*	0.804*	0.835*	0.818*
	(0.382)	(0.385)	(0.382)	(0.383)	(0.384)	(0.382)
Labor Force Participation	9.443**	9.121**	9.023**	10.385**	9.490**	9.003**
Rate of Male Workers	(2.725)	(2.776)	(2.776)	(2.836)	(2.788)	(2.778)
R	0.245	0.244	0.245	0.243	0.237	0.245
Adjusted R	0.216	0.215	0.216	0.213	0.208	0.216
Number of Cases	375	375	375	375	375	375