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Kin Connection: Kin Involvement While Growing Up and Marriage in Adulthood

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Abstract

Although previous research demonstrates the importance of the availability of marriageable men, earnings, and employment stability for racial differences in marriage, it also suggests that other factors likely contribute to this variation. This study investigates a new factor that might help to explain racial variation in marriage, the kinship group. To explore this possible connection, we examine the influence of parental kin involvement experienced during childhood and adolescence on marriage in adulthood using all three waves of the National Survey of Families and Households. While few of the measures of kin ties have significant effects on marriage, some measures were significantly related and the patterns of associations sometimes varied by race.

Keywords

Marriage; Race; Kin; Culture; Family

The median age at first marriage for black women is just over 28, 3.5 years older than for white women (Simmons and Dye 2004). Additionally, a substantially higher proportion of white women will ever marry, 93 percent as compared to 64 percent for black women (Goldstein and Kenney 2001). A number of studies have attempted to explain these differences, and the best answer we have so far is that racial differences in male employment, incarceration, and mortality, leave black women with relatively fewer marriageable men than is the case for white women (Wilson and Neckerman 1987). Employment, earnings, and job stability strongly predict the likelihood that a man marries (e.g. Oppenheimer, Kalmijn & Lim 1997; Koball 1998; Lloyd & South 1996), and the availability of employed men (i.e. the ratio of employed men to women) predicts the chances that a woman will marry (Lichter, Kephart, McLaughlin, and Landry 1992). Yet previous research suggests that the local availability of marriageable men accounts for only about 20 percent of the race gap in marriage, and differences in women's own employment and earnings account for even less (Lichter et al., 1992). Thus while clearly economic factors are an important part of any explanation for why whites are able to marry more quickly than blacks, the fact that differences persist net of a strong set of controls for economic characteristics and careful modeling (Lichter, McLaughlin, and Ribar 2002) leads

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some scholars to suggest that cultural factors may be at play (Cherlin 1998). So far we have no direct quantitative evidence supporting “culture” as an explanation for marriage differentials.

Quantitative tests for culturally based ethnic variation in family organization have focused on kinship relations instead of marriage. This line of research was stimulated by ethnographic research of the 1970s that argued black families, compared with white families, placed more emphasis on extended kin ties and less on affiliations based on marriage (e.g., Stack 1974). More recent quantitative analyses indicate that whites' and blacks' kinship networks operate differently net of socioeconomic status, although it is not the case that black kin networks are more intensive than white families on all dimensions of support and exchange (Sarkisian and Gerstel 2004; Hogan, Hao, and Parish 1990; Raley 1995).

It is the goal of our study to connect these two literatures on racial variation in family organization (marriage and kin involvement) by investigating the influence of kin involvement in the family of origin on marriage timing. We combine indicators of kin involvement in the family of origin and race as measures of cultural heritage to investigate whether intergenerationally transmitted models of family organization contribute to racial variation in marriage timing. Substantial previous research has investigated the reverse relationship, that is, the influence of marital status on kin relationships (e.g. Kaufman and Uhlenberg 1998; Sarkisian and Gerstel 2008), but to our knowledge, no research using survey data from a national sample of whites and blacks has investigated the influence of kin networks on marriage timing in the contemporary United States. Our study employs the third wave of the National Survey of Families and Households to examine the influence of kin relationships, experienced during childhood and adolescence, on the transition to first marriage. We also investigate the possibility that cultural differences between black and white family organization lead to different patterns of association between kin involvement and marriage timing.

Origins of Racial Variation in Family Organization

Many scholars have suggested that black-white differences in family behavior, ranging from marriage and single parenthood to patterns of coresidence with kin, are generated by longstanding racial differences in family organization (Furstenberg 2007). Some have argued that the experience of slavery and subsequent poverty had severely weakened the black family (e.g., Frazier 1948). Others have suggested black families have different strengths than white families. Whereas white families emphasize conjugal ties, black families emphasize consanguineal ties (or ties to blood relatives) (Stack 1974; Cherlin 1998). These differences may have deep historical roots, originating in Western Europe and Western Africa. Western European family organization is historically distinct particularly in its late age at marriage and relatively high proportions of women never marrying (Hajnal 1965; 1982). In the United States, whites have historically followed this pattern with late marriage common and marriage timing sensitive to economic circumstances (Fitch and Ruggles 2000). Although marriage was late, it was central to family organization, as evidenced by the strong negative response to nonmarital pregnancies (Pagnini & Morgan 1996). Similarly, Gutmann (1976) argues that slaves drew from African traditions to maintain black families despite extreme exploitation. These traditions included strong kinship ties and examples of matrilineal kinship organization as well as child fostering (Therborn 2004). This idea that black and white families have long had a different underlying organizational structure was bolstered by a series of studies that showed that one hundred years ago, black households were more likely than white households to be extended (Gordan and McLahanan, 1991; Ruggles 1994; Morgan et al. 1993).

Some recent analyses provide reason to question the idea that greater kin involvement and/or lower marriage rates among African Americans are tied to historical origins. In fact some studies suggest that whites may actually have more active exchange networks than blacks (Hogan, Eggebeen, and Clogg 1993). Moreover, prior to World War II, blacks married as early as whites (Koball 1998) and some research suggests that blacks' greater tendency to coreside with extended kin is also a recent development (Goldscheider and Bures 2003; Ruggles 2007). These findings present some difficulty for arguments that race differences originate on the other side of the Atlantic in Western Europe and Western Africa.

It is important to remember, however, that household arrangements are shaped by economic conditions as well as cultural factors such as attitudes and beliefs. For example, early marriage among blacks in the early part of the 20th century was at least partially a result of a lack of educational opportunity. Migration out of the South and increases in educational attainment were primary sources of the shift to a later age at marriage among African American men (Koball 1998). Additionally to coreside with kin one must have living relatives. This may be one reason why in the nineteenth century coresidence was least likely among the poor (Ruggles 2003). Poverty (and high levels of mortality) may have suppressed coresidence among blacks in the years following emancipation even if blacks had a higher preference for living with kin. Further, regardless whether the differences are longstanding, since World War II, blacks have been more likely than whites to live in extended households, a pattern that is not easily explained by differences in economic circumstances (Angel and Tienda 1982; Cohen & Casper, 2002; Goldschieder and Bures 2003). Studies also suggest higher levels of kin contact among blacks compared to whites (Raley 1995; Sarkisian 2007).

All together this review suggests that there may be some culturally based differences in family organization of white and black Americans, putting aside the question whether black and white differences in family organization originate in their respective homelands or if they emerged as a result of disparate experiences in the United States (Furstenberg 2007). We do not know, however, whether these potential cultural differences are isolated to kin relationships or if they underlie a broader set of family behaviors, shaping the connections between marriage, parenthood, and kinship networks. Although there has been substantial interest in how the connection between marriage and parenthood varies by race-ethnicity, relatively little work conceptualizes a connection between kin and marriage. Nonetheless, there is good reason to expect that these two aspects of family life are associated and that this association might vary by race.

Kin Connection

Kin ties may influence marriage timing by providing instrumental support and by altering incentives for marriage. A growing literature suggests that debt from schooling and wedding costs pose a barrier to marriage (Smock, Manning, Porter, 2005; Edin, Kefalas, & Reed 2004). Kin may sometimes provide resources to offset some of the start-up costs of marrying. For example parents might assist with wedding expenses and some may loan their children money for a down payment on a house. Young adults from families with few resources or families that hold staunchly to the belief that children must stand on their own, may find it more difficult on average to find the resources to marry.

Kin influence may not only occur through removing barriers to marriage, but also by enhancing the incentives for marriage (Raley and Sweeney 2009). For example, a father may not help his daughter's boyfriend find a job even if he would be quick to recommend his son-in-law for a position. Those more tightly embedded in the kinship group may have more incentive to formalize their relationship quickly, particularly when it has more resources.

Providing some support for this conjecture, research shows that private transfers among kin contribute to the greater wealth accumulation in married couple families compared to single and cohabiting couple families (Hao 1996). Recent research also shows that married adults are more likely than cohabiters to give and receive support from their parents even when characteristics such as the child's age and the parent's health status are controlled (Eggebeen 2005).

At the same time, some studying poor black families have noted that intensive kinship networks could have drawbacks. Kin ties may have hindered some blacks from entry into the middle class because assisting their poorer kin prevented them from building their own nest egg to buy a home and to establish some measure of financial security (e.g. Stack 1974). For some of the same reasons, these networks could also delay marriage. Economically disadvantaged kin may draw resources away from middle-class blacks, making it more difficult to accumulate the prerequisites for marriage. Research suggests that net of one's own education and income, having poor kin inhibits wealth accumulation and blacks are more likely than whites to have a poor family member (Heflin and Pattillo 2002). Further, coresidence with kin may sometimes impede (or delay) marriage. For example, coresident kin might not offer strong support for marriage if it threatens their housing situation. More generally, in family systems where blood ties are strong and at least as central as marriage, kin networks may compete with marriage as often as they support it. Some have noted that contemporary marriage is a "greedy institution" that reduces involvement with neighbors and communities and support to other relatives (Sarkisian and Gerstel 2008). Consequently, those who receive support from relatives may fear losing resources if supportive kin marry. In such situations, a couple may not receive instrumental support to facilitate their marriage and could even face some social pressure to delay marriage. If kin involvement influences marriage for instrumental reasons, then kin are an often unmeasured economic factor that contributes to race differences in marriage.

Another potential avenue of kin influence is through shaping orientations towards family life. It may be that those who are in more active kinship groups or who perceive greater obligations to their kin place family relationships among their highest priorities, above building careers and/or socializing with friends. When families are organized with marriage as the central relationship, a stronger family orientation would "naturally" lead to higher marriage rates. This pattern of association may be particularly strong for women given that "kin keeping" is more often performed by women (Rosenthal 1985). Moreover, for men economic factors are strong predictors of marriage, perhaps overwhelming any influence of a family orientation transmitted from the family of origin.

Importantly, a "family orientation" does not necessarily equate to marriage. Recent research shows that social scientists have inaccurately portrayed black men's family involvement by too narrowly defining family as marriage and biological progeny. If one examines patterns of contact and support among extended kin, one sees a different picture. Black men live with or near relatives and are more frequently in contact with them than white men. In addition, despite relatively low economic standing, black men are as likely as white men to provide emotional and practical assistance to extended kin, perhaps because of a cultural orientation that buoys their contributions (Sarkisian 2007). Thus, whether a family orientation translates to quicker marriage likely depends substantially on the cultural rules that guide family organization. If black families are more kin-centric (or less marriage-centric) than white families, then a "family orientation" will not necessarily translate to higher marriage rates.

Analytical Approach

Often analyses of kinship groups focus on levels of exchange among kin. Our conceptualization of kinship ties is broader, taking into account levels of contact, coresidence, and exchange of instrumental support, as well as perceived obligations to kin. This more inclusive definition helps us to better understand how kin influence family formation. For example, we expect that, within family systems that emphasize marriage, stronger kin ties should be associated with increased rates of entry into first marriage. This should be true whether this is because kin ties in the family of origin facilitate marriage for instrumental reasons or because they are associated with a stronger family orientation. Yet if kinship ties influence marriage timing by encouraging a general family orientation, then contact among kin should be as important as exchange of instrumental support. Alternatively, if kinship groups shape marriage timing by influencing the incentives for marriage, then we should expect exchange to be more important than contact, and we should expect that the effects of kin contact are more positive in kin networks with more resources and possibly more negative in networks with fewer resources. Thus, a key aspect of our analysis, one that helps us to better understand whether and why kin involvement in the family of origin influences marriage timing, is our inclusion of multiple kinds of measures of kin involvement. Note that both coresidence and kin obligations are not clearly measures of orientation or exchange, and so they do not allow us to determine whether kin ties shape marriage timing for instrumental reasons or because they indicate a family orientation. Nonetheless, we include them in our analysis because they work as indicators of the broader concept, kin involvement.

A second aspect of our analysis is that we allow the influence of kin involvement in the family of origin to vary by race-ethnicity, testing whether the coefficients are significantly different for whites and blacks. Considering the *instrumental* reasons why kin exchange might work differently for blacks and whites, the kin of blacks tend to have fewer resources than the kin of whites, which is one reason why kin exchange is more strongly positively associated with the wealth of whites than blacks (Heflin and Pattillo 2002). This is in essence an economic argument, rather than a cultural one. To further explore this issue, we also investigate whether the effects of kin exchange in family of origin vary by race and parental education, a crude indicator of the resources available in the kin network. Focusing on family *orientations*, some have argued that black families are less centered on marriage than is the case for typical white families. If so, then whereas kin involvement should have a positive influence on marriage among whites, it should have a weaker influence on marriage among blacks. To test this possibility, we test whether the effects of kin contact and obligations vary significantly by race.

While the focus of this research is on the impact of kinship involvement in the family of origin on marriage timing and how this varies by race, there are a number of other factors that also influence marriage timing. For example, previous research shows that parent's education is associated with marriage rates, at least partly because school enrollment delays marriage (Thornton, Axinn & Teachman 1995). In addition, stable employment is positively associated with marriage, particularly for men (Oppenheimer et al 1997; Lloyd & South 1996). Parents' marital status predicts marriage timing (Wolfinger 2003), perhaps because children who experience their parents' divorce may be less committed to the institution of marriage and are more likely to cohabit than those raised in a stable two-parent family (Amato & Deboer 2001; Thornton 1991). Religious attendance and affiliation also shape marriage in early adulthood. Specifically, conservative Protestants are more likely to be early marriers than mainline Protestants or Catholics (Uecker and Stokes 2008).

Pulling all of these influences together, our analyses focus on the impact of patterns of kin involvement that youth experience while growing up on the timing of their own marriage. Kin involvement may serve as a measure of the availability of kin for instrumental support or it may be an indicator of family orientation. In at least some family systems, a culture of kin involvement may be positively associated with marriage rates. To examine this possibility we estimate the association between parental kin involvement while offspring are between ages 5 and 18 and the timing of marriage in adulthood, controlling for other influences such as school enrollment and parental marital status. An advantage of examining kin involvement and obligations in the family of origin is that they are measured prior to the point where the children have reached an age where they are likely to consider marriage. Moreover, the kin involvement and obligations measures are unaffected by the child's own struggles in the transition to adulthood. Because of the possibility that family organization differs by race, analyses will be conducted separately for whites and blacks and we test whether the influence of kin involvement or kin obligations significantly differs by race. We also explore whether the effects of kin involvement and obligations vary by (parent) respondent's education, since the effect of kin networks may vary by how richly resourced those networks are. To ensure that we are properly specifying our statistical models we also investigate whether the effects of kin involvement are particularly strong for women.

Data and Method

Our analyses examine kinship relations in the family of origin and how these impact marriage during adulthood. Our data source is the National Survey of Families and Households, a longitudinal national probability survey of family life. Primary respondents, a national sample of 13,000 adults age 19 and above, were first interviewed in 1987-1988. The NSFH includes oversamples of some population groups, including blacks, single-parent families, the recently married and cohabiters and our analyses are weighted to account for the stratified sampling design.

For primary respondents living with children at the time of this interview, the NSFH selected a random minor child ("focal child") to be the subject of detailed questions about parenting experiences. At wave 3, conducted 2001-2003, the NSFH reinterviewed selected members of the original sample, including parents of a focal child that was at least 3 years old at wave 1, 10 years old at wave 2, and 18 years old at wave 3. As part of the third wave of the survey, the now-adult focal children (ages 18-34) completed their own interviews (Sweet and Bumpass 2002). Our sample includes children of white and black primary respondents, who were age 5-18 at the time of the first interview (N=2065). We include only whites and blacks in this analysis because our interest is in racial differences and there are insufficient numbers of cases of any other racial or ethnic group.

Although we know of no other data set that allows us to examine the influence of kin involvement on marriage, a weakness of the NSFH concerns the high levels of sample attrition in this data set. Of the original sample of 3357 first wave white and black respondents with a focal child age 5-17 (all of whom were eligible for a wave 3 interview), only 2065 have an interview with the focal child after that child reached adulthood (age 18). Consequently, we are concerned that our sample is not representative of this generation of young adults. To investigate this issue we make two comparisons. First we examine race differences in kinship involvement between our analytical sample and the full sample of focal children (see Appendix Table A). Generally, the direction and magnitude of the race differences are similar in the analytical and full samples. Blacks have higher levels of contact and higher perceived obligations compared to whites and these differences are larger in the analytical sample than they were in the full sample. In addition, whites are more likely than blacks to receive a gift or loan and this difference is also larger in the analytical sample

than in the full sample. Differences in the summary measures of giving or receipt of physical assistance are not significant in either the full or analytical samples.

Second, we compare life-table estimates of marriage calculated using our analytical sample to estimates from the SIPP. Figure 1 shows timing of first marriage by race, estimated using our analytical sample (thinner lines) and for comparison purposes a comparable cohort from the Survey of Income and Program Participation (SIPP; thicker lines). The solid lines depict estimates for blacks and the dotted lines for whites. Generally, the NSFH results match those of the SIPP reasonably well. For whites the NSFH and SIPP estimates are nearly identical, but for blacks we see some divergence after age 25 with the NSFH reporting lower marriage rates than the SIPP. Importantly our sample of unmarried blacks by age 26 is small (less than 100) and the estimates are consequently unstable, but if there is a bias in our sample it is towards those who remain unmarried. We are somewhat reassured by the fact that marriage patterns in our analytical sample are similar to those in the SIPP. Nonetheless, our results are potentially influenced by the fact that blacks who do not marry and blacks who are higher on the kin obligations index may be over-represented. Despite these problems with sample attrition, the NSFH is by far the best data set to examine the influence of kin networks on marriage and the survey's strengths offset this weakness.

Measures

Our dependent variable is marriage timing, measured by the focal child's reports about marital status as well as month and year of first marriage. The most appropriate way to model the timing of first marriage in a sample age 18-34 is to employ an event history approach. Importantly, event history models estimate the probability of entry into marriage in each year. Lower marriage rates indicate delays in marriage, but not necessarily lower proportions ever marrying. To estimate our multivariate models, we first create a separate observation for each person-year lived between age 18 and the year of first marriage or their last interview (whichever comes first). Then we estimate logistic regression models in STATA predicting whether the respondent married or remained single in that person year. This approach is widely employed and has been shown not to violate assumptions about independence across observations (Allison 1982). That is, the standard errors are not artificially deflated by creating multiple records from the same respondent as long as each respondent can transition to marriage only once, as is true in this case. Modeling the transition to marriage as a function of age in single-year categories, we determined that transition rates are similar from age 19 to 21, from 22-23 and from 24 to 34. If we had a larger sample, no doubt we would be able to identify differences within the ten years from age 24 to 34, but with our sample there are no statistically significant differences within this span. Thus in our final models we included variables for ages 19-21, 22-23, and 24-34 to describe the age function of marriage. We also estimated models with more fine-grained categories and the results were the same. Models that included interaction terms between our key independent variables and age provided no evidence of non-proportionality in the effects of the kin involvement variables, although we do find that race differences increase with age.

Our primary independent variables indicate kinship involvement in the family of origin. To construct these, we use data from the primary respondent (parent) interview conducted in 1987-88, when the child was age 5-18. There are four general types of measures, coresidence, contact, exchange, and obligations. **Coresidence** is determined from the household roster, the list of individuals living in the respondent's household and their relationship to the respondent. From this information we determined whether the respondent was living with a parent, grandparent or sibling and constructed a measure indicating number of non-nuclear kin residing in the household. Table 1 shows that most households have no non-nuclear kin, and this is especially true for whites.

Contact is measured from a series of questions about the respondent's contact (visiting and communicating by phone or letter) with their parents at Wave I. Respondents are first asked about contact with their mother. Following, if the mother is not living with the respondent's father, they are asked how often they see or communicate with their father. For our indicator of contact with parents, we code the higher value of level of contact with mother or father. Respondents are also asked about contact with siblings. Response categories are: 0-not at all, 1-about once a year, 2-several times a year, 3-1 to 3 times a month, 4-about once a week, 5-several times a week. Those coresiding with a parent and/or sibling are coded at the highest level of contact (5), and those who have no living parent and/or sibling are coded at the mean. We also construct a summary measure of contact with kin by adding report of contact with parents to that for contact with any sibling, creating a variable that theoretically could range from 0 to 10. Models also include dummy indicators for those who have no parent or no siblings although these dummy variables are never significant. Table 1 shows that mean levels of contact on the summary measure are slightly higher for blacks compared to whites and that this difference arises largely because of greater contact with siblings rather than parents.

In the 1987-88 interview, respondents were also asked about *exchange* of physical assistance with parents, siblings, and other relatives. Exchange could involve providing assistance with repairs, housework, gifts and loans, transportation, or baby sitting. Separate variables identify each type of assistance and distinguish giving from receiving. Altogether, the data have 30 measures of exchange of physical assistance with kin; there are 5 types of assistance which can be either given to or received by three types of kin. To begin our analysis, we created intermediate summary measures of giving and receiving by adding across types of assistance and type of kin relation. Table 1 shows the distributions on these measures of exchange. Levels of giving and receiving assistance are similar for whites and blacks, with the major exception that white parents of children age 5-18 are more likely than black parents to report receiving a gift or loan of \$200 or more. It also appears that blacks are more likely than whites to exchange assistance with siblings.

In analyses not shown we examined the correlations among these intermediate measures of exchange and found that giving assistance with repairs, transportation, babysitting, and housework are all strongly positively correlated while giving a gift or loan of \$200 or more is strongly negatively correlated with these forms of exchange. The same pattern appears for the variables measuring receipt of assistance. Thus, to avoid potential problems with collinearity, we constructed summary measures of giving and receiving physical assistance by summing across the repairs, transportation, babysitting, and housework measures of assistance. These two measures potentially range from 0 to 12, where 12 would indicate giving (or receiving) all 4 types of physical assistance from all three types of kin. Our preliminary multivariate models tested the associations between the intermediate measures of assistance and marriage and these measures were never statistically significant. Because many of these measures of exchange are positively correlated making it more difficult for each measure to achieve statistical significance, we present models that use summary measures of exchange with kin plus the measures of giving and receiving gifts and loans. Measures of gifts and loans are added to the model separately because they are negatively correlated with summary measures of exchange of physical assistance. Note that these measures are intended to indicate actual levels of exchange, which are a product of having available kin able to help, a need for assistance, and norms supporting kin exchange. That is, this measure is shaped by both norms and practical constraints.

To measure just the value placed on kin assistance, independent of practical demands and constraints, we use the NSFH measures of filial **obligations**. Like other recent work exploring race-ethnic variation in kinship networks using the same data set (e.g. Sarkisian

and Gerstel 2004), we examine variables characterizing the respondent's (parent's) beliefs about parental and filial obligations. These variables include responses (ranging 1-5) to questions about whether (1) parents ought to provide financial help to their adult children when the children are having financial difficulty, (2) Parents ought to let their adult children live with them when the children are having problems; (3) Children ought to provide financial help to aging parents when their parents are having financial difficulty; (4) Children ought to let aging parents live with them when the parents can no longer live by themselves; (5) Parents ought to help their children with college expenses. Table 1 replicates, using our more restricted and potentially selective sample, the finding from previous research that blacks perceive higher intergenerational obligations than whites. The levels of intercorrelation among these items are moderately high ($\alpha=.61$), leading us to include a summary index rather than each item separately in our multivariate models. This index is created by summing across all five measures of perceived intergenerational obligations and subtracting 5 so that the minimum value is zero. Our goal will be to see whether this orientation influences marriage patterns differently for whites and blacks.

The Wave I (parent-respondent) interview is also our source of information on race-ethnicity, parent's education, parent's marital status, household income, as well as religious attendance and affiliation. Race has two categories, white (reference) and black. Parent's education is both a control and, in some analyses, a crude proxy for the resources available in the kin network. We expect that sibling's and parent's resources should be associated with parent's education, although the resources of more extended kin are less well measured by this proxy. Education has four categories: no high school diploma, high school graduate, some college, and college graduate or more. High School graduate is the reference category. Parent's marital status at Wave 1 has three categories, married (reference), cohabiting, and single. Household income is a logged continuous variable, and religious affiliation is a dichotomous measure indicating whether at Wave 1 the parent identified as a conservative Protestant. We classify parents as conservative Protestant according to the widely employed RELTRAD scheme which has been used by Wilcox and others with the NSFH (Wilcox 2004, Steensland et al. 2000). The parent interview also provides information on the parent's relationship to the focal child (mom or dad), the focal child's birthdate, and the sex of the focal child. The Wave 2 and Wave 3 focal child interviews provide us with other information about the youth's transition into adulthood, specifically school enrollment (enrolled or not), employment (full-time, part-time and not employed), and educational attainment (no high school diploma, high school graduate, some college, and college degree or more). These transitions out of school and into the full-time labor force are key factors shaping marital timing and it is an advantage of our data source that we have this detailed information

To account for missing data we use the *ice* program in STATA to perform multiple imputations on the data at the individual level. Imputing at this level ensures that time-fixed variables, such as our kinship measures, are not imputed as if they are time-varying (as would be the case with multiple imputation at the person-year level). We subsequently convert the five imputed individual level data sets into the person-year format and recombine them for analysis using the *mijoin* and *micombine* commands in STATA. Overall for 29% of the sample, we imputed the value on one or more of the independent variables, most commonly income.

Results

Table 2 presents results from discrete-time event-history models predicting marriage. For each model there is a pair of columns where the first shows exponentiated coefficients, or the relative risk of marriage, and the second shows p-values. Looking first at Model 1, we

find that blacks' risk of marriage in any given year is 31% of the risk for whites and this difference is statistically significant. Model 1 also shows that some aspects of parental kin involvement while growing up are significantly associated with marriage. Specifically, contact with kin is positively associated with marriage, but exchange of gifts and loans with kin (particularly giving) is negatively associated with marriage rates. Further analysis (not shown) indicates that the positive effect of kin contact is entirely due to the respondent's (parent's) contact with parents (grandparents), particularly face-to-face contact, while the focal child was growing up. Contact with siblings has no effect, just as exchange of physical assistance is not associated with the likelihood of marriage, nor is perceived kin obligations. We also estimated models where each kin involvement measure is entered separately into Model 1 and the results are remarkably robust across models. Finally, we tested the assumption that the effects of the independent variables are proportional across all ages. We found that race differences are significantly larger in the older age group, but including this interaction term does not significantly alter our results.

A primary interest of this paper is whether kin ties (involvement and obligations) in the family of origin influence marriage differently for whites than blacks. In Models 2 and 3, we investigate this possibility by estimating models separately by race. Model 2 shows that for blacks, none of the six measures of kin contact, coresidence and exchange in the family of origin are statistically significant, although they are negatively associated with marriage rates. Only the one measure of perceived kin obligations has a statistically significant (negative) association. For whites (Model 3), contact with kin in family of origin is positively associated with marriage rates. Overall, the results so far suggest that kin networks can influence marriage and that these patterns of association between kin and marriage may differ between whites and blacks.

We further explored these race differences by running models with interaction terms between race and each of the measures of kin involvement and obligations. Only one of these interactions was significant, perceived kin obligations. Model 4 shows the model allowing the effects of perceived kin obligations to vary by race. As predicted by theory, kin obligations are significantly more negatively associated with marriage among blacks than whites. That is, the coefficient for the interaction between kin obligations and race is significant and negative. Yet, it is equally important to note that contrary to theory none of the effects of actual kin involvement significantly differ between whites and blacks.

Earlier, we argued that kin networks could influence marriage rates either by encouraging a family orientation or by increasing the incentives to marry. So far our results provide more support for the idea that kin involvement impacts marriage through shaping family orientations than by improving the incentives to marry. For blacks none of the measures of kin exchange are associated with marriage rates. For whites, kin contact increases marriage rates, but exchange either has no effect or, in the case of giving financial assistance to kin, decreases the chances of marriage. This does not support the idea that greater kin involvement increases the incentives for marriage. Yet, earlier in the paper we did anticipate that obligations and exchange could have a negative effect on child's rate of transition into marriage if kin networks bleed resources away from the focal child's family. If so, we might expect that the negative effects of kin obligations and giving kin financial assistance would be especially strong when parents have lower levels of education, a weak indicator that the kin network has fewer resources. We estimated a model interacting giving financial assistance to kin with parent's education and the results indicated that the negative effects of giving financial assistance are statistically similar regardless of parent's education. We also estimated a model with perceived obligations interacted with parent's education and in this model the interaction is marginally significant, but in the wrong direction. Kin obligations have a more positive association with marriage for those whose parents have less education.

Moreover, the race interaction with kin obligations continues to be strong in this model. Overall, the results of these interaction tests do not support the view that giving financial assistance or perceived kin obligations decrease the risk of marriage because kin networks are taking resources away from the focal child's immediate family.

Finally, because men's marriage is so strongly influenced by their earnings potential and because women often take greater responsibility than men for maintaining kin networks, these networks may exert a more powerful influence on the marriages of women than men. Thus we investigated models that ran the analyses separately by gender of the focal child and tested for gender differences in the estimated effects of kin ties. Overall, we find few significant gender differences in the effects of kin ties in family of origin on marriage. The exception concerns an interaction between gender and kin obligations such that obligations are less negatively associated with marriage for men than women.

To summarize, in concert with our theory that kin involvement might shape marriage differently for whites and blacks, the estimated effects of kin obligations are significantly more negative for blacks than whites. In fact, we note that with the interaction term in the model, the effect of race is no longer significant. This means that among those with the lowest levels of kin obligations, blacks and whites have similar marriage rates. As kin obligations increase, marriage rates decrease for blacks but not for whites. Interaction tests indicate that this race difference does not arise because of a more negative effect of kin obligations for young adults with less educated parents. Our results do suggest that kin obligations are a significantly greater impediment to marriage for (black) women than for men.

Discussion and Conclusion

Our main goal for this analysis was to investigate if kin involvement of parents while growing up influenced marriage and whether this influence varied by race. We presented two potential reasons to expect that kin involvement in family of origin would be associated with family formation in adulthood. One was that kin can provide instrumental support to assist their children in their transition to adulthood. We find no evidence in support of this idea. Kin obligations and parent's exchange with kin while the focal child was growing up are never positively associated with marriage and sometimes we see significant negative effects. A potential explanation could be that while kin can help provide resources to marry eventually, they can also provide resources that encourage youth to delay marriage (Avery, Goldscheider & Speare 1992). Yet, we found no indications that the effects of obligations or exchange vary by age. An alternative reason to expect kin involvement to be associated with marriage was that kin involvement is a measure of family orientation that is passed from parents to children to affect children's own family formation. We find some support for this idea.

Among whites, parent's contact with kin while the focal child is growing up encourages the focal child's marriage in adulthood. This may occur because greater involvement with kin suggests that family plays a more central role in the lives of the respondent-parent. These values are passed on to the children and encourage marriage in early adulthood among whites. We also found significant racial differences in the association between kin obligations and marriage. The influence of perceived kin obligations on marriage is significantly more negative for blacks than whites. Perceived kin obligations impede marriage among blacks and have no effect on marriage among whites. This is some support for the idea that black and white family systems are organized differently, consistent with ethnographic accounts. We find no evidence that this is due to race differences in the

resources of kin as this race interaction persists when we include an interaction with parent's education in the model.

A potential explanation for this race interaction may involve the relative centrality of marriage in the white compared to the black family systems. Marriage has long been the central relationship in the white nuclear family system, with extended kin playing a subsidiary role. In this cultural context, perceived kin obligations as a measure of family orientation should support marriage – the central relationship in the family system. It is less clear that marriage is the central relationship in the African American family system. Instead maternal lineages may play at least as important a role. This may be evidenced by greater grandmother involvement in raising children (Cherlin and Furstenberg 1985) or by black men's greater involvement with their extended family (Sarkisian 2007). In a context where marriage is not the central relationship, perceived kin obligations may still be a measure of family orientation, but it may not encourage marriage. Note that by saying that marriage is not the central relationship in the family system, we are not claiming that it is unimportant or that the black family system is inferior or weaker in any way (see also Sarkisian and Gerstel 2004).

Yet, even if our finding an interaction between kin obligations and race does support cultural explanations, it is important to place this finding in a broader context. First, kin obligations was one of seven measures tested and it was the only significant race interaction. Second, this evidence in support of a cultural interpretation should be balanced by the finding that clearly employment has a stronger influence on marriage than kin involvement in the family of origin. For these reasons and because of the high levels of sample attrition, our results do not provide definitive evidence regarding the role of culture in race differences in marriage. Our analysis suggests that there are important differences between the original sample and those who were followed up in either Wave 2 or Wave 3 of the NSFH. In particular, blacks with higher values on the Kin Obligations index are more likely to be in the analytical sample and this variable is associated with delayed marriage. Additionally, our life-table analysis of marriage shows that our sample of blacks may be biased towards those marrying slightly later. It is difficult to know how these biases might impact the estimated race interaction with kin obligations, but we can not rule out the possibility that sample attrition is distorting our findings.

More broadly, our research design has a number of important strengths. We use longitudinal data to investigate how experiences in the family of origin, reported by the parent-respondent while the focal child is age 5-18, influence the focal child's marriage (as reported by the focal child) years later. This is a rigorous test for our theory. In the transition to adulthood, children often question their parent's views and parents themselves also change, sometimes in response to their children's behavior. That “noise” should weaken the associations between parent's behavior and beliefs in Wave 1 and their children's behavior once they become adults. Still, if cultural heritage shapes marriage then those orientations and expectations must be transmitted intergenerationally. Our analyses detect some effects of kin involvement on marriage and, even with a fairly small sample of blacks, race differences in the influence of kin obligations on marriage.

Appendix 1. Kin Ties measures by Race for Full and Analytical Sample

	All Wave 1 focal children (FULL)			Focal child interview at Wave 3 (ANALYTICAL)		
	Black (N=791)	White (N=2566)	Difference	Black (N=341)	White (N=1724)	Difference
Coresidence	0.15	0.05	0.10	0.13	0.04	0.09
Contact Index	7.31	6.83	0.48	7.44	6.78	0.66
Giving Physical Assistance Index	1.03	1.02	0.01	1.11	1.00	0.11
Receiving Physical Assistance Index	0.78	0.75	0.03	0.88	0.73	0.15
Giving Gifts & Loans	0.17	0.21	-0.04	0.17	0.22	-0.05
Receiving Gifts & Loans	0.12	0.40	-0.28	0.11	0.45	-0.34
Kin Obligations Index	17.42	17.06	0.36	17.63	17.04	0.59

Note: Numbers in bold indicate variables where race differences are statistically significant

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Figure 1. Life-Table Estimates of Marriage Timing by Race

Table 1
Black-White Differences in Kin Involvement and Obligations

	Black (N=341)	White (N=1724)	Range
Coresidence (# of non-nuclear kin)	0.13	0.04	0-10
Contact Index	8.10	7.11	0-10
Parent	3.90	3.66	0-5
Sibling	4.21	3.48	0-5
Giving Physical Assistance Index	1.23	1.03	0-12
Repairs	0.16	0.21	0-3
housework	0.29	0.27	0-3
transportation	0.39	0.30	0-3
babysitting	0.27	0.22	0-3
parents	0.51	0.47	0-4
siblings	0.43	0.34	0-4
other relatives	0.31	0.24	0-4
Receiving Physical Assistance Index	0.92	0.73	0-12
Repairs	0.14	0.14	0-3
housework	0.14	0.12	0-3
transportation	0.26	0.17	0-3
babysitting	0.34	0.30	0-3
parents	0.36	0.36	0-8
siblings	0.35	0.22	0-4
other relatives	0.24	0.16	0-4
Giving Gifts & Loans	0.18	0.22	0-6
Receiving Gifts & Loans	0.13	0.48	0-6
Kin Obligations Index	17.63	17.04	0-20
parents help adult children w/ \$	3.38	3.26	1-5
parents help adult children w/ coresidence	3.03	2.99	1-5
parents help children w/ college \$	3.93	3.82	1-5
children help parents w/ \$	3.95	3.77	1-5
children help parents w/ coresidence	3.74	3.46	1-5

Note: Numbers in bold indicate variables with a significantly different mean by race.

Table 2
Estimated Association between Kin Ties in Family of Origin and Marriage in Adulthood

	Model 1		Model 2 (Blacks)		Model 3 (Whites)		Model 4	
	Relative Risk	P-value	Relative Risk	P-value	Relative Risk	P-value	Relative Risk	P-value
Race (White)								
Black	0.31	0.00					1.20	0.76
Kin Involvement								
Obligations	0.99	0.69	0.90	0.04	1.00	0.89	1.00	0.96
Coresidence	1.05	0.71	0.92	0.73	1.18	0.32	1.06	0.65
Contact	1.07	0.03	0.93	0.50	1.07	0.02	1.07	0.04
Give Physical Assistance	1.02	0.65	0.86	0.35	1.03	0.50	1.02	0.64
Get Physical Assistance	0.91	0.16	0.93	0.71	0.92	0.20	0.91	0.16
Give Money	0.80	0.03	0.98	0.96	0.79	0.03	0.80	0.03
Get Money	0.89	0.09	0.62	0.51	0.89	0.10	0.89	0.09
Interaction Black $\times$ Kin Obligations							0.90	0.03
Focal Child Sex (Male)								
Female	1.41	0.00	0.69	0.21	1.46	0.00	1.41	0.00
Employment (not employed)								
Full-Time	1.80	0.00	1.51	0.36	1.81	0.00	1.81	0.00
Part-Time	1.76	0.01	0.97	0.97	1.79	0.01	1.76	0.01
Enrolled	1.00	0.99	1.45	0.50	0.92	0.69	0.99	0.97
Educational Attainment (High School Grad)								
No Diploma	0.62	0.01	0.44	0.12	0.63	0.02	0.62	0.01
Some College	0.66	0.08	0.36	0.22	0.72	0.19	0.67	0.09
College Degree+	1.31	0.08	2.56	0.09	1.27	0.13	1.32	0.08
Age (18)								
19-21	1.44	0.07	1.03	0.96	1.49	0.06	1.43	0.07
22-23	2.20	0.00	1.09	0.87	2.35	0.00	2.19	0.00
24-34	2.02	0.00	0.68	0.50	2.23	0.00	2.02	0.00
Parent Education(High School Grad)								
No Diploma	0.99	0.95	1.54	0.25	0.91	0.61	1.00	1.00

	Model 1		Model 2 (Blacks)		Model 3 (Whites)		Model 4	
	Relative Risk	P-value	Relative Risk	P-value	Relative Risk	P-value	Relative Risk	P-value
Associates Degree	0.96	0.72	0.68	0.33	0.96	0.75	0.95	0.69
College Degree+	0.70	0.01	0.38	0.17	0.71	0.02	0.70	0.01
Log Income Wave 1	0.97	0.47	1.05	0.75	0.95	0.33	0.96	0.43
Respondent-Parent Marital Status (Wave 1)								
Cohabiting	0.87	0.64	0.68	0.72	0.96	0.91	0.86	0.63
Unpartnered	1.11	0.36	2.18	0.02	0.96	0.74	1.11	0.36
Relationship to Focal Child (Dad)								
Mom	0.77	0.01	1.17	0.68	0.75	0.01	0.77	0.01
Religious Affiliation (Not Conservative Protestant)								
Conservative Protestant	1.44	0.00	1.02	0.97	1.44	0.00	1.44	0.00
Religious Attendance	1.04	0.10	1.23	0.03	1.03	0.16	1.04	0.10