An Historical Perspective of Step-Parenting in the United States:
Exploring Changes in the American Family Using an Age-Period-Cohort Model

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Extended Abstract

Demographic changes during the last 50 years have re-shaped the American family. Increases in divorce, non-marital births, and cohabitation have shifted childrearing from co-residence with biological parents to a variety of family environments. However, changes in living with children differed for men and women. During this time, mothers were increasingly more likely to live with their biological children, while men were increasingly less likely to live with their own children and more likely to live with someone else's. These changes have shifted the role of parenthood, especially for men, from a biological to a social one. In order to fully understand this shift, we use an Age-Period-Cohort model to investigate the incidence of social parenting in the United States since 1940. Using IPUMS data (1940-2000), we examine gender, age, period, and cohort differences in step-parenting.

These demographic changes of the last half of the 20th century have complicated the definition of step-parenthood. At one time marriage was a defining feature of step-families. But with the rise in nonmarital births and cohabitation, men and women's living arrangements often include children present. In turn, this rules out marriage as a clear marker for step-families. Any person living with a child of a partner that is not their own should be considered a step-parent. Thinking this way, roughly two-thirds of all women and 30% of all children will spend some time in a step-family.

Gender also seems to play a role in step-parenting. With the rise in divorce, courts were more likely to award full-custody of children to women, although this is slowly changing. Therefore, it is residentially complicated for men to be present in the lives of their biological children. Since the best and most effective parenting is done in the home, men are excluded from fulfilling their parenting roles and consequently for some, fatherhood becomes a less central and stable role in their lives. All of this together creates a large pool of women with children and a large pool of men without residential

children. This produces an opportunity to men to engage in the social roles of parenting through remarriage and cohabitation, rather than the biological roles associated with living with one's own children.

Research Questions, Model and Expected Results

This paper addresses several questions. Historically, has the number of step-parents increased in the United States? Are men more likely to experience step-parenting at each age group and across periods than women? Also, could there be an age-period-cohort effect in estimating the likelihood of step-parenting?

An age-period-cohort (APC) model is a method for studying cohort related effects. We use a variation of this model, an APC characteristic model (APCC), for the following analyses. The APCC model solves for the identification problem by replacing one of the three dimensions with one or more continuous variables associated with one of the dimensions. This cohort characteristic along with age and period dummy variables serves as predictor variables to estimate an age/period specific dependent variable value for each of the cohorts.

The following outlines the rationale for possible age, period, or cohort effects. Based on a traditional lifecourse perspective, we expect that older men and women are more likely to be a step-parent since they have had time to marry, have their own children, divorce, and remarry. However, with the rise in cohabitation and nonmarital childbearing, the traditional lifecourse may be out of order. Therefore, we offer a competing hypothesis that younger people will be more likely to step-parent since they are more likely to have nonmarital births and cohabit than older adults.

Along with age effects, we hypothesize that there are also period and cohort effects. The establishment of "no fault" divorce and skyrocketing divorce rates in the 1970's suggest that step-parenting may be a period effect. Therefore, regardless of age, birth cohort, or gender, periods after this time will see a dramatic increase in the number of step-parent families than in periods before.

Both Norman Ryder and Glen Elder suggest that cohorts are vehicles for social change. The influence of historic events varies depending on the stage of life at which they are experienced. Therefore, the experience of changing divorce laws and the social

acceptance of divorce and cohabitation make birth cohorts entering the marriage market after 1970 (born after 1945) at greater risk for step-parenting. Overall, we expect both the period variables and the cohort related variable to be significant in the model.

Data and Measures

To complete the APCC model we use the IPUMS dataset created by S. Ruggels, et. al., at the University of Minnesota. The IPUMS are compatible U.S. Census Data, dating back to 1850. Each dataset represents a cross-sectional sample for that census year and provides representative data of men and women in the U.S. at that point in time. The data are not perfect for measuring step-parenting, but do provide some important insights. Variables labeled STEPPOP and STEPMOM indicate identification of being a step-parent. This is loosely defined as living with a child of a partner that is not their biological child. There are many step-parents in the population that can not be identified with information gathered from the census. These variables will always under represent the actual number of step-parents in the population, but do provide enough information to analyze the magnitude of historical change. There were only four periods where men and women were identified as step-parents (1940, 1950, 1990, 2000). Unfortunately we exclude other years because there is no data available on being a step-parent.

Also entered into the model were age and period dummy variables, as well as a cohort characteristic. Age is broken down into 10 year spans (ie. 15-25, 25-34, etc.) Dummy variables for age were entered into the model to control for any variable associated with them and whose effects are invariant over time. They also control for differences between ages groups that are consistent across time. Similarly, period dummy variables control for other variables associated with period effects that are invariant across age groups. The APCC model automatically controls for a linear relationship between the dependent variable and the cohort characteristic based on time of the cohort's birth. In the APCC model there are no dummy variables for cohort's birth, therefore autocorrelation could be a problem.

The cohort characteristic variable was more complicated to calculate. Percent marriage at age 40 needed to be calculated across all of the years as the cohort entered the period in which they were between the ages of 35 and 45. For instance, in 1950 the birth

cohort 1905-1915 was between the ages of 35 and 45. We calculated the percent married in 1950 and brought this value across into the final combined dataset. For cohorts born after 1965, we took the percent married at the last census date (2000) and included that into the final data set.

Results

Using logistic regression we estimated the age, period, and cohort effects of being a step-parent. Each age and period variable was statistically significant, and in the expected direction, in predicting step-parenting. For instance, across time, those aged 25-34 are 14 times as likely to be a step-parent as people over the age of 45. Holding age group constant, people in 2000 were 7.5 times as likely to be a step-parent as in 1950. More importantly, the percent of the cohort married at age 40 is statistically significantly related to the age/period-specific step-parent rates after controlling for period and age group effects. These variables control for effects correlated with age groups and that are invariant across age groups and any linear association between being a step-parent and the period in which the cohort was born.

For the likelihood of being a step-mother, we see similar results. Again, those in the youngest age category were more likely to be a step-mother than those who were in the oldest age category. However, the period effects, although statistically significant, were diminished for women. In fact, women were more likely to be step-mothers in earlier periods than in the later periods. This is the complete opposite effect from step-parenting overall. Again, the percent married by age 40 in the cohort was statistically significant after controlling for age and period, again signifying a possible cohort effect.

The strongest results come from men. Men between the ages of 25 and 34 were 20 times as likely to be a step-father as those in the oldest age category. The period effects were stronger for men than for women. As compared with men in 1950, men in 2000 were almost 30 times as likely to be a step-father. Overall, the age and period effects are quite different between men and women. Although they both move in similar directions (younger ages more likely, later time periods, more likely) the effect is larger for men than for women. This supports the gender hypothesis. Again, percent married is statistically significant after controlling for age and period suggesting a cohort effect.

Conclusions and Future Steps

On the whole, the APCC models support the project hypotheses. As expected, we find significant gender differences over time. We also find higher incidences of step-parenting among younger adults, cohorts born after 1965, and in periods after 1990. The results suggest that not only are men more likely to take on the social role of parenting than women, but this likelihood is contingent on age, period and cohort.

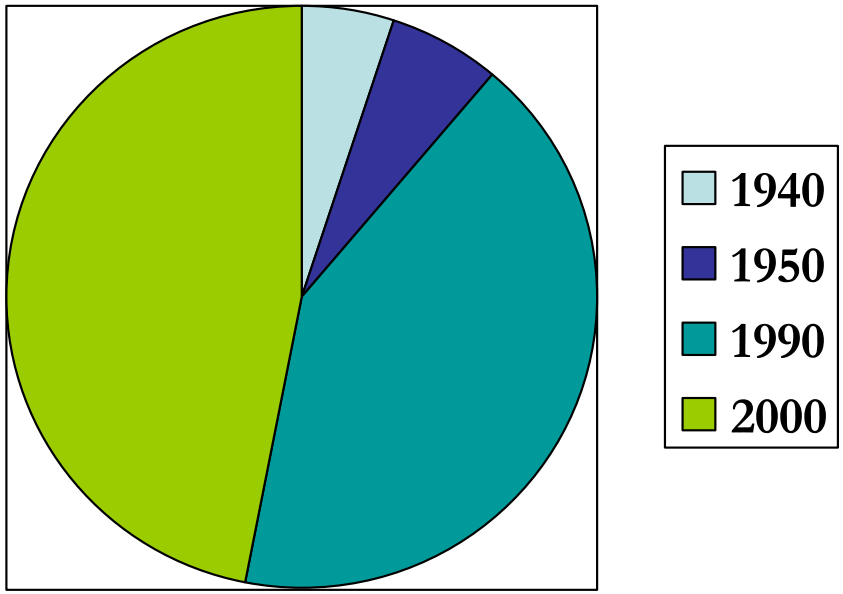
However, there are some major data limitations in this project. It is difficult to define, never mind measure step-parenthood. How long does one need to live with a child not their own to be considered a step-parent? Staying on the weekends or permanent residence? These things need to be considered in future studies determining the risk of step-parenthood. Also, although the census could identify some step-parents, they are under-represented in the dataset, especially since the years between 1950 and 1990 could not be used. It is my hopes that the U.S. Census Bureau will continue to collect such important data which will enable us to understand family formation in its fullest.

Future steps in refining this project will include changing the cohort characteristic to a period characteristic. We know that divorce has increased across all groups since the 1970's, so it might be more advantageous to investigate the likelihood of step-parenthood though the cohorts. By adding them as dummy variables into the model, we could specify which cohorts are at higher risk of being a step-parent. Also, the datasets need to be weighted so that years with more respondents do not over inflate the results. We would also like to investigate the autocorrelation problem by calculating the residuals.

Investigating the prevalence of step-parenting makes an important contribution to family demography. Step-families can occur in all forms, especially with the rise in nonmarital childbearing and cohabitation. As time passes, children are more likely to experience this type of family structure before they reach the age of 18. Future studies like this may help us understand the changing family structures in which children are raised and the importance of family and marriage for both women and men. Any future study of changes in family formation over time must be sensitive to age, period, and cohort effects.

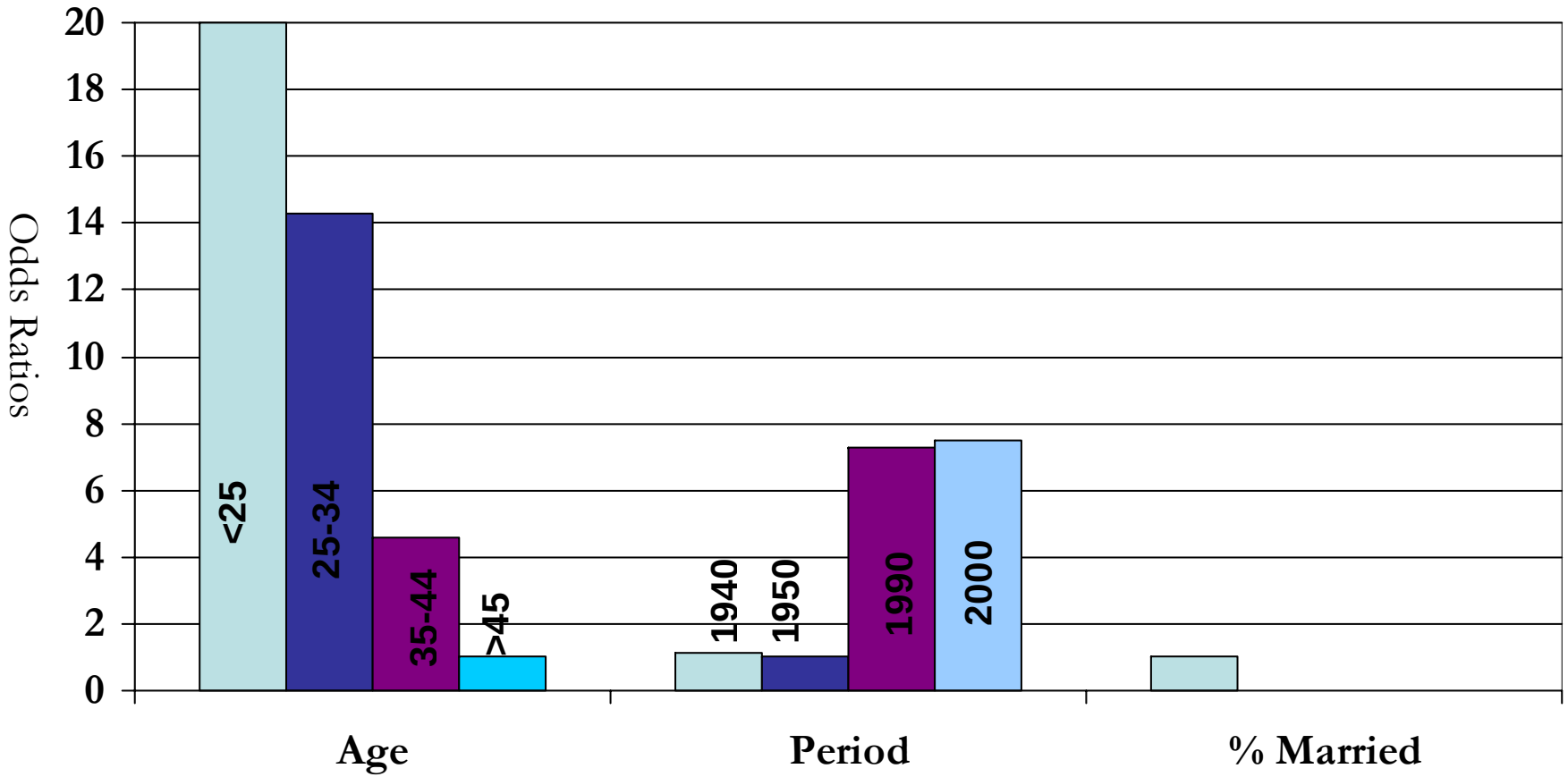
Increases in Step-parenting

- Of all step-parents identified in the 4 years:
  - 5.11% from 1940
  - 6.04% from 1950
  - 42.01% from 1990
  - 46.85% from 2000

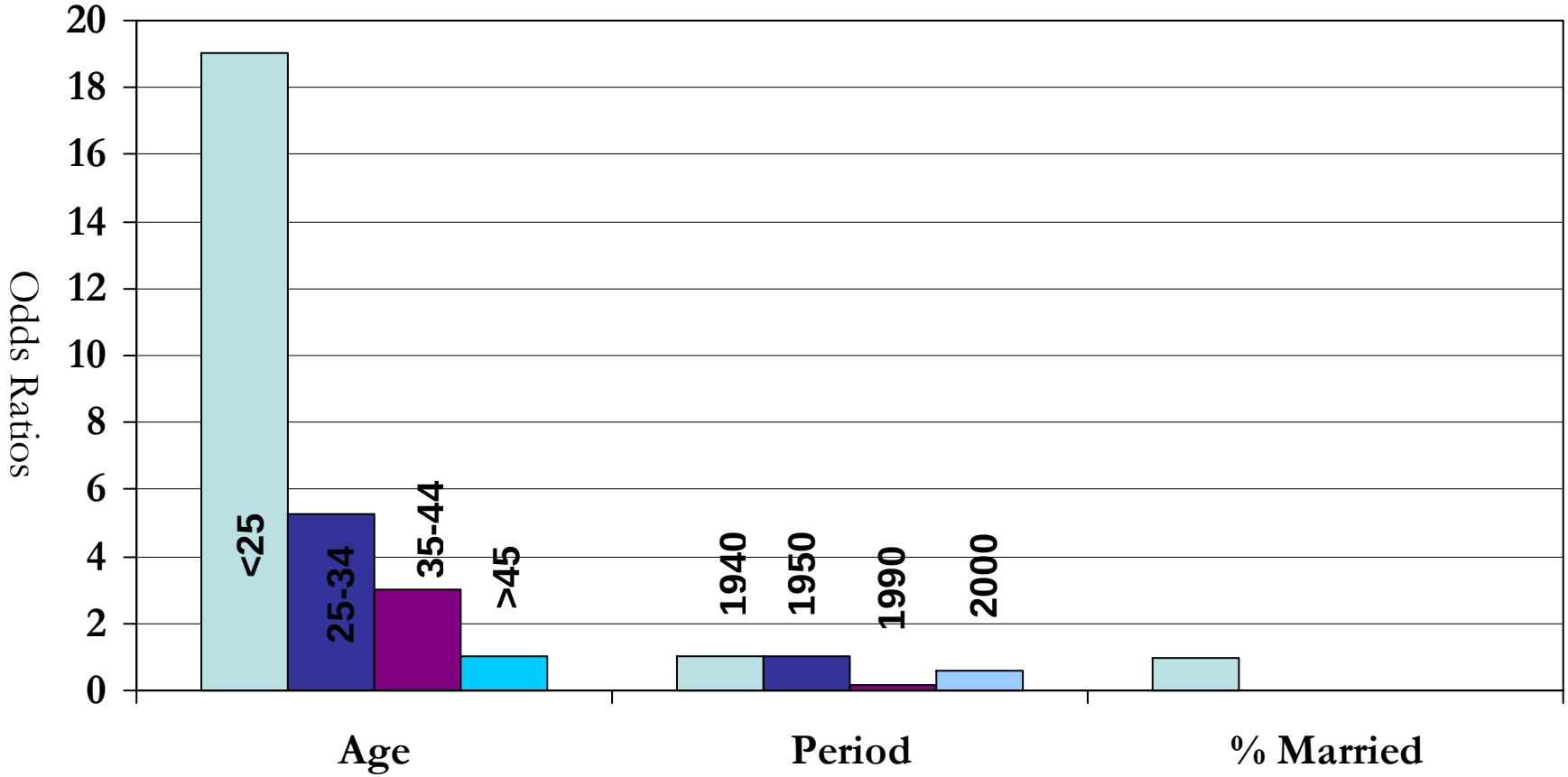


Overall Results

Likelihood of Being a Step-Parent



Likelihood of Being a Step-Mother



Likelihood of Being a Step-Father