"Fertility of the Hispanic Population of the United States in Historical Perspective: Evidence from the Census of 1910."*

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ABSTRACT

The demography of the Hispanic population of the United States has received considerable attention for recent time periods. But historical perspective is more difficult to obtain. This is partly a function of data limitations, since it was not simple to identify the Hispanic origin population before the census of 1970. Studies that have done this have been local in nature, but it has not been possible to do a comprehensive national study. Now there exists a nationally representative sample of the Hispanic population of the United States based on the manuscripts of the 1910 census. It contains about 71,500 persons of Hispanic origin plus about another 24,000 of their non-Hispanic neighbors. It was sampled from six states (California, Arizona, New Mexico, Texas, Kansas, and Florida) where most of the Hispanic origin population lived. The criteria of mother tongue, Hispanic surname, place of birth, and place of birth of parents were all used to identify individuals. Previous work for recent years has pointed to relatively high fertility in the Hispanic population, tracing it mostly to Mexican and Puerto Rican origin groups. Analysis of this sample indicates this was historically true, at least for the Mexican origin population, which was the predominant part of the 1910 Hispanic population. This paper presents a detailed analysis of the fertility patterns of the Hispanic population at the turn of the century using own-children methods. In addition to standardized age-specific child woman ratios, total fertility rates and total marital fertility rates are estimated, as well as estimates of If and Ig. Multivariate analysis of the fertility of individual women (children ever born and own young children present) is used to assess the controlled effects of such variables as socio-economic status (based on occupation and home/farm ownership), region, rural-urban residence, woman's employment, ethnicity, race, and literacy.

INTRODUCTION

The Hispanic population of the United States is a large and rapidly growing part of the nation. In the 2000 census, for example, 36,306,000 individuals identified themselves as of Hispanic or Latino origin. Of that total, 20,641,000 reported Mexican identity (58%). The total Hispanic population had grown from 22,379,000 in only ten years, a growth rate of 4.6% per annum – almost four times the overall national population growth rate for the same period (1.2% per annum) [U.S. Bureau of the Census, 2001, Tables 1, 10, & 23].[1]

The demography of the Hispanic population of the United States has received considerable attention for recent years [e.g. Bean and Tienda, 1987; Bean and Swicegood, 1985; Jaffe, Cullen, and Boswell, 1980]. The historical perspective has, however, been more difficult to obtain. This is partly a function of data limitations, since it is not simple to identify the Hispanic-origin population before the census of 1970 [Bean and Tienda, 1987, ch. 2]. For work with censuses prior to 1970, birthplace, foreign parentage, language, and race (in 1930) have been used. When dealing with original manuscript census data, Hispanic surnames have also been used. The studies that have done this have been local in nature. For instance Gutmann and Fliess [1996] sampled census manuscripts for 1900 and 1910 for six rural Texas counties to make estimates of childhood mortality. For an earlier period Bradshaw and Bean [1972] took a sample of Hispanic surname individuals and those born in Mexico to compare to the native white population in Bexar County, Texas (which contains the city of San Antonio) from the census of 1850. Forbes and Frisbee [1991] made estimates of infant mortality for the Spanish surname population of San Antonio and Bexar County, Texas from 1936 to 1985. More recently, Gratton and Gutmann [2000] have made estimates of the size and national origin of the entire Hispanic population since 1850.

There now exists a nationally representative sample of the Hispanic population of the United States based on the manuscripts of the 1910 census [Gutmann, et al.1998; Gutmann and Ewbank, 1999; Gutmann, Frisbee, and Blanchard, 1999]. It forms the basis for the analysis in this paper and will be described in detail below. This paper will present a detailed analysis of the fertility patterns of the Hispanic population at the turn of the century using that sample and own-children methods [United

1. Some of this very rapid growth was due to immigration, but a considerable portion was caused by ethnic re-identification by individuals already in the United States.

Nations, 1983, chs. II & VIII]. Comparisons are made to the African American and non-Hispanic white populations, using both the special Hispanic sample and the 1910 nationally representative IPUMS sample of approximately 366,000 individuals. In addition to standardized age-specific child woman ratios, we estimate total fertility rates and total marital fertility rates, as well as estimates of If and Ig for comparisons to the results of the European Fertility Project. Estimates of the extent of fertility control early in marriage are made using cohort parity analysis. Finally, multivariate analysis of the fertility of individual women (children ever born and own young children present) is done to assess the controlled effects of such variables as socio-economic status (based on occupation and home/farm ownership), region, rural-urban residence, woman's employment, ethnicity, race, and literacy.

DATA AND METHODS

The data set has already been briefly mentioned above. It is a nationally representative sample which includes about 71,000 persons of Hispanic origin plus about another 24,500 of their non-Hispanic neighbors, who lived in 57 counties in six states (California, Arizona, New Mexico, Texas, Kansas, and Florida).[2] These six states were chosen since it was estimated that most of the Hispanic origin population was living there in 1910. The criteria of mother tongue, Hispanic surname, place of birth, and place of birth of parents were all used to identify individuals as Hispanic. There are 16,888 Hispanic women in that sample between the ages of 15 and 50 and 6,285 non-Hispanic women in the same age group. For currently married women, there are 10,903 Hispanic and 4,034 non-Hispanic women. This sample can be combined with the nationally representative IPUMS sample from the U.S. Census of 1910 with appropriate sampling weights assigned. The nationally representative sample (of approximately 366,000 individuals overall) contains an additional 778 Hispanic women and 94,322 non-Hispanic women aged 15 to 50. Of those women, 543 and 60,517, respectively, were ever-married. The samples both contain information on children ever born, children surviving, duration of current marriage, and number of times married. In addition, the IPUMS project has made assignments of own-children to their mothers, creating the variable for each woman of number of own-children present aged 0-4. These women and their own-child data in the combined sample are the basis for this analysis, as well as

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2. The data are available as part of the Integrated Public Use Microdata Series (IPUMS) from the University of Minnesota [Sobek and Ruggles, 1999; Ruggles and Sobek, 1995; Ruggles and Menard, 1995]. The IPUMS can be found on the World Wide Web at http://www.hist.umn.edu/~ipums.

mortality estimates based on indirect estimation using the data on children ever born and children surviving [Gutmann, et al., 2000]. Another set of sources is found in set of published studies done in conjunction with the 1940 U.S. Census [U.S. Bureau of the Census, 1943, 1944, 1945a, 1945b], in which samples were taken from the data on number of children ever born from the censuses of 1910 and 1940. In addition, in those volumes women were matched to their own young children and tabulations were made of the numbers of children below age five by age of woman. This was the first use of own-children methods, which are described there and elsewhere [U.S. Bureau of the Census, 1944; Grabill and Cho, 1965; United Nations, 1983, ch. VIII].

The methodology here is indirect estimation of demographic measures with own-children analysis. The basic intuition is that children can be matched to their mothers. These methods make use of information given directly in a census or survey on a woman's children (such as children ever born, children surviving, number of births in the year before the census) or information obtained by linking surviving children to their mothers within households. The latter provides, for example, data on number of surviving own-children aged 0-4 years for each woman. These data then allow computation of age-specific child woman ratios both all women and for married women (children aged 0-4 per woman or married woman aged 15-19, 20-24,....,45-49).

These child-woman ratios can, in turn, be used to estimate age-specific birth rates, total fertility rates, total marital fertility rates, and gross and net reproductions rates. To do this, the ratios must be adjusted for relative underenumeration of women and children, mortality of women and children in the five years prior to the census, and children missing from their mothers for reasons other than mortality. Estimates of relative underenumeration were taken from previous studies of the white and black populations of the United States [Coale and Zelnik, 1963; Coale and Rives, 1974]. Adjustments for children missing from their mothers for reasons other than mortality were estimated directly from the census samples as the ratio of all children in a group (e.g. white, black) to the number of matched (own) children. Finally, mortality of women and children was obtained from contemporary life tables for 1909-11 [Glover, 1921] and from indirect estimates of childhood mortality generalized to the adult population using Coale and Demeny [1966] West Model life tables [Haines and Preston, 1997; Gutmann, et al. 2000; Haines, 1998]. These procedures applied to historical data have been described in detail elsewhere

[Haines, 1979; 1989].

DIFFERENTIAL FERTILITY

Previous work for recent years has pointed to relatively high fertility in the Hispanic population [Bean and Tienda, 1987, ch. 7 and Tables 7.1 and 7.2; Bean and Swicegood, 1985; Jaffe, Cullen, and Boswell, 1980]. The theory behind this generally appeals either to (a) the subcultural hypothesis; (b) the socioeconomic characteristics hypothesis; (c) the minority group status hypothesis; or (d) the economic hypothesis. These views are not mutually exclusive, and some or all of them might be operating simultaneously. The subcultural hypothesis posits that fertility norms from areas of origin of migrants or of the descendants of such migrants remain an influence over time. Most Hispanics originated ultimately in nations with high fertility norms. Mexico, at least in the past, is a prominent example. Longer residence in the U.S. would be expected to lead to convergence toward American norms, but some residual effect might persist over time.

The social characteristics hypothesis proposes that Hispanics were (and are) systematically different from the majority native white population and even from other immigrants and native-born minority groups. They have lower levels of education, literacy, and income; have higher mortality; live in less desirable housing and neighborhoods; and have lower SES occupations on average. The argument runs that if these differences are controlled, then the group fertility differentials would disappear.

The third explanation is the minority group status hypothesis [Bean and Marcum, 1978]. It suggests that membership in a minority group might have an independent effect on behavior [e.g., Goldscheider and Uhlenberg, 1969]. Generally, the view is that minority group status perceptions, stemming from social disadvantages and sometimes smallness of the group, would be pro-natalist. But counterexamples can be cited, such as Japanese-Americans and middle class African-Americans, who view large families as an impediment to achieving higher SES.

Finally, the economic hypothesis is based on the “new home economics” pioneered by Gary Becker and other economists [e.g., Becker, 1991]. It emphasizes the value of a woman’s time (opportunity costs) as crucial in the tradeoff between market work and time-intensive activities in the home, including child-rearing. Women with higher levels of education, training, and labor force experience (and higher SES generally) would be expected to have the lowest fertility. This hypothesis is really a subset of the social

characteristics hypothesis and emphasizes on particular dimension, human capital and opportunity cost. Again, these hypotheses are not necessarily mutually exclusive and are not easy to discriminate one from another.

Some idea of differential fertility in the United States by race and ethnicity may be seen in Table 1. That table presents average parity (children ever born) for total women aged 15-44 and also all women aged 35-44 (and hence nearing then end of their reproductive lives). These averages are based on published data covering the censuses of 1910 and 1940 through 1990. In addition, the IPUMS for 1900 was used to provide some estimates for the overall, white, and black populations at that date. The Hispanic sample yields the estimate for the Hispanic and non-Hispanic black and white populations in 1910. Estimates are thus available for the Hispanic population for 1910 and for 1960 to 1990. Further, there is information on women born in Mexico for 1910, 1940, and 1970, on the Spanish surname and non-Spanish surname populations (for five southwestern states) in 1950 and 1960, and on the Spanish-origin population in 1980.

In general, the Hispanic population has exhibited higher than average fertility during the 20th century. In 1910, the Hispanic population had average parity for women aged 35-44, 50% higher than the national average and 56% higher than the non-Hispanic white population. By 1980, Hispanic fertility had converged toward the average, but Mexican and Puerto Rican origin women still had higher than average parity. Starting in 1960, data were published by subgroups of the Hispanic population, showing substantial intragroup variation. Mexican and Puerto Rican women maintained above average fertility while Cuban women had considerably lower birth rates. The overall impression from Table 1 is that Hispanics had higher fertility throughout the century with some convergence by 1990. The differentials in 1910 were, however, very large.

American vital statistics only began reporting Hispanic-origin in 1989. Table 2 reports total fertility rates (TFRs) for different racial and ethnic groups, including the Hispanic-origin population, for the period 1989 to 2001. The Hispanic population is broken down into Mexican-origin women, Puerto-Rican origin women, Cuban-origin women, and other Hispanic-origin women. The basic results from Table 1 are confirmed, but with some interesting nuances. The upper panel of the table shows that there has been convergence of birth rates among the major racial and ethnic groups except for Hispanics. For

them, birth rates have remained stable or even increased, largely due to the relatively high fertility of Mexican-origin and other Hispanic-origin women (many from Central America, the Dominican Republic, and Colombia). The fertility of Cuban-origin women continues to be relatively low, although the rates have risen in recent years. Puerto Rican women have birth rates that were declining but have risen in the past few years. The conclusion here is that the Hispanic-origin population remains distinctive in its fertility behavior.

A more detailed look at differential Hispanic fertility in 1910 is provided by Table 3. That table presents age-specific overall and marital child-woman ratios (children 0-4 per 1,000 total women and per 1,000 currently married women with spouse present, respectively). The table also gives an overall ratio and one standardized to the age structure of all women in 1910 (for the overall child-woman ratios) and all married women in 1910 (for the marital child-woman ratios). The ratios in Table 3 were calculated from the national 1910 IPUMS for the total, white, black, and other nonwhite populations and from the special Hispanic sample for the Hispanic, white non-Hispanic, black non-Hispanic, and the state populations. The individual states were for five of the six states which were sampled for the Hispanic sample.[3] Again, the high fertility of the Hispanic population is confirmed. The overall unstandardized Hispanic child-woman ratio was 42% higher than the national average, 43% higher than that of the national white population, and 37% higher than that of the white non-Hispanic population in the Hispanic sample area. The relative situation was not much changed by looking at the age-standardized ratios. Notably, current Hispanic fertility was significantly higher than that for blacks, both nationally (36% higher) and especially for non-Hispanic blacks in the Hispanic sample (75% higher). The data for individual states did not show dramatic differences with the exception of the higher fertility in New Mexico.[4] Similar results held for the marital child-woman ratios. The Hispanic population had marital fertility 29% higher than both the national average and the white population. The Hispanic marital child-woman ratio was 34% higher than the non-Hispanic white population in the Hispanic sample. Both Texas and New Mexico appear to have had very high marital fertility.

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[3] Kansas is excluded because of small sample sizes.

4. The calculations for the states include both the Hispanic and the non-Hispanic white and black populations. Hence their averages are less than the average for the sample for the Hispanic population.

More standard demographic measures are presented in Table 4. That table gives age-specific overall (upper panel) and marital (lower panel) fertility rates, along with the total fertility rate (TFR), gross reproduction rate (GRR), net reproduction rate (NRR), total marital fertility rate (TMFR), and the Coale-Trussell "M" and "m" measures of fertility control.[5] The last three rows of both the upper and lower panels are from the Hispanic sample alone. The rows above are each from the weighted combined sample. The differences between similar rows stem from that point. Again the higher fertility of the Hispanic population is evident. This table should be considered in conjunction with Table 5, which gives the Coale indices of overall fertility (I_f), marital fertility (I_g), proportions married (I_m), and nonmarital fertility (I_h) by race an ethnicity for the United States and for a selected group of other nations over the period 1871-1934 for comparison. The index of nonmarital fertility (I_h) was not calculated for the United States given the difficulty of ascertaining illegitimate births there. All births were assigned to the legitimate category and used to calculate I_g.

Once more the Hispanic population could be seen to have had quite high fertility: the synthetic cohort of all Hispanic women had over five children (TFR) in 1910 and almost six children for currently married women with spouse present (TMFR). This contrasts with TFR's of 3.6 for the overall population and 3.4 for white non-Hispanic women and with TMFR's of 4.8 and 4.7 for the same groups. The "m" values point to little or no evidence of fertility regulation in the Hispanic population. (An "m" value below about .4 is in the range where fertility control is much less likely.) This makes Hispanic women similar to black women and unlike white women, especially native-white women. The high I_g value for the Hispanic population (.640) in 1910 was exceeded only by Ireland and (likely) Bulgaria and European Russia (of the nations presented in Table 4). Further, Hispanic women had more extensive nuptiality (I_m = .659) than found in western Europe (but not eastern Europe) in this era. Foreign-born white women had a nuptiality pattern of early and more extensive marriage more similar to that of Hispanic women.

Overall, then, the high fertility and the earlier and more extensive marriage of the Hispanic female population is confirmed by these estimates. Levels of marital fertility and nuptiality were comparable to those of the higher fertility nations of eastern Europe. Marital fertility was only moderately below that of Ireland in 1911 (I_g = .708), indicating that a substantial portion of the Hispanic population of the United

5. The TFR, GRR, and NRR apply to women aged 15-49. The TMFR applies to women aged 20-44.

States at the turn of the century was a natural fertility population.

The relatively high fertility of the Hispanic population was not of recent origin in 1910. Table 6 provides calculations of average parity for age cohorts (and corresponding approximate birth years) from both the nationally representative sample and the Hispanic sample well back into the 19th century. The completed fertility of ever-married native-born Hispanic women was considerable higher than for native-born white women, foreign-born white women, and even black women. It was also above that for foreign-born Hispanic women, about two thirds of whom were of Mexican origin. But the foreign-born Hispanic women did have relatively high parities at all ages.

COHORT PARITY ANALYSIS

A methodology known as cohort parity analysis (CPA) was developed in the 1980s to evaluate the degree of fertility control with marriage to a finer degree than the Coale and Trussell "M" and "m" values [David, et al. 1988; David and Sanderson, 1988]. The method uses a "model" population assumed to be close to natural fertility, that is, fertility without a significant amount of deliberate limitation of births either through stopping or spacing. The "model" population is taken as married rural Irish women in 1911, which is the same population used in the original CPA work [Great Britain, 1913]. The distribution of parity (cumulative fertility or children eve born) in a population being analyzed (the target population) is compared to the model distribution by marriage duration and age at marriage. For this to be appropriate, most or almost all fertility must take place within marriage, which seems to have been the case in the United States in the early 20th century.[6] The degree to which the target population deviates from the model distribution gives estimates of upper and lower bound proportions of controllers in the target population. In general, the deviation results from the fact that the target population has a distribution that is less "flat" than the model distribution.

Some results of the application of CPA to the 1910 U..S. census samples is found in Table 7. The data are organized by race, nativity, and ethnicity for the nationally representative and Hispanic samples separately. C(L) is the lower bound estimate for the proportion of controllers in each group. C(U) is the

[6] There certainly was illegitimate fertility in early 20th century America. But the stigma attached was so great that it was either unreported or reported as legitimate. For instance, the State of Massachusetts stopped reporting births by legitimacy status in the 1890s because it was felt that the reporting of illegitimacy was wholly unreliable.

corresponding upper bound estimate of the proportion of controllers. The midpoint estimate is simply the arithmetic average of the two. In each panel of Table 7, there is also an estimate of the mean number of births to controllers in each group.

Overall, it is apparent that non-Hispanic white women, especially non-Hispanic white women, were substantially controlling their number of births by 1910. Among these women, 67-69% of married women who had been married 5 to 9 years ans who were married at ages below 35 years were controlling. There is evidence that this control was not just stopping behavior (terminating childbearing at earlier ages), but also spacing from early in marriage [Haines, 1989, 1990]. The Coale & Trussell "m" value provides evidence mostly on stopping while lower "M" values indicate spacing early in marriage. Table 4 shows that both seemed operative. Surprisingly, a the extent of control was almost as great among foreign-born white women (62% controllers), although they had more births per woman who was attempting to limit births. In contrast, black women were much less likely to control their fertility (45% controllers), a result also confirmed by the "m" and "M" values in Table 4. In the Hispanic sample, Hispanic women of all races were comparable to the national black population in the lesser extent of fertility control (44-46% controllers). When Hispanic women did control their family size, however, they were about as effective as the white population in terms of numbers of births to controllers.

MULTIVARIATE ANALYSIS

In an effort to explore the issue of the covariates of fertility, multivariate analysis need to be undertaken. In terms of dependent variables, the number of own children aged 0-4 can be used to measure recent fertility. Another option is to use parity (children ever born) for older women to measure completed or near completed fertility. Finally, a new index will be tried. It is a ratio of actual parity achieved to an expected parity. The expected parity is based on a standard natural fertility population for women of the same marriage duration and age at first marriage (or alternatively age). The standard population in this case is women in rural Ireland in 1911 [Great Britain, 1913], the same population chosen as the natural fertility standard for cohort-parity analysis. This index would have an intuitive interpretation similar to that of I_g – values closer to 1 would indicate behavior closer to natural fertility.

In terms of independent variables, it is important to determine if residence (rural-urban), race, nativity of the woman and her spouse, employment status of the women, literacy of the woman and her spouse,

occupation of spouse (used as a general measure of SES), state or region of residence, and home or farm ownership exert an independent effect on current or past fertility. These variables are available from the census. In the case of age, it is introduced for current fertility (Tables 8 and 10) in a curvilinear fashion as a control for the well-known non-linearity of birth rates with age. For completed parity (Table 9), it is introduced as a control for the time trend seen in Table 6.

Statistically, the number of young own children present is technically a limited value dependent variable (taking on values of 0,1,2 and even 3,4, and 5). Earlier work [Haines, 1979, ch. IV] has indicated that ordinary least squares (OLS) works quite well, since the number of own children aged 0-4 present is an ordered, interval measure with six outcomes (albeit skewed in distribution). Children ever born is closer to continuous and the fertility index is virtually continuous, although both are lower bounded at zero. Ordered probit was estimated, and the relatively rankings and significance levels of the variables were very similar to the OLS estimates. Only the OLS estimates are given here.

Tables 8-10 present the results of the regressions for recent fertility (own young children present to women aged 15 to 49) in Table 8, cumulative fertility for older women (children ever born to women aged 40 to 69 years) in Table 9, and the fertility index (for women aged 15 to 54 years) in Table 10. In general, the results for the fertility index were similar to those for current fertility. Child mortality (children dead or a mortality index) was not included on the right-hand side of the models because of endogeneity issues. Test with the mortality index included pointed to consistent, strong positive relationships with current fertility and the fertility index.

For the national population sample of the white population, foreign nativity of either wife or husband tended to raise fertility, while literacy (a weak proxy for education) tended to lower it. Urban residence produced lower fertility, as did having a wife in the labor force. Homeownership was correlated with lower fertility in the native-born white population but not in the foreign-born white population. Having a husband who reported some unemployment in the year prior to the census was associated with higher fertility, as was having a husband with an unskilled occupation (laborer, the omitted dummy variable) or in farming (being a farmer or farm laborer). Similarly, residence on a farm was correlated with higher fertility. Residents of the Northeast (New England and the Middle Atlantic states) experienced lower birth rates than in the south, the western Midwest (West North Central region), and the Mountain states.

None of these results are particularly surprising and accord with what is generally known about differential fertility in the United States in the early 20th century [Haines, 2000, pp. 157-163].

In contrast, the national sample of the black population showed few distinctive characteristics in describing fertility. This is likely the case because the black population was relatively more homogeneous: 73% rural, 58% of adult males in farming, and concentrated in low SES occupations. It was true that residence in an urban place was related to lower fertility and that a husband reporting some unemployment or an agrarian occupation was associated with lower fertility.

In the Hispanic sample, the results are less clear. the lower fertility of foreign-born Hispanic women is confirmed for current fertility but not (significantly) for completed family size. The highest current fertility was found in Texas, with California next. Texas also had the highest completed parity, but California had the next to lowest levels in this. Having a wife in the labor force definitely depressed fertility, while having a husband as a farmer raised current, but not lifetime, fertility. The opposite was true for residence on a farm, with higher lifetime parity but no significant effect on current birth rates. Husband's reported weeks unemployed had no effect on either current or lifetime fertility. Urban residence depressed current birth rates but was not significantly associated with completed family size among older women (or even a positive effect for foreign-born Hispanic women). Woman's literacy status had a negative sign and significant coefficient only for completed parity for all Hispanic women. Husband's literacy had the opposite to expected effect (positive sign) on both current fertility and parity among older women. Husband's occupation revealed higher current fertility for farmers and lower current fertility for professional and technical occupations and for service workers. The results for the white non-Hispanic portion of the Hispanic sample generally resembled the white population in the nationally representative sample.

The results of the multivariate analysis for the nationally representative sample seem consistent with the socioeconomic characteristics hypothesis and the new home economics view. Children were more valuable to families with lower SES since their labor, both market and non-market work, was more necessary to family well-being. Lower SES families were also less likely to have effective control of marital fertility. For the Hispanic sample, the results are similar. The lower fertility of foreign-born Hispanic women does not support the subcultural hypothesis (that higher fertility immigrant groups

originated in higher fertility cultural environments). Since the minority group status hypothesis predicts that the sign could go in either direction, it lacks predictive power. The best that can be said is that both Hispanic women, either native- or foreign-born, and foreign-born white women had higher current fertility and larger completed family sizes than native-born white women. The same was true for the black population.

CONCLUDING DISCUSSION

The analysis of the nationally representative PUMS and the special Hispanic sample has revealed that Hispanic women had both higher current fertility and large completed family size than the white population, whether native- or foreign-born. This was true for the national sample of whites and the non-Hispanic white population in the Hispanic sample. Interestingly, Hispanic fertility was also generally higher than that for the black population, which also did indeed have higher current birth rates and larger completed family size than the white population. Interesting differences did appear between current fertility and lifetime completed family size. Analysis of the extent of fertility control, using the Coale and Trussell model and cohort parity analysis, yielded results quite consistent with this. Fertility control was rather extensive in the white population by 1910 with evidence of both stopping and spacing behavior. The multivariate analysis yielded results fairly consistent with what is known about differential fertility in the United States in the early 20th century for the white population. The results for the national black population were not particularly able to discriminate covariates, partly because of the relatively greate homogeneity of the largely rural, agrarian, poor black population in that era. The Hispanic population did reveal some interesting results, most notably very high current fertility and completed family size and higher fertility among native-born Hispanic women relative to foreign-born Hispanic women (and foreign-born white women as well). The results provide some support for the socioeconomic characteristics and the new home economics hypotheses to explain differential fertility. The subcultural hypothesis was definitely not confirmed for the Hispanic population, bur earlier work on the 1910 PUMS national sample does point to some support for that when different ethnic and nativity groups are compared to their areas of origin [Morgan, et al., 1994].

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Table 1. Children Ever Born By Race, Ethnicity, Marital Status, & Age.
United States. 1900-1990.

	1900	1910	1940	1950	1960	1970	1980	1990
Children Ever Born per 1,000 Women aged 15-44								
Total	1793	1694	1214	1395	1746	1621	1302	1224
White	1745	1662	1186	1372	1712	1589	1246	1169
Black	2162	2086	1437	1568	2016	1862	1576	1432
Amerindian				2405	2116	1687	1611	
Asian				1521	1421	1194	1097	
Other			1668	1984	1550		1602	
Non-Hispanic								
White		1631				1232		
Black		2103				1575		
Amerindian						1701		
Asian						1184		
Other						1164		
Hispanic		2448			----	1919	1591	1513
Mexican					2290	2114	1715	1611
Puerto Rican					1855	1938	1662	1503
Cuban					----	1310	1069	1066
Other					----	1719	1355	1349
Born in Mexico		2790	3144			2473		
Spanish Origin						1591		
Spanish Surname(a)					2046		2291	
Non-Spanish Surname(a)							1330	1697
Children Ever Born per 1,000 Women aged 35-44								
Total	3886	3525	2320	2112	2465	2958	2639	1960
White	3784	3450	2279	2079	2419	2884	2544	1849
Black	4811	4548	2645	2370	2836	3485	3185	2250
Amerindian				4202	4267	3462	2481	
Asian				2344	2556	2272	1933	
Other			3570	3544	3222		2826	
Non-Hispanic								
White		3400				2523		
Black		4517				3184		
Amerindian						3466		
Asian						2256		
Other						2519		
Hispanic		5277			----	3523	3202	2587
Mexican					3834	4222	3646	2848
Puerto Rican					2873	3240	3202	2450
Cuban					----	1932	2033	1759
Other					----	3041	2640	2246

Table 1 (cont.)

	1900	1910	1940	1950	1960	1970	1980	1990
Children Ever Born per 1,000 Women aged 35-44								
Born in Mexico	5298	4502			3834	4186		
Spanish Origin						3202		
Spanish Surname(a)				3921		3810		
Non-Spanish Surname(a)						1816	2258	

(a) Five southwestern states only (Arizona, California, Colorado, New Mexico, and Texas).

SOURCE: 1900: calculated from the 1900 PUMS. 1910: calculated from the 1910 PUMS Hispanic Sample and from U.S. Bureau of the Census [1945a], Tables 10-12. 1940: calculated from U.S. Bureau of the Census [1945a], Tables 7-10, 40. 1950: calculated from U.S. Bureau of the Census [1955], Tables 1, 12, 14. 1960: calculated from U.S. Bureau of the Census [1964], Tables 1, 8-11. 1970: Calculated from U.S. Bureau of the Census [1973], Tables 1, 8, 13. 1980: Calculated from U.S. Bureau of the Census [1983], Tables 84, 121, 131, 166. 1990: calculated from U.S. Bureau of the Census [1993], Tables 41, 114.

Table 2. Total Fertility Rates. By Race & Hispanic-Origin. United States. 1989-2001.

	All Women	White Women	Black Women	Amerindian Women	Asian & Pacific Islander Women	Total Hispanic Women	Non-Hispanic White Women	Non-Hispanic Black Women
1989	2014.0	1931.0	2432.5	2247.0	1947.5	1921.0	1770.0	2424.0
1990	2081.0	2003.0	2480.0	2183.0	2002.5	1979.5	1850.5	2547.5
1991	2073.0	1995.5	2480.0	2169.0	1956.0	1959.5	1826.5	2551.0
1992	2065.0	1993.5	2442.0	2190.0	1942.0	1941.0	1810.5	2514.0
1993	2046.0	1982.0	2384.5	2141.0	1935.5	1918.5	1792.5	2454.5
1994	2036.0	1985.0	2300.0	2080.0	1943.0	1905.0	1792.0	2365.0
1995	2019.0	1989.0	2175.0	2033.5	1924.0	1881.0	1786.5	2245.0
1996	2027.0	2005.5	2144.0	2030.0	1907.5	1881.0	1795.5	2204.0
1997	2032.5	2009.0	2154.0	2047.5	1925.5	1888.5	1801.0	2210.5
1998	2058.5	2041.0	2171.0	2090.5	1867.5	1919.5	1837.0	2235.5
1999	2075.0	2065.0	2146.5	2056.5	1927.0	1929.5	1850.0	2212.5
2000	2130.0	2113.5	2193.0	2100.5	2072.5	1968.0	1879.0	2256.0
2001	2114.5	2109.5	2123.5	2074.5	2035.5	1936.0	1853.0	2190.5

	All Hispanic Women	Mexican-Origin Women	Puerto Rican Origin Women	Cuban-Origin Women	Other Hispanic-Origin Women
1989	2903.5	2916.5	2421.0	1479.0	2683.0
1990	2959.5	3214.0	2301.0	1459.5	2877.0
1991	3002.5	3317.5	2276.0	1385.5	2817.0
1992	3043.0	3196.5	2644.5	1485.5	3076.0
1993	3020.5	3174.0	2523.5	1632.5	3038.5
1994	3014.0	3211.5	2490.0	1680.5	2855.5
1995	3019.5	3273.5	2245.5	1705.5	2834.0
1996	3047.5	3353.5	2163.0	1774.5	2762.0
1997	2999.5	3307.5	2164.0	1814.5	2653.5
1998	2947.5	3198.0	2268.0	1560.0	2719.0
1999	2985.0	3181.5	2378.0	1563.0	2836.5
2000	3108.0	3265.5	2584.0	1871.0	2969.5
2001	3165.0	------	------	------	------

Source: Martin et al. (2002), Tables 4 & 9.

TABLE 3. Age-specific & Age-standardized Marital Child-woman Ratios. By Race & Ethnicity. Married Women with Spouse Present. United States, 1910.

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Overall	Standardized
				Per 1,000 Total Women					
Total Population									
Ratio	63.9	472.4	730.5	695.1	552.2	320.0	98.1	428.8	428.8
Children	1164	8340	11443	9093	6771	3140	824	40775	
Women	18230	17655	15665	13081	12262	9811	8396	95100	
White Population									
Ratio	56.3	459.1	736.0	699.0	551.8	317.9	92.7	425.2	425.5
Children	897	7067	10099	8145	6015	2828	703	35754	
Women	15933	15393	13721	11653	10901	8896	7587	84084	
Black Population									
Ratio	112.3	560.9	682.7	638.0	544.6	337.9	139.1	447.2	443.2
Children	246	1220	1261	853	702	293	106	4681	
Women	2191	2175	1847	1337	1289	867	762	10468	
Other Nonwhite Population									
Ratio	198.1	609.2	855.7	1044.0	750.0	395.8	319.1	620.4	601.3
Children	21	53	83	95	54	19	15	340	
Women	106	87	97	91	72	48	47	548	
Hispanic Sample									
Hispanic Population									
Ratio	133.0	785.9	1036.7	889.2	707.7	409.3	185.7	609.5	614.3
Children	491	2566	2908	1829	1387	591	216	9988	
Women	3693	3265	2805	2057	1960	1444	1163	16387	
White Non-Hispanic Population									
Ratio	76.1	556.5	772.3	622.2	531.7	286.0	64.1	445.6	434.4
Children	75	552	702	504	377	155	27	2392	
Women	985	992	909	810	709	542	421	5368	
Black Non-Hispanic Population									
Ratio	73.8	503.4	386.5	481.5	437.5	329.3	67.8	348.8	333.9
Children	9	74	63	52	42	27	4	271	
Women	122	147	163	108	96	82	59	777	
Texas									
Ratio	111.2	697.6	970.1	801.6	643.8	374.1	197.3	558.6	559.9
Children	223	1292	1525	974	703	312	132	5161	
Women	2005	1852	1572	1215	1092	834	669	9239	
Arizona									
Ratio	111.1	799.0	907.0	830.9	586.3	375.7	99.2	579.4	556.4
Children	46	310	361	231	146	65	12	1171	
Women	414	388	398	278	249	173	121	2021	
New Mexico									
Ratio	99.4	754.5	1021.7	847.4	776.6	456.4	156.3	580.7	605.0
Children	104	630	706	461	445	199	55	2600	
Women	1046	835	691	544	573	436	352	4477	

Table 3 (cont.)

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Overall	Standardized
California									
Ratio	141.9	683.7	898.8	728.6	650.2	290.3	139.7	543.0	528.5
Children	62	268	373	255	210	63	25	1256	
Women	437	392	415	350	323	217	179	2313	
Florida									
Ratio	156.0	739.5	885.5	792.8	572.2	326.8	72.8	550.6	536.0
Children	139	684	704	463	301	133	23	2447	
Women	891	925	795	584	526	407	316	4444	

Per 1,000 Married Women (Spouse Present)

Total Population									
Ratio	506.2	955.7	1020.5	883.6	687.6	400.8	127.2	720.9	721.4
Children	1024	7903	11030	8802	6511	2997	784	39051	
Women	2023	8269	10808	9961	9469	7477	6162	54169	
White Population									
Ratio	498.5	969.5	1030.8	889.6	688.1	397.5	120.1	719.9	725.2
Children	823	6808	9838	7957	5866	2735	677	34704	
Women	1651	7022	9544	8944	8525	6881	5637	48204	
Black Population									
Ratio	535.5	884.3	932.0	803.0	676.8	434.7	187.8	720.8	688.7
Children	181	1047	1111	754	599	243	92	4027	
Women	338	1184	1192	939	885	559	490	5587	
Other Nonwhite Population									
Ratio	588.2	761.9	1125.0	1166.7	779.7	513.5	428.6	846.6	832.9
Children	20	48	81	91	46	19	15	320	
Women	34	63	72	78	59	37	35	378	
Hispanic Sample									
Hispanic Population									
Ratio	558.0	1184.2	1252.0	1050.4	826.4	511.5	235.1	928.9	886.9
Children	452	2404	2767	1730	1300	532	182	9367	
Women	810	2030	2210	1647	1573	1040	774	10084	
White Non-Hispanic Population									
Ratio	452.8	929.4	1018.0	760.3	650.1	337.2	83.9	690.4	672.0
Children	72	540	678	482	366	146	26	2310	
Women	159	581	666	634	563	433	310	3346	
Black Non-Hispanic Population									
Ratio	416.7	873.0	739.7	547.9	576.3	480.8	148.1	604.5	581.7
Children	5	55	54	40	34	25	4	217	
Women	12	63	73	73	59	52	27	359	
Texas									
Ratio	543.0	1144.1	1267.2	974.5	781.2	480.9	242.3	893.0	858.0
Children	202	1199	1451	919	664	289	110	4834	
Women	372	1048	1145	943	850	601	454	5413	

Table 3 (cont.)

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Overall	Standardized
Arizona									
Ratio	457.4	1140.1	1145.7	977.5	681.6	435.1	128.2	858.4	793.8
Children	43	293	346	217	137	57	10	1103	
Women	94	257	302	222	201	131	78	1285	
New Mexico									
Ratio	453.3	1123.4	1179.3	966.4	882.5	517.0	185.0	862.0	848.5
Children	97	619	671	432	413	182	47	2461	
Women	214	551	569	447	468	352	254	2855	
California									
Ratio	716.0	1058.8	1097.3	873.6	762.5	376.7	174.2	812.8	773.8
Children	58	252	361	242	199	55	23	1190	
Women	81	238	329	277	261	146	132	1464	
Florida									
Ratio	581.8	1094.1	1115.8	954.5	692.5	404.8	115.8	832.7	777.6
Children	128	628	665	441	286	119	22	2289	
Women	220	574	596	462	413	294	190	2749	

SOURCE: See text.