PRELIMINARY ANALYSES DRAFT

Racial Differences and Similarities Among Childless, Only-Child, and Multiple Children American Women, 1988-2002

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June 20, 2006

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In this paper we explore the socioeconomic similarities and differences between white and black women who are childless, mothers of only children, and mothers of two or more children. Past research has either neglected racial differences among women with small completed family sizes, or attributed very low fertility to unique causes for black and white women. While white women's childlessness has been attributed to greater educational and employment opportunities that conflict with family responsibilities, black women's childlessness has been viewed as the result of inadequate health care, disease, and coercive sterilization. We re-evaluate these arguments with data from the three most recent waves of the National Survey of Family Growth (cycles 4, 5, and 6). Our preliminary findings indicate that there is little racial variation in low fertility patterns. The primary determinant of childlessness and singleton births is marital history, and this is true for both white and black women. Sterilization is not implicated in any of these low fertility patterns; however, issues of infertility figure strongly for both black and white women. Educational attainment influences all singleton births, regardless of marital history and is also strongly associated with childlessness among the never married. However, there seems to be no effect of education on childlessness among married women. Employment also appears correlated with low fertility, but the cross-sectional analyses here do not allow us to make causal arguments for this relationship. Event history and survival analyses utilizing detailed fertility, marital, employment, and educational histories are currently under way.

In recent years, very low fertility in industrialized nations has captured the attention of demographers and policy-makers. While fertility levels in the U.S. have not fallen to below-replacement levels as they have in some European countries, the growth in the proportion of American women who are remaining childless has sparked multiple investigations into the causes and consequences of this trend (Downs 2003; Heaton and Jacobsen 1999; Jacobsen and Heaton 1991; Jeffries and Konnert 2002; Park 2002). There is also evidence of a parallel increase in the proportion of only-child families in the U.S., although this trend has been less well investigated. Data from the Current Population Survey, presented in figure 1, reveal these trends toward reduced fertility. Among women aged 40-44, the percentage who were childless in 1976 was 10.2%, while the percentage who had only one child was 9.6%. By 2004 these percentages had risen to 19.3% and 17.4%, respectively (Dye 2005). These percentages are considerably higher when limited to women with undergraduate degrees or higher (Bachu 1995). Importantly, the rates of childlessness are highest for non-Hispanic white women (20.0%) and black women (21.3%), compared to other racial/ethnic groups (Dye 2005). While some of these childless women in the 40-44 year age bracket may eventually become mothers, the first birth rate for this age group is very low, at 2.4 births per 1,000 women for non-Hispanic whites, and 4.7 among non-Hispanic blacks (Dye 2005).[2] Thus, very low fertility seems to be a social phenomenon of growing importance in the U.S., particularly so for white and black women.

The convergence in rates of childlessness among black and white women represents two trends: growing white childlessness and declining black childlessness. From 1940 until 1970, black ever-married women had higher rates of childlessness than their white peers, although this trend

[2] These rates compare to peak birth rates of 99.2 for white women aged 25 to 29 and 128.9 for black women aged 20 to 25 (Downs 2003).

reversed in 1970 (Boyd 1989a). Historically, childlessness is not a new phenomenon for either group. Among women born in 1910 and entered their childbearing years during the Great Depression, rates of childlessness passed 20 percent (Morgan 1991). But the recent growth of childlessness during an era of comparative economic prosperity stands in stark contrast to historical trends. Understanding the growth of low fertility and childlessness is important for understanding demographic dynamics at the population level and at the individual level. At the population level, very low fertility could lead to an imbalance of the age structure, unless immigration of young families with children counter-balances this trend. An imbalanced age structure could produce problems for the social and fiscal support of the elderly. This is particularly true if the current structure of old age social security systems (paid for by transferring wages from younger workers to retired workers) and privatized solutions to caring for the aged remain unchanged. At the individual level, low fertility may reflect, in part, the new opportunities for women in education and employment. However, not all of the low fertility may be voluntary. Because family building occurs during the same stage of life as career-building, and because American workplaces provide few incentives and supports to combine work with motherhood, some women may be delaying having children until they are finished with formal education and established in their careers. Delayed childbearing increases the risk of age-related infertility issues and raises the possibility of involuntary childlessness.

Understanding whether and how the causes and consequences of low-fertility may differ by racial group is critical because the social and economic experiences of families vary by race/ethnic background. Childlessness among white women largely has been cast as a voluntary lifestyle choice and attributed to the rising opportunities for women in education and employment, combined with the availability of effective contraception (Jacobsen and Heaton 1991). In contrast, childlessness among black women historically has been cast as involuntary and attributed to the effects of poverty and discrimination, including poor health care, malnutrition, disease, and coercive sterilization (Farley 1970). However, others argue that the socioeconomic factors leading to childlessness among white women are similar to those of black women. For example, Boyd (1989b) argues that high-status black couples are more likely to be voluntarily childless than their white peers, due to racist barriers to full integration into dominant societal institutions. The degree to which late twentieth-century childlessness is similar or different among black and white women has not been adequately explored in the literature. Our research attempts to fill this gap.

Little is known about the correlates of childlessness and only-child families largely because such completed fertility outcomes are still relatively rare events in the United States. As such, it is a challenge to locate fertility datasets with sufficiently large sample sizes of women past their reproductive years, much less ones with adequate numbers of African American women. We remedy this by utilizing the rich fertility information provided by the NSFG and combining the three most recent waves of data from 1988 (cycle 4), 1995 (cycle 5), and 2002 (cycle 6). We investigate differences and similarities between non-Hispanic white and Non-Hispanic black women of varying levels of completed fertility. We focus on women aged 40 to 44 and investigate whether racialized theories of childlessness and low fertility adequately explain fertility trends among black and white women, whether the second demographic transition is affecting fertility among white and black women in the same way, and how racial differences in family structure and opportunities available to women relate to fertility outcomes. Specifically,

we ask how marital history, human capital, employment history, reproductive health issues and other factors contribute to the persistence of childlessness and to the incidence of only-child families. While the preliminary descriptive and logistic analyses presented in this paper are merely suggestive, we are currently conducting event history and survival analyses to better model racial differences and similarities in these fertility outcomes.

THE SECOND DEMOGRAPHIC TRANSITION

The past three decades have witnessed significant changes in the structure of American families. Some of these changes are attributed to the second demographic transition. While the first demographic transition is characterized as a reduction in marital fertility in response to declining mortality rates, the second demographic transition refers to a stage in industrialized societies where full control over fertility produces a level of fertility that fails to maintain replacement of current generations (van de Kaa 1987). Some reasons for the declining total fertility rate include the postponement of marriage, lower marital rates, increase in divorce rates, widespread availability of effective contraception and abortion, postponement of childbearing within marriage, and the decline of higher order births (van de Kaa 1994). A key factor related to all of these changes is the growing social, political, and economic emancipation of women.

While the native-born population growth in some European nations is nearing zero, total population growth is also affected by immigration, emigration, and migration. To the extent that the second demographic transition occurs unevenly across countries or within countries, the relative size of racial/ethnic groups, immigrant/native groups, and socioeconomic groups may also change.

RACIAL DIFFERENCES AND SIMILARITIES REGARDING THE CHANGING AMERICAN FAMILY STRUCTURE

Multiple factors may affect zero-to-low fertility. Some of these may have similar effects by race while others may affect black women's and white women's fertility patterns differently. Changes related to family structure that differ between non-Hispanic black women and non-Hispanic white women include the availability of marriageable men, the rising age at first marriage, the age at first birth, and the prevalence of non-marital fertility.

Particularly affecting black women is the reduced availability of marriageable black men due to the high unemployment, incarceration, and mortality rates suffered by this group. The ratio of single men to single women is dramatically different by racial group. In 2004, the ratio of single men to single women aged 20-29 was 92:100 for blacks and 120:100 for whites (U.S. Census 2006a). To the extent fertility decisions are influenced by marriage prospects, the relative lower availability of marriageable men may affect black fertility more than white fertility.

Both black and white women are experiencing rising ages at first marriage. In 1970 the median age at first marriage was 20.8 years among women. By 2005 this increased to 25.8 years and there is little difference by race in these trends (US Census 2006b). Higher ages at marriage may lead to smaller completed family size. However, while maternal ages at first birth have also risen for whites, black women have not experienced this change. Thus, significant differences

have emerged in age at first birth between black and white women. In 1970 the median age at first birth was 20.0 for blacks and 22.3 for whites. By 2000 this had risen to 24.7 for whites but only to 21.8 for blacks (NCHS 1999). Increasing age at first birth is linked to the incidence of age-related infertility. While white women are more likely to delay motherhood, they are also likely to have access to financial resources to seek out and obtain infertility treatment.

These trends point to racial differences in the link between childrearing and marriage. For all races, but especially among African-Americans, there has been an increase in non-marital births. Between 1970 and 2004, non-marital births as a percentage of all births increased from 5.7% to 27% among white women and from 38% to 69% among black women (Ventura and Bachrach 2000). The growth of non-marital births indicates that older ages at marriage should impact low-low fertility less over time and less for blacks than for whites. Taken together, these trends imply that age at first marriage should predict white women's fertility and childlessness more strongly than black women's.

Family structure may be changing in part due to the increased educational and employment opportunities for women. Enabling the growth of women's educational attainment and employment participation during the 1970-2004 period is the increasing availability of contraception and legalized abortion. While increased access to birth control and abortion should reduce fertility, it is not obvious that effects would differ by race.

Between 1970-2004 the percentage of adult women earning at least a high school diploma rose from 58% to 86% among whites and dramatically rose from 35% to 81% among blacks. Similarly, the percentage completing at least a bachelor's degree rose from 8.6% to 26% among white women and 4% to 19% among black women (CPS 2004). If women delay marriage and motherhood until they have completed full-time enrollment in educational institutions, then educational attainment should reduce overall fertility by increasing the age at marriage and at first birth.

Education is also linked to increasing employment opportunities for women. Between 1970 and 2005, among women aged 25 to 54, labor force participation grew, although this growth was more dramatic for white women (49% to 75%) than for black women (60% to 77%) (Bureau of Labor Statistics custom figures). Using event history analysis to examine women's employment and fertility histories with longitudinal data, Budig (2003) has shown that both full-time and part-time employment decrease women's likelihood of becoming pregnant. This implies that employment may contribute to rising rates of childlessness and only-child families.

PRELIMINARY DATA AND METHODS

Little is known about the correlates of childlessness and singleton births largely because such completed fertility outcomes are still relatively rare events in the United States. As such, it is a challenge to locate fertility datasets with sufficiently large sample sizes of women past their reproductive years, much less ones with adequate numbers of African American women. We remedy this by utilizing the rich fertility information provided by the NSFG and combining the three most recent waves of data from 1988 (cycle 4), 1995 (cycle 5), and 2002 (cycle 6). We restrict our sample to black and white women at the oldest ages of the NSFG age range, years

40-44, under the assumption that most women have met their reproductive preferences by this point in their lives.[3] The total sample size is 3,914.

These preliminary analyses use cross-sectional data in a series of multivariate logistic regressions to predict a) the likelihood of having no children versus having one child or more and b) the likelihood of having an only-child versus two children or more[4]. Our regression models are separated by race and by marital status. We control for four groupings of variables: basic demographic characteristics, second demographic transition indicators, socioeconomic status factors, and reproductive histories.

Basic demographic characteristics include age, race/ethnicity, nativity, religiosity, and date of survey. The respondent's age at date of interview is measured in years. We run separate models for black and white women, where Hispanics may be of either race. We include a dummy variable =1 if Latino, with non-Hispanic whites and non-Hispanic blacks as the reference groups. Nativity is a dummy variable =1 if born outside of the U.S., with native born serving as the reference group. We measure religiosity by the frequency of attending church services, and date of survey (this controls for time period differences between the cycles).

Second demographic transition indicators include marital status, age at first marriage, ever divorced, and ever cohabitated. The dummy variable married=1 if ever married, with never married being the reference group. Respondent's age at first marriage is measured in years. We created a variable for divorced that =1 if respondent is currently divorced or if respondent was ever married but is not currently married.[5] Cohabitation is measured as a dummy variable =1 if the respondent ever cohabitated, and never cohabitated is the reference group.

Socioeconomic status factors include education level, employment, spousal employment, and maternal education and employment. Education is measured as a set of dummy variables indicating the respondent's highest level of educational attainment. These include high school diploma, some college, or a college degree or more, with high school dropouts serving as the reference category. Employment is measured as whether the respondent was employed part-time (less than 35 hours weekly) or full-time (35+ hours weekly) at the time of the survey interview. Not employed is the omitted category. Spousal employment =1 if the respondent's husband or cohabiting partner was employed at the time of the interview. Finally, to capture family of origin socioeconomic class background, we included two dummy variables indicating whether the respondent's mother was employed when respondent was age fourteen and whether the respondent's mother had a college education. We used the respondent's mother's employment and education for two reasons. First, data on mothers tends to be more reliable, particularly in the event of divorce or separation. Secondly, we thought the respondent's mother's educational

[3] Although birth rates to women at older ages have risen in recent decades due to fertility delay and infertility treatments, the rates are still very low. Of all first births in 2003, for example, only 1% were to women ages 40-44 (Martin et al 2005). Higher parity births are slightly more common at these ages, but still relatively rare, at just under 2% (Martin et al 2005). We acknowledge therefore that our childlessness sample and only child sample may be slightly overestimated (more so in the latter case than the former case), but believe the effect to be negligible.

[4] We include nonbiological children in our estimates of birth parity.

[5] Note that this may code widowed women as divorced, but among this age group this is a small percentage. Also divorced women who are currently married are not captured by this measure.

and labor force engagement might influence the respondent's education and employment, and indirectly, fertility, more so than the father's.

Reproductive histories include dummy variables indicating medical sterilization, whether the respondent ever sought infertility treatment, and if the respondent has had difficulty becoming pregnant. We decided against combining the two seemingly similar variables, "ever sought infertility treatment" and "ever had difficulty becoming pregnant," when descriptive cross-tabulations indicated a negative correlation between the two. Exploration of this contradiction revealed that women with college educations are most likely to report having sought fertility help, but least likely to report that they had ever had difficulty becoming pregnant. We thus infer that the variable for fertility help more likely captures childbearing delay, or age-related infertility. Furthermore, while the available data does not allow us to directly assess coercive medical sterilization, the sterilization variable measures the prevalence of procedures like tubal ligation, hysterectomy, ovary removal and other forms in assessing racial differences in fertility outcomes (in the final analyses we will include a variable for fertility motives as a control for elective versus coercive sterilization).

Because the cross-sectional nature of the independent variables in many cases prohibits assignment of causality, we emphasize that the following analyses in this abstract are exploratory. Reverse causality cannot be ruled out in many instances, and even plays a likely role in the case of variables like employment, for example (which was measured as of the respondent's interview year, taking place after, not before, the occurrence of fertility events). More rigorous analyses utilizing the longitudinal data in the NSFG's century month files are currently under way.

PRELIMINARY RESULTS

Descriptive Analyses

Table 1 presents descriptive statistics for the variables used in the analyses. The first set of columns show the characteristics of white women in the sample and the second set of columns show those of black women. Each group is divided by birth parity-- from zero children, to one child only, to two or more. Perhaps the most striking difference among the fertility variables is the variation in medical sterilization. The percentage of women sterilized increases by parity of child, indicating that sterilization occurs following a number of births. Although there is no racial variation among childless women, higher levels of sterilization do indeed appear among black women of higher parity births.

----------TABLE 1 ABOUT HERE----------

Among the family status variables it is noteworthy that black and white childless women have much lower percentages of ever married. Age upon marriage for both races is also linked to birth parity, with the average age climbing significantly for mothers of only children and even more so for childless women.

Socioeconomic status, perhaps best captured here by education level, suggests that schooling may be more determinative of zero to low parity for whites than for blacks. Forty-five percent of white childless women have college degrees compared to only twenty-seven percent of women with two or more children. While substantially more black childless women and mothers of only children also have a college degree than black women with two or more children (twenty-six percent each respectively compared to only fourteen percent), the linkage to education does not appear to be as polarizing as for whites.

Much of the data reported in Table 1 would seem to support theories concerning race and low fertility in the literature. To understand to what extent such trends hold in the face of multivariate controls, we turn next to the regression analyses.

Logistic Regression Findings: Childlessness

Given the striking difference in marital rates among women of different parities, we decided to analyze fertility outcomes separately by marital status. First, however, we wanted to assess the effect of marital status on fertility outcomes, net of other factors. Table 2 shows the models before being separated by marital histories. The first set of models predicts the odds of childlessness for whites in column 1a and for blacks in column 1b. By far the strongest predictor in both models is the never married variable, which is highlighted in gray.

----------TABLE 2 ABOUT HERE----------

Whites are 33 times, and blacks eight times, more likely to be childless by age 40-44 if they have never married. That women who never marry are least likely to become mothers makes common sense, given the strong normative association of reproduction within the context of marriage. But the fact that marital history outweighs any other factor many times over in predicting childlessness is challenges the common perception that rising childlessness stems from high achieving career women who forego childbearing. In fact, in descriptive cross-tabulations not shown, women in this sample who never marry, most of whom are childless, are the least likely to be college grads and the most likely to be high school drop outs. This negative association between marriage and education level has been documented elsewhere (Goldstein and Kenney, 2001). In light of scholarly and popular media attention directed toward nonmarital childbearing among African Americans, it is of further interest that marital status is also the primary predictor of childlessness for blacks. Of course, the magnitude of the effect is much smaller than it is for whites, which reflects aforementioned differences in nonmarital childbearing between the two populations.

Although the effect is considerably smaller, never marrying is also the driving factor in the second set of models (table 4), which predict the odds of having just one child instead of two or more. Both never married blacks and whites are about six times more likely to stop childbearing after a first birth than those who have been married. Here the magnitude of the effect is equal for both races, implying that racial differences between women are more mitigated when they have had at least one nonmarital birth.

The strength of marital history in predicting both childlessness and singleton births suggests substantial underlying heterogeneity in the sample. The remaining predictors are better evaluated within the context of each marital status and so we turn to Table 3, which separates the models by marital history.

----------TABLE 3 ABOUT HERE----------

Childlessness Among Married Women

Table 3 shows that factors predicting childlessness are fairly similar for black and white women. Looking first at women who have ever married (column 1) infecundity (measured by either the pregnancy difficulty or fertility assistance) is the strongest predictor of childlessness for both white and black women, though the size of the effect is stronger for black women. In contrast to the way infertility is often discussed in the literature, infertility among blacks is shown here to be more strongly linked to age-related infertility than it is for whites.[6] Furthermore, childlessness seems to have no relationship to the respondent's family of origin socioeconomic level for either race. While employment is strongly and positively correlated with childlessness, given the cross-sectional nature of the data, we cannot assess whether employment is the cause of or result of childlessness. We plan to investigate this relationship by using employment and fertility history data and event history models in future analyses.

Still focusing on the ever married, some structural characteristics of the second demographic transition also influence childlessness. Older age at marriage increases the likelihood of childlessness for both races. For each year older the respondent is at her first marriage, the likelihood of being childless at age 40-44 increases by 12 to 17%. Divorce also doubles the likelihood of childlessness, but this applies only to white women. There is no effect of divorce on childlessness for black women. We suspect this is because whites tend to delay fertility within marriage longer than blacks do, increasing the chance of a divorce occurring before a first birth, but require more detailed data to know for sure. The only other racial difference in married childlessness is that church attendance frequency among whites decreases the likelihood of having no children. This is probably due to the greater universality of church attendance among blacks compared to whites.

Childlessness Among Single, Never-Married Women

Turning to the second set of columns in table 3, we see that among the never married there are, again, few differences by race in the correlates of childlessness. However, the disproportionately large number of black women who never marry may reflect racial differences in the availability of marriageable men, as discussed above. Clearly, among the never married, educational attainment is the most important predictor of childlessness. Having a high school diploma and attending college increase the likelihood of childlessness more strongly for black women than for white women. While having a high school diploma has no effect on white women's childlessness, it increases the probability by a factor of 4 for black women. Moreover, compared to high school dropouts, black women with some college are 12 times more likely to be childless,

[6] Medical sterilization is negatively correlated to childlessness for both blacks and whites, indicating that those most likely to undergo such procedures do so after having had children.

and white women are 5 times more likely. The effect of having a college degree is even more strongly linked to childlessness for never married women, upping the odds by 16 times for both races.

Never married women who have cohabited are less likely to be childless than those who have not cohabited, and this correlation is mildly stronger for black women. The negative correlation between medical sterilization and childlessness seems surprising; however, it indicates that mothers, not childless women, are more likely to be sterilized, presumably after reaching their desired family size. One significant racial difference among the never married is that in the more recent NSFG waves, childlessness among black women is decreasing, while there has been no change over time in childlessness rates for whites. Census data indicates that never marrying is rising quickly for both races, but fastest among blacks. As of 2001 34% of black women by age 40 had never married compared to only 12% of same aged white women (US Census Bureau 2005). It is likely that once a minimum threshold of the population has ceased to marry, the desire for children becomes less elastic to marital status. This points to the decoupling of childbearing from marriage, as discussed above.

In summary, table 3 shows that the correlates of childlessness differ most dramatically by whether we are looking at individuals who have married compared to those who have not. Within each grouping, childless blacks look more similar to childless whites than different. Contrary to common discourses on childlessness, its occurrence among the ever married population is primarily due to women who report difficulty becoming pregnant and age-related infertility. Childlessness among the never married is determined first and foremost by education level.

Logistic Regression Findings: Only-Child Families

How similar is the context in which singleton births take place to that of childlessness? Table 4 predicts the logistical odds of having an only child by age 40-44 compared to having two children or more and is similarly formatted to Table 3.

----------TABLE 4 ABOUT HERE----------

Only-Child Families Among Ever Married Women

Looking first at the ever married column, there is no one overpowering predictor of singleton births (unlike with childlessness). Similar to childlessness, but to a much lesser extent, infecundity, marital disruption, and older age at first marriage increase the likelihood of completing fertility with just one child. There are few racial differences in these factors, though divorce has a mildly stronger positive effect on singleton births for black women. Full-time employment and educational attainment increase the likelihood of ending fertility with one child. Again, in regard to employment and fertility, it is impossible to disentangle cause and effect with these cross-sectional data. The effects of education, however, are more likely to be causal. Among white women, having a high school diploma or some college raises the odds of a singleton birth by about 70%-75%, but there is no significant effect of a college diploma. Among black women the effect of a college degree is striking: college graduates are 300% more

likely to end fertility with an only child. These effects are similar to those predicting childlessness for never-married women.

Also similar to models predicting childlessness among the never married is the racial difference in the prevalence of only-child families over time. As with childlessness among the never married, singleton births among married black women are declining over time, whereas more only-child families are increasing among ever married white women. Otherwise, the remaining coefficients--age at marriage, medical sterility, and religious frequency-- all predict the likelihood of only children in similar patterns as in the childless models. Divorce also tends to cut short childbearing to just one child for each race, but more so for blacks than for whites.

Only-Child Families Among Single, Never Married Women

The second set of models predicts the likelihood of having a singleton birth versus more children for never married women. Current full-time employment is extremely highly correlated with singleton births for white women. Unfortunately, we again cannot tease apart the causal order of ending fertility with a single child and working full-time: longitudinal data are needed. Notably, education is a strong determinant of singleton births -- but solely for black women. Single black women with college degrees are ten times more likely to have an only-child than to have multiple children.

Again, the difference in sample sizes of the two groups (representing only 2% of the total white sample compared to 17% of the black sample) suggests that never married white women with nonmarital births are rare and highly unrepresentative of the larger group.[7] Perhaps due to the relatively few cases we have to analyze in this marital status/fertility outcome grouping, our models seem to do a poorer job predicting singleton births among the never married.

DISCUSSION

Although much of the literature discusses childlessness and singleton births among black and white women as though these outcomes derive from divergent causes, overall, our multivariate results indicate more similarity than difference. The single largest predictor of childlessness for both races is marital history: women who never marry are most likely to never have children. After marital history, other correlates predicting fertility outcomes are fairly similar for white and black women. Even though childlessness is often discussed in the context of high-achieving career women, this seems to apply only in the case of never married women. Childlessness within marriage bears no relationship to educational level and is largely determined by infecundity. High educational achievement, however, does lead to a greater likelihood of singleton births among married women. It is likely that increasing educational and labor force opportunities are reducing fertility among married women, but not reducing it to zero. The strong relationships between low fertility outcomes and labor force participation are suggestive but inconclusive, given the cross-sectional nature of the data. Although other research suggests that employment is more likely to deter fertility than fertility is to reduce labor force attachment

[7] This is not to say single motherhood is uncommon among white women, but many single white mothers are married at some point in the lifecourse.

(Budig 2003), we need to fully utilize the fertility and employment histories available in cycle 5 of the NSFG before drawing any conclusions.

If it is true that African Americans are more often compelled by the medical community to undergo sterilization than whites, results here indicate that coercive influences are not directed toward those who are childless nor toward those with only one child, irrespective of marital status. When it comes to the role of medical sterilization in determining low fertility patterns these effects do not appear to differ at all by race.

Finally, the fertility behaviors of both blacks and whites are similarly affected by the changing family structures of the second demographic transition. Later ages at marriage increase the probability of remaining childless or having just one child, although the effect is not as strong as one might have predicted and does not differ by race. Marital dissolution also depresses fertility: for both races divorce increases the incidence of only children, and among white women, divorce increases the likelihood of childlessness.

FUTURE PLANS FOR OCTOBER NSFG CONFERENCE

The current analyses are suggestive but require fine tuning. We are currently combining date-of-event data shared across waves 4 through 6 in order to provide a sequencing of important events that may influence fertility outcomes. Using discrete-time survival analyses with time-changing variables to assess the likelihood of reaching age 40-44 with no children or just one child will remedy many of the weaknesses in the preceding analyses. We will take advantage of the NSFG's chronological information, which includes dates of marriage, cohabitation, union dissolution, fertility procedures, co-residence of nonbiological children, school completion, labor force participation, etc. to assess their relationship to the time of birth(s). We also intend to utilize the date information on fertility motives and wantedness in relation to each birth. We plan to run a series of pooled models with race interaction terms in order to more accurately assess significant racial differences in zero to low fertility outcomes. We have hired a research assistant for the summer of 2006 and intend to have these analyses completed in time for presentation at the October NSFG conference.

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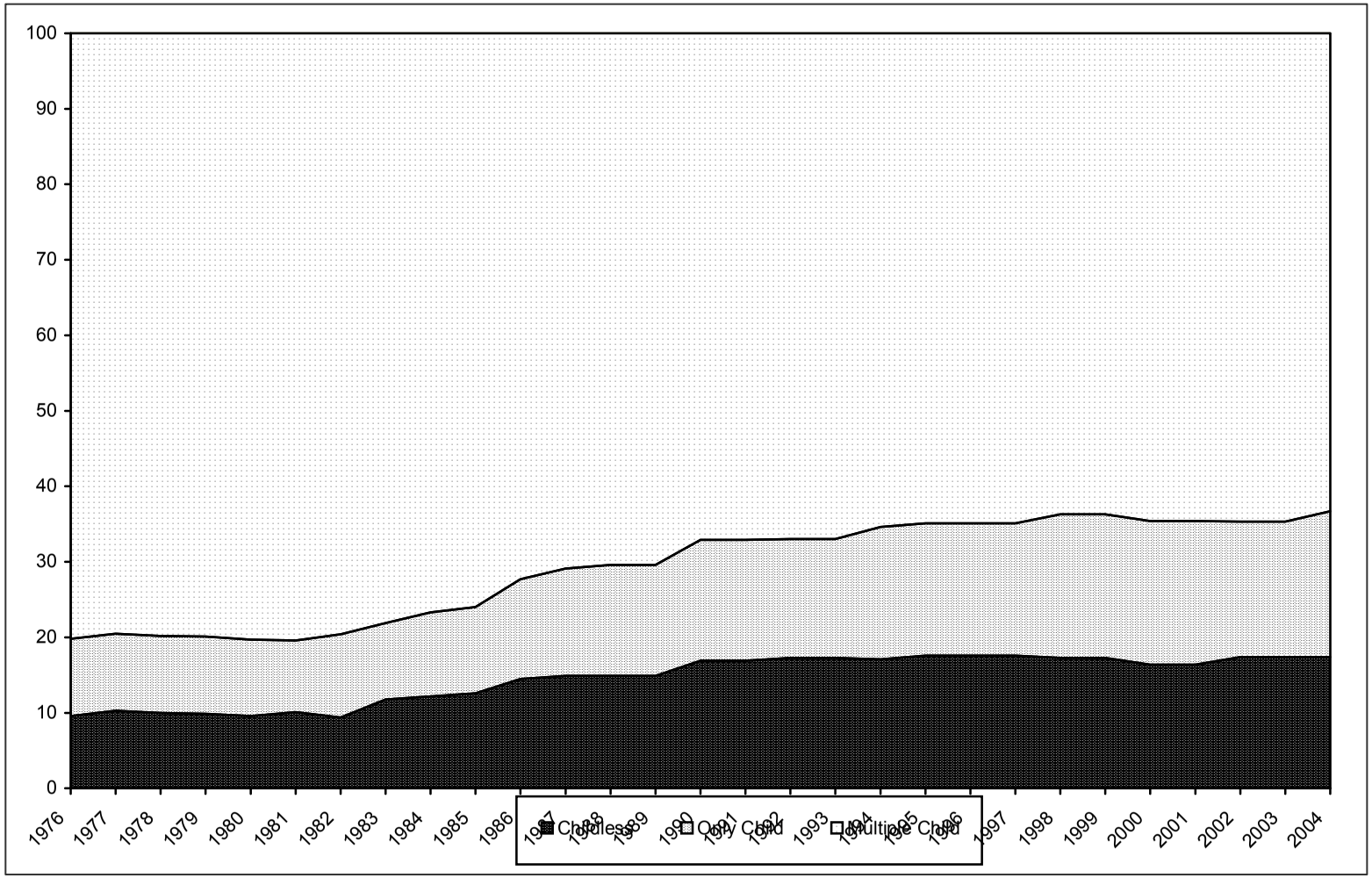
Figure 1. Completed Family Size (Childless, One-Child, and Multiple Children) of American Women Aged 40-44, 1976-2004



Note: Author's calculations using data from the Current Population Survey, 1976-2004.

Table 1. Characteristics of Women Aged 40-44 Years, by Fertility Status and Race

	White			Black		
	Childless	Singleton	2+ Children	Childless	Singleton	2+ Children
Percentage of Sample Within Racial Category	17%	16%	67%	14%	22%	64%
FERTILITY						
Difficulty w/fertility	13%	13%	10%	16%	13%	12%
Surgically sterile	28%	35%	53%	28%	45%	71%
Ever had fertility treatment	15%	20%	14%	13%	15%	8%
FAMILY STATUS						
Ever been married	58%	92%	98%	40%	67%	84%
Ever been divorced	30%	26%	16%	26%	35%	25%
Ever cohabited	49%	48%	39%	38%	51%	52%
Age at marriage (if ever married)	26	23	21	27	24	22
SOCIOECONOMIC CHARACTERISTICS						
College degree	45%	32%	27%	18%	26%	14%
Some college	23%	26%	23%	23%	24%	21%
High school diploma only	28%	33%	34%	34%	36%	37%
High school dropout	5%	9%	16%	25%	14%	28%
Currently employed fulltime	74%	58%	52%	73%	73%	59%
Currently employed parttime	11%	21%	22%	13%	9%	13%
Partner employed (of those in union)	89%	91%	91%	70%	80%	67%
Mother attended college	31%	25%	21%	20%	17%	13%
Mother worked full-time	53%	49%	46%	73%	69%	70%
OTHER CHARACTERISTICS						
Age (40-44)	41.7	41.9	42.0	42.1	42.0	41.9
Church attendance frequency	1.09	1.24	1.43	1.63	1.60	1.68
Hispanic	6%	12%	13%	3%	4%	3%
Foreign born	7%	11%	12%	5%	8%	8%

Note: Data from Waves 4, 5, and 6 of the National Survey of Family Growth

Table 2. Logistic Regressions Predicting Childlessness and Singleton Births for NSFG Women Ages 40-44, by Race

	1. Childlessness (vs. 1+)				2. Singleton Births (vs. 2+)			
	a. Whites		*b. Blacks*		*a. Whites*		*b. Blacks*	
Dependent Variables	Odds		Odds		Odds		Odds	
Age (within 40-44)	0.89	*	1.13		0.97		1.03	
Never Married	32.53	***	7.73	***	6.59	***	6.11	***
Ever divorced	1.43		0.77		1.59	*	2.75	***
Ever cohabited	0.96		0.46	**	0.88		0.99	
Age at marriage	1.17	***	1.12	***	1.10	***	1.06	***
Not native born	0.78		0.30	*	0.95		0.75	
NSFG cycle	1.07		0.86		1.36	***	0.66	***
Latino	0.35	***	1.31		0.84		1.74	
Pregnancy difficulty	4.60	***	4.02	***	2.66	***	2.11	**
Ever had fertility assistance	1.41	+	2.64	**	1.67	***	2.10	**
Ever medically sterilized	0.26	***	0.22	***	0.43	***	0.29	***
Mother was employed	1.16		0.84		1.04		1.07	
Mother college educated	0.87		1.52		0.87		1.03	
Current partner employed	0.54	**	0.69		0.73		1.21	
Currently works full time	2.19	***	2.43	**	1.49	**	2.23	***
Currently works part time	0.75		3.30	**	1.10		1.55	
Has diploma	2.09	*	1.51		1.65	*	2.06	**
Has some college	1.90		1.94		1.62	*	2.34	**
Has college degree	2.50	**	2.19		1.34		4.14	***
Church attendance freq	0.59	***	0.93		0.67	***	0.77	
	n=2922		n=992		n=2406		n=849	

Notes: *p<.05; **p<.01; ***p<.001

[a] Versus having two or more children

Table 3. Logistic Regressions Predicting Childlessness[a] for NSFG Women Ages 40-44, by Race and Marital Status

	1. Evermarried				2. Nevermarried			
	a. Whites		*b. Blacks*		*a. Whites*		*b. Blacks*	
Dependent Variables	Odds		Odds		Odds		Odds	
Age (within 40-44)	0.90		1.15		0.93		1.21	
Ever divorced	2.03	**	0.96		n/a		n/a	
Ever cohabited	1.23		0.65		0.39	*	0.30	**
Age at marriage	1.17	***	1.12	***	n/a		n/a	
Not native born	0.78		0.17		1.65		0.38	
NSFG cycle	1.01		1.20		0.79		0.52	**
Latino	0.37	**	1.00		0.34		1.82	
Pregnancy difficulty	4.00	***	6.88	***	4.86		2.15	
Ever had fertility assistance	1.71	**	4.18	***	0.24		1.40	
Ever medically sterilized	0.28	***	0.24	***	0.25	**	0.17	***
Mother was employed	1.20		1.15		1.18		0.56	
Mother college educated	0.83		1.59		1.27		2.10	
Current partner employed	0.88		0.87		0.24	*	1.17	
Currently works full time	2.16	***	3.01		2.96	*	1.78	
Currently works part time	0.75		5.12	*	0.98		2.28	
Has diploma	1.44		1.02		3.49		3.99	*
Has some college	1.14		0.39		5.36	*	11.79	***
Has college degree	1.35		0.44		16.51	***	15.69	***
Church attendance freq	0.59	***	1.03		0.52		0.87	
	n=2675		n=755		n=247		n=237	

Notes: *p<.05; **p<.01; ***p<.001

[a] Versus having two or more children

Table 4. Logistic Regressions Predicting Singleton Births[a] to NSFG Women Ages 40-44, by Race and Marital Status

	1. Evermarried				2. Nevermarried			
	a. Whites		*b. Blacks*		*a. Whites*		*b. Blacks*	
Dependent Variables	Odds		Odds		Odds		Odds	
Age (within 40-44)	0.97		1.10		1.43		0.84	
Ever divorced	1.64	*	2.95	***	n/a		n/a	
Ever cohabited	0.95		0.94		0.05	*	1.29	
Age at marriage	1.10	***	1.07	***	n/a		n/a	
Not native born	0.93		0.62		0.16		1.33	
NSFG cycle	1.34	**	0.63	**	1.32		0.64	
Latino	0.88		2.40		1.50		0.30	
Pregnancy difficulty	2.82	***	2.20	*	0.01	*	2.03	
Ever had fertility assistance	1.78	***	2.30	**	0.02		1.33	
Ever medically sterilized	0.43	***	0.35	***	0.82		0.14	***
Mother was employed	1.00		1.43		4.82		0.52	
Mother college educated	0.93		1.15		0.01	*	1.36	
Current partner employed	0.76		1.30		20.50		0.91	
Currently works full time	1.44	*	2.67	**	103.05	*	1.49	
Currently works part time	1.12		2.15		0.38		0.50	
Has diploma	1.75	*	1.68		0.08		3.28	*
Has some college	1.69	*	1.75		0.18		4.41	*
Has college degree	1.35		3.02	**	6.80		9.72	**
Church attendance freq	0.67	***	0.78		0.41		0.69	
	n=2342		n=682		n=64		n=167	

Notes: *p<.05; **p<.01; ***p<.001

[a] Versus having two or more children