Marriage Order, Marring Timing, and Black/White Intermarriage, 1968-1995
(Extended abstract)

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Intermarriage has long been used to describe the importance of social distinctions. Since marriage is considered an intimate, long-term relationship, distinctions important to marriage choice reflect distinctions important to society in general. If members of different groups avoid engaging in social interaction with each other through marriage, the social boundary separating the groups is likely to be important for other forms of social interaction as well. For racial and ethnic distinctions, the extent to which individuals cross these boundaries in their marriages reveals the importance of racial and ethnic distinctions in society more generally.

Since the early 1990s American sociologists have mined Census microdata for an impressive body of work about U.S. racial and ethnic intermarriage. Researchers have studied intermarriage patterns for Asian Americans (Hwang, Saenz, and Aguirre 1995; Qian, Blair, and Ruf 2001; Rosenfeld 2001), Blacks (Qian 1997), Latinos (Rosenfeld 2002; Qian and Cobas 2004), and West Indians (Model and Fisher 2001), investigating change over time (Qian 1997; Qian and Lichter 2004; Fu 2004), educational partnering (Fu 2001; Gullickson 2004; Hwang et al. 1995), differences by nativity (Qian and Lichter 2001), as well as the salience of panethnic identities (Rosenfeld 2001; Qian et al 2001).

However, researchers have neglected aspects of intermarriage that have increased in importance with recent changes in the institution of marriage. First, intermarriage researchers have not investigated the relationship between marriage order and racial intermarriage. Researchers have focused on first marriages as a methodological convenience or young couples to avoid bias from selective marital dissolution. However, given current high rates of divorce and remarriage, assortative remarriage patterns represent an important site for investigating the importance of social distinctions. In fact, by 1990, a full 46 percent of marriages were to brides and grooms where at least one had been previously married (Clarke 1995, Table 7). Focusing exclusively on first marriages is merely a methodological convenience with no substantive justification. If patterns of racial assortative mating vary with marriage order, incorporating remarriages into intermarriage studies may change conclusions about the direction or pace of change over time.

Past studies have also neglected to investigate the relationship between marriage timing and marriage choice. Census microdata have been the most common data source for intermarriage researchers but after 1980, the Census Bureau stopped collecting information on marriage order or timing. Thus, due to data limitations, intermarriage researchers have been unable to investigate the relationship between age at marriage and racial assortative mating. Understanding this relationship has become increasingly important as first marriages are increasingly delayed (Clarke 1995; Fields and Casper 2001).

This study opens intermarriage research to remarriage and age differentials. Using marriage license data instead of the usual Census microdata, this study describes the influence of age and marriage order on racial intermarriage. Marriage license data also provide a prime

opportunity to replicate Census-based findings of increased intermarriage over time. This is a non-trivial matter as Census data are not ideal for studying marriage *choice*, which has been the aim of most intermarriage studies. Census data are prevalence data and include only marriages that have survived to Census day. Conclusions drawn from these marriages are thus vulnerable to selective marital disruption. Better data for studying marriage choice are incidence data from marriage licenses because these data record marriages as they are formed.

The importance of replication is increased by the procedures researchers have used to approximate incidence data with the Census. Sensitive to the flaws of prevalence data, researchers have limited the samples they analyze to recently married couples or young couples. Since these marriages are recently formed, the stock of these marriages is less affected by selective marital disruption and hence more representative of recent marriage choices. With data on marriage timing available in the 1980 Census, it was possible to directly identify recently married couples. Researchers responded to the removal of questionnaire items about marriage timing in 1990 by using age restrictions to identify samples of recently married couples.

The practice of selecting samples based on age restrictions would have been relatively innocuous were it not for the steady increases in age at marriage over recent decades. The consequence of this practice is that samples from later years are increasingly selective because the same age threshold is used at points in time that differ with respect to marriage timing. These age restrictions mean that smaller shares of recent marriages are captured in later samples. Thus, samples from later censuses are increasingly non-representative of the marriages taking place.

Selecting samples using age restrictions is also undesirable because Blacks tend to marry at later ages than Whites. In 1995, 81 percent of White women had experienced a first marriage

by age 30, but only 52 percent of African American women had by the same age (Bramlett and

Mosher 2002, Table 1). Thus, using age restrictions to select samples excludes an unusually

large share of African Americans' marriages. Marriage license data can correct this imbalance.

Although marriage license data have shortcomings as well, they represent a necessary

supplement to Census data for improving knowledge about intermarriage.

DATA AND METHODS

The data used for this study are from 1968-1995 marriage license data from the National

Center for Health Statistics (National Center for Health Statistics 1997, 2002). As incidence

data, marriage license data are generally preferred over Census data for studying marriage choice.

This dataset also contains information on marriage order and timing that have been unavailable

in recent censuses. However, data from marriage licenses also have several shortcomings. First,

the National Center for Health Statistics ceased assembling marriage license datasets for licenses

filed after 1995. Thus, these data are not as current as data from the 2000 Census, although the

difference is not great as many of the recent marriages appearing in the 2000 Census were formed

in the late 1990s. Second, unlike Census data, marriage license data are not collected for the

entire U.S. Data from marriage licenses is available only for the Marriage Registration Area

(MRA). The number of states in the MRA ranged from 39 to 42. Since 1980, marriages formed

in the MRA have been representative of of 74-81 percent of the marriages formed in each year.

Another issue is that reporting of the variables of interest varies by state and by year.

Obviously crucial for studying Black/White intermarriage is data on race. For 34 states race

reporting is relatively complete for the period 1968-1995[1]. Some large states such as California, New York, and Texas are not included, although Florida, Illinois, and Pennsylvania are included. Many states in the South such as Georgia, Louisiana, and Missouri with large concentrations of urban Blacks are also included. Data on age at marriage are available for all states reporting data on race. The same is true for data on previous marital status with the exception of Iowa for all years and Minnesota for two years[2].

I estimate log-linear models to describe marriage patterns. Marriage outcomes are determined by both population composition and individual preferences. Log-linear models provide a means to describe marriage outcomes that controls for the effect of population composition. The odds ratios derived from log-linear model parameters describe marriage choices that are made. The baseline log-linear model I estimate to describe the relationship between racial intermarriage and marriage order is:

$$log\ m_{ijklm} = \lambda + \lambda_i + \lambda_j + \lambda_k + \lambda_l + \lambda_m + \lambda_{im} + \lambda_{jm} + \lambda_{km} + \lambda_{lm}, \tag{1}$$

$i, j \in \{$Black, White$\}$

$k, l \in \{$never married, previously married$\}$

$m \in \{$1968-74, 1975-79, 1980-84, 1985-89, 1990-95$\}$

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[1]These states are: Alabama, Alaska, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming. Minnesota and South Carolina began reporting race in 1970. Pennsylvania ceased reporting race in 1994 and Maine in 1995.

[2]Minnesota is missing information on previous marital status in 1991 and 1992.

where the λ and λ_m are the constant for each time period; λ_i, λ_j, λ_{im}, and λ_{jm} control for racial population composition and changes over time therein; and λ_k, λ_l, λ_{km}, and λ_{lm} control for differences in the numbers of never married and previously married people in each time period. For previous marital status, I distinguish only between those who have never been married and those who have ever married because the numbers of those who have been married two or more times are too small to support an analysis. To describe marriage choice, I add to this baseline model interaction terms described in the following model:

$$log\ m_{ijklm} = \lambda^* + \lambda_{ij} + \lambda_{kl} + \lambda_{ijm} + \lambda_{klm} + \lambda_{ijkl}, \qquad (2)$$

$$i, j \in \{Black, White\}$$

$$k, l \in \{never\ married, previously\ married\}$$

$$m \in \{1968\text{-}74, 1975\text{-}79, 1980\text{-}84, 1985\text{-}89, 1990\text{-}95\}$$

where λ^* includes all the terms in the baseline model, λ_{ij} represents racial homogamy, λ_{kl} represents marital status homogamy, λ_{ijm} represents changes over time in racial homogamy, λ_{klm} represents changes over time in marital status homogamy, and λ_{ijkl} describes how racial homogamy patterns depend on previous marital status.

To describe the relationship between age at marriage and racial intermarriage, I estimate a similar set of log-linear models. The baseline model I estimate is:

$$log\ m_{ijklm} = \lambda + \lambda_i + \lambda_j + \lambda_n + \lambda_o + \lambda_m + \lambda_{im} + \lambda_{jm} + \lambda_{nm} + \lambda_{om}, \qquad (3)$$

$$i, j \in \{Black, White\}$$

$$m \in \{1968\text{-}74, 1975\text{-}79, 1980\text{-}84, 1985\text{-}89, 1990\text{-}95\}$$

$$n, o \in \{12\text{-}19, 20\text{-}24, 25\text{-}29, 30\text{-}39, 40+\}$$

where the λ and λ_{m} are the constant for each time period; λ_i, λ_j, λ_{im}, and λ_{jm} control for racial population composition and changes over time therein; and λ_n, λ_o, λ_{nm}, and λ_{om} control for differences in the age composition of those marrying in each time period. To describe marriage choice, I add to this baseline model interaction terms described in the following model:

$$log\ m_{ijklm} = \lambda^* + \lambda_{ij} + \lambda_{no} + \lambda_{ijm} + \lambda_{nom} + \lambda_{ijno}, \tag{4}$$

$$i, j \in \{\text{Black, White}\}$$

$$m \in \{1968\text{-}74, 1975\text{-}79, 1980\text{-}84, 1985\text{-}89, 1990\text{-}95\}$$

$$n, o \in \{12\text{-}19, 20\text{-}24, 25\text{-}29, 30\text{-}39, 40+\}$$

where λ^* includes all the terms in the baseline model, λ_{ij} represents racial homogamy, λ_{kl} represents assortative mating by age, λ_{ijm} represents changes over time in racial homogamy, λ_{klm} represents changes over time in assortative mating by age, and λ_{ijkl} describes how racial homogamy patterns depend on bride's and groom's ages.

The first two sections of this paper describe the relationship of marriage order and timing to racial intermarriage. These sections also evaluate how conclusions about change over time are influenced by accounting for marriage timing and marriage order. Current perspectives hold that marriages later in age and order are likely to be more heterogeneous than first marriages or marriages at earlier ages. Marriages formed at later ages and remarriages are likely to be less influenced by the presumably endogamous norms of one's family of origin. The marriage market for divorcees and those who delay marriage is also likely to be more heterogeneous than for those entering their first marriage at younger ages (Murguia 1982; Aguirre, Saenz, and Hwang 1995). If these patterns hold, then these changes in the institution of marriage will be implicated in

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recent increases over time in Black/White intermarriage. Furthermore, these findings would be

evidence that Census-based studies have under-estimated increases in intermarriage.

CONCLUSION

This study identifies flaws in Census-based research on Black/White intermarriage and addresses

these flaws with data from marriage licenses. Census-based studies, due to data limitations,

examine marriage choice using samples of young married couples and first marriages. With

remarriages now almost as numerous as first marriages, focusing exclusively on first marriages

ignores a substantial amount of marriage behavior. And as Americans are increasingly delaying

marriage, focusing on young couples excludes a great number of recent marriages. Significant

differences in marriage timing between Blacks and Whites may also bias results from studies of

younger couples. Findings from marriage license data can confirm or modify conclusions drawn

by Census-based studies.

REFERENCES

Aguirre, B., R. Saenz, and S. Hwang. 1995. "Remarriage and Intermarriage of Asians in the United States of America." *Journal of Comparative Family Studies* 26:207-215.

Bramlett, M. D. and W. D. Mosher. 2002. *Cohabitation, Marriage, Divorce, and Remarriage in the United States*. National Center for Health Statistics. Vital and Health Statistics 23(22).

Bumpass, Larry L., and Hsien-hen Lu. 2000. "Trends in Cohabitation and Implications for Children's Family Contexts in the United States." *Population Studies* 54: 19–41.

Casper, Lynne M., and Philip N. Cohen. 2000. "How Does POSSLQ Measure Up? Historical Estimates of Cohabitation." *Demography* 37(2):237-45

Clarke, Sally C. *Advance Report of Final Marriage Statistics, 1989-1990*. Volume 43 no.12, supplement. United States Department of Health and Human Services, 1995.

Fields, Jason and Lynne M. Casper. 2001. America's Families and Living Arrangements: March 2000. Current Population Reports, P20-537. U.S. Census Bureau, Washington, DC.

Fu, Vincent K. 2001. "Racial Intermarriage Pairings." *Demography* 38:147-159.

Fu, Vincent K. 2004. "1980-2000 Change and Regional Variation in United States Racial Intermarriage." Unpublished manuscript. University of Utah Department of Sociology.

Goldstein, Joshua R. 1999. "The Leveling of Divorce in the United States." *Demography* 36:409-414.

Gullickson, A. 2004. "The Interracial Context of Educational Partnering Within Marriage." Paper presented at the 2004 Annual Meeting of the Population Association of American, Boston, Massachusetts.

Hwang, S., R. Saenz, and B. Aguirre. 1995. "The SES Selectivity of Interracially Married Asians." *International Migration Review* 29:469-491.

Model, S. and G. Fisher. 2001. "Black-White Unions: West Indians and African Americans Compared." *Demography* 38:177-185.

Murguia, E. 1982. *Chicano Intermarriage: A Theoretical and Empirical Study*. San Antonio, Texas: Trinity University Press.

National Center for Health Statistics. 1997. Data File Documentation, Marriage and Divorce Data, 1989-1995 (machine readable data file and documentation, CD-ROM Series 21, No. 6). Hyattsville, Maryland: National Center for Health Statistics.

National Center for Health Statistics. 2002. Data File Documentation, Marriage, 1968-1988 (machine readable data file and documentation, CD-ROM Series 21, No. 34H). Hyattsville, Maryland: National Center for Health Statistics.

Preston, Samuel H. and J. McDonald. 1979. "The incidence of divorce among cohorts of American marriages contracted since the Civil War." *Demography* 16(1):1-26.

Qian, Z. 1997. "Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990." *Demography* 34:263-276.

Qian, Z., S. Blair, and S. Ruf. 2001. "Asian American Interracial and Interethnic Marriages: Differences by Education and Nativity." *International Migration Review* 35:557-586.

Qian, Z. and J. Cobas. 2004. "Latino's mate selection: national origin, racial, and nativity differences." *Social Science Research* 33:225-247.

Qian, Z. and D. Lichter. 2001. "Measuring Marital Assimilation: Intermarriage among Natives and Immigrants." *Social Science Research* 30:289-312.

Qian, Z. and D. Lichter. 2004. "Crossing Racial Boundaries: Changes of Interracial Marriage in America, 1990-2000." Paper presented at the Annual Meeting of the Population Association of America, Boston, Massachusetts.

Rosenfeld, M. 2001. "The Salience of Pan-national Hispanic and Asian Identities in U.S. Marriage Markets." *Demography* 38:161-175.

Rosenfeld, M. 2002. "Measures of Assimilation in the Marriage Market: Mexican Americans 1970–1990." *Journal of Marriage and Family* 64:152–162.