INFORMATION TO USERS

This reproduction was made from a copy of a manuscript sent to us for publication and microfilming. While the most advanced technology has been used to photograph and reproduce this manuscript, the quality of the reproduction is heavily dependent upon the quality of the material submitted. Pages in any manuscript may have indistinct print. In all cases the best available copy has been filmed.

The following explanation of techniques is provided to help clarify notations which may appear on this reproduction.

1. Manuscripts may not always be complete. When it is not possible to obtain missing pages, a note appears to indicate this.

2. When copyrighted materials are removed from the manuscript, a note appears to indicate this.

3. Oversize materials (maps, drawings, and charts) are photographed by sectioning the original, beginning at the upper left hand corner and continuing from left to right in equal sections with small overlaps. Each oversize page is also filmed as one exposure and is available, for an additional charge, as a standard 35mm slide or in black and white paper format.*

4. Most photographs reproduce acceptably on positive microfilm or microfiche but lack clarity on xerographic copies made from the microfilm. For an additional charge, all photographs are available in black and white standard 35mm slide format.*

*For more information about black and white slides or enlarged paper reproductions, please contact the Dissertations Customer Services Department.
Sorenson, Ann Marie

ETHNICITY AND FERTILITY: THE FERTILITY EXPECTATIONS AND FAMILY SIZE OF MEXICAN-AMERICAN AND ANGLO ADOLESCENTS AND ADULTS, HUSBANDS AND WIVES

The University of Arizona

Copyright 1985 by Sorenson, Ann Marie
All Rights Reserved
ETHNICITY AND FERTILITY: THE FERTILITY EXPECTATIONS AND FAMILY SIZE OF MEXICAN-AMERICAN AND ANGLO ADOLESCENTS AND ADULTS, HUSBANDS AND WIVES

by
Ann Marie Sorenson

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF SOCIOLOGY
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

1985

Copyright 1985 Ann Marie Sorenson
As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Ann Marie Sorensen entitled Ethnicity and Fertility: The Fertility Expectations and Family Size of Mexican-American and Anglo Adolescents and Adults, Husbands and Wives.

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Dissertation Director

Date

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Dissertation Director

Date
STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder.

SIGNED: Ann Marie Johnson
ACKNOWLEDGMENTS

The special contributions of the members of my dissertation committee mark different stages of my work at Arizona. Many of the ideas for the dissertation were developed in the course of a seminar on Population Studies led by Michael Hout. The framework and research strategies for this study of minority fertility reflect his continued assistance. Doug McAdam made many helpful suggestions that guided the earlier stages of writing. Many of the final decisions associated with completing the dissertation and moving on to new opportunities were guided by the advice and encouragement of Dr. McAdam and Gary Jensen.

Special thanks are extended to Patricia MacCorquodale. The data used in my first study of fertility expectations were gathered by Dr. MacCorquodale under a National Institute of Education Grant, #NIE-G-70-0111. I have relied on her support and encouragement from that beginning to the end of the dissertation process.

As dissertation director, Travis Hirschi allowed me independence in my work balanced with the structure necessary to the presentation of that work and its completion. His efforts to help me refine and articulate the sociological aspects of minority fertility are recognized and appreciated.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>x</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>xi</td>
</tr>
<tr>
<td>1. THE EFFECTS OF SOCIOECONOMIC STATUS AND ETHNIC IDENTITY ON FERTILITY EXPECTATIONS AND ACTUAL FERTILITY</td>
<td>1</td>
</tr>
<tr>
<td>Implications of Minority Fertility</td>
<td>5</td>
</tr>
<tr>
<td>Theoretical Framework of Research on Minority Fertility</td>
<td>6</td>
</tr>
<tr>
<td>Research Questions Addressed in This Study</td>
<td>8</td>
</tr>
<tr>
<td>Ethnic Integration, Husband's Characteristics, and Fertility</td>
<td>10</td>
</tr>
<tr>
<td>The Interaction of Socioeconomic Status and Ethnicity</td>
<td>12</td>
</tr>
<tr>
<td>Language Use and Fertility</td>
<td>14</td>
</tr>
<tr>
<td>The Organization of the Research</td>
<td>16</td>
</tr>
<tr>
<td>2. DATA AND METHODS</td>
<td>18</td>
</tr>
<tr>
<td>Sample Selection</td>
<td>18</td>
</tr>
<tr>
<td>Couple as the Unit of Analysis</td>
<td>19</td>
</tr>
<tr>
<td>Wife Married Only Once and Living With Her Husband</td>
<td>21</td>
</tr>
<tr>
<td>Wife's Age 40-44</td>
<td>21</td>
</tr>
<tr>
<td>Husband and Wife Anglo or Mexican American</td>
<td>22</td>
</tr>
<tr>
<td>Residence in Arizona, Texas, or New Mexico</td>
<td>23</td>
</tr>
<tr>
<td>Limitations of the Data</td>
<td>24</td>
</tr>
<tr>
<td>Variables</td>
<td>26</td>
</tr>
<tr>
<td>Couple's Fertility</td>
<td>27</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>28</td>
</tr>
<tr>
<td>Education of Wife and Husband</td>
<td>29</td>
</tr>
<tr>
<td>Husband's Income</td>
<td>29</td>
</tr>
<tr>
<td>Ethnic Integration</td>
<td>30</td>
</tr>
<tr>
<td>Language Use</td>
<td>33</td>
</tr>
<tr>
<td>Generation</td>
<td>36</td>
</tr>
<tr>
<td>Control Variables</td>
<td>36</td>
</tr>
<tr>
<td>Topic</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>37</td>
</tr>
<tr>
<td>Regression Analysis</td>
<td>37</td>
</tr>
<tr>
<td>Parity Regression Ratios</td>
<td>44</td>
</tr>
<tr>
<td>3. ECONOMIC THEORIES OF FERTILITY</td>
<td>51</td>
</tr>
<tr>
<td>The Basic Economic Model</td>
<td>52</td>
</tr>
<tr>
<td>The Revised Economic Model</td>
<td>54</td>
</tr>
<tr>
<td>Revisions of the Concepts of Costs and Resources</td>
<td>55</td>
</tr>
<tr>
<td>Revisions of the Concept of Child Services</td>
<td>57</td>
</tr>
<tr>
<td>Revisions of the Concept of Price</td>
<td>59</td>
</tr>
<tr>
<td>Revisions of the Concept of Fertility as a Measure of Demand</td>
<td>61</td>
</tr>
<tr>
<td>Application of Economic Theory to Minority Fertility</td>
<td>64</td>
</tr>
<tr>
<td>The Sociologists' Response</td>
<td>66</td>
</tr>
<tr>
<td>4. RELIGIOUS VALUES AND FERTILITY</td>
<td>68</td>
</tr>
<tr>
<td>The Pronatalist Influence of Catholicism</td>
<td>69</td>
</tr>
<tr>
<td>Trends in Catholic Fertility</td>
<td>70</td>
</tr>
<tr>
<td>Mexican-American Catholics</td>
<td>74</td>
</tr>
<tr>
<td>Religious Effects on Mexican-American Fertility</td>
<td>76</td>
</tr>
<tr>
<td>5. THE EFFECTS OF ETHNICITY</td>
<td>84</td>
</tr>
<tr>
<td>The Minority Status Hypothesis</td>
<td>85</td>
</tr>
<tr>
<td>Ethnic Culture</td>
<td>87</td>
</tr>
<tr>
<td>Mexican Culture as a Source of Pronatalist Norms and Values</td>
<td>88</td>
</tr>
<tr>
<td>Familism and Adult Sex Roles</td>
<td>92</td>
</tr>
<tr>
<td>The Persistence of Familism</td>
<td>95</td>
</tr>
<tr>
<td>Summary</td>
<td>98</td>
</tr>
<tr>
<td>6. THE EFFECTS OF SOCIOECONOMIC STATUS AND ETHNICITY ON MEAN FAMILY SIZE</td>
<td>100</td>
</tr>
<tr>
<td>Socioeconomic Status, Ethnicity, and Fertility</td>
<td>101</td>
</tr>
<tr>
<td>The Main Effects Model</td>
<td>106</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>107</td>
</tr>
<tr>
<td>Mexican-American Identity and Ethnic Integration</td>
<td>107</td>
</tr>
</tbody>
</table>
### TABLE OF CONTENTS—Continued

| Interaction With Mexican-American Identity | 113 |
| Socioeconomic Status and Mexican-American Identity | 113 |
| Ethnic Integration and Mexican-American Identity | 119 |
| General Observations and Conclusions | 122 |

#### 7. THE EFFECTS OF SOCIOECONOMIC STATUS ON THE DECISION TO HAVE ONE MORE CHILD | 128 |

- The Use of Progression Ratios in the Study of Fertility | 129 |
- The Dependent Variable: Odds on Progression for One More Child | 130 |
- The Independent Variables | 130 |
- The Pattern of Family Building Described by Parity | 134 |
- Socioeconomic Status and Progression to One More Child | 139 |
- Education of the Husband and Wife | 140 |
- Opportunity Costs and the First and Second Births | 142 |
- Child Quality, Opportunity Costs, and the Third Birth | 143 |
- Education and Fifth or Higher Order Births | 144 |
- Husband's Income | 144 |
- Socioeconomic Status, Mexican-American Identity, and Progression | 147 |
- Mexican-American Identity and Education | 148 |
- Mexican-American Identity, Education, and the First Birth | 156 |
- Mexican-American Identity, Education, and the Second Birth | 157 |
- Mexican-American Identity, Education, and the Third and Fourth Births | 158 |
- Mexican-American Identity, Education, and the Fifth and Sixth Births | 160 |
- Mexican-American Identity and Income | 161 |
- Mexican-American Identity, Income, and First Births | 162 |
- Mexican-American Identity, Income, and the Second Birth | 169 |
- Mexican-American Identity, Income, and Third or Higher Order Births | 170 |
- General Observations and Conclusions | 170 |
### TABLE OF CONTENTS--Continued

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td><strong>LANGUAGE USE AND FERTILITY: THE EFFECTS OF ETHNIC INTEGRATION AND OPPORTUNITY COSTS</strong></td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>Language Use and the Fertility of All Couples</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>Language as a Measure of Opportunity Cost</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Ethnic Integration and the Fertility of Anglos and Mexican Americans</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>Language Use and the Fertility of Mexican-American Couples</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td>Language, Socioeconomic Status, and Fertility</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>Language, Nativity, and Fertility</td>
<td>197</td>
</tr>
<tr>
<td></td>
<td>General Observations and Conclusions</td>
<td>199</td>
</tr>
<tr>
<td>9.</td>
<td><strong>SUMMARY AND DISCUSSION</strong></td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>The Major Findings and Their Relationship to Fertility Expectations</td>
<td>202</td>
</tr>
<tr>
<td></td>
<td>The Use of Parity Progression Ratios</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>Additional Findings Using Parity Progression</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Language Use as an Index of the Effects of Mexican-American Cultural Norms on Fertility</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>Fertility as an Indicator of Social Processes</td>
<td>212</td>
</tr>
<tr>
<td></td>
<td>Assimilation</td>
<td>213</td>
</tr>
<tr>
<td></td>
<td>Discrimination</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>APPENDIX A: SAMPLE SELECTION</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>APPENDIX B: MEASURES OF FERTILITY, SOCIOECONOMIC STATUS, AND ETHNICITY</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>REFERENCES</td>
<td>223</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table                                      Page

1. Mean Number of Children Ever Born by Age and Race or 2
   Type of Spanish Origin

2. Mean Number of Children Ever Born by Age and Ancestry 3
   Group

3. Proportion of Women Retained in the Analysis After 25
   Selection for Marital Status and Spouse's
   Ethnicity

4. Number of Children Ever Born by Ethnicity of Husband 48
   and Wife

5. Odds on Progression by Ethnicity of Husband and Wife 49
   by Parity, in Logged Scale

6. Means and Standard Deviations of Variables Used in the 102
   Regression Models

7. Means and Standard Deviations of Variables Used in the 104
   Regression Models by Husband's and Wife's
   Ethnicity

8. Regression of Number of Children Ever Born on 108
   Socioeconomic Status and Ethnic Identity of
   Husbands and Wives

9. Regression of Number of Children Ever Born on Mexican- 110
   American Identity and Ethnic Integration

10. Regression of Number of Children Ever Born on 112
    Socioeconomic Status, Mexican-American Identity,
    and Ethnic Integration

11. Regression of the Number of Children Ever Born on 116
    Socioeconomic Status, Ethnic Identity, Ethnic
    Integration and the Interaction of Ethnic
    Identity and Socioeconomic Status
LIST OF TABLES--Continued

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Regression of Number of Children Ever Born on Socioeconomic Status, Ethnic Identity, Ethnic Integration and the Interaction of Ethnic Integration and Mexican-American Identity</td>
<td>121</td>
</tr>
<tr>
<td>13. Percentage Distribution of Wife's Educational Attainment by Wife's and Husband's Ethnicity</td>
<td>132</td>
</tr>
<tr>
<td>14. Percentage Distribution of Husband's Educational Attainment by Husband's and Wife's Ethnicity</td>
<td>133</td>
</tr>
<tr>
<td>15. Percentage Distribution of Husband's Annual Income by Husband's and Wife's Ethnicity</td>
<td>135</td>
</tr>
<tr>
<td>16. Regression of Logged Odds on Progression on Educational Attainment of Husband and Wife and Husband's Income by Parity Level</td>
<td>146</td>
</tr>
<tr>
<td>17. Regression of Logged Odds on Progression on Ethnicity and Educational Attainment of Husband and Wife, Husband's Income, and the Interaction of Educational Attainment and Ethnicity of Husband and Wife</td>
<td>150</td>
</tr>
<tr>
<td>18. Regression of Logged Odds on Progression on Ethnicity and Educational Attainment of Husband and Wife, Husband's Income, the Interaction of Ethnicity and Education of Husband and Wife, and the Interaction of Ethnicity and Husband's Income by Parity</td>
<td>163</td>
</tr>
<tr>
<td>19. Regression of Logged Odds on Progression on Ethnicity and Ethnic Integration by Parity</td>
<td>180</td>
</tr>
<tr>
<td>20. Regression of Logged Odds on Progression on Ethnicity and the Interaction of Mexican-American Identity and Ethnic Integration by Parity</td>
<td>182</td>
</tr>
<tr>
<td>21. Regression of the Logged Odds on Progression on Language Use and English Speaking Ability and and Nativity by Parity, Mexican-American Couples Only</td>
<td>190</td>
</tr>
<tr>
<td>22. Regression of the Logged Odds on Progression on Language Use, English Speaking Ability and Nativity of Husbands and Wives, and Husband's Income by Parity, Mexican-American Couples Only</td>
<td>198</td>
</tr>
</tbody>
</table>
LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Main Effects Models of Minority Fertility</td>
<td>39</td>
</tr>
<tr>
<td>2.</td>
<td>The Minority Status Hypothesis and the Pronatalist Model</td>
<td>45</td>
</tr>
<tr>
<td>3.</td>
<td>The Effects of Wife's Educational Attainment on Mean Family Size by Wife's Ethnicity and Husband's Ethnicity</td>
<td>125</td>
</tr>
<tr>
<td>4.</td>
<td>The Effects of Husband's Income on Mean Family Size by Husband's Ethnicity and Wife's Ethnicity</td>
<td>126</td>
</tr>
<tr>
<td>5.</td>
<td>Observed Odds on Progression by Parity Level, in Logged Scale</td>
<td>136</td>
</tr>
<tr>
<td>6.</td>
<td>Observed Odds on Progression by Parity Level and Ethnicity of Husbands and Wives, in Logged Scale</td>
<td>138</td>
</tr>
<tr>
<td>7.</td>
<td>The Effects of Educational Attainment of Husbands and Wives on the Odds on Progression by Parity</td>
<td>141</td>
</tr>
<tr>
<td>8.</td>
<td>Effects of Educational Attainment and Ethnicity on the Logged Odds on Progression by Parity</td>
<td>152</td>
</tr>
<tr>
<td>9.</td>
<td>Effects of Husband's Income in Quintiles on Progression by Ethnicity and Parity Level</td>
<td>165</td>
</tr>
<tr>
<td>10.</td>
<td>Effects of Wife's Language Use and English Speaking Ability on the Likelihood of Progression by Ethnicity and Parity</td>
<td>186</td>
</tr>
<tr>
<td>11.</td>
<td>Effects of Husband's Language Use and English Speaking Ability on the Likelihood of Progression by Ethnicity and Parity</td>
<td>187</td>
</tr>
<tr>
<td>12.</td>
<td>Effects of Wife's Language Use, English Speaking Ability and Educational Attainment on the Odds on Progression by Parity Level</td>
<td>193</td>
</tr>
<tr>
<td>13.</td>
<td>Effects of Husband's Language Use, English Speaking Ability and Educational Attainment on the Odds on Progression by Parity</td>
<td>196</td>
</tr>
</tbody>
</table>
ABSTRACT

Because pronatalist sentiments may be an important aspect of Mexican-American ethnic heritage, this research focuses on cultural as well as socioeconomic factors which may contribute to higher Mexican-American fertility. Language use and nativity are used as indirect indicators of identification with an ethnic culture. Wives' characteristics are generally considered adequate to the study of couples' fertility, but in light of earlier research by the author indicating the importance of cultural factors to the fertility expectations of Mexican-American adolescent males, characteristics of husbands as well as wives are included in this analysis. For this reason, the sample, which is drawn from the 1980 Census data for Arizona, Texas, and New Mexico, is limited to Mexican-American and Anglo women who have been married only once and live with their husbands.

Two complimentary methods of analysis are used. Linear regression describes the significance of husband's and wife's language use, nativity, and socioeconomic characteristics to mean family size. Parity progression ratios are used to study the contribution of these variables to the likelihood of the addition of one more child at each stage of the family building process.
While wife's characteristics are sufficient to account for most of the variation observed in Anglo fertility, husband's socioeconomic characteristics significantly contribute to variation observed in the fertility of Mexican-American couples. Husbands' identification with Mexican-American culture may be somewhat more important to couples' fertility than that of their wives. This is consistent with research which suggests that children are more central to male sex role expectations as they are expressed in the context of Mexican-American culture than in that of Anglos.

The measures of ethnic identity used in this study are clearly associated with socioeconomic status. The differential fertility of Anglos and Mexican Americans could be attributed to these differences. The association of Spanish language use and fertility has been linked to the lower opportunity costs represented by additional children to women who do not speak English proficiently. However, the analysis of these data, which compares structural and cultural explanations of fertility differentials, provides evidence of cultural effects as well as the effects of socioeconomic status on fertility.
CHAPTER 1
THE EFFECTS OF SOCIOECONOMIC STATUS AND ETHNIC IDENTITY ON FERTILITY EXPECTATIONS AND ACTUAL FERTILITY

Differences in the fertility of racial or ethnic groups have been observed in U.S. Census data since 1910. While the higher fertility of many immigrant groups disappeared in subsequent generations (Engleman, 1951; Rosenwaike, 1973; Korbin and Goldscheider, 1978), Mexican Americans, among others, have maintained fertility rates higher than the national average (Rindfuss and Sweet, 1977). The persistence of higher Mexican-American fertility, as well as that of blacks and Native Americans, is seen in Table 1, the mean number of children ever born by race or type of Spanish origin as reported in the 1980 Census. At ages 35-44 black women have had an average of 3.18 children, Native American women have had 3.47 children, and Mexican-American women 3.65 children. These rates can be compared with the average of 2.52 children born to white women in this age group. The convergence of the fertility of white ancestry groups is seen in Table 2. While many first generation immigrants experienced higher than average fertility, there is little difference in the fertility rates of white ancestry groups described in the 1980 Census.
Table 1. Mean Number of Children Ever Born by Age and Race or Type of Spanish Origin.

<table>
<thead>
<tr>
<th>Race</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
</tr>
</thead>
<tbody>
<tr>
<td>White *</td>
<td>.26</td>
<td>1.38</td>
<td>2.52</td>
</tr>
<tr>
<td>Black</td>
<td>.54</td>
<td>1.86</td>
<td>3.18</td>
</tr>
<tr>
<td>American Indian</td>
<td>.53</td>
<td>2.03</td>
<td>3.47</td>
</tr>
<tr>
<td>Asian, Pacific Islander</td>
<td>.21</td>
<td>1.22</td>
<td>2.26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Spanish Origin</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican</td>
<td>.53</td>
<td>2.11</td>
<td>3.65</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>.55</td>
<td>1.99</td>
<td>3.20</td>
</tr>
<tr>
<td>Cuban</td>
<td>.19</td>
<td>1.19</td>
<td>2.26</td>
</tr>
</tbody>
</table>

* does not include Spanish origin

Table 2. Mean Number of Children Ever Born by Age and Ancestry Group.

<table>
<thead>
<tr>
<th>Ancestry Group</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>.35</td>
<td>1.53</td>
<td>2.56</td>
</tr>
<tr>
<td>French</td>
<td>.36</td>
<td>1.57</td>
<td>2.80</td>
</tr>
<tr>
<td>German</td>
<td>.29</td>
<td>1.45</td>
<td>2.59</td>
</tr>
<tr>
<td>Irish</td>
<td>.29</td>
<td>1.43</td>
<td>2.66</td>
</tr>
<tr>
<td>Italian</td>
<td>.18</td>
<td>1.22</td>
<td>2.37</td>
</tr>
<tr>
<td>Polish</td>
<td>.22</td>
<td>1.23</td>
<td>2.40</td>
</tr>
</tbody>
</table>

These differences may be linked to socioeconomic or structural factors. That blacks and Native Americans also have higher than average fertility invites a search for common characteristics that contribute to these higher rates. One of these may be the pattern of urbanization that characterizes each group. European immigrants established themselves in an urban setting in the earlier part of the twentieth century. Mexican Americans as well as Native Americans and blacks generally remained in a rural setting until more recently. While earlier immigrants became part of an expanding urban, industrial economy, more recent arrivals faced a situation of declining opportunities in an urban setting (Wilson, 1979). In addition, Mexican Americans, Native Americans, and blacks have historically been targets of discrimination and remain at the lower levels of educational attainment, income, and occupation. The negative association of socioeconomic status and fertility suggests that the higher fertility of Mexican Americans is also due to their lower than average socioeconomic status.

In addition to the possible effects on fertility of the different opportunity structures faced by Mexican Americans, blacks, and Native Americans, another explanation of higher than average Mexican-American fertility emphasizes the importance of cultural heritage to the fertility behavior of some minority groups. Several of the earlier immigrants whose fertility rates have converged with those of the majority also migrated from areas with different fertility norms. There are, however, few
groups that have had the potential experienced by Mexican Americans for maintaining strong ties to their country of origin.

Implications of Minority Fertility

The population of Mexican descent is now the fastest growing racial or ethnic group in the United States (Swicegood, 1982). This is a result of high rates of immigration and levels of childbearing that are 35 to 45 percent higher than those of white women in the United States. While the Census can only document these differences since 1910, historical reconstruction of vital records in Texas indicates that these fertility differences have persisted in this country for over a century (Bradshaw and Bean, 1972).

The continuing interest in the study of minority fertility suggests that there are issues involved in this research agenda beyond documenting the well established negative association of socioeconomic status and fertility. Some of these issues are related to the larger issues of the dynamics of population growth. The importance of perceived opportunities for educational or occupational advances that may have to precede fertility declines is central to the question of curbing population growth on a much larger scale. In the short term there remains the concern for the provision of the material and educational needs of a rapidly growing population. This, in turn, is linked to the implications of high fertility for the opportunity structures faced by each new cohort.
The study of minority fertility also suggests a second set of issues. As some groups continue to be reinforced socially and demographically by large numbers of new arrivals, the social meaning of ethnicity becomes unclear. Assimilation is no longer the undisputed goal of minority and majority groups as more recent immigrant groups call into question the ideal and the reality of absorbing immigrants into the mainstream of American life. Assimilation is also being questioned by the "older" immigrant groups. For members of these groups there appears to be an emerging sensitivity to ethnic heritage. In explaining this current phenomena among the earlier immigrant groups, Daniel Bell suggests that ethnicity may be a source of identity in the face of the increasingly impersonal qualities of modern life (1975).

Theoretical Framework of Research on Minority Fertility

Hypotheses that seek to explain differential fertility reflect the terms of more basic understandings of social processes. Models that link fertility differentials to differences in socioeconomic status imply assimilation as the dominant ethnic experience. The underlying assumption is the invariance of social processes linking socioeconomic status, family structure, fertility patterns, and mobility. In the extreme this model suggests that class is the fundamental basis of differentiation. Ethnic differences are interpreted as essentially socioeconomic differences that are expected to disappear when the goal of full participation
of the minority group in the socioeconomic structure is realized (Greeley, 1977).

A source of the plausibility of the socioeconomic model is the fact that social class and ethnicity intersect. However, in spite of the overlap of status and ethnicity, status variables may account for only part of the fertility differences between Anglos and Mexican Americans. If so, this would suggest that ethnic identification or ethnic culture continues to support higher fertility independent of the effects of socioeconomic status. The retention of distinct ethnic characteristics in family formation patterns would provide evidence of pluralism as an alternative to the traditional image of assimilation as the goal or the experience of ethnic minorities. The pluralistic model of the immigrant ethnic experience stresses the continuing relevance of unique norms and values to the ethnic group in spite of assimilation into the mainstream of the socioeconomic system.

Sociodemographic data that describe patterns of minority fertility may provide evidence of the extent to which assimilation or pluralism more accurately describes the Mexican-American experience. Fertility is one of the traits on which differences between and among minority groups and the majority persist. As such, fertility rates can be viewed as either an indicator of the progress of assimilation or of the continuity of ethnic identity for the Mexican-American population.
Research Questions Addressed in This Study

Several issues dealing with specific aspects of Mexican-American fertility are addressed more explicitly in the analysis. This study provides a description of the effects of ethnicity and socioeconomic status on Anglo and Mexican-American fertility utilizing relatively new data collected in the 1980 Census. Much of this study is based on earlier research on economic and cultural correlates of the fertility expectations of Anglo and Mexican-American adolescents by the author (Sorenson, 1985). In fact, the research questions that frame the research on adult fertility were developed in the context of this research on fertility expectations. Fertility expectations and actual fertility are two very different features of the family building process and are observed in two different age groups. Therefore, the findings presented here should not be interpreted as an attempt to approximate the findings that would be obtained in a longitudinal study of fertility expectations and eventual fertility. However, it is of interest to observe the extent to which the factors that appear to shape the fertility expectations of adolescents reflect the factors associated with the actual fertility of members of their parents' generation.

The three issues addressed in more detail are (1) the utility of including husband's characteristics in the study of minority fertility, (2) the interaction of socioeconomic status and ethnicity in their effects on fertility, and (3) explanation
of the association of Spanish language use and fertility among Mexican Americans. After a brief description of the expectations study itself and other fertility research addressing similar issues, the major findings from the study of fertility expectations as they pertain to each of these issues will be presented.

The sample used in the study of fertility expectations includes Mexican-American and Anglo male and female secondary-school students in Tucson and Nogales, Arizona. In this sample, the Mexican-American adolescents expect to have significantly more children than Anglos. The mean number of children expected and the ethnic differentials in these expectations in this 1980 study in Arizona were quite comparable to fertility expectations reported in 1979 by a nationwide sample of married women aged 18-35 (U.S. Bureau of Census, 1980, p. 14), suggesting the validity of adolescents' reported fertility expectations. The sex and ethnicity of these adolescents were retained in a series of analyses designed to determine the extent to which differences in the socioeconomic expectations or family status account for the higher fertility expectations of the Mexican-American adolescents. No evidence of a negative association between socioeconomic status and fertility expectations was found. Differences in the socioeconomic characteristics of the two groups are not the basis of the observed differences in expected fertility.
Unique norms and values pertaining to fertility or the family were considered as another source of higher Mexican-American fertility expectations. An indirect test of this hypothesis links ethnic integration and fertility expectations. All Mexican Americans may not identify equally with an ethnic subculture. If fertility expectations reflect subcultural norms, those expectations should vary with the extent to which an individual identifies with an ethnic subculture or ethnic integration. (The use of generation and language as measures of ethnic integration is discussed in Chapter 2.)

The consistent finding of this analysis was that fertility expectations are affected by ethnic integration. Holding constant variations in socioeconomic status and number of siblings, foreign birth and the use of Spanish in the home are associated with higher fertility expectations. The effect of ethnic integration is particularly striking for males, suggesting that children may be especially important to the Mexican-American adult male role.

Previous research frequently has used only wife's characteristics in evaluating the correlates of fertility. Even when the couple is the implied unit of analysis, the inclusion of the husband's information is thought to do little to improve predictions based on wife's information alone (Bumpass and Westoff, 1970; Fried et al., 1980). In the interests of economy at the
point of data collection (Williams and Thomson, 1985) or parsimonious model fitting (Morgan, 1985), wife's characteristics or information are often considered adequate proxies for couple information. It should be noted, however, that the conclusions of these studies are based on white samples or representative samples without racial or ethnic distinctions as part of the reported analysis. Whether the importance of husband's characteristics differs by race or ethnicity is unclear.

As will be discussed in greater detail in Chapter 3, the costs of childrearing to educational or occupational attainment may be borne disproportionately by women. If indeed the socioeconomic consequences of fertility are more generally relevant to women and pronatalist norms and values pertain more clearly to the Mexican-American adult male role, the methodological decision to measure socioeconomic status and ethnic attachment in terms of female characteristics may have biased some studies of minority fertility that have reported the importance of socioeconomic status rather than indices of ethnic attachment or ethnicity (see Bean and Swicegood, 1982 and Swicegood, 1982 as examples; a counter example is Lopez and Sabagh, 1978). While it is unlikely that the inclusion of male characteristics will warrant a reevaluation of the negative association of socioeconomic status and minority

1. Lopez' findings with respect to Spanish language use were inconsistent, however. The effect of Spanish language on fertility was reported as not significant or negative, depending on wife's age and nativity among 1,129 Los Angeles couples.
fertility, it may be that the importance of ethnic ties has been prematurely discounted.

The socioeconomic and ethnic characteristics of husbands and wives are retained throughout this analysis to evaluate the contribution of husbands' characteristics in addition to wives' characteristics to the prediction of couples' fertility in regression models which summarize fertility as mean family size. In addition the significance of the characteristics of both spouses in models of fertility decision making will be evaluated. Socioeconomic and ethnic characteristics may assume different levels of importance at different stages of fertility (Bean et al., 1984). Likewise, the importance of husbands' and wives' characteristics may vary at different stages in the family building process.

The Interaction of Socioeconomic Status and Ethnicity

Several hypotheses concerning the combined effects of socioeconomic status and ethnicity on fertility are described in Chapter 2. The negative effect of socioeconomic status on fertility is a common feature of all of these. Despite the regularly reported, negative effects of status on actual fertility, the lack of this association in the study of fertility expectations was not altogether unexpected in light of other research describing labor force participation plans and expected fertility. Stolzenberg and Waite (1977) suggest that young women do not fully understand the relationship of other life plans and fertility expectations
until they have actually had the experience of combining family responsibilities with other activities. Often this does not happen until after the birth of the first child.

The finding of a positive association of fertility expectations and socioeconomic status was unexpected. Among Mexican-American adolescents, fertility expectations increase with father's educational attainment and occupational prestige. A similar pattern was not observed among Anglo adolescents. Since higher socioeconomic status implies the ability to realize values, the higher fertility expectations of the advantaged portion of the Mexican-American subsample was interpreted as evidence of distinctly pronatalist values as part of Mexican-American culture.

The interaction of minority status and socioeconomic variables has generally been described quite differently. Goldscheider and Uhlenberg (1969) observed higher than average fertility among minority group members of lower than average socioeconomic status but lower than average fertility in the advantaged portion of the minority group. It should be noted that this pattern was observed for minority groups who do not appear to have distinctly pronatalist views as part of their cultural tradition.

In this study the effects of the interaction of ethnicity and socioeconomic status on the mean number of children of Anglo and Mexican-American couples will be described. Given the preponderance of evidence indicating a negative effect of status on
Mexican-American fertility (Bradshaw and Bean, 1972; Bean and Wood, 1974; Lopez and Sabagh, 1978; Fischer and Marcum, 1984), it is unlikely that the positive effects of status on fertility as they are conditioned by ethnicity will be observed.

Family size has been measured as mean number of children in the studies that have consistently reported negative effects of status on fertility among Mexican Americans. This does not preclude the possibility that status has a positive effect on the fertility of Mexican Americans at certain stages of family building. It may be that the resources associated with higher status increase the probability that Mexican-American couples will start families or continue to add to already larger than average families. The positive association of fertility expectations and measures of status among Mexican-American adolescents suggests that this association may be apparent at some stage in the family building process of adults.

Language Use and Fertility

Among Mexican-American adolescents, the extent to which Spanish is used at home was shown to have a positive effect on fertility expectations independent of the effects of generation or parental socioeconomic status. This effect was not observed in terms of language use with friends. The positive effect of Spanish language use has been noted in other studies (Swicegood, 1982; Fischer and Marcum, 1984), but how this should be interpreted is unclear. Speaking Spanish at home may encourage interaction
with mostly Mexican-American friends and watching and listening to Spanish television and radio. Lopez and Sabagh suggest that any unique content of Mexican-American culture will be reflected in the Spanish media and that having Mexican-American friends will reinforce the message of that media, supporting the maintenance of any distinct ethnic subculture (1978, p. 1493). This interpretation is consistent with a cultural explanation of higher Mexican-American fertility.

In a nationwide sample Swicegood (1982) observed higher fertility among Mexican-American women who speak Spanish at home. While this may appear to support a cultural explanation of higher fertility, Swicegood suggests female employment as the intervening mechanism between language and fertility. In this study the impact of speaking a language other than English at home on couples’ fertility is evaluated in terms of Mexican-American husbands’ language use as well as that of Anglo husbands and wives. This is done in order to provide evidence relevant to two questions raised by Lopez and Sabagh’s interpretation of the possible meaning of language use and Swicegood’s explanation of the link between language and fertility. First, it may be that speaking a language other than English at home reflects a traditional set of attitudes that are related to higher fertility regardless of the language spoken. This would mean that the observed effect of Spanish use does not reflect norms and values that are unique to Mexican-American ethnic culture. Second, since Swicegood’s sample is
limited to Mexican-American women, observations in a sample which includes other women (for whom we would expect the same effect of language use on fertility) and men (for whom we would expect no effect) may provide further evidence relevant to the socioeconomic interpretation.

The Organization of the Research

A theoretical overview follows the discussion of data and methods in Chapter 2. In Chapter 3 economic theories of fertility behavior are discussed. Given the persistent negative association between fertility and socioeconomic status and the striking disparity of income, education, and occupation of Anglos and Mexican Americans in the Southwest, it may be that socioeconomic factors alone can account for their differential fertility. Chapter 4 addresses the question of the importance of religious norms and values to Mexican-American fertility. Mexican Americans are predominantly Roman Catholic. The pronatalist norms and values of the Catholic Church coupled with proscriptions against effective birth control techniques may be the source of higher than average Mexican-American fertility. While data pertaining to religious preference are not available in the Census data used in this research, studies reviewed in Chapter 4 indicate that this is not an adequate explanation of Mexican-American fertility. Chapter 5 describes evidence linking aspects of native Mexican culture to distinctly pronatalist norms and values and suggests that high fertility is functional to circumstances of
the Mexican-American immigrant experience. This would reinforce the pronatalist norms described as part of Mexican culture.

Chapter 6 presents the results of regression analysis as they pertain to the questions outlined above. Chapter 7 presents the results of the analysis of the effects of socioeconomic status and ethnicity in a series of sequential models of family building. Chapter 8 uses the same technique of sequential modeling to analyze the effects of ethnic integration of the subsample of Mexican-American couples.
The subsample of couples used in this study of actual fertility was drawn from the Arizona, Texas, and New Mexico Public Use Microdata Sample files (P.U.M.S.) (U.S. Bureau of Census, 1983a). A stratified 5 percent sample of housing units and the persons in them, as enumerated in the 1980 Census, is contained in these files (Bureau of Census, 1983b). Information on education and income, ethnicity, language use and ability, and nativity is also included. Number of children ever born is available for female respondents over age 15.

In this chapter I describe the criteria used to select couples from these data files for inclusion in the analysis and the variables used as measures of socioeconomic status and ethnic integration. I also briefly describe techniques used in the analysis of these data, linear regression and parity progression ratios. More detail on the techniques of analysis will be found in Chapters 6, 7, and 8 which present the results of the analyses based on these two methods.

**Sample Selection**

The sample used in this analysis was limited to couples with the following characteristics: the wife had married only
once and was living with her husband at the time of the 1980 Census; the wife's age was in the range of 40-44; both husband and wife were either Anglo or Mexican American; the couple resided in Arizona, Texas, or New Mexico at the time of the Census. Reasons for these specifications are discussed below. The questionnaire items on which sample selection was based appear in Appendix A.

Couple as the Unit of Analysis

As we saw in Chapter 1, measures of ethnic identity are linked to fertility expectations among Mexican-American adolescents. This association may be more firmly established for boys than for girls. It has been suggested that differences in the adult sex role expectations of Anglo and Mexican cultures are greater for males than for females (Derbyshire, 1968). If this is the case and if the adult role expectations of husbands as well as wives affect family size, the ethnicity and ethnic integration of husbands may be of some importance to couples' fertility decisions.

The theories discussed in Chapter 3 linking socioeconomic status and fertility imply that the couple is the unit of analysis relevant to decisions about fertility. Yet in many studies of the effects of socioeconomic status on fertility the analysis is limited to women and their characteristics. This strategy has been extended to studies of ethnic fertility as well. In some cases the methodological decision appears to have been taken for granted. In others (see Gurak, 1980) it is actually asserted
that the characteristics of women are more relevant to fertility than those of men. The strong correlation between husbands' and wives' background characteristics is cited by others as the rationale for regarding wife's characteristics as proxies for family characteristics (e.g., Bean and Swicegood, 1982). Because the relative contributions of both partner's characteristics can be empirically assessed, this study uses the couple, as described by the characteristics of the husband and the wife, as the unit of analysis. It is, after all, still within a marital relationship that most fertility decisions are made and most births take place.

This emphasis on wives' attributes is not to suggest that husbands' characteristics have never been included in the study of minority fertility. Husband's income has been most frequently included as a control variable (e.g., Bean and Wood, 1974; Gurak, 1978, 1980), but this approach reflects a narrow interpretation of the meaning of children to the adult male. If the relevant male characteristic is defined as his financial contribution to the support of children, only the limiting function of husband's income potential is described. It may also be that fertility decisions reflect the positive contribution of children to an adult male sex role ideal.

As was evident in the discussion of fertility expectations in the previous chapter, the sex of the respondent conditions the effects of some measures of ethnic integration. The effect of ethnic integration on fertility expectations is more pronounced
among males than among females. The extent to which husbands' ethnic identification and socioeconomic characteristics add to or condition the effects of wives' characteristics may add to our understanding of the role of husbands in fertility decisions and the role of ethnic identity in Mexican-American fertility.

**Wife Married Only Once and Living With Her Husband**

Because this research tests the hypothesis that the husband's characteristics have an effect on a couple's fertility decisions, it is necessary to measure the characteristics of the man to whom the woman was married at the time those decisions were made. Women married only once but who were widowed, divorced, or separated are excluded because the data are organized by household, and only those who share a household can be identified as a couple.

**Wife's Age 40-44**

Women ages 40-44 are old enough that the number of children ever born adequately approximates completed fertility. This limitation is essential for examining ethnic differences because it precludes confusing differences in the timing of fertility and differences in actual fertility. These women are also young enough that the depletion of the sample by widowhood and divorce is minimized since as age increases, more women leave the once married and currently married category than enter it.

Wife's age was limited to a five-year range to minimize the possibility of period effects. The potential that the time
period in which a woman was passing through childbearing years 
has for affecting fertility is seen in the family sizes of women 
who passed through these years during the Depression as opposed 
to the post-war era of the late 1940s and 1950s. The time period 
during which a woman passes through childbearing years may also 
interact with other variables as they affect fertility. Controls 
for variation by age cohort in the effects of measured items 
like education can be included in the statistical analysis, but 
unmeasured variables may also differ by age cohort in their effects 
on fertility.

Religious preference is one of many possible sources 
of period effects in this analysis. The association of religious 
preference and fertility cannot be controlled in this study because 
Census data do not include items regarding religion. However, 
the effect of Catholicism on family size changed markedly between 
1950 and 1975 (Westoff and Jones, 1979). Women aged 40-44 were 
passing through their childbearing years at about the same time. 
Constraining the age range of women in the sample imposes an 
informal control on a whole range of economic and social variables 
experienced differently by women of different birth cohorts.

Husband and Wife Anglo 
or Mexican American 

The sample was limited to couples in which both partners 
consider themselves to be either white or among the Mexican, 
Mexican-American responses to the Spanish Origin item (Appendix
A) in order to confine analysis to one set of issues, the effects of Mexican-American ethnic identity on fertility. Couples in which either spouse identifies with other groups that may have their own characteristic fertility patterns were eliminated from the sample in order to clarify the analysis.

This process relies on self identity of the respondent. Spanish surname, while available on these files, was not used. Because part of this research agenda includes the importance of reference groups as the source of models of fertility behavior, the respondent's own perception of his/her ethnicity is of more interest than a designation based on genealogical considerations. It is not possible to separate husbands and wives of different ethnic backgrounds on the basis of Spanish surname. In addition to the very real possibility of misclassifying individuals due to their marital status, a name carried or lost in the paternal line of one's heritage may or may not have a great deal to do with determining ties to an ethnic culture.

Residence in Arizona, Texas, or New Mexico

The original intent of this analysis was to parallel as closely as possible the analysis of fertility expectations described in Chapter 1 that used a sample of adolescents living in southern Arizona. However, attempts to create a parallel adult sample here are not feasible because the constraints on the selection of couples used for this analysis of actual fertility
significantly reduced the sample from the P.U.M.S. Arizona file. In order to increase the sample, files from Texas and New Mexico were added. These states were selected because they also share a border with Mexico and a large portion of the Spanish-origin population is of Mexican descent. Border states were specifically chosen because proximity to Mexico may affect the maintenance of ethnic ties. This proximity hypothesis is not tested in the present work, but proximity to Mexico is held constant in the sample. Using these criteria California would also have been included, but the population of California increased the sample size such that data analysis would have been exceedingly costly.

**Limitations of the Data**

The selection criteria described above may bias these data in several important ways. At ages 40-44 these once married women have experienced a degree of marital stability that reflects spouses’ shared class and ethnic backgrounds or common views on basic questions like ideal family size. In addition, divorce, separation, and widowhood may be associated with socioeconomic status such that those retained in the sample are distinct with respect to socioeconomic status. The estimated proportion of Anglo and Mexican-American women aged 40-44 retained in the sample is reported in Table 3. These estimates were derived using procedures described in the technical documentation provided by the Census Bureau (1983b, p. 14).
Table 3. Proportion of Women Retained in the Analysis After Selection for Marital Status and Spouse's Ethnicity.

<table>
<thead>
<tr>
<th>Age</th>
<th>Anglo</th>
<th>Mexican-American</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>.5340</td>
<td>.7223</td>
</tr>
<tr>
<td>41</td>
<td>.5052</td>
<td>.6551</td>
</tr>
<tr>
<td>42</td>
<td>.5300</td>
<td>.6468</td>
</tr>
<tr>
<td>43</td>
<td>.5371</td>
<td>.6660</td>
</tr>
<tr>
<td>44</td>
<td>.5114</td>
<td>.5481</td>
</tr>
</tbody>
</table>
Because this sample is not representative of all Mexican-American and Anglo women in this age group, population estimates of Anglo or Mexican-American fertility cannot be made from these data. However, the purpose of this study is the clarification or identification of the relationship of fertility to other variables. It is not the intent of this analysis to account for overall differences in the fertility rates of all Anglo or Mexican-American women but to describe the relationship of fertility to other variables within groups.

Using these criteria 12,868 couples were included in the sample. Of these 10,241 are couples in which both the husband and wife are Anglo; 2,376 are couples in which both are Mexican-American. In 177 couples the husband is Anglo and the wife Mexican-American; in 74 cases the wife is Anglo and the husband Mexican-American.

**Variables**

The Public Use Microdata Sample files contain measures similar to those used to indicate socioeconomic status and ethnic ties in the study of adolescent fertility expectations. The effects of these variables on actual fertility are estimated in this study. In the following sections the dependent variable, the number of children ever born to wives, and the independent variables measuring socioeconomic status and ethnic integration are introduced. The measures of socioeconomic status, education, occupation, and income are so well established in sociological
analysis that their use will not be discussed at length. The
decision not to use all of these measures for both husbands and
wives requires greater explanation. Measures of ethnic integration
are also introduced. Because these variables and the concept
of treating ethnicity as a continuous rather than dichotomous
variable are not well established, the measurement of ethnic
integration will be discussed at greater length. Wife's age
at marriage and rural or urban residence are associated with
these other measures. While they are not directly related to
the hypotheses tested here, they are introduced as controls in
the regression analysis of the effects of socioeconomic status
and ethnicity on actual fertility. The specific items from the
P.U.M.S. files used to measure these variables are described
in Appendix B.

Couple's Fertility

Couple's fertility is measured as the wife's number of
live births. This is an imperfect measure, subject to several
limitations. First, marital fertility is overestimated because
births that occurred before marriage are not excluded. These
data do not include an indicator which would clearly distinguish
between all premarital and marital fertility nor is it possible
to establish whether children born before their mother's marriage
are now part of the couple's family.

Family size may actually be a more appropriate dependent
variable in this analysis. Fertility implies that it is the
birth of a child that defines the social role of parents and that only children born to the couple contribute to their perception of appropriate or desired family size. Number of children nurtured by the couple may be more clearly affected by socioeconomic status or ethnicity. Family size may be underestimated by wife's fertility if adoption has been a part of a couple's family building strategy. Family size may be overestimated in the case of infant mortality. While family size may have a more important social meaning than wife's fertility, a more detailed definition of family size is not available from these data.

Socioeconomic Status

Education, income, and occupation\(^1\) are available in the P.U.M.S. files as standard indicators of socioeconomic status. While their use as socioeconomic indicators will not be detailed, the assumptions made in using these measures as independent variables which are thought to affect fertility should be noted. The causal argument advanced in economic theories (Chapter 3) and theories emphasizing the importance of ethnic heritage to family size (Chapter 5) implies a time ordering of these variables. The sequence described by both sets of theories is that characteristics of husband and wife prior to childbearing or in intervals between

\(^1\) Several descriptions of the location and type of husband's and wife's current occupation are available in the 1980 Census data. These were not included in the present analysis. While it is unlikely that fertility is randomly associated with occupational characteristics, the theories presented here do not directly address this issue.
births influence couples' ideas about family size or in some other way influence subsequent fertility. Ideally, measures of couples' characteristics at earlier points in time would have been available to this research. Because in survey research the criterion of time ordering is often difficult to satisfy, measures of current socioeconomic status are used as indicators of status before families were completed.

Education of Wife and Husband

Wife's education and husband's education are defined as the number of years of school completed (Appendix B). Education is viewed as a stable characteristic of a respondent's adult life, given the likelihood of completion of education before entering what becomes a usual occupation and before completing a family. While continuing education may coincide with starting a family, the higher order births which mark completed family size generally take place after education is completed.

Husband's Income

The income of husbands, but not wives, is used for reasons of stability and consideration of the implied order in a model purporting to describe variables affecting fertility. Husband's income is a reasonable proxy for earlier income levels because of the direct association of income at the early stages of an occupational history and income at later stages, the point at which data are available to this study (Easterlin, 1969). The
income of middle-aged men may actually be the better measure for this discussion in that fertility decisions are based on anticipated as well as current resources of the family unit. Groups with lower incomes as young adults, professionals who are still in training or in the early stages of career building for example, may gauge their fertility on the basis of anticipated income rather than their income at the time of actual births.

Wife's income is not used as a measure of the economic status of the family. Husband's income is less likely to be affected by family size than wife's income. This is an important consideration in the discussion of models which describe socioeconomic status as a factor explaining fertility behavior. The income of wives at ages 40–44 may remain affected by the amount as well as the continuity of time spent in the labor market. Because of the effects of children on the amount and timing of women's labor force participation as well as the location and types of mothers' employment, it has been argued that the presence of children reduces women's income not only at the life stage characterized by childbearing and the care of young children but throughout her working life.

Ethnic Integration

Generally ethnicity has been treated as a dichotomous variable. As part of the sample selection procedure, husbands and wives are described as either Anglo or Mexican American in this study. However, models of fertility which treat ethnicity
as a dichotomous variable have been limited to ad hoc explanations of differences between majority and minority groups that cannot be accounted for after controlling for the socioeconomic differences between the two groups.

This approach to explaining the residual variation in fertility has been criticized as it offers no positive evidence against which cultural theories can be tested (Lopez and Sabagh, 1978). Rather than attributing residuals to norms and values, it could be argued that the socioeconomic measures were not wholly accurate or encompassing of the effects of socioeconomic status. In addition, attributing the residuals of a socioeconomic explanation to ethnic norms and values provides no further understanding of the mechanisms by which ethnicity affects fertility behavior. Introducing variables which measure the degree of involvement in an ethnic culture is a first step in developing positive evidence toward evaluating cultural theories. A positive association of fertility and these measures of involvement in ethnic culture could be interpreted as evidence of the importance of subcultural norms and values to Mexican-American fertility.

In their survey of Chicano couples in Los Angeles, Lopez and Sabagh (1978) described dimensions of ethnic involvement. Social ethnicity was defined as having mostly other Chicano friends and using Spanish at home. Media ethnicity was defined as watching and listening to Spanish language television and radio. It is thought that the content of Mexican-American culture would be
reflected in Spanish language media and that having Mexican-American friends would reinforce these messages of the media. In addition, context ethnicity was defined in terms of the proportion of Mexican-American residents in the respondent's neighborhood and the ethnicity of husband's fellow workers. Of these, language use, friendship networks, and media preference are thought to be the least clearly tied to socioeconomic status.

Generation has also been used as an indicator of ethnic ties (Bean and Swicegood, 1982; Bean et al., 1984). This reflects the duration of exposure of the respondent and his/her family to Anglo norms and values. It is predicted that the impact of an original ethnic culture is diminished with exposure to competing values of the majority culture.

Language spoken at home and generation (foreign or native born) are available in the P.U.M.S. files. Although the Census Bureau publishes aggregate level data describing the ethnic composition of areas by Census tracts or blocks, these data cannot be linked to the individual level data reported on the public use files. This protects the confidentiality of respondents whose identity could perhaps be determined if detailed information about households and the people who live in them were combined with identification of small geographical areas like Census tracts or blocks.
Language Use

The item pertaining to language use in the 1980 Census appears to yield an extraordinarily high language maintenance rate with 80 to 90 percent of the adult Hispanic population speaking a language other than English at home. Historically this population has had rates of language maintenance higher than most other immigrant groups, but these rates found in the Census data are much higher than previous studies have indicated. This could reflect increased ethnic pride or identity which encourages acknowledgement of the use of Spanish or the large proportion of recent immigrants who make up this population.

It is more likely, however, that this apparent increase is an artifact of the wording of the language question in the 1980 Census which asks if a language other than English is spoken at home. In the past usually has been a part of the wording of similar language use questions. In the 1976 Survey of Income and Education a similar question conditioned by the inclusion of usually elicited a positive response from only 45 to 50 percent of adult Hispanics (Lopez, 1982). Compared with response patterns on earlier surveys, it appears that the deletion of usually elicits a positive response from those whose other language use ranges from limited attempts to use a language other than English to those who speak no English at home. "Other than English" seems to be interpreted as "in addition to English" by a large number of respondents.
It may be that this question does not sufficiently distinguish among levels of language use. Making use of the alternate data sets, Lopez demonstrates that the question of language use and an item describing English ability can be combined to yield approximations of additional language use categories. Lopez' analysis indicates that the group that speaks English "very well" even though Spanish is spoken at home corresponds to the group of Mexican-Americans that describes itself as speaking "mostly English, some Spanish at home" in other surveys. Those who speak English "well," "not well," and "not at all" correspond to those who speak "mostly Spanish or Spanish only" at home.

Lopez gives several reasons for combining the latter three categories in contrast to "very well" on the ability question. The comparison of actual English ability scores and self-ratings shows that respondents generally overrate their English ability. The category "well" is thought to include people who would not be considered proficient in English. Second, categories constructed using the criteria specified by Lopez replicate relationships between language use, generation, and mother tongue observed in other data sets when language use is measured using multiple response categories "English only;" "English, some Spanish;" "Spanish, some English;" and "Spanish only." In addition, this procedure seems to distinguish between those who speak Spanish at home by some measure of choice, those who are probably not paying the economic consequences of an inability to speak English.
very well, and those for whom language use may be associated with limited economic opportunities.

For the purposes of this analysis the language variable is defined by combining English use (LANG1) and ability (ENGLISH) (Appendix B). The three categories derived from these two variables are

1. English only/speaks English very well (ENG/VW).
   This category is made up of those respondents who speak only English at home. It is assumed that ability would have been described as speaking English very well.  

2. Not English only/speaks English very well (ENG/VW).
   This category is made up of those respondents who speak a language other than English at home and who speak English very well.

3. Not English only/does not speak English very well (ENG/VW). This category is made up of those respondents who usually speak a language other than English at home and who are not described as speaking English very well.

---

2. Logically there should have been a fourth category, "speaks English only but not very well." This would represent those who would not have scored "very well" on the objective measure of English proficiency use by Lopez. These people may be paying the economic and social costs of speaking nonstandard English along with those who speak a second language. The Census did not ask ability of those who speak English only.
There are no a priori assumptions about the possible ordering of these three categories in their effect on fertility or whether there is a significant difference between the effects of the latter two categories, ENG/VW and ENG/VW. For this reason these three categories are defined by two dummy variables, coded 0 or 1, in the regression analysis and as unordered categories in the analysis of progression ratios.

Generation

Unlike earlier Censuses, the 1980 Census did not include an item describing parents' birthplace. In 1980 only first generation (foreign born) respondents can be distinguished from native born respondents. In this study foreign born respondents were identified by their response to an item pertaining to year of immigration.

Control Variables

Age at marriage and rural residence are associated with fertility rates. Women married at a younger age are consistently exposed to the risk of pregnancy over a longer period of time. Rural residence is thought to be associated with higher fertility because of lower costs of childbearing in terms of time and money resources and the greater potential benefits of children to a family engaged in agricultural production. The sample used in this analysis includes an item describing the type of location of the housing unit. This is used as a general indicator distinguishing those respondents who live in an area clearly urban
and those living in proximity to urban areas from those who do not. Wife's age at marriage is a variable computed by the Census Bureau for all persons 15 years old and older who have ever been married. Since both age at marriage and urban versus nonurban residence are associated with ethnicity and socioeconomic status, they are included in the regression analysis as control variables.

**Data Analysis**

Two strategies for analyzing the effects of ethnicity and socioeconomic status on fertility are used in this study. Each represents a different conceptualization of the dependent variable, number of children ever born. The first, linear regression, describes the effects of measures of ethnicity and socioeconomic status on completed family size, mean number of children ever born. The second strategy utilizes the ordered nature of the variable, number of children ever born, to describe the effects of socioeconomic status and ethnicity on an implied sequence of fertility decisions. Parity progression ratios, which will be described in more detail, estimate the effect of independent variables on the probability of a couple completing their family at a given number of children or going to have at least one more child.

**Regression Analysis**

The language of much of the ethnic fertility and minority fertility literature suggests that most of these studies have
been based on models developed and tested using regression analysis. Using the logic of regression, Bean and Marcum (1978) have summarized the basic models of ethnic fertility. These models and their corresponding graphic representations and equations are presented below.

The first model is based on an assumed negative association of fertility and socioeconomic status. The intervening processes which lead to the expectation of this negative association are discussed in Chapter 3. The socioeconomic characteristics model suggests that higher Mexican-American fertility is a function of an overrepresentation of Mexican Americans among those of lower socioeconomic status. While there is clearly a difference in the mean family sizes of Anglo and Mexican-American couples, under the terms of this model ethnicity is expected to have no significant effect on fertility when controls for the effects of socioeconomic status are introduced.

\[ Y = k + b_1 \text{(SES)} + e \]  

The value of \( Y \), mean family size, is expected to be a function of the intercept, a measure of socioeconomic status, and an error term. As represented in Figure 1-a, the coefficient \( b_1 \), associated with a measure of socioeconomic status, is negative. Specifying the socioeconomic characteristics of each partner does not change the logic of the model but may represent an improvement in the measure of couple's socioeconomic status. Husband's characteristics
1-a. The Socioeconomic Characteristics Model

1-b. The Cultural Model

Figure 1. Main Effects Models of Minority Fertility.
Figure 1, continued

1-c. The Ethnic Integration Model
are included in the evaluation of models discussed in the remainder of this chapter.

\[ Y = k + b_1 (\text{SES wife}) + b_2 (\text{SES husband}) + e \]  

eq. 2-2

If the addition of a term describing the ethnicity of husband or wife does not significantly add to the variation explained by equation 2-2, fertility differences can be attributed to the effects of socioeconomic status. Like the assimilation model of the minority group experience, this model predicts that distinct ethnic traits will disappear with full social and economic participation of minority groups.

The second, the cultural model, includes a term representing an effect of ethnicity which persists controlling for the effects of socioeconomic status. Under the terms of the cultural effects model, the negative effect of socioeconomic status on fertility is not conditioned by ethnicity so a single coefficient adequately describes that effect for both Anglo and Mexican-American couples.

\[ Y = k + b_1 (\text{SES}) + b_2 (\text{ethnicity}) + e \]  

eq. 2-3

As seen in Figure 1-b, if the variable indicating ethnicity is coded to represent Mexican Americans, it is expected that the coefficient associated with ethnicity is positive. Under this model the difference in mean expected family size remains constant over the full range of socioeconomic levels, suggesting that ethnicity retains its importance as a source of norms regarding fertility regardless of respondent's socioeconomic status. If
socioeconomic differences were eliminated, fertility differences would be reduced but not eliminated.

A refinement of the cultural effects model is suggested by Lopez' measures of ethnic integration. If norms and values associated with an ethnic subculture have an effect on fertility behavior, it is expected that this effect would vary with levels of involvement in that culture. Language use, English only, English and Spanish, or Spanish only is used here to illustrate the potential effect of ethnic integration.

\[ Y = k + b_1 (SES) + b_2 \text{ (ethnicity)} + b_3 \text{ (English and Spanish)} + b_4 \text{ (Spanish only)} + e \]  

The negative effect of socioeconomic status on fertility remains unchanged. Mexican-American ethnic identity retains a positive effect that varies with levels of ethnic integration. The coefficient associated with speaking English and Spanish is also expected to have a positive value. The coefficient associated with speaking Spanish only is expected to be significantly larger than that associated with speaking Spanish and English. Regardless of status, those speaking Spanish only are expected to have more children than those speaking Spanish and English. Those Mexican Americans speaking only English would have the smallest families, most like those of Anglos with similar socioeconomic characteristics (Figure 1-c). This would be interpreted as evidence of pronatalist values associated with Mexican-American culture that are retained in spite of the negative effects of socioeconomic status on fertility.
Two additional models of the effects of socioeconomic status and ethnicity on fertility are based on the interaction of these two variables. The first of these suggests that the effects of ethnicity vary with socioeconomic status. In their analysis of minority group status and fertility, Goldscheider and Uhlenberg (1969) predict a negative interaction of ethnicity and socioeconomic status.

\[ Y = k + b_1 (SES) + b_2 (ethnicity) + b_3 (SES \times ethnicity) + e \]

In this equation socioeconomic status retains its overall negative effect, and the coefficient associated with ethnicity is expected to be positive. The negative coefficient associated with the interaction of socioeconomic status and ethnicity yields a more pronounced effect of socioeconomic status for the minority group (Figure 2-a). This results in a positive effect of ethnicity at lower levels of socioeconomic status and a negative effect of ethnicity on fertility at the higher levels.

A very different pattern of interaction might be predicted if pronatalist values associated with Mexican-American identity are influencing fertility behavior. Since higher socioeconomic status implies the ability to realize values, higher fertility among the advantaged portion of the Mexican-American population would be the expected outcome. The equation representing this model of socioeconomic and ethnic effects on fertility is expected to be similar to that of Goldscheider and Uhlenberg's model except
that the coefficient associated with the interaction of status and ethnicity is positive, yielding a positive relationship of socioeconomic status and fertility (Figure 2-b). This association has been observed in the fertility expectations of Anglo and Mexican-American adolescents (Sorenson, 1985).

Parity Progression Ratios

The dependent variable, number of children ever born, conceptualized as a continuous variable organized as interval data implies that linear regression is suitable to the task of specifying the effect of measures of socioeconomic status and ethnicity on fertility. Given the large number of independent variables described by theories stressing economic and cultural influences on fertility, linear regression is an efficient strategy for identifying those independent variables which are so highly intercorrelated that they fail to significantly add to explained variation in fertility. Linear regression also summarizes the general patterns of the effects of significant independent variables. In addition, the summary measure, mean number of children ever born, is an efficient treatment of a variable that includes 13 levels of fertility (0 to 12 or more children).

The logic of linear regression includes assumptions which may mask more subtle, yet important, variations in the relationship of fertility to socioeconomic or cultural factors. The treatment of the dependent variable as interval level data implies that the effects of the independent variables are consistent at all
2-a. The Minority Status Hypothesis

2-b. The Pronatalist Model

Figure 2. The Minority Status Hypothesis and the Pronatalist Model.
points in the family building process. Several socioeconomic theories of fertility discussed in Chapter 3 suggest that this assumption may be misleading. For example, wife's education, her potential earning power, and husband's income may affect the decision to have the first child differently than the decision to have a third, fifth, or higher order birth. The marginal costs of children in terms of time or money may well diminish at higher parity levels.

Ethnicity may not have a consistent effect at each increment of family size either. If single-child families are generally disfavored, as is suggested by Blake (1966a), ethnicity may have little effect on family formation patterns at the point of one versus two children. If large families are a preference associated with ethnicity, ethnicity should have a greater impact on the decision to have an additional child at the middle or higher range of family size.

The sequential nature of the family building process makes progression ratios an appropriate analytical strategy. Progression ratios are suitable to the analysis of data in which the dependent variable is ordered such that category i implies having also been in all categories of a lower order than i and having been in no categories of a higher order than i. Except for the case of multiple births, fertility fits these criteria. For a woman to have had three children, for example, she would
have had to have been in category 0, 1, and 2 in that order. She has never been in categories 4 or greater.

In order to use progression ratios the data are organized in tables which crossclassify the number of children and categories of one or more independent variables. Each table is then collapsed into a series of dichotomies describing the decision to stay at a given family size or add at least one more child. The dependent variable is expressed as the linear transformation of the odds on moving from one parity level to another. The parity progression ratios are expressed as

\[ \ln \left( \frac{N_i^+}{N_i^-} \right) \]  eq. 2-6

where \( N_i^+ \) is the number of respondents with \( i \) or more children and \( N_i^- \) is the number of respondents with exactly \( i-1 \) children. The effect of parity level itself as well as the effects of other independent variables such as education or ethnicity on the odds on having added another child can then be specified (Fienberg and Mason, 1979). This method of analysis does not constrain the effects of independent variables to remain constant over different levels of fertility.

Table 4 shows the crossclassification of number of children ever born, husband's ethnicity, and wife's ethnicity. Table 5 shows the transformation of these data to a series of odds on progression associated with each of the four possible combinations of husband's and wife's ethnicity. The details of this analysis and the treatment of continuous independent variables like education
Table 4. Number of Children Ever Born by Ethnicity of Husband and Wife.

<table>
<thead>
<tr>
<th>Husband's Ethnicity</th>
<th>Wife's Ethnicity</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglo</td>
<td>Anglo</td>
<td>638</td>
<td>921</td>
<td>3,099</td>
<td>2,957</td>
<td>1,540</td>
<td>668</td>
<td>251</td>
<td>90</td>
<td>40</td>
<td>16</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.06)</td>
<td>(.09)</td>
<td>(.30)</td>
<td>(.29)</td>
<td>(.15)</td>
<td>(.07)</td>
<td>(.03)</td>
<td>(.01)</td>
<td>(.00)</td>
<td>(.00)</td>
<td>(.00)</td>
<td>(.00)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Anglo</td>
<td>Mex. Am.</td>
<td>17</td>
<td>21</td>
<td>38</td>
<td>50</td>
<td>19</td>
<td>14</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.10)</td>
<td>(.12)</td>
<td>(.22)</td>
<td>(.28)</td>
<td>(.11)</td>
<td>(.08)</td>
<td>(.05)</td>
<td>(.04)</td>
<td>(.01)</td>
<td>(.01)</td>
<td>(.01)</td>
<td>(.00)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Mex. Am.</td>
<td>Anglo</td>
<td>4</td>
<td>4</td>
<td>18</td>
<td>21</td>
<td>12</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.05)</td>
<td>(.05)</td>
<td>(.24)</td>
<td>(.28)</td>
<td>(.16)</td>
<td>(.05)</td>
<td>(.05)</td>
<td>(.07)</td>
<td>(.01)</td>
<td>(.01)</td>
<td>(.00)</td>
<td>(.00)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Mex. Am.</td>
<td>Mex. Am.</td>
<td>83</td>
<td>104</td>
<td>238</td>
<td>436</td>
<td>427</td>
<td>319</td>
<td>261</td>
<td>207</td>
<td>104</td>
<td>75</td>
<td>52</td>
<td>26</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.04)</td>
<td>(.04)</td>
<td>(.10)</td>
<td>(.18)</td>
<td>(.18)</td>
<td>(.13)</td>
<td>(.11)</td>
<td>(.09)</td>
<td>(.04)</td>
<td>(.03)</td>
<td>(.02)</td>
<td>(.01)</td>
<td>(.02)</td>
</tr>
</tbody>
</table>
Table 5. Odds on Progression by Ethnicity of Husband and Wife by Parity, in Logged Scale.*

<table>
<thead>
<tr>
<th>Husband's Ethnicity</th>
<th>Wife's Ethnicity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglo</td>
<td>Anglo</td>
<td>2.71</td>
<td>2.24</td>
<td>.59</td>
<td>-.12</td>
<td>-.35</td>
<td>-.47</td>
<td>-.41</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Anglo</td>
<td>Hex. Am.</td>
<td>2.24</td>
<td>1.89</td>
<td>.98</td>
<td>.02</td>
<td>.52</td>
<td>.25</td>
<td>.22</td>
<td>-.84</td>
<td>.69</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Hex. Am.</td>
<td>Anglo</td>
<td>2.86</td>
<td>2.80</td>
<td>.98</td>
<td>.25</td>
<td>.22</td>
<td>1.01</td>
<td>.56</td>
<td>-.92</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Hex. Am.</td>
<td>Hex. Am.</td>
<td>3.32</td>
<td>3.05</td>
<td>2.10</td>
<td>1.25</td>
<td>.94</td>
<td>.88</td>
<td>.67</td>
<td>.37</td>
<td>.64</td>
<td>.40</td>
<td>.30</td>
<td>.52</td>
</tr>
</tbody>
</table>

* calculated from ln (Ni+/Ni-1)

** Calculation based on less than 1 percent of the sample.
and income will be discussed in greater detail in Chapter 7, which presents the results of the parity progression analysis.
CHAPTER 3

ECONOMIC THEORIES OF FERTILITY

As the advances in birth control technology of previous decades have made it possible for couples to reduce the element of change involved in their fertility, scholars have focused their attention on factors that influence couples' decisions about fertility. The importance of economic factors to fertility are stressed in the theoretical framework developed by the "new home economists." The decision-making processes previously applied in the analysis of market behavior are thought by these economists to shape fertility behavior as well (Schultz, 1975).

The economic model of fertility focuses on household characteristics as the primary determinants of families' decisions about fertility, largely to the exclusion of earlier socialization of husbands and wives or the influence of other reference groups. The extent to which ethnic identity modifies the effect of couples' economic characteristics is a question that may provide evidence pertaining to competing models of the minority group experience in this country. The effects of income and education as they are described under an economic model are described in this chapter.
The Basic Economic Model

In its most basic form the economic model compares the family to a corporate body in which decisions about production and consumption are made (Becker, 1974; Schultz, 1975). Fertility decisions are made within the nuclear family, and the factors that influence this decision are confined to the family unit. According to this model, the interests of all corporate members are represented in the decision-making process, with everyone ultimately benefiting from decisions that benefit the firm.

Like the corporate unit, family decision making is thought to balance and represent the best interests of individual family members. Decisions which benefit the family benefit individual members of the family as well (Becker, 1974). The vocabulary of this model of fertility decision making reflects its origins in economic theory: costs, prices, services, satisfactions, resources, human capital, utility and substitution functions, production and consumption, supply and demand, as well as the economist's last resort, tastes and preferences are all applied to the couple's decision to become parents or to have additional children.

Simply stated, children, or as the economist prefers, child services, are described as consumer "goods" which couples will seek to acquire as much as possible within the constraints of the price of the goods (children) and the resources available to the couple. Under this model, variation in the couples' available
resources should directly affect the children they can afford. The availability and prices of other goods which compete for the couple's resources also affect their pattern of acquiring children (Willis, 1973).

In theory, parents can utilize children in a variety of ways. Children could represent a source of social security in their parents' old age or add to the power and prestige of the family. Their labor power could be expropriated by their parents in home production or their wages could be used to supplement family income. Finally, they could be a source of personal satisfaction to their parents. However, in advanced industrial societies characterized by social security and old age pension systems, status attainment through individual achievement, child labor laws, and the general expectation of a flow of wealth and assistance from older to younger generations, only personal satisfaction is likely to be derived from children (Schultz, 1975).

Initial formulations of this economic model used the traditional measures of socioeconomic status (education, occupation, or income) as indicators of the resources available to the family. Fertility was viewed as the measure of the family's acquisition of children. The predicted positive association of resources and the consumption of child services gained little support in empirical data. While there is limited evidence of a positive effect of socioeconomic status on fertility in cross-sectional data, this has been outweighed by the more common finding of
a negative effect of family socioeconomic status on measures of fertility in advanced industrial societies.1

The Revised Economic Model

The disappointing performance of this description of decision making and fertility in empirical analysis led to revisions of the concepts or measures of resources, costs, child services, the price of children, and fertility. The revisions attempted to account for the observed negative association of socioeconomic status and fertility within the framework of the economic model of market behavior. A central assumption of the economic framework is that the decision-making process operated independently of the tastes and preferences which may develop in the context of an ethnic culture. The new economic model is presented in some detail below since it represents the basic processes by which convergence in fertility is expected to take place under an assimilationist model of the ethnic experience.

1. The use of cross-sectional data with individual households as units of analysis generally yields the negative association described above. On the other hand, a positive association between aggregate fertility and economic cycles can be observed in longitudinal surveys. The "baby boom" experience contrasted with the low fertility of the Great Depression is probably the best example of a positive association between economic factors and fertility rates. This association is largely a function of the effects of economic conditions on nuptuality rates and the timing of fertility by married couples.
Revisions of the Concepts of Costs and Resources

The original economic model of fertility limited the discussion of the costs of children and the resources of the family unit to money costs and resources. This model assumed that men, as husbands and fathers, are the principal providers of the money necessary to the acquisition of children. The logic that the more money a father makes, the more children he can afford led to the prediction of a positive association between fertility and socioeconomic status.

Time is included with money in the revised concept of costs and resources (Easterlin, 1969; Schultz, 1975). The time cost of children is assumed to be allocated to women as wives and mothers. This expanded model accounts for the observed negative association of fertility and socioeconomic status by proposing that "the scarce resource that matters most at the early stage of the marriage cycle is the time that mothers devote to their children (Schultz, 1975, p. 3).

If the only alternate use of wives' time is work in the paid labor force and if the only satisfaction derived from labor force participation is the money to be added to the family resources, wives' time for childrearing activities should be most available to families of high socioeconomic status. On the other hand, activities other than labor force participation may compete with childrearing for wives' time resources (Becker, 1960). Wives who do not "have to" work may derive satisfactions from working
in the paid labor force in addition to their wages. These possibilities weaken the argument that the availability of the time resource necessary to childrearing is positively associated with family socioeconomic status as it is measured by husband's income.

More damaging to the assumption that time for childrearing is positively associated with husband's income is the consideration of the "costs" of wives' time (Mincer and Polacheck, 1975). The income or satisfactions displaced by childrearing activities are described as the opportunity costs associated with children. The more education or human capital acquired by a woman, the greater the returns to her time invested in labor force participation. In addition to the cost of wages foregone by women at the time of childbearing, interruptions in the career building stage, which for women generally coincide in age with family building, have long-term consequences for lifetime earning potential that by definition cannot be recouped upon reentry to the labor force. Women leaving the labor force are not only losing the wages that they could have earned during that time, they also bear the cost of foregone opportunity to acquire more human capital in the form of training or experience which establishes them in the work force, increasing potential wage rates and making later labor force participation time more valuable (Mincer, 1963).

The educational attainments of spouses are generally observed to be highly associated. Men with higher educational attainment and higher incomes are likely to marry women with
similarly high educational attainment. The opportunity costs represented by children are expected to be higher to family units characterized by high male income and the associated high levels of female educational attainment. If money is the scarce resource which constrains the demand for children, socioeconomic status of the family unit may be expected to have a positive effect on fertility. If time is the scarce resource constraining fertility, the increase in the "cost" of that time with higher female educational attainment would predict a negative association of fertility and family socioeconomic status.

Revision of the Concept of Child Services

The reconceptualization of "resources" to include the time as well as money available for the acquisition of "child services" in the original economic model may also explain the poor fit of the data to the model. Originally, fertility was seen as a measure of the quantity of child services acquired by the family unit. A family could also increase the satisfaction it derived from children by increasing the quality of the children it already had (Namboodiri, 1975). The quality of children is not as readily observed as their quantity nor are data on child quality collected with the regularity or accuracy of fertility data. At a given level of resources, the quality of children produced by a family is inversely related to the quantity of the children produced by that family unit (Turchi, 1975; Thornton,
1979). In order to satisfy their "demand" for children in terms of quality rather than quantity, economists suggest that parents invest in educational programs, private schools, summer camps, athletic organizations, music lessons, and the like. These investments enrich and improve the quality of children and therefore increase their parents' satisfactions.

Meeting the demand for the satisfactions derived from children can be costly in terms of time and money. As suggested above, time may be less costly to families of lower socioeconomic status, while money is more available to those of higher status. Given this variation in available resources by status, this qualification of the meaning of child services to include quality as well as quantity further accounts for the negative association of socioeconomic status and fertility. Increasing the quantity of children is especially demanding of maternal time, i.e., caring for infants and the supervision of young children. On the other hand, increasing the quality of children is especially demanding on money resources. While money is not the sole resource necessary to the production of quality children, larger inputs of parental time cannot substitute for expenditures which provide the materials or experiences designed to increase the "quality" of children nor can increases in the input of parental time effectively substitute for the purchased time of educational, medical, and dental experts, to name but a few, who contribute to the production of "quality" children (Becker and Lewis, 1975).
Given the associations among family socioeconomic status, wife's education, and the wage value of her time, family units of higher socioeconomic status should be more likely to satisfy their demand for child services by increasing the quality of children. This strategy minimizes the time spent by the wife in childrearing and maximizes the use of money resources. With the greater money-making potential of this type of family unit, this may be the more rational choice. In contrast, families of lower status may satisfy their demand for children by increasing the quantity of children. Although this strategy is demanding of wives' time, the time spent by wives with less education (human capital) in childrearing activities is thought to be less costly in terms of foregone opportunities (wages). While time may be more readily available to families of lower socioeconomic status, money, by definition, is not, making the investment of more money in fewer children a less likely choice.

Revision of the Concept of Price

In addition to the variation in the nature of the resources available for childrearing, the price of children may vary with socioeconomic status (Easterlin, 1976). There appears to be general agreement that the price of children has increased over time as a consequence of industrialization and urbanization; the decrease in average family size observed in Western nations has corresponded to these processes of modernization. The early
prediction of a positive effect of resources (socioeconomic status) on the acquisition of children in cross-sectional analysis was based on the assumption that the price of children, like the price of other goods, is constant over all socioeconomic levels at a given time.

Economic theory posits that the price of goods does not vary with the resources available to the individual consumer for their purchase. The familiar grocery basket analogy illustrates this point. The price charged for a given item—beans, bread, steak, or lobster—does not vary from consumer to consumer. The variation in the quantity and quality of foods in each basket and hence the variation in the cost among grocery baskets is a product of the resources of the individual shopper, the extent to which he/she is willing to commit these resources to this particular form of consumption and his/her preference for a particular type or quality of food.

While it may be that the price of grocery items is constant over socioeconomic groups, the price of children may not be. Individual taste can dictate the quality and therefore the price of some consumer items, but the price of children may be more clearly influenced by resources available to the family. Children share the lifestyle of their parents. To the extent that children are maintained at the same level of health and well being as their parents and are afforded the opportunity of an education which is at least equal to that of their parents, the price of
each child is directly related to families' socioeconomic status. Because of the social pressures on parents to share their lifestyles with their children, this price is relatively non-negotiable. The positive association of socioeconomic status and the price of children combined with the negative association of price and quantity of children indicates that the variable price of children by socioeconomic status contributes to the negative association observed between socioeconomic status and fertility.

Revision of the Concept of Fertility as a Measure of Demand

The interpretation of fertility as an indicator of demand which has contributed to the uneasy fit of theory and data appears to be flawed by a naive assumption. This interpretation implies that couples with fewer resources have a greater demand for children than those with more resources. Fertility might be better considered an indicator of supply than demand. If this is the case, the economic theory of demand as a function of resources, prices, and tastes has not been adequately tested in most surveys of socioeconomic status and fertility. We may know very little empirically about the relationship of demand for children and resources. Data that show a negative relationship between resources and fertility may be indicating an oversupply of children to
families of lower socioeconomic status rather than a greater demand for them (Bean, 1975).²

Economists are unaccustomed to the notion that consumers may inadvertently acquire an oversupply of a desired good. This reality probably has no parallel in the market place. While every act of intercourse probably does not have as its goal the production of a child, there remains the risk of conception. That couples at one end of the socioeconomic continuum are more successful at managing this risk and matching the supply of children to their demand is not improbable. Couples with more resources, both educational and material, are more able to successfully influence fertility, both in terms of preventing excess births and increasing the probability of parenthood in the case of subfertility. To the extent that an oversupply of children is the more likely result of uncontrolled fertility over the course of couples' reproductive lifetime, the net outcome of differences in the success of fertility control by status would be an oversupply of children to couples with fewer resources (Ryder and Westoff, 1971).

² The extent to which couples are successful at meeting their demand for children is difficult to test empirically. Ideally perhaps couples would be asked their intention before they actually become parents or within birth intervals before the conception of a child. These data could then be compared to actual fertility (Westoff and Ryder, 1977). Retrospective questioning of couples who have completed their families about original intentions is perhaps invalid in that many would doubtless "adjust" their stated intentions to include the number of children born and to whom they have developed an emotional attachment.
Advances in birth control technology and the increased role of decision making in fertility stimulated the interest of economists in this area. However, the availability of this technology varies by socioeconomic status due to the legal restrictions imposed on some forms of birth control and an individual's access to medical care. Advances in controlling fertility have been primarily medical advances, controlled by the medical community. The reliability of birth control technology varies quite directly with cost and degree of contact with medical practitioners which is required. As demonstrated by Keyfitz (1971), even small variations in the efficacy of a given technique can result in quite different family sizes as different probabilities of the success or failure of different techniques are applied over the number of years which make up a woman's reproductive life. Greater financial resources and the educational resources useful in seeking the most effective and appropriate method of fertility control are clearly linked to reducing the probability of an oversupply of children.

Legal constraints to fertility control would also imply more effective fertility control to those with more resources. Prior to the 1973 Supreme Court ruling overturning state laws limiting abortion, the availability of abortion varied from state to state. It could be argued that women with more resources were more likely to have knowledge of and access to states where this option was least restricted. Women who depend on public
assistance for medical care continue to face restrictions on this option of fertility control in the wake of the Supreme Court's decision that public assistance programs are not obliged to provide these services.

Historically, all forms of fertility control have been granted low priority or precarious status in health programs for those relying on public assistance (Deckard, 1983). The effect of education on an awareness of birth control options, the effect of resources on access to medical technology, and the differential impact of legal constraints suggest that the efficacy of fertility control is directly associated with socioeconomic status and that the higher fertility among those families of lower socioeconomic status may well represent an oversupply of children rather than a greater demand.

**Application of Economic Theory to Minority Fertility**

It has been observed that the average fertility among Mexican-American women is considerably higher than that of Anglos. One explanation of this higher than average fertility is that it is simply a reflection of the overrepresentation of Mexican Americans at lower than average levels of socioeconomic status. Rather than attributing higher fertility to cultural factors such as distinctly pronatalist attitudes, it may be that the fertility of Mexican-American women is no higher than would be expected given socioeconomic circumstances. The economic model
of fertility implies that the costs of large families vary as a function of women's education, the strategy of trading quantity for quality in the process of consuming child services; the price of children and the probability of an oversupply of children apply equally to all couples. These factors should alter or influence decisions about fertility made by Mexican-American couples with the same predictable results as for couples of any other ethnic origin. This explanation of fertility decisions implies that when controlling for socioeconomic factors, Mexican-American fertility is not higher than that of any other group. This logic parallels the assimilationist model of the immigrant experience, with socioeconomic differences the primary sources of differentiation between groups and the expected disappearance of distinct ethnic "cultural" traits with full socioeconomic participation.

This interpretation appears to be quite plausible in the case of Mexican Americans in the Southwest. Among Mexican-American women in Arizona, Texas, and New Mexico, the average number of children born to all women aged 35-44 is 3.77 compared to 2.47 for whites. The average income of Mexican-American males over age 15 with incomes is $8,394 compared to $13,869 for comparable Anglos. Seventy-two percent of Anglos in these three states have completed high school compared with 31 percent of Mexican Americans. The average number of years of school completed is 8.9 for Mexican Americans compared to 12.7 for Anglos (U.S. Bureau
of Census, 1981). These differences are significant if education determines the opportunity costs associated with children. In addition to opportunity costs, these educational differences affect the quantity-quality tradeoffs made by couples and the probability of an oversupply of children. The comparison of the measures of socioeconomic status of these two groups shows that if indeed there is a negative association of socioeconomic status and fertility, there is ample evidence of an overrepresentation of Mexican Americans at the lower levels of income and education.

The Sociologists' Response

The economic model relies solely on individual level characteristics in its explanation of variations in fertility rates. This has brought considerable criticism from other students of fertility who point out that while it is clear that economic factors have a bearing on fertility, the social context of fertility cannot be ignored (Blake, 1968). Couples' taste for children probably develops in this social context. While many economists describe individual characteristics as the sole determinant of these tastes, others describe taste as a function of the "nurture experience" and peer group influences as well (Liebenstein, 1976, p. 425).

While the economic model assumes that the family unit stands as an independent unit in the process of fertility decision making, others argue that reproduction is far too important to the maintenance of society as a whole to have been left to the
individual decision-making process (Blake, 1968). It is within the larger social context that the motivation to have children is thought to develop. In industrial societies parents derive primarily emotional pleasure or personal satisfaction from their children, making children "useful" only as consumer goods. In view of the costs involved in rearing children and the long-term commitment implied by parenthood, the individual family unit seems an implausible source of the motivation necessary to undertake parenthood (Bean, 1975).

Critics of the narrow focus of the economic model suggest that socially defined values or goals are created which can only be realized or satisfied by the presence of children. Blake suggests that the creation and maintenance of these goals are a principal function of familial and kinship institutions in all societies. By largely excluding institutional alternatives to family statuses, family satisfactions and kinship affiliation, societies channel motivation in the direction of goals that imply the existence of children (1968, p. 22).

Given the power of these pronatalist values and institutions, it seems unlikely to critics of this approach that the decision-making process involved in fertility is solely shaped by economic considerations.
CHAPTER 4

RELIGIOUS VALUES AND FERTILITY

Unlike Jewish and Protestant groups which in general do not have unequivocal positions on family limitation, contraceptive use, or ideal family size, the teachings of the Catholic Church have been clearly enunciated. The observation that 85 to 95 percent of Mexican Americans indicate that they are at least nominal Catholics points to the traditional teachings of the Catholic Church as an explanation of the higher fertility of this group. Because the Census data used in this research do not include questions concerning religious preference or practice, controls for the overrepresentation of Catholics among Mexican Americans cannot be included in this study. The following discussion is presented in lieu of a statistical analysis of the effects of religion or religiosity on Anglo and Mexican-American fertility levels.

Trends in Catholic fertility indicate that the influence of the Church on the fertility behavior of all Catholic women in the 40-44 age cohort has not been as great as it was among older women. Correlates of adherence to religious norms regarding fertility among Catholics suggest that these teachings were even less likely to affect the fertility behavior of Mexican-American
women in this age group. Studies of attitudes toward contraception, contraceptive behavior, and the family size ideals of Mexican-American adults as well as the family size expectations of Mexican-American adolescents provide little evidence of an effect of religion or religiosity in this ethnic group. While Mexican Americans may subscribe to pronatalist norms and values, the overrepresentation of Catholics in the Mexican-American population does not appear to be a key element in explaining higher than average Mexican-American fertility.

The Pronatalist Influence of Catholicism

Evidence of changes in the fertility behavior of most Catholic women over the past several decades underscores the importance of framing the discussion of religious teachings and fertility behavior in terms of the age of the cohort of interest, women born in 1936-1940. In 1966, when these women were ages 26-30, the sources of pronatalist influence of Catholicism described by Judith Blake (1966b) included the ideals of marriage and family life as they were represented in the Catholic media as well as the familiar stance of the Church on birth control. Adherence to traditional teachings regarding birth control alone would be expected to have a pronatalist impact.1 Rhythm is described as the only permissible form of family limitation—to be used

1. Wilson and Bumpass (1973) report that Catholic women practicing the rhythm method were nearly as likely to have had a live birth in a three and one-half year period of observation as women who were using no method at all.
for the nonselfish goals of concern for the health and safety of parents and children. These goals did not include substituting traditional socioeconomic factors such as the quality of lifestyle or material goods for additional children.

The ideals of marriage and family represented in Catholic media and marriage manuals endorsed the large families that no doubt would result from adherence to Church guidelines regarding contraception. The benefits of large families to parents and children were affirmed, and concern was expressed for those living in smaller families. Implicit endorsement of large families was apparent as well. Blake reports that the Catholic Mothers of the Year had an average of 8.2 children, with no family smaller than five children and half numbering nine or ten.

Trends in Catholic Fertility

The extent to which the attitudes or behavior of American Catholics reflect the ideals and expectations of their Church has been the focus of studies of Catholic birth control practice (Westoff and Bumpass, 1973; Westoff and Ryder, 1977), family size expectations (Freedman et al., 1961; Westoff et al., 1963), and actual fertility (Westoff et al., 1963; Burch, 1966; Westoff and Jones, 1979; Mosher and Hendershott, 1984a, 1984b). These studies have shown convergence in some decades and divergence in others. In the early twentieth century Catholic fertility was clearly higher than that of non-Catholics. Between 1920 and 1940 a more rapid decline in the fertility of Catholics marked
the beginning of a trend toward convergence that lasted until the post-war baby boom (Freedman et al., 1959). As the baby boom progressed, Catholic fertility became disproportionately higher (Burch, 1966). Since the end of the baby boom, the decline in fertility among Catholics has been sharper than that of non-Catholics, again leading to a convergence in fertility rates (Westoff and Jones, 1979). Westoff and Jones estimate the Catholic-non-Catholic difference in total marital fertility rates to have been .10 children in 1971-1975, down from a high of 1.11 children in 1961-1965.

The decline in fertility differentials may have marked a decline in the influence of the Church's ideals regarding marriage and the family. This decline is paralleled by changes in rates of conformity to Church teaching regarding birth control. Longitudinal analysis of birth control practices (Westoff and Bumpass, 1973) indicates that among the birth cohorts just prior to the 1936-40 cohort, the greatest conformity to birth control proscriptions and the highest fertility differentials are observed. Nonconformity among all Catholic women rose steadily from 1955 to 1975 (Westoff and Jones, 1977). In 1960, when these women were 20-24, nonconformity
in the 1936-40 birth cohort was 43 percent. By 1970 the nonconformity rate for this birth cohort was 68 percent.\(^2\)

While there remains some debate about whether current birth control practice and the family size differential of .10 children observed by Westoff and Jones are sufficient to declare the end of "Catholic fertility" (Mosher and Hendershott, 1984a, 1984b), there is consensus on the growing similarity of Catholic-non-Catholic birth control practice and fertility during the time when women of the 1936-40 birth cohort were building their families.\(^3\) There is also a good deal of consensus about the

---

2. The birth cohorts just prior to the women of interest in this study had the largest family size differentials and the lowest rates of nonconformity. This does not mean, however, that the high Catholic fertility of the baby boom era reflected fertility that exceeded desired family size. Family size expectations suggest that Catholics during the baby boom had larger families because they wanted larger families.

3. Mosher and Hendershott found a .18 child difference in Catholic-non-Catholic fertility, causing them to question the Westoff and Jones declaration of the end of "Catholic fertility." Unlike Westoff and Jones, Mosher and Hendershott included Hispanic women in their sample, suggesting that this yields a more representative sample. Because these women were disproportionately Catholic, it could also be argued that Mosher and Hendershott have confounded religion and ethnicity. When Hispanic women were deleted from their sample, Mosher and Hendershott find a mean family size difference of only .11 child (compared to .10 from the Westoff and Jones study). Mosher and Hendershott also suggest that constraining marital histories of Protestants and Catholics to be the same distorts the effect of higher marital disruption on the fertility of Protestant women. Given this study's examination of Anglo and Mexican-American women and the constraints on marital history in sample selection, the Westoff and Jones conclusion suggesting the declining significance of religion remains applicable here.
extent to which conformity to Catholic fertility norms varies with ethnicity at any given time (Westoff et al., 1963; Burch, 1966; Potvin et al., 1968; Goldscheider and Uhlenberg, 1969). Goldscheider and Uhlenberg note that ethnic groups in the United States vary with the extent to which religious identification appears to be a part of their ethnic identification. The Irish as described by Greeley (1977) or the Polish as described by Isajiw (1974) appear to be groups for whom religious identity has played an important part in shaping ethnic identity. Goldscheider and Uhlenberg observe that the importance of religious norms and values to fertility behavior seemed to vary with that identification and the integration of the group into the institutionalized Catholic structure.

Adherence to the norms of the Church also varies among individuals. Two important correlates of adherence to Church doctrine among Catholics are religiosity and a parochial education. Catholic education has been found to be positively associated with number of children ever born (Janssen and Hauser, 1981; Johnson, 1982), family size expectations (Johnson, 1982), and compliance to the Church's norms on birth control (Freedman et al., 1961; Potvin et al., 1968). As would be expected, religiosity is also associated with conformity to fertility norms and values. Conformity to birth control proscriptions is associated with frequency of Mass attendance, receiving Communion, and being married by a priest (Potvin et al., 1968). Family size is positively
related to frequency of church attendance among Catholics (Ryder and Westoff, 1971).

**Mexican-American Catholics**

The overall trend of convergence in the fertility of American Catholics with those of non-Catholics implies similar family size goals as well as an acceptance of efficient techniques of birth control. The Church apparently lost a substantial share of its influence in the family size decisions of most American Catholic couples at the time when the women of the 1936-40 birth cohort were building their families. The larger than average family sizes of Mexican-American couples could be interpreted as evidence that the Church retains a substantial influence on the fertility behavior of these couples in contrast to other American Catholics. However, if the compliance of an ethnic group is associated with the importance of religion to the ethnic identity of that group and the integration of that group in the Church structure, the history of Mexican-American participation in the Catholic Church in the Southwest does not support this interpretation. The lower than average rates of religious education among Mexican-American children and low rates of religious participation of Mexican Americans as a group suggest that religion does not play a major role in decisions about contraception or fertility by this group.

Historically, the relationship of the Catholic Church and the Mexican-American population has been uneasy at best (Grebler
et al., 1970; Acuña, 1981). In contrast to accounts of the relationship of European immigrants and their Church in the Northeastern cities, the Catholic Church in the Southwest typically has not been portrayed as a source of comfort and support to Mexican-American immigrants. A chronic lack of resources available to the Church in the Southwest and the continuing flow of immigrants from Mexico may have contributed to the perception of the clergy that Mexican Americans have been a people "uninstructed in the faith" (Acuña, 1981, p. 55). Perhaps as a result, Church loyalty and adherence to religious norms are characterized as problematic in the Mexican-American community.

Ongoing conflict between the Church and the government in Mexico resulted in a distinct anti-clerical upbringing for many Mexicans which has been reflected in a chronic shortage of Spanish-speaking priests available for positions in the Southwest and a severe underrepresentation of Mexican Americans in the Church hierarchy. In the past, churches in this region were staffed by clergy recruited from Spain or France, decreasing the identification of Mexican Americans with their clergy. This situation was aggravated by differences in the socioeconomic origins of the clergy and their clientele which led to the perception that the Church was not concerned or unable to identify with the social needs of the people (Acuña, 1981). Thus, the ties of Mexican Americans to the Church have been more tenuous than those of earlier European Catholic immigrants.
These conditions continue to be reflected in the religious practice of Mexican Americans. Large numbers of Mexican Americans in the Southwest do not conform to norms of the Church. Survey data from Los Angeles and San Antonio in 1965–66 indicate that attendance at Mass among Mexican Americans was substantially lower than the national average. Mexican Americans report a low percentage of marriages originally performed before a Catholic priest. Although this marriage pattern could be attributed to the greater familiarity with Mexican law, which recognizes only civil marriages, this pattern persists among those who are native to America and of native parentage (Grebler et al., 1970, p. 474).

In addition to lower than average Mass attendance and fewer marriages before priests, Mexican Americans are less likely than other Catholics to have received a religious education (Grebler et al., 1970). Education is especially pertinent to contraceptive use because parochial schooling has been associated with adherence to norms of the Church regarding contraceptives. Given all these circumstances, Mexican-American women should be less, rather than more, constrained by Church teachings than Irish, Polish, or German Catholic women in their choice or practice of birth control.

**Religious Effects on Mexican-American Fertility**

As their marginal attachment to other norms of the Church and low rates of participation in religious education would suggest,
traditional proscriptions regarding the use of birth control
do not appear to have been an important source of the higher
fertility of the 40-44 year old Mexican-American wives who are
of interest in this study. Religiosity or religious affiliation
appear to affect contraceptive use, wanted family size, or actual
fertility only under limited circumstances.

Surveys conducted in San Antonio and Los Angeles in 1965-
66 (Grebler et al., 1970) and Austin, Texas, in 1969 (Bradshaw
and Bean, 1972) provide evidence that birth control was accepted
in practice as well as in principle among Mexican Americans.
The time frame is of special interest because the 1936-40 birth
cohort was 24-30 years of age at the time of the San Antonio
and Los Angeles surveys and 29-33 years of age at the time of
the Austin family survey. The mean age at the birth of the second
child to white women of this birth cohort was 27.2, making the
attitudes toward and use of family limitation options at this
time of particular interest to the present study.

Despite the teachings of their Church regarding family
limitation, 64 percent of the Mexican Americans interviewed in
Los Angeles and 50 percent of the Mexican Americans in San Antonio
expressed the opinion that the practice of birth control is usually
right or always right for married couples. Sixty-two percent of a nationwide sample responded favorably to the same question. Younger Mexican Americans were even more likely to agree to the use of birth control on principle. Seventy-three percent of those under age 30 in Los Angeles and 64 percent in San Antonio favored the use of birth control. This is a far greater rate of acceptance than would be expected from a population that is at least nominally Catholic.

In addition to favorable contraceptive attitudes, Mexican-American couples reported high levels of contraceptive use (Bradshaw and Bean, 1972). Interviews with Mexican-American couples in Austin indicate that 86 percent had used some form of contraception. In the couples where the husband had at least a high school education, 93 percent had used contraception. This compares to 84 percent of white couples and 78 percent of white Catholic couples (Ryder and Westoff, 1971).

These couples also used more effective forms of contraception. Like other Catholic couples, these Mexican-American couples report less use of the condom or diaphragm than white couples. However, they differed from a nationwide sample of Catholic couples

4. The item regarding birth control practice read as follows: "Family planning--or birth control--has been discussed by many people. What is your feeling about a married couple practicing birth control? If you had to decide, which one of these statements best expresses your point of view? It is always right; it is usually right; it is usually wrong; it is always wrong" (Grebler et al., 1970, p. 365).
in reporting far less use of the rhythm method and more widespread use of oral contraceptives. Sixty-five percent of Mexican-American women in Austin had used the Pill, more than twice the 25 percent of white Catholic couples in the U.S. who had used oral contraceptives. Only 33 percent of the entire nationwide white sample had used oral contraception. These findings confirm earlier reports that women of Latin American or Spanish background (most of whom were of Mexican origin) were less likely than Catholic women of other ethnic backgrounds to conform to the proscription against birth control other than rhythm (Potvin et al., 1968).

Studies of the relationship of religiosity and religious affiliation to contraceptive use and fertility also support the thesis that Catholicism is probably not the basis of the higher fertility rates of these Mexican-American women (Alvirez, 1973; Sabagh and Lopez, 1980). The association of religious preference and fertility behavior is difficult to describe in the Mexican-American population because there are very few Mexican Americans who are not Catholic.

In order to identify the effects of religion on the fertility behavior of the Mexican-American couples interviewed in Austin in 1969, Alvirez analyzed the effects of religiosity or religious affiliation on contraceptive use and wanted family size. Essentially, the logic applied in his study is that if the norms of Catholicism have any effect on fertility behavior, those effects should be greater with increased importance of religion in individuals'
lives. Religiosity was represented by such items as praying at home, attending church-sponsored activities, and discussing problems with a priest. Religious affiliation refers to the degree to which minimum standards for membership in good standing in the Church are met, indicated as marriage by a priest, attending Mass, and receiving Communion. If there is a positive effect of Catholicism on fertility, those who score low on scales of religiosity or religious affiliation should be more likely to use proscribed contraceptives and have smaller wanted family sizes while those for whom religion is a central concern should be more likely to adhere to the teachings of the Church with respect to contraceptive use and family size ideals. This logic has been supported by similar research on a nationwide sample of Catholics (Ryder and Westoff, 1971).

Contraceptive use among Mexican-American couples was not associated with religious affiliation or religiosity of husbands or wives (Alvirez, 1973). Unlike other Catholic women, Mexican-American women do not appear to be inhibited by the norms of the Catholic Church in the type or effectiveness of their contraceptive use. It would be unwarranted then to argue that the higher fertility rates of Mexican-American women are due to religious influences associated with negative attitudes toward contraception in general or an unwillingness to use more efficient methods.

While the norms and values of the Church do not seem to affect contraceptive use, Alvirez also tested the hypothesis
that the pronatalist values with respect to family size observed among these Mexican-American couples are linked to Catholic norms and values. (Alvirez used the number of children the couple already had or, if additional children were desired, the total number of children wanted as the measure of wanted family size.)

The general conclusion was that there is little effect of religiosity on wanted family size. The subgroup that stands as a slight exception to these findings was made up of wives married nine years or more. Within this subgroup, there did appear to be a positive effect of religious participation on wanted family size. While this may be interpreted as evidence of religious effects on the family size ideals of these wives, the lack of association among their husbands and husbands or wives who were married less than nine years suggests an alternate explanation. If women are traditionally viewed as responsible for the religious training of children, these wives may have developed and displayed suitable religious attitudes and behavior in the home in response to the presence of children old enough to appreciate their mothers' efforts. Rather than religiosity affecting family size, it may be that children in the home affect their mother's religious behavior.

Sabagh and Lopez (1980) studied the association of religiosity and net fertility of Mexican-American women raised in the United States and those raised in Mexico. In this study the effect of religiosity on net fertility was conditioned by the country
of upbringing among women of the 1929-38 cohort. Among Mexican-American women raised in the United States, a positive association of religiosity and fertility was observed. Among those raised in Mexico, there was no effect of religiosity on fertility. These findings are not unexpected since these women are part of the earlier birth cohort in which the highest conformity to the contraceptive norms of the Church and the highest religious differential in birth rates were observed. These Mexican-American women were building their families when the influence of the Church on the fertility behavior of all Catholic women was probably the greatest.

In a much younger cohort, those born between 1962 and 1967, the fertility expectations of Mexican-American adolescents are greater than those of Anglos and of their adult counterparts (Sorenson, 1985). It might be argued that at this stage, preliminary to actual family building, the teachings of the Church are responsible for differential fertility expectations in the high proportion of Mexican-American adolescents who are Catholic. Analyses of the expected family size of these adolescents by ethnicity and religious preference (Catholic versus non-Catholic) indicate that even among adolescents there is no significant difference in the family size expectations of the Catholic and non-Catholic Mexican Americans or the Catholic and non-Catholic Anglos. Even at the level of developing family size expectations, religious preference does not have a significant effect, suggesting that
in spite of the traditional teachings of the Church, Catholicism is not a likely source of higher Mexican-American fertility. Hence, the lack of information on religion in the Census data is not regarded as a serious impediment to the analysis of ethnicity and fertility presented in the following chapters.
CHAPTER 5
THE EFFECTS OF ETHNICITY

In Chapter 3 economic theories which explain fertility decisions in many of the same terms used to describe consumers' market place behavior were presented. Critics of the use of the economic framework for analyzing fertility behavior argue that this model is seriously limited by its focus on the couple as the largest unit relevant to fertility decisions at the expense of considering the effects of reference groups in shaping couples' decisions (Blake, 1968). The importance of the norms and values shared with larger reference groups and the role of peers in reinforcing these values is not explicitly addressed under the terms of economic models. As we have seen, the norms of the Catholic Church do not provide a convincing explanation of the higher fertility rates that characterize Mexican Americans. Rather than religious identity, ethnic identity may influence Mexican-American couples' decisions about fertility.

This chapter discusses two explanations of the influence of ethnicity on fertility. The first suggests that fertility is affected by the status insecurities that accompany minority group membership (Goldscheider and Uhlenberg, 1969). The unique values and norms of the particular group are not central to the
minority status hypothesis. The second focuses on the norms and values characterizing Mexican-American culture with respect to the family. Each of these explanations will be discussed in greater detail in this chapter.

The Minority Status Hypothesis

The notion that fertility rates are a function of socio-economic characteristics has been so generally accepted that fertility rates have been used as indirect indicators of socioeconomic status for comparisons between groups. Economic theories of fertility predict that when the socioeconomic characteristics of majority and minority groups are similar, fertility differences will be eliminated. However, statistical controls for individuals' socioeconomic characteristics in previous studies of minority fertility have failed to confirm these predictions. Goldscheider and Uhlenberg (1969) observed that fertility rates for some minority groups are either higher or lower than would be predicted on the basis of socioeconomic status alone, leading them to conclude that minority status itself affects fertility behavior even when the socioeconomic consequences of minority status are controlled.

In their study of blacks, Japanese-Americans, and Jews, Goldscheider and Uhlenberg found a pattern of minority fertility higher than that of the majority among those at lower levels of socioeconomic status. Minority group members who had attained higher than average status had fertility rates lower than those of the majority at comparable levels of socioeconomic attainment.
Subsequent research has described similar patterns of socioeconomic status and fertility, concurring with the conclusion that social class differences are only part of the explanation of fertility differences (Roberts and Lee, 1974; Bean and Wood, 1974; Ritchey, 1975; Johnson, 1979).

Goldscheider and Uhlenberg explain the interaction of minority status and socioeconomic status in terms of the minority individual's perception of the opportunity to achieve or maintain higher levels of socioeconomic status and the associated costs. The lower than average fertility of advantaged minority group members is therefore a reflection of the insecurities associated with minority group status. Minority group members who desire upward mobility are thought to anticipate that achieving those goals will be more difficult than similar attainment would be for majority group members. In order to compensate for the social or economic barriers they anticipate, these minority group members limit or defer having children.

While describing a strategy for conserving resources by limiting family size among the more advantaged minority group members, Goldscheider and Uhlenberg are somewhat less explicit about the mechanisms of higher minority fertility at lower levels of socioeconomic status. Real or perceived opportunity for social advancement is among the necessary conditions for the decision of some individuals to defer the gratification associated with having children. In a study of black-white fertility differentials,
Ritchey expands on the effects of perceived opportunity. He compares the interaction of minority status and socioeconomic characteristics in states with varying levels of racial segregation and discrimination. The pattern of high fertility among blacks at the lower levels of socioeconomic status is more pronounced in states where there is the least opportunity for mobility. This underscores the importance of perceived opportunity in the decision to defer childbearing among less advantaged minority group members. It may be that lower socioeconomic status combined with barriers to achievement leaves minority group members with little reason to defer childbearing.

The minority status hypothesis describes the effects of the insecurities felt by minority group members competing with the majority for socioeconomic status. Goldscheider and Uhlenberg qualify the application of their hypothesis to groups without distinctly pronatalist values. Another source of variation in fertility rates associated with ethnicity may be the values regarding family and fertility that characterize different ethnic groups.

**Ethnic Culture**

While the socioeconomic characteristics of individual couples have a bearing on fertility, norms and values associated with ethnic heritage may also affect fertility decisions. In a study of five minority groups, Gurak (1978) found that fertility differentials cannot be explained by reference to either minority
status or socioeconomic status alone. This suggests that social characteristics, reflecting the cultural heritage of particular ethnic groups, may exert an influence on fertility beyond that of their minority status.

In her response to economic theories of fertility, Blake (1968) contends that the motivation to have children develops within a context larger than the individual family unit. Culturally defined goals or values that can only be realized by the presence of children provide part of that motivation. Variation in the importance of parenthood to cultural definitions of adulthood or the performance of adult roles may contribute to variations in ethnic fertility. The importance of family satisfactions or kinship affiliation, which imply the existence of children, may vary among ethnic groups.

**Mexican Culture as a Source of Pronatalist Norms and Values**

Mexican culture may be a source of pronatalist norms and values relevant to the fertility of Mexican-American couples. Studies of family structure and socialization patterns of other immigrant groups suggest that aspects of family structure, identifiable by ethnic subgroup, persist beyond the first generation in spite of apparent assimilation into the economic structure of American society. Among older immigrant groups these characteristics may reflect traditions typical of an earlier time in the country of origin. Among groups which continue to receive large
numbers of immigrants, characteristics attributed to ethnic culture would be expected to reflect more contemporary aspects of culture in the country of origin.

Evidence that high fertility rates remain common in Mexico is abundant. The number of births per mother averages 6.3. Corresponding rates for women of Mexican origin in the United States are 4.3 (Uhlenberg, 1973). While the Mexican rates are declining somewhat in response to economic development and the decline in mortality, cultural factors that inhibit a rapid fertility decline remain. Anthropological studies of contemporary communities suggest the existence of specific norms and values regarding fertility, birth control, and children associated with the persistence of high Mexican fertility.

The following description of female status and family life is of interest to this study in suggesting possible sources of the norms and values that may influence Mexican-American fertility. These observations apply to Mexican culture and cannot be viewed as the undisputed basis of higher Mexican-American fertility without American evidence that this dimension of the native cultural tradition has survived immigration. On the other hand, evidence of norms resulting in high fertility in the country of origin would lend support to a cultural argument.

Shedlin and Hollerbach's findings from semi-structured interviews with women ages 15-44 who were living in a marital union parallel descriptions of women's status in other areas.
of the world with limited industrialization and female participation
in the wage labor force (O'Kelly, 1980; Berch, 1982). Among
these women childbearing is recognized as a major source of prestige
in the family and community as well as an important source of
the esteem of the husband. In a developing society where men
socialize primarily with other men, children and female relatives
represent a source of companionship and assistance within the
home as well as future economic security, emotional gratification,
and affection.

Ideal and actual family size reflect pronatalist norms
and values. Among the women interviewed by Shedlin and Hollerbach
(1978), the mean and modal ideal number of children was four
—two boys and two girls. Their actual fertility, however, exceeds
this ideal. Of the women aged 35–44, the average number of preg-
nancies is 9.5 with 6.6 surviving children. In part the contrast
of ideal and actual family sizes results from the rare use of
contraception among these respondents. The prestige gained from
additional children contributes to low levels of contraceptive
use as does the perception that pregnancy is a normal state,
necessary to maintain health. These beliefs and the concern
that illness may accompany many birth control methods contribute
to low levels of contraception. In addition, wives report that
their use of birth control causes husbands and mothers-in-law
to suspect them of infidelity.
While the portrait of family life of the women interviewed by Shedlin and Hollerbach (1978) reflects the power of the maternal role as a counter force to domination by husbands and mothers-in-law, some aspects of the immigration experience may reduce the high fertility observed in Mexico. Economic participation by women and freedom from the influence of the extended family are associated with more egalitarian relationships and greater communication between husbands and wives regarding fertility and other decisions (Zinn, 1980; Cromwell and Ruiz, 1979). If immigration represents greater economic opportunities for women and displacement from the extended family, aspects of family structure which contribute to higher fertility rates in Mexico may be modified in the process of immigration (Hawkes and Taylor, 1975).

The rare use of contraception by Mexican women described by Shedlin and Hollerbach is quite different from the unusually high rates of contraception among Mexican-American women described in Chapter 4. This may be largely attributed to fears of illness and death among Mexican women who were receiving low levels of information regarding birth control. When these fears were allayed by health practitioners, the side effects of birth control were tolerated, which suggests that even among Mexican women, birth control is not rejected in principle. Although both the husband and wife may gain prestige from the number of their children,
women in the United States may be able to match more closely the ideal of four children.

There is evidence that large families are indeed more valued by Mexican-American couples in the United States as well. The Growth of American Families study found that about 90 percent of all American women interviewed considered 2-4 children the ideal. Only 40 percent of Mexican-American women preferred fewer than four children (Uhlenberg, 1973). Mexican-American wives in Austin, Texas, report wanting an average of 4.4 children. They report Mexican-American men as wanting larger families, an average of 5.4 children (Bradshaw and Bean, 1972). Additional survey items completed by these women reflect strong positive values regarding large families. Eighty-seven percent indicate that one of the most important things in life is to have children. Seventy-five percent indicate having many children is a lot of work but worth it (85 percent of husbands agreed with this). Fifty-six percent agree that the more children a family has, the happier it is.

**Familism and Adult Sex Roles**

As Blake's (1968) comments on economic models of fertility imply, the pronatalist values and ideal family sizes reported above may be traced to family values and adult sex roles within Mexican-American culture. However, caution must be taken in discussing ethnic variation in family form or adult roles because there is a danger of relying on stereotypes or applying the described
traits uncritically to all Mexican Americans. Because there is no real "type" of Mexican-American family, the characteristics described below should be interpreted from a probabilistic frame of reference (Murillo, 1971), that is, there is a greater chance of observing them among Mexican Americans than among Anglos.

The family is a major theme in most descriptions of Mexican-American life. The family is described as the primary social unit in an individual's life (Murillo, 1971) or the central institution for Mexican-American individuals (Mirandé, 1977). Because individual's interests are more likely to be second to those of the family, the individual may be seen first as a representative of the larger family unit. Mexican-American respondents appear to endorse the idea that family ties are especially important to them, which, in contrast to other groups, may be a source of collective pride (Grebler et al., 1970). Surveys of urban Mexican-Americans indicate that Mexican Americans as a group value family life and kinship more than Anglos and that, even with controls for socioeconomic status, Mexican Americans are more familialistic than Anglos (Farris and Glenn, 1976).

The family is described as central but also insular. Community studies describe socialization patterns, especially those of women, as largely confined to the kinship network, which does not exclude close friends but also includes many extended family members (Murillo, 1971). The family has been able to maintain its prominence in the lives of Mexican Americans in
part because of its ability to provide needed emotional and material security. Reticence to seek aid from outside sources or agencies reinforces the image of the family as the primary social unit. Dependence on the family unit for emotional support, advice, assistance, or material needs is common.

As might be expected given the importance of the family, adult roles are more likely defined in terms of family roles. Children are important to the adult male role as evidence of a father's ability to provide for his family in most cultures, but Mexican Americans differ from Anglos in the extent to which potency or virility are important components of this role (Martinez, 1977). The ideal female role is centered around home and children. Childbearing and childrearing symbolize female maturity. While motherhood is a respected role, there is the expectation that a mother's needs are secondary to those of other family members (Stevens, 1973). In this context, the performance of family roles may be the most viable source of status for women. Models for developing independent lifestyles are missing, and alternate roles outside the home may represent too great a source of conflict with ideal female behavior and family roles as evidenced by the low labor force participation rates of Mexican-American women.

This ideal female adult role is not too dissimilar from that of American society at large (Grebler et al., 1970). The only difference may be in degree. The presumption that a husband and family are basic to a woman's fulfillment or that they are
her first responsibility is hardly unique to Mexican-American culture. The persistence of these ideal adult roles for Mexican-American women may in part reflect the endorsement they receive in both Anglo and Mexican-American culture.

The primacy of the family role may also be reinforced by female social isolation. Contacts outside the home are more likely limited to female relatives for Mexican-American women than for Anglos. A 1970 survey of urban Mexican-American women indicates that 70 to 80 percent do not belong to any organization that meets on a fairly regular basis. Eighty percent limit their visiting to other family members, visiting with neighbors only rarely or never (Moore, 1970). Exclusivity of social relations may maintain the "Mexican-ness" of families (Grebler et al., 1970). In addition, these socialization patterns do not conflict with the care of infants and small children, reducing the "psychic" costs associated with childbearing by many Anglo mothers, who are more likely to work or participate in activities outside the home.

The Persistence of Familism

The importance of the family and accompanying ideal adult roles which support higher Mexican-American fertility may persist for several reasons. If they reflect Mexican cultural values, the extent to which recent immigrants have been able to maintain ties with Mexico may explain a retention of distinctive norms and values. This unique aspect of Mexican-American experience,
not shared by European immigrants, is enhanced by the simple
proximity of Mexico, which facilitates contact with relatives
who have remained there. These ties are further maintained by
a pattern of in and out migration before final migration for
a number of first-generation immigrants and the recent migration
of a relatively large portion of the Mexican-American community.

It is doubtful that continued immigration and proximity
to Mexico are solely responsible for the maintenance of the norms
and values that seem to characterize Mexican-American family
formation patterns. To rely on this explanation alone implies
a rather static, potentially disfunctional way of life. Culture
is not a series of automatic responses based on the experiences
of other people in another place or time. Culture is a pattern
of responses to a group's environment and the constraints implied
by that environment. Ethnic traits may be developed upon arrival.
That the Irish appear to have become especially adept at urban
politics (Greeley, 1977) or that Scandinavians seemed inclined
to farming may have more to do with conditions in the United
States at the time of immigration than life in their country
of origin.

Rather than being interpreted as evidence of a persistent
ethnic heritage, familism and higher than average fertility may
be differences resulting from what Yancy et al. describe as "the
structural conditions which each immigrant group and their descendants
have encountered" (1976, p. 391). As developing highly successful
political skills may have enhanced the security of the Irish in their environment, family characteristics may have been part of an adaptive complex utilized by Mexican Americans. Mexican-American history suggests that familism may have been a response to the precarious position of Mexican immigrants to the American Southwest.

Other Catholic immigrants do not seem to have developed a comparable sense of the central importance of the family. The conditions and opportunities available to other groups may have been more conducive to the development of other social institutions which met the needs of immigrant groups. Many of these other groups were urban from their arrival, making the development of formal organizations more feasible in terms of time and distance. As suggested by Greeley, the role of the Church cannot be minimized in the process of the establishment of other Catholic immigrants in this country. National churches, the Polish Catholic Church, like that of the Italians, the Irish, and the Germans were central institutions, marking neighborhoods and providing the basis of political organization and educational and relief efforts to successive waves of immigrants (1977).

The relationship of Mexican-American Catholics to their Church and the clergy was tenuous before leaving Mexico and has historically remained so in the American Southwest. In a primarily rural setting, without the organizational structure of the Church
to assist in receiving immigrants and providing social services, the family may have been seen as a more reliable social resource. This perception may have been reinforced in the face of dealing with institutions which appeared unreliable or untrustworthy. As illustrated by the history of Chicanos in the Southwest (Acuña, 1981), the domination of the political economy by large mining and agricultural concerns in the region and the alignment of these with formal religious and political institutions created a situation in which the social security of family ties retained a unique importance. The concern that welfare agencies may also be involved in police functions is important to the maintenance of reliance on the family (Mirande, 1977). The historical participation of these agencies in "repatriation programs" may in part be the basis of this concern (Acuña, 1981).

Summary

Ethnicity may affect fertility as a result of the minority status ascribed to Mexican Americans in the United States. In part, characteristics of ethnic culture such as adult sex role ideals and the importance of the family may have a pronatalist effect on the fertility decisions of Mexican-American couples. The minority status hypothesis and cultural characteristics are not necessarily competing hypotheses describing how ethnicity may affect fertility. A negative interaction term describing the effects of socioeconomic status as they are conditioned by ethnicity (Figure 2-a) would support Goldscheider and Uhlenberg's
description of how minority status affects fertility behavior. If pronatalist norms and values are characteristics of the Mexican-American culture and if these affect fertility decisions, a positive effect of ethnicity when controls for socioeconomic status are introduced will be detected (Figure 1-b). An added measure of ethnicity, ethnic integration, is measured in terms of language use and generation. If ethnic culture continues to have an important role in fertility decisions, the positive effect of ethnicity is expected to be the greatest among those who most strongly identify with the ethnic culture (Figure 1-c).
CHAPTER 6
THE EFFECTS OF SOCIOECONOMIC STATUS AND ETHNICITY ON MEAN FAMILY SIZE

The regression analysis presented in this chapter is designed to assess the effects of the socioeconomic status, Mexican-American identity, and the ethnic integration of husbands and wives on their fertility as a couple. Economic theories of fertility state that decisions about family size are made on the basis of factors that are relevant to the family. Education should have a negative effect on fertility because of the greater opportunity costs of childbearing to women with higher educational attainment and the role of education in shaping the preferences for children. Wife's education should have the greater negative effect on the fertility of couples since child care generally has a greater impact on wives' options to pursue other activities than on husband's options. An additional negative effect of the educational attainment of husbands may reflect the influence of education on the child quality preferences of both parents. Controlling for the effects of education, income should have a positive effect on fertility since greater resources allow parents to have more of whatever type of children they prefer. If fertility behavior is wholly shaped by the constraints of socioeconomic variables, controls
for differences in socioeconomic status should eliminate ethnic fertility differences.

If norms and values associated with ethnic group membership affect the fertility behavior of Mexican Americans, ethnicity or measures of ethnic integration should retain a significant effect on fertility in addition to the effects of socioeconomic status. Those Mexican Americans who are foreign born or who usually speak Spanish are expected to have higher fertility rates net of other social and economic characteristics.

The minority status hypothesis advanced by Goldscheider and Uhlenberg (1969) predicts an interaction of socioeconomic status and ethnicity such that the negative effects of socioeconomic status observed in the general population are more pronounced in the minority population. An opposite pattern, that of a positive association of fertility and socioeconomic status, among those groups with distinctly pronatalist norms and values is suggested by findings based on the fertility expectations of Mexican-American adolescents discussed in Chapter 1. The study of fertility expectations also suggests that the effects of Mexican-American identity or ethnic integration on fertility will be more pronounced among husbands than among wives.

**Socioeconomic Status, Ethnicity, and Fertility**

Descriptive statistics for the variables used in the regression analysis in this chapter are reported in Table 6.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (x)</th>
<th>Standard Deviation (s.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fertility</strong></td>
<td>3.12</td>
<td>1.89</td>
</tr>
<tr>
<td><strong>Socioeconomic Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife's Education (WFED)</td>
<td>11.80</td>
<td>3.36</td>
</tr>
<tr>
<td>Husband's Education (HSED)</td>
<td>12.37</td>
<td>4.12</td>
</tr>
<tr>
<td>Husband's Income (HSINC)</td>
<td>$23,042</td>
<td>15,842</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife's Nativity (WFBIRTH)</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td>Husband's Nativity (HSBIRTH)</td>
<td>.06</td>
<td>.25</td>
</tr>
<tr>
<td>Wife's Language Use (WFENG/VW)</td>
<td>.77</td>
<td>.42</td>
</tr>
<tr>
<td>Wife's Language Ability (WFENG/VW)</td>
<td>.11</td>
<td>.31</td>
</tr>
<tr>
<td>Husband's Language Use (HSENG/VW)</td>
<td>.78</td>
<td>.41</td>
</tr>
<tr>
<td>Husband's Language Ability (HSENG/VW)</td>
<td>.11</td>
<td>.31</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wife's Age at Marriage (AGEMAR)</td>
<td>20.51</td>
<td>4.35</td>
</tr>
<tr>
<td>Residence (RURB)</td>
<td>.80</td>
<td>.40</td>
</tr>
</tbody>
</table>

In this and subsequent regression analyses,

- 1 = foreign born
- 1 = English usually spoken at home
- 1 = a language other than English is usually spoken at home, but respondent speaks English "very well"
- 1 = nonrural residence
The couples in this sample have an average of 3.12 children. This is, of course, an overestimation of the fertility of this age group because the sample is restricted to married women. That these women are married only once and are currently married and living with their spouses at the time of the Census increases the margin by which this sample overestimates the fertility of all women. The marital fertility of the women in this sample is also overestimated in that it is assumed that children ever born, as reported by the wife, are children born to the couple. The mean educational attainment of all wives is 11.8 years— that of the husbands is 12.37 years. Husband's average income is $23,042.

Table 7 presents these descriptive statistics for each of four subgroups defined in terms of the possible combinations of husband's and wife's ethnicity. On the average Anglo couples have the smallest families, with 2.77 children. Mexican-American couples have the largest mean family size of 4.65 children. Mexican-American husbands and Anglo wives have an average of 3.34 children. Anglo husbands and Mexican-American wives have somewhat smaller families, averaging 2.93 children.

Given the prediction that fertility varies inversely with educational attainment, these differences in mean family size could be due to compositional differences of the four groups. The educational attainment of husbands ranges from 13.41 years for Anglo men married to Anglo women to 7.91 years for
Table 7. Means and Standard Deviations of Variables Used in the Regression Models by Husband’s and Wife’s Ethnicity.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife’s Ethnicity:</td>
<td></td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertility</td>
<td>2.77</td>
<td>1.49</td>
<td>2.92</td>
<td>1.91</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>12.71</td>
<td>2.34</td>
<td>11.16</td>
<td>3.36</td>
</tr>
<tr>
<td>BSED</td>
<td>13.41</td>
<td>3.33</td>
<td>12.57</td>
<td>3.00</td>
</tr>
<tr>
<td>BSINC</td>
<td>$25,428</td>
<td>16,186</td>
<td>18,695</td>
<td>13,211</td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>HSETH</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ethnic Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBRITH</td>
<td>.04</td>
<td>.19</td>
<td>.18</td>
<td>.39</td>
</tr>
<tr>
<td>BSBIRTH</td>
<td>.02</td>
<td>.14</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>.96</td>
<td>.21</td>
<td>.23</td>
<td>.42</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>.04</td>
<td>.19</td>
<td>.56</td>
<td>.50</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>.96</td>
<td>.20</td>
<td>.84</td>
<td>.37</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>.03</td>
<td>.18</td>
<td>.12</td>
<td>.32</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>20.27</td>
<td>4.03</td>
<td>23.78</td>
<td>5.42</td>
</tr>
<tr>
<td>RURB</td>
<td>.83</td>
<td>.38</td>
<td>.84</td>
<td>.37</td>
</tr>
<tr>
<td>N</td>
<td>10,241</td>
<td></td>
<td>177</td>
<td></td>
</tr>
</tbody>
</table>

^a- 1 = Mexican American
Table 7, continued

<table>
<thead>
<tr>
<th>Husband's Ethnicity:</th>
<th>Mexican American</th>
<th>Anglo</th>
<th>Mexican American</th>
<th>Mexican American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's Ethnicity:</td>
<td>X</td>
<td>s.d.</td>
<td>X</td>
<td>s.d.</td>
</tr>
<tr>
<td>Fertility</td>
<td>3.34</td>
<td>1.91</td>
<td>4.65</td>
<td>2.55</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>11.84</td>
<td>2.82</td>
<td>7.94</td>
<td>4.11</td>
</tr>
<tr>
<td>HSED</td>
<td>12.32</td>
<td>4.10</td>
<td>7.91</td>
<td>4.59</td>
</tr>
<tr>
<td>HSINC</td>
<td>$19,171</td>
<td>13,505</td>
<td>13,202</td>
<td>9,524</td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>HSETH</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ethnic Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>.16</td>
<td>.37</td>
<td>.31</td>
<td>.46</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>.07</td>
<td>.25</td>
<td>.26</td>
<td>.44</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>.66</td>
<td>.48</td>
<td>.03</td>
<td>.16</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>.23</td>
<td>.42</td>
<td>.40</td>
<td>.49</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>.34</td>
<td>.48</td>
<td>.03</td>
<td>.16</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>.53</td>
<td>.50</td>
<td>.42</td>
<td>.49</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>22.30</td>
<td>5.21</td>
<td>21.24</td>
<td>5.27</td>
</tr>
<tr>
<td>RURB</td>
<td>.84</td>
<td>.37</td>
<td>.82</td>
<td>.38</td>
</tr>
<tr>
<td>N</td>
<td>74</td>
<td></td>
<td>2376</td>
<td></td>
</tr>
</tbody>
</table>
Mexican-American husbands of Mexican-American wives. Similarly, wives' educational attainment ranges from 12.71 years for Anglo wives of Anglo husbands to 7.94 years for Mexican-American wives of Mexican-American husbands.

The Main Effects Model

The extent to which differential fertility reflects only differences in socioeconomic status or status plus a constant ethnic effect is described in regression equations which include measures of socioeconomic status and ethnicity. Measures of ethnic integration are included as an indicator of the effects of the maintenance of ethnic ties on fertility. Wife's age at marriage controls for the number of years at risk of childbearing in each regression equation. To control for the predicted negative effect of nonrural residence on fertility, a dichotomous variable describing the couple's residence at the time of the Census is also included. Neither age at marriage nor residence type is viewed here as an indicator of socioeconomic status or ethnic integration.

There is considerable intercorrelation within and between the variables representing socioeconomic status, Mexican-American identity, and ethnic integration. To rule out the possibility that only some of these are necessary to the estimation of mean family size, with the others only additional proxies describing the same effects, parallel main effects models regressing the number of children ever born on a series of different independent
variables were specified. The statistical significance of the variation in mean family size explained by independent variables is determined by an F-test (Kerlinger and Pedhazur, 1973, p. 70).

Socioeconomic Status

The first three equations in Table 8 represent the effects of socioeconomic status on fertility. The negative effect of education on fertility and the more pronounced effect of wife's education predicted by economic theories of fertility are observed in these data. With each year of wife's education, mean family size is reduced by .154 children. Each year of husband's education further reduces mean family size by .057 children. The coefficients associated with education may be cautiously interpreted as support for the hypothesis that wife's education has a greater effect on fertility than that of husbands. This is consistent with the expectation that the education of both parents shapes child quality expectations while the additional opportunity costs of children pertain mostly to women. In this undifferentiated sample, husband's income does not add to the variance in mean family size that can be explained by measures of education alone.

Mexican-American Identity and Ethnic Integration

Columns 4 and 5 of Table 8 describe the effects of the ethnicity of husbands and wives unadjusted for the socioeconomic differences between Anglos and Mexican Americans. On the average, Mexican-American wives have 1.908 more children than Anglo women.
Table 8. Regression of Number of Children Ever Born on Socioeconomic Status and Ethnic Identity of Husbands and Wives.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>-.203</td>
<td>-.154</td>
<td>-.154</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>HSED</td>
<td>--</td>
<td>-.057</td>
<td>-.057</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>HSINC</td>
<td>--</td>
<td>--</td>
<td>.000*</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1.908</td>
<td>.772</td>
</tr>
<tr>
<td>HSETH</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>1.228</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>-.090</td>
<td>-.088</td>
<td>-.088</td>
<td>-.129</td>
<td>-.128</td>
</tr>
<tr>
<td>RURB</td>
<td>-.086</td>
<td>-.060*</td>
<td>-.060*</td>
<td>-.141</td>
<td>-.142</td>
</tr>
<tr>
<td><strong>CONSTANT</strong></td>
<td>7.423</td>
<td>7.503</td>
<td>7.503</td>
<td>5.500</td>
<td>5.463</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.19472</td>
<td>.20303</td>
<td>.20303</td>
<td>.22707</td>
<td>.23487</td>
</tr>
</tbody>
</table>

* p > .05
In spite of the clear association of husband's and wife's ethnicity, husband's ethnicity adds to the variation in fertility that can be explained by wife's ethnicity alone. That husband's ethnicity seems to have the greater effect on couples' fertility is consistent with the interaction of sex and ethnicity described in the study of adolescent fertility expectations.

The equations in Table 9 describe the effects of measures of ethnic integration on fertility. As seen in Column 1, wife's foreign birth, unadjusted for socioeconomic differences between foreign-born and native-born wives, increases family size by a factor of .477 children. The regression coefficients in Column 2 of Table 9 indicate that husband's foreign birth adds to the variation in mean family size explained by wife's nativity.

Language is also used here as a measure of ethnic integration. Speaking a language other than English at home, either by choice or because English is not spoken very well, is thought to indicate a greater integration of the individual in an ethnic culture. As seen in Column 3 of Table 9, wife's English ability rather than language use seems to affect fertility. Wives who speak English at home (WFENG/VW) or who speak English very well (WFENG/VW) have fewer children than those wives who usually speak a language other than English at home and who do not speak English very well. The added effects of husband's language use on fertility are similar to the effects of wife's language (Column 4, Table 9). Lower fertility is also associated with husband's English
Table 9. Regression of Number of Children Ever Born on Mexican-American Identity and Ethnic Integration.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>.710</td>
<td>.713</td>
<td>.547</td>
<td>.548</td>
<td>.581</td>
</tr>
<tr>
<td>HSETH</td>
<td>1.164</td>
<td>1.123</td>
<td>1.035</td>
<td>.948</td>
<td>.969</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>.477</td>
<td>.332</td>
<td>--</td>
<td>--</td>
<td>.231</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>--</td>
<td>.327</td>
<td>--</td>
<td>--</td>
<td>.205</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>--</td>
<td>--</td>
<td>-.699</td>
<td>-.480</td>
<td>-.345</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-.390</td>
<td>-.293</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>-.131</td>
<td>-.131</td>
<td>-.129</td>
<td>-.129</td>
<td>-.131</td>
</tr>
<tr>
<td>RURB</td>
<td>-.147</td>
<td>-.147</td>
<td>-.147</td>
<td>-.147</td>
<td>-.150</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>5.509</td>
<td>5.521</td>
<td>6.175</td>
<td>6.346</td>
<td>6.149</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.23938</td>
<td>.24049</td>
<td>.24134</td>
<td>.24300</td>
<td>.24511</td>
</tr>
</tbody>
</table>
ability. The inclusion of the language use and ability with nativity of husband and wife (Column 5) indicates that while language and nativity are correlated, each has a unique effect on fertility. The effects of ethnic integration described above are estimated for the entire sample.

Because of the association of socioeconomic status with language characteristics and nativity, a more accurate assessment of the effects of ethnic integration on fertility requires controls for the effects of education and income. English proficiency is associated with socioeconomic status in this country. For this reason, it could be argued that the apparent negative effect of English proficiency is merely a proxy for the established negative effects of education on fertility. To control for the confounding effects of socioeconomic status and ethnic integration on fertility, education and income are added to measures of nativity and language use in Table 10.

The regression coefficients in Column 1 suggest that the apparent effects of wife's ethnic integration as described here for the entire sample of couples are largely the effects of socioeconomic status. With the inclusion of the education of both spouses and husband's income, wife's nativity and wife's language characteristics have no significant effect on mean family size.

Comparison of a series of parallel regression equations results in the selection of a final model estimating the main
Table 10. Regression of Number of Children Ever Born on Socioeconomic Status, Mexican-American Identity, and Ethnic Integration.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>-.081</td>
<td>-.082</td>
</tr>
<tr>
<td>HSED</td>
<td>-.022</td>
<td>-.022</td>
</tr>
<tr>
<td>HSINC</td>
<td>.022</td>
<td>.022</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>.417</td>
<td>.467</td>
</tr>
<tr>
<td>HSETB</td>
<td>.827</td>
<td>.820</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>.124*</td>
<td>.143</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>.200</td>
<td>.193</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.130*</td>
<td>--</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.065*</td>
<td>--</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.183*</td>
<td>-.245</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.206</td>
<td>-.238</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>-.115</td>
<td>-.115</td>
</tr>
<tr>
<td>RURB</td>
<td>-.118</td>
<td>-.117</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.751</td>
<td>6.691</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.26222</td>
<td>.26231</td>
</tr>
</tbody>
</table>

* $p > .05$
effects of socioeconomic status, nativity, and language use on fertility. Education has a negative effect on fertility. Husband's income has a positive effect predicted by economic theories in Chapter 3. In this model foreign birth of both spouses increases family size. English use or proficiency of the husband decreases couples' mean family size. When included in a regression equation with husband's language characteristics, wife's language use is not significant.

Interaction with Mexican-American Identity

The analysis described above pertains to the estimated effects of single variables or sets of variables on fertility of all couples. A more accurate description of the relationship of cultural and socioeconomic variables to minority fertility requires the estimation of the effects of these variables as they pertain specifically to Mexican-American fertility.

Socioeconomic Status and Mexican-American Identity

Two hypotheses presented in Chapter 2 suggest that the effects of socioeconomic status may be conditioned by ethnicity. The minority status hypothesis (Goldscheider and Uhlenberg, 1969) suggests that minority group members at the lower levels of socioeconomic status perceive no reasonable chance of higher attainment given the combined effects of socioeconomic status and minority status. Given these barriers to upward mobility, they are described as less likely to forego the satisfactions of a large family
for the chance of higher status attainment. The few minority group members who have achieved higher than average socioeconomic status are thought to have compensated for the barriers to their achievement with extremely low fertility.

This model was developed on the basis of the fertility behavior of minority groups who do not appear to have distinctly pronatalist values as part of their cultural heritage. If it applies to Mexican-American fertility, a negative interaction of socioeconomic measures and ethnicity would be observed. That interaction would mean that at lower levels of socioeconomic status ethnicity has a positive effect on fertility but that because of the more pronounced negative effect of socioeconomic status on Mexican-American fertility, at higher levels of income or educational attainment, Mexican-American fertility is the same or lower than that of Anglos.

On the other hand, if children are especially valued, those Mexican Americans who have achieved higher status may have more children rather than consuming other "goods" made possible by greater resources. In this case, there would be a positive effect of socioeconomic status as it is conditioned by Mexican-American identity.

The third possible outcome of including terms describing the interaction of ethnicity and education or income is that the interaction terms do not add to the variation in mean family size that can be described by the main effects model. This would
mean that the pronatalist norms and values associated with Mexican-American culture are shared and acted upon equally by Mexican Americans regardless of their socioeconomic status.

In order to estimate the effects of socioeconomic status as they are conditioned by ethnicity, terms describing the interaction of income and education with ethnicity were added to the main effects model. The regression coefficients for the main effects model from Table 10 are repeated in Column 1 of Table 11 to facilitate comparison with models which include interaction terms.

The effect of wife's education as it is conditioned by ethnicity is described in Column 2 of Table 11. The comparison of this regression equation to the main effects model in Column 1 indicates that education has a greater effect on the fertility of Mexican-American women. The main effects coefficient associated with wife's education, -.082, indicates that for all women in this sample, there is a decline in mean family size of .082 children with every year of wife's education. In the equation summarized in Column 2, -.40 estimates the effect of wife's education (WFED) for Anglo women. The interaction term (WFED X WFETH) indicates how that effect is modified for Mexican-American women. Education decreases family size by an additional .100 children with each year of education if the woman is Mexican American.

The pattern of the effects of wife's education by ethnicity parallels the pattern of effects predicted by the minority status hypothesis advanced by Goldscheider and Uhlenberg. At the eighth
Table 11. Regression of Number of Children Ever Born on Socioeconomic Status, Ethnic Identity, Ethnic Integration, and the Interaction of Ethnic Identity and Socioeconomic Status.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>-.082</td>
<td>-.040</td>
<td>-.058</td>
<td>-.080</td>
<td>-.057</td>
</tr>
<tr>
<td>HSED</td>
<td>-.022</td>
<td>-.026</td>
<td>-.000*</td>
<td>-.021</td>
<td>-.001*</td>
</tr>
<tr>
<td>HSINC</td>
<td>.022</td>
<td>.001*</td>
<td>.005*</td>
<td>.037</td>
<td>-.008*</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>.467</td>
<td>1.596</td>
<td>.997</td>
<td>.455</td>
<td>.966</td>
</tr>
<tr>
<td>HSETH</td>
<td>.820</td>
<td>.720</td>
<td>1.689</td>
<td>1.223</td>
<td>1.790</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>.143</td>
<td>.092*</td>
<td>.105*</td>
<td>.130</td>
<td>.102</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>.193</td>
<td>.157</td>
<td>.113*</td>
<td>.178</td>
<td>.112*</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.245</td>
<td>-.140*</td>
<td>-.045*</td>
<td>-.178</td>
<td>-.030*</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.238</td>
<td>-.088*</td>
<td>-.050*</td>
<td>-.152</td>
<td>-.066*</td>
</tr>
<tr>
<td><strong>Interaction Terms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH X WFED</td>
<td>--</td>
<td>-.100</td>
<td>-.050</td>
<td>--</td>
<td>-.048</td>
</tr>
<tr>
<td>HSETH X HSED</td>
<td>--</td>
<td>--</td>
<td>-.085</td>
<td>--</td>
<td>-.078</td>
</tr>
<tr>
<td>HSETH X HSINC</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-.239</td>
<td>-.109</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>-.115</td>
<td>-.117</td>
<td>-.117</td>
<td>-.115</td>
<td>-.117</td>
</tr>
<tr>
<td>RURB</td>
<td>-.117</td>
<td>-.116</td>
<td>-.120</td>
<td>-.124</td>
<td>-.122</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>6.691</td>
<td>6.179</td>
<td>6.001</td>
<td>6.555</td>
<td>5.991</td>
</tr>
<tr>
<td>R²</td>
<td>.26213</td>
<td>.26689</td>
<td>.27051</td>
<td>.26458</td>
<td>.27096</td>
</tr>
</tbody>
</table>

* p > .05
grade level of educational attainment, Mexican-American women have an average of .80 more children than Anglo women. Among women with a twelfth grade education, the families of Mexican-American women are still larger than those of Anglo women, but the differential is reduced by .57 children. The differences in the fertility of Anglo and Mexican-American women converge at approximately sixteen years of education. Mexican-American women who have attended graduate or professional school have, on the average, somewhat smaller families than similar Anglo women.

The minority status hypothesis emphasizes the lower than average fertility of minority group members with higher than average attainments. Fewer than 2 percent of the Mexican-American wives in this sample have completed more than sixteen years of education. Their lower than average fertility would be interpreted by Goldscheider and Uhlenberg as a strategy of compensating for the barriers faced by Mexican-American women in achieving this status.

The educational attainment of Mexican-American husbands affects couples' fertility in addition to the effect of wives' education (Column 3, Table 11). Like the term describing the effects of wife's education by ethnicity, the interaction of husband's ethnicity and education is negative, resulting in a decline in mean family size of .085 children for every year of husband's education if he is Mexican American. At lower levels
of educational attainment, Mexican-American husbands have more children than do Anglos. The differences between the family sizes of Anglo and Mexican-American husbands diminish at higher levels of educational attainment in a pattern similar to that of wives.

With the inclusion of the interaction term specifying the educational effects as they pertain to Mexican-American husbands, the effect of education (HSED), which now estimates that effect for Anglo husbands, is not statistically significant. Among Anglos, husband's education does not have an effect on family size net of the effect of wife's education.

The interaction of husband's income and ethnicity further supports the minority status hypothesis advanced by Goldscheider and Uhlenberg. While the general effect of husband's income as described in the main effects model (Column 1, Table 11) is positive, that effect as specified for Mexican-American men is negative (Column 4, Table 11), reducing family size by a factor of .239 children with each $10,000 of annual income. Because of the association of income and education, it is possible that this is merely a restatement of the negative effects of Mexican-American husband's education described above. In order to address this possibility, terms describing the interaction of education and ethnicity for husbands and wives were added to the equation describing the effects of Mexican-American husband's income (Column 5, Table 11).
While it is apparent that husband's education contributes to the negative effect of Mexican-American husband's income, the interaction of ethnicity and income retains a significant effect with the addition of the terms describing education. This is the reverse of the effect that would be predicted by the study of Mexican-American adolescents which linked higher fertility expectations to higher levels of expected socioeconomic status. The negative interaction of income and ethnicity is also quite different from the effect that might be expected if pronatalist norms and values were held uniformly among all Mexican-American husbands. The strength of these pronatalist norms and values is apparently diminished with higher socioeconomic status.

Ethnic Integration and Mexican-American Identity

The positive effect of foreign birth on fertility and the negative effect of English ability described in the main effects model are consistent with the hypothesis that norms and values linked to Mexican-American ethnic heritage are important to fertility behavior. However, the effects of nativity and language use are estimated in the main effects model for all husbands and wives not just those who identified themselves as Mexican Americans. The effects of nativity and language in the main effects model could be interpreted as an indication that the "ethnic" effect is not unique to Mexican-American cultural tradition but rather that it is an effect that can be observed
over a wide range of recent immigrants or among those preserving ethnic ties through language, regardless of what national origin that heritage reflects.

In order to describe the effects of language use and nativity as they pertain specifically to Mexican-American husbands and wives, the terms describing the interaction of language and nativity with ethnicity were added to the main effects model. These are reported in Table 12. Again, the main effects model is repeated in Column 1 to facilitate comparisons.

The effects of nativity on fertility as they pertain specifically to Mexican Americans are reported in Column 2 of Table 12. The addition of the term describing the effect of nativity among Mexican-American wives (WFBIRTH X WFETH) is consistent with the expectation that first-generation Mexican Americans may still retain some fertility characteristics associated with their country of origin, resulting in higher fertility net of educational and income characteristics, language use, residence, or age at marriage. With the introduction of the interaction term describing nativity as conditioned by Mexican-American identity, the effect of wife's nativity (WFBIRTH), describing the effect of foreign birth for Anglo wives, is not statistically significant. The effect of nativity described in the main effects model was based on that effect in the Mexican-American population.

A parallel result is observed for the effects of Mexican-American husbands' nativity. However, the addition of husband's
Table 12. Regression of Number of Children Ever Born on Socioeconomic Status, Ethnic Identity, Ethnic Integration, and the Interaction of Ethnic Integration and Mexican-American Identity.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socioeconomic Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFED</td>
<td>-.082</td>
<td>-.080</td>
<td>-.081</td>
</tr>
<tr>
<td>HSED</td>
<td>-.022</td>
<td>-.022</td>
<td>-.012</td>
</tr>
<tr>
<td>HSINC</td>
<td>.022</td>
<td>.022</td>
<td>.020</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>.467</td>
<td>.420</td>
<td>.475</td>
</tr>
<tr>
<td>HSETH</td>
<td>.820</td>
<td>.802</td>
<td>1.450</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>.143</td>
<td>.030*</td>
<td>.138</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>.193</td>
<td>.153</td>
<td>.175</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.245</td>
<td>-.264</td>
<td>.332</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.238</td>
<td>-.216</td>
<td>.550</td>
</tr>
<tr>
<td><strong>Interaction Terms</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFBIRTH X WFETH</td>
<td>--</td>
<td>.333</td>
<td>--</td>
</tr>
<tr>
<td>HSENG/VW X HSETH</td>
<td>--</td>
<td>--</td>
<td>-.479</td>
</tr>
<tr>
<td>HSENG/VW X HSETH</td>
<td>--</td>
<td>--</td>
<td>-.991</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGEMAR</td>
<td>-.115</td>
<td>-.114</td>
<td>-.115</td>
</tr>
<tr>
<td>RURB</td>
<td>-.117</td>
<td>-.116</td>
<td>-.118</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>6.691</td>
<td>6.691</td>
<td>6.103</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.26213</td>
<td>.26263</td>
<td>.26340</td>
</tr>
</tbody>
</table>

* p > .05
nativity does not explain any more variation in mean family sizes than did wife's nativity alone. This indicates that the nativity of either spouse is an adequate proxy for the nativity of the couple. The decision to present the effect of Mexican-American wives' nativity was arbitrary.

The effect of language as it is conditioned by ethnicity is reported in Column 3 of Table 12. Those Mexican-American husbands who speak English at home and those who speak English very well although they generally speak Spanish at home have fewer children, controlling for the main effects of socioeconomic status and nativity. Those who speak Spanish at home, although they speak English very well, have on the average the smallest families of all Mexican-American husbands, .99 fewer children than those who do not speak English very well and .51 children fewer than those Mexican-American husbands who speak only English at home. The addition of the interaction term reverses the effect of language use and ability among non-Mexican Americans. In the non-Mexican-American population, those who do not speak English at home and who do not speak English very well have the fewest children. The interaction of Mexican-American identity and language use for wives does not represent a significant improvement on the main effects model.

General Observations and Conclusions

This analysis was designed to assess the effects of socioeconomic status, ethnic integration, and Mexican-American identity
on the mean family size of couples. The availability of measures of these concepts for husbands and wives and the organization of Census data such that husbands and wives can be matched affords the opportunity to test the effects of the characteristics of husbands as well as wives on fertility.

The analysis supports the basic predictions of economic theories of fertility. The main effects of education and income, if significant, are in the direction predicted by these theories. That wife's education has the greater effect is implied in the explanations of the negative association of education and fertility advanced by child quality and opportunity cost hypotheses. The relative importance of husband's and wife's education to fertility described in this analysis provides evidence that these explanations are accurate representations of the dynamics of that association. The slightly positive effect of husband's income on fertility among Anglos indicates that while not the overriding determinant, the "cost" of children is perceived, and other things being equal, those Anglos who can afford to have slightly larger families do so.

Mexican-American identity has a significant effect on fertility net of socioeconomic status. In addition, ethnicity conditions the effects of the other independent variables included in this analysis. Mexican-American identity of the husband appears to be the more influential to the fertility of the couple, as would be predicted from the study of Mexican-American adolescent's
fertility expectations. This observation can be made both in terms of ethnic identity and ethnic integration as measured by the language variables. The positive effect of Mexican-American identity of husbands and wives is greater in the lower levels of socioeconomic status.

The negative effects of status on fertility are more pronounced among Mexican Americans than among Anglos. The negative effect of education on fertility is accelerated for Mexican-American women, as seen in Figure 3. The educational attainment of Mexican-American husbands exerts a significant negative effect on fertility in addition to the effects of wife’s education. The educational attainment of Anglo husbands has no significant additive effect on fertility. While the effect of income is slightly positive among Anglo husbands, the effect of Mexican-American husbands’ income on fertility is clearly negative (Figure 4).

The patterns observed in Figures 3 and 4 support the minority status hypothesis which predicts higher than average fertility among minority individuals of lower socioeconomic status and lower than average fertility among more privileged minority group members. It does appear that lower fertility may be a strategy for the achievement or maintenance of higher socioeconomic status among Mexican Americans. Because this hypothesis was developed in the context of the fertility of minority groups without distinctly pronatalist norms and values, it is of interest
Figure 3. The Effects of Wife's Educational Attainment on Mean Family Size by Wife's Ethnicity and Husband's Ethnicity.*

* calculated from equation 2, Table 11
AGEMAR = 20.51
HSED = 12.37
Figure 4. The Effects of Husband's Income on Mean Family Size by Husband’s Ethnicity and Wife’s Ethnicity.*

* calculated from equation 4, Table 11
AGEMAR = 20.51
HSED = 12.38
WFED = 11.80
to observe support for this hypothesis from a group whose culture is associated with pronatalist values.

The regression analysis described above yields varying degrees of evidence of ethnic as well as socioeconomic effects on fertility. In the following chapters parity progression ratios are used to specify the points at which these variables exert their influence on the decisions of couples to have one more child.
CHAPTER 7
THE EFFECTS OF SOCIOECONOMIC STATUS
ON THE DECISION TO HAVE ONE MORE CHILD

The choice of analytical strategies used in the study of fertility implies certain assumptions about how couples make decisions about their fertility and how social and economic variables affect those decisions. The regression analysis reported in Chapter 6 focuses on completed family size in describing the dependent variable as the mean number of children ever born. This treatment of the dependent variable may reflect the process described by Willis (1973) in which couples are thought to adopt a lifetime plan for childbearing early in marriage, before the birth of a first child. Completed family size is the result of that early decision. The regression of completed family size on social and economic characteristics is thought to model how these characteristics shape a couple's decision about the expenditure of time and money on children or for other sources of satisfaction in their adult lives. If regression is not being used to model the factors which affect that single decision about fertility, its use means that the effects of social and economic factors are the same at each of several fertility decision points. This implies that mother's education, for example, affects the likelihood
of a second birth in the same way that it affects the likelihood of having a fourth child.

The Use of Progression Ratios in the Study of Fertility

The use of progression ratios implies that decisions about fertility are revised after the birth of each child (Rosenzweig, 1976). From this perspective the effects of economic and social variables on the decision to have another child interact with current parity, the number of children a couple already has. This perspective focuses on the birth interval as a decision point. Completed family size is the sum of decisions made at each birth interval and is described as the point at which the decision to have more children is made.

This chapter examines ethnic and socioeconomic effects on the likelihood of couples completing their families or having at least one more child at each parity level. This strategy may help clarify several issues addressed in this research. Ethnicity may affect couples’ expectations of completed family size, hence the importance of ethnic identity to continuing fertility may vary with parity level. Income and education are highly correlated, but socioeconomic theories predict that they will have opposite effects on fertility. Like ethnicity, the socioeconomic characteristics of husbands and wives may vary in the points of the family building process at which they are relevant to decisions about continued fertility.
The Dependent Variable: Odds on Progression for One More Child

In this analysis the data are crossclassified in a five-way table, number of children ever born by the educational attainment of the husband and wife, husband's income, and ethnicity of husband and wife. The dependent variable, the odds on progression expressed in log scale, is derived by collapsing categories of fertility into a series of dichotomies:

\[ \ln \left( \frac{N}{N_i} \right) \]

These dichotomies provide the contrast between those with \( i-1 \) children and all those with \( i \) or more children at parity level \( i \). For example, if \( i = 5 \), the dichotomy describes those with only four children \( (i - 1) \) as opposed to all those who went on to have a fifth child \( (i +) \). The effects of independent variables on the odds on progression are estimated using logit regression procedures (Duncan, 1978).

The Independent Variables

Education and income were treated as continuous variables in the regression analysis presented in Chapter 6. The use of logit regression requires the organization of independent variables as categories. Income, ranging from $0 to $50,000 or more was collapsed into five categories. Education, ranging from 0 to 20 years, was collapsed into six categories. Rather than following statistical procedures for partitioning tables (Duncan, 1975), theoretical criteria for collapsing these data were used.
Categories of educational attainment were defined to reflect socially and economically significant levels of education: seven or fewer years, representing the completion of no more than elementary school; eight to eleven years, the completion of no more than a junior high education; twelve years, the completion of high school; thirteen to fifteen years, some college or vocational training; sixteen years, the equivalent of a college education; and seventeen or more years, at least some graduate education or professional training.

The distribution of the educational attainment of wives by their ethnicity and that of their husbands in Table 13 shows a great deal of disparity. Mexican-American women with Mexican-American husbands are overrepresented at the lowest level of educational attainment. Forty percent of these women have less than an eighth grade education. Fewer than 2 percent of the Anglo wives of Anglo husbands are in the lowest category of educational attainment. At the higher levels of educational attainment, fewer than 3 percent of Mexican-American wives of Mexican-American husbands have sixteen or more years of schooling, a college education. Nearly 17 percent of Anglo wives of Anglo husbands have completed a college education. A similar pattern of the distribution of the educational attainment of husbands is observed in Table 14.

Husband's income was collapsed into five categories, with 20 percent of the sample assigned to each quintile defined
Table 13. Percentage Distribution of Wife’s Educational Attainment by Wife’s and Husband’s Ethnicity.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife’s Ethnicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hex.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Educational Attainment: | | | | |
|-------------------------| | | | |
| less than 8 years       | 1.7 | 15.3 | 5.4 | 45.7 |
| 8-11 years              | 15.0 | 19.7 | 23.0 | 24.5 |
| 12 years                | 46.9 | 41.2 | 40.5 | 22.1 |
| 13-15 years             | 19.5 | 15.2 | 24.3 | 5.3 |
| 16 years                | 10.6 | 4.0  | 2.7  | 1.2 |
| 17 or more years        | 6.3  | 4.5  | 2.7  | 1.2 |
Table 14. Percentage Distribution of Husband's Educational Attainment by Husband's and Wife's Ethnicity.

|---------------------|-------|-------|----------|----------|

**Educational Attainment:**

- **less than 8 years**: 3.9, 5.1, 13.5, 47.5
- **8-11 years**: 13.4, 16.9, 13.5, 21.9
- **12 years**: 32.1, 35.6, 23.0, 17.5
- **13-15 years**: 19.9, 26.6, 29.7, 8.7
- **16 years**: 14.2, 7.3, 10.8, 1.7
- **17 or more years**: 16.6, 8.5, 9.5, 2.7
from the income distribution of all husbands in the sample (Shryock et al., 1976, p. 207). The ranges of each quintile are shown in Table 15. A disparity of income distribution similar to that of educational attainment can be observed. The extent to which these socioeconomic differences have affected couples' fertility decisions at each parity level is addressed in the subsequent analysis.

The Pattern of Family Building Described by Parity

There is a clear pattern describing the likelihood of having an additional child at each stage of the family building process which repeats itself in each subgroup of couples as they are defined by ethnicity. Figure 5 shows the logged odds on progression by parity level calculated for the entire sample. The highest odds on progression (about 16:1 or 2.86 in logged scale) are associated with the probability of the birth of a first child. Fewer than 6 percent of the wives in this sample report childlessness, suggesting that parenthood was a part of the adult role expectations for nearly the entire group. Given that the sample is limited to married couples who have apparently experienced a high level of marital stability, nearly universal parenthood is not unexpected.

The analysis of progression ratios can also be interpreted in terms of nonprogression or the point at which couples view their families as complete. Among those who have at least one
Table 15. Percentage Distribution of Husband's Annual Income by Husband's and Wife's Ethnicity.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's Ethnicity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anglo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hex.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Annual Income:

I. less than $11,000  13.6  27.1  28.4  45.6
II. $11,001 - $17,600 18.0  24.7  24.3  28.9
III. $17,601 - $23,000 21.0  16.4  17.6  13.5
IV. $23,001 - $31,500 23.2  17.5  20.2  8.7
V. more than $31,500  24.2  11.3  9.5  3.3
Figure 5. Observed Odds on Progression by Parity Level, in Logged Scale.
child, the odds on having a second child are also very high, nearly 11:1 (2.26 in logged scale). Most couples, regardless of ethnicity, are quite unlikely to regard an only child as a completed family. In contrast to the odds on having a first or second child, there is a sharp decline in the odds on adding a third child. While a majority of those couples with at least two children did decide to have a third, those odds decline to about 2.25:1 (.82 in logged scale). For many of these couples, two children apparently represent a completed family. Among those with at least three children, there continues to be a decline in the odds on adding a fourth child, down to 1.22:1, .20 in logged scale.

The plots of the logged odds on progression for subgroups defined in terms of husband's and wife's ethnicity retain the prominent features of the plot for the entire sample (Figure 6). The striking feature of the comparison of the odds on progression by parity level of the subgroups is the higher probability of continued childbearing for Mexican-American husbands and wives at every parity level. Among these couples progression is more likely than nonprogression at every parity level:

$$\ln \left( \frac{N_{i+}}{N_{i-1}} \right) > 0, \text{ where } i \geq 1 \quad \text{eq. 7-2}$$

This is in contrast to Anglo husbands and wives who are more likely not to have additional children at each parity level beyond the third child:
Figure 6. Observed Odds on Progression by Parity Level and Ethnicity of Husbands and Wives, in Logged Scale.
\[ \ln \left( \frac{N_i}{N_{i-1}} \right) < 0, \text{ where } i \geq 4 \]

**Socioeconomic Status and Progression to One More Child**

Three hypotheses that seek to explain the effects of income and education have been derived from economic theories of fertility.

1. Wife's educational attainment will have a negative effect on fertility. The opportunity costs of childbearing associated with higher educational attainment is cited as explanation of this relationship.

2. Husband's educational attainment will also have a negative effect on fertility. The child quality hypothesis predicts that levels of acceptable child-rearing standards vary with educational attainment, making the cost of children greater to parents of higher educational attainment.

3. Income will have a positive effect on fertility. Income represents the resources that make it possible for couples to afford the costs of children. Additional income should make it possible for couples to have more of whatever quality children they prefer.

The interplay of these three economic factors may be better understood using a model that allows their importance to couple's fertility decisions to interact with the number of
children a couple already has. The analysis of the probability of additional births at each stage of the family building process affords the opportunity to assess the points at which these factors are relevant to decisions about fertility. In order to estimate the effects of these three indicators of socioeconomic status on the probability on continued childrearing at each parity level, the logged odds on progression to each of twelve parity levels are regressed on wife’s education and husband’s education and income. These twelve parity levels represent the sequence of decisions made by all couples about having a first child through the decisions made by couples with at least eleven children about having a twelfth.

Education of the Husband and Wife

As would be predicted from the opportunity costs hypothesis (1) and the child quality hypothesis (2), wife’s education has a negative effect on the likelihood of an additional birth up to the tenth birth. The regression coefficients describing the effect of education (levels one to six described above) for wives and husbands on the odds on progression by parity are plotted in Figure 7. The odds on having a first child are reduced by a factor of .198 for each level of education completed by wives. Similarly, each level of education completed reduces the odds on having a second child by a factor of .158. Wife’s education has the greatest effect on the likelihood of a third or fourth
Figure 7. The Effects of Educational Attainment of Husbands and Wives on the Odds on Progression by Parity.*

estimated from:  \( Y = k + b \text{(WFED)} + b \text{(HSED)} + e \)
birth. Among those with three children, the likelihood of a fourth birth is decreased by a factor of .379 for each level of education completed. After four children, the effect of wife's education gradually diminishes. In the entire sample of couples, the educational attainment of husbands adds to the effect of wife's education in reducing the odds of additional births after the second child.

Opportunity Costs and the First and Second Births

The plots of the effects of both husband's and wife's education on the odds on progression offer support for both hypotheses (1) and (2) described at the beginning of this section. Wife's education alone is sufficient to explain the effects of education on the decision to have a first or second child. These births may represent the points at which the opportunity costs associated with wife's education are more important than child quality considerations in explaining the negative effects of education on fertility. The birth of the first child may represent the highest incremental cost to a woman in terms of foregone opportunities for participation in the labor force. The birth of a second child may postpone her return to the labor force.

Opportunity costs most clearly pertain to wives, as reflected in the importance of wife's education to the decisions regarding first and second children. In contrast, child quality considerations are not likely to come into play at the first or second parity
levels. The child quality hypothesis suggests that the addition of another child or children at any given level of family size will diminish the resources available to children already born. The resources considered adequate to these children's needs are thought to vary with the education of both parents. Child quality is not in question at the point of one child as opposed to childlessness. It is also less likely that the addition of the second child would be seen as jeopardizing the quality of the upbringing for the first. Indeed, Blake's study (1966a) indicates that most couples consider being raised as an only child to be a disadvantage.

Child Quality, Opportunity Costs, and the Third Birth

The transition from two children to three or more is perhaps the first point at which child quality is a consideration in the decision to have additional children for most couples. It is at this level that husband's educational attainment first has an effect on the probability of continued fertility. The effects of education of both spouses increase at parity level four, but wife's education continues to have the greater effect on the likelihood of third and fourth births. The opportunity costs to wives added to the child quality considerations associated with the education of both husband and wife are reflected in the greater impact of wife's education at these levels. That husband's educational attainment also has a significant effect
may be interpreted as evidence of the child quality concerns at these points in the decision-making process in family building.

Education and Fifth or Higher Order Births

At parity levels five through ten, the effects of the educational attainment of husbands and wives on the odds on progression are roughly equivalent. It seems reasonable to argue that as family size exceeds five children, the incremental opportunity costs associated with additional births are reduced considerably. The effect of parental education on the probability of progression to these higher order births may be better explained in terms of the association of the costs of children and parents' education. The child quality hypothesis predicts that the perceived impact of additional children on the life chances of their children already born is greater among those with higher levels of educational attainment. This would explain the negative effect of both parents' education on progression to higher order births.

Husband's Income

Analyzing fertility as a sequence of decisions is also advantageous in untangling the association of income and fertility. Obviously, those with higher educational attainments are likely to have higher incomes. The child quality hypothesis predicts a negative association of education and fertility. On the other hand, if children are desired by parents, those parents with
more resources are expected to be more able to have more of these "goods."

Table 16 presents the regression coefficients which estimate the effects of husband's income and the educational attainment of husbands and wives on the odds on progression by parity level.

\[ Y + K + b_1 \text{(WFED)} + b_2 \text{(HSED)} + b_3 \text{(HSINC)} + e \]

Husband's income increases the likelihood of a first and second child. If parenthood is a valued adult role for these couples and the only child is not seen as the preferred family, husband's income may increase the probability of these births. At parity one, income is associated with a minimum level of security that is viewed as a prerequisite to starting families (Hout, 1978). Income is also associated with effective fertility control, the ability to achieve desired family size. At parity one and two, this may mean treatment for subsertility rather than limiting births.

At parity three and beyond, husband's income has a negative effect on the odds on progression. This may reflect a change in the balance of the negative effects of educational attainment on fertility in terms of both investments parents feel it is necessary to make in children and opportunity costs children represent to mothers, offset by the potentially positive effect of income on fertility.
Table 16. Regression of Logged Odds on Progression on Educational Attainment of Husband and Wife and Husband's Income by Parity Level.*

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's Education</td>
<td>-0.214</td>
<td>-0.176</td>
<td>-0.243</td>
<td>-0.274</td>
<td>-0.162</td>
<td>-0.138</td>
<td>-0.085</td>
<td>-0.040</td>
<td>-0.075</td>
<td>-0.028**</td>
</tr>
<tr>
<td>Husband's Education</td>
<td>-0.001**</td>
<td>0.009**</td>
<td>-0.050</td>
<td>-0.111</td>
<td>-0.154</td>
<td>-0.135</td>
<td>-0.070</td>
<td>-0.049</td>
<td>-0.070</td>
<td>-0.036</td>
</tr>
<tr>
<td>Husband's Income</td>
<td>0.072</td>
<td>0.052</td>
<td>-0.066</td>
<td>-0.085</td>
<td>-0.130</td>
<td>-0.120</td>
<td>-0.070</td>
<td>-0.069</td>
<td>-0.070</td>
<td>-0.035</td>
</tr>
<tr>
<td>Constant</td>
<td>2.719</td>
<td>2.344</td>
<td>1.869</td>
<td>1.573</td>
<td>1.322</td>
<td>1.171</td>
<td>0.805</td>
<td>0.529</td>
<td>0.774</td>
<td>0.383</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.04518</td>
<td>0.08748</td>
<td>0.40667</td>
<td>0.47322</td>
<td>0.41862</td>
<td>0.29547</td>
<td>0.18095</td>
<td>0.11130</td>
<td>0.20930</td>
<td>0.08729</td>
</tr>
</tbody>
</table>

* estimated from eq. 7-4

** p > .05
Socioeconomic Status, Mexican-American Identity, and Progression

In Chapter 2, four models of the effects of ethnicity and socioeconomic status on fertility were presented. The socioeconomic characteristics model indicates that there is no significant effect of ethnicity on fertility if differences in the socioeconomic status of minority and majority groups are controlled. The cultural model adds an effect of ethnicity that is constant over all levels of socioeconomic status. The third model, based on Goldscheider and Uhlenberg's minority status hypothesis, describes higher fertility for the minority group members at the lower range of status and lower fertility for those at higher than average levels of socioeconomic status. This shift in the effects of ethnicity indicates an interaction of status and ethnicity. Socioeconomic status has a negative effect on the fertility of both groups, but that effect is accelerated among minority individuals, resulting in the lower fertility of minority individuals of higher than average socioeconomic status. The fourth model was developed to reflect the pronatalist values thought to be part of Mexican-American culture. If children are especially valued, higher fertility would be expected among those who could afford larger families. Like the third model, this model includes the interaction of ethnicity and socioeconomic status. The minority status hypothesis describes the interaction of ethnicity and status as negative. Under the terms of this fourth model, the interaction term would be positive.
As presented by Bean and Marcum (1978), these models use mean family size as the dependent variable. The present analysis uses progression ratios as the dependent variables in a series of equations representing likelihood of an additional birth at each parity level. This strategy does not threaten the logic of the models based on mean family size. Progression from one parity level to another ultimately results in the mean family sizes described in the models presented in Chapter 2. By using parity progression ratios, the effects of ethnicity and status can be analyzed more precisely at each decision point in the family building process.

Interaction terms for ethnicity and socioeconomic status are included in the analysis of the effects of ethnicity for two reasons. First, the interaction of ethnicity and socioeconomic status is an important factor in comparing the accuracy with which these models represent Anglo and Mexican-American fertility. Second, the effects of ethnicity will be more clearly described. In the analysis of these data, a consistent pattern of interaction of socioeconomic status and ethnicity developed. In most cases, the effects of ethnicity are conditioned by socioeconomic status.

Mexican-American Identity and Education

In this section the effects of ethnicity and educational attainment are presented. Because education conditions the effect of ethnicity on fertility, the regression coefficients used in
this analysis are derived from regression equations that include couple's socioeconomic characteristics, ethnicity, and the interaction of education and ethnicity for both husband and wife:

\[ Y = k + b_1 (WFED) + b_2 (HSED) + b_3 (HSINC) + b_4 (WFETH) + b_5 (HSETH) + b_6 (WFED \times WFETH) + b_7 (HSED \times HSETH) + e \]

Table 17 presents the regression coefficients estimated by this equation for parity levels one to nine. Beyond the fifth child, the reduced sample sizes mean that many coefficients are not statistically significant. Beyond the eighth child, the likelihood of an additional birth is not affected by any combination of socioeconomic status and ethnicity.

The terms describing the interaction of ethnicity and education of both husbands and wives were included so that two questions framing this analysis could be addressed. The first of these is at what point in the family building process does ethnicity have an effect on the decision to have one more child that cannot be accounted for by socioeconomic variables. The effects of ethnicity, as it interacts with educational attainment, are represented in Figures 8-a through 8-g. Each figure represents a single decision point. Figure 8-a shows the effects of ethnicity and education on the likelihood of a first child, 8-b those effects on the decision to have a second. These figures are similar to those representing the models described in Chapter 2. The four lines in each figure represent the effect of education as
Table 17. Regression of Logged Odds on Progression on Ethnicity and Educational Attainment of Husband and Wife, Husband's Income, and the Interaction of Educational Attainment and Ethnicity of Husband and Wife.*

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's Education</td>
<td>-.218</td>
<td>-.146</td>
<td>-.211</td>
<td>-.224</td>
<td>-.062</td>
<td>-.020</td>
<td>.073*</td>
<td>.012**</td>
<td>-.015**</td>
</tr>
<tr>
<td>Husband's Education</td>
<td>.042**</td>
<td>.059</td>
<td>.003**</td>
<td>-.043</td>
<td>-.075</td>
<td>-.030**</td>
<td>-.026**</td>
<td>-.039**</td>
<td>-.005**</td>
</tr>
<tr>
<td>Husband's Income</td>
<td>.049</td>
<td>.030</td>
<td>-.047</td>
<td>-.055</td>
<td>-.088</td>
<td>-.068</td>
<td>-.039**</td>
<td>-.058</td>
<td>-.053</td>
</tr>
<tr>
<td>Wife's Ethnicity</td>
<td>-.098**</td>
<td>.246</td>
<td>.418</td>
<td>.416</td>
<td>.676</td>
<td>.730</td>
<td>.672</td>
<td>.316</td>
<td>.341</td>
</tr>
<tr>
<td>Husband's Ethnicity</td>
<td>.555</td>
<td>.802</td>
<td>.969</td>
<td>.846</td>
<td>.689</td>
<td>.782</td>
<td>.377</td>
<td>.058**</td>
<td>.378</td>
</tr>
<tr>
<td>Wife's Ethnicity X Education</td>
<td>-.129</td>
<td>-.191</td>
<td>-.060</td>
<td>-.059</td>
<td>-.103</td>
<td>-.131</td>
<td>-.126</td>
<td>-.075**</td>
<td>-.078</td>
</tr>
</tbody>
</table>
Table 17, continued

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husband's Ethnicity X Education</td>
<td>-.305</td>
<td>-.318</td>
<td>-.208</td>
<td>-.153</td>
<td>-.114</td>
<td>-.136</td>
<td>-.034**</td>
<td>-.005**</td>
<td>-.091</td>
</tr>
<tr>
<td>Constant</td>
<td>2.820</td>
<td>2.204</td>
<td>1.419</td>
<td>.946</td>
<td>.407</td>
<td>.011</td>
<td>-.127</td>
<td>.203</td>
<td>.199</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.25875</td>
<td>.46743</td>
<td>.55671</td>
<td>.60297</td>
<td>.60859</td>
<td>.50384</td>
<td>.32958</td>
<td>.13319</td>
<td>.26563</td>
</tr>
</tbody>
</table>

* estimated from eq. 7-5

** $p > .05$
Figure 8. Effects* of Educational Attainment and Ethnicity on the Logged Odds on Progression by Parity.

*computed from regression equations in Table 17
Figure 8, continued

8-c. Parity 3

8-d. Parity 4
Figure 8, continued

8-e. Parity 5

8-f. Parity 6
described by logit regression equations by sex and ethnicity. The dependent variable is represented as the likelihood of progression at each parity level.

The second question is that of the relative importance of husbands' and wives' characteristics. Husband's and wife's education and ethnicity are included in these equations so that the adequacy of wife's ethnicity as a proxy for the ethnicity of the couple or wife's education as a proxy for couple's status can be considered. The extent to which measures of these characteristics for husbands add to or modify the effects of wife's characteristics will be described. This may define points in the family building process where the ethnicity as well as the socioeconomic characteristics of each spouse affect the couple's continued fertility.

Other studies have suggested that wife's characteristics are sufficient for the study of fertility. This may not be the case in the study of minority fertility. The importance of male characteristics may pertain only to specific groups. If children are particularly relevant to both the male and female adult roles as they are defined by distinctly Mexican-American values, husband's characteristics may have an impact on the fertility of these couples.
Although the large majority of the couples in this sample have had children, the effects of ethnicity and education on the probability of a first birth or remaining childless are quite striking. Controlling for the effects of husband's characteristics, the effect of wife's ethnicity on the likelihood of the birth of the first child is negative at every level of educational attainment. The interaction of ethnicity and education means that while the differences in the effects of wife's ethnicity are insignificant at lower levels of educational attainment, at the higher levels of educational attainment, Mexican-American identity of the wife quite clearly reduces the likelihood of the birth of a first child (Figure 8-a).

Controlling for the effects of income and wife's characteristics, the effect of husband's ethnicity on the probability of a couple having had a first child is positive among husbands with less than eight years of education. It should be noted, however, that 47.5 percent of the Mexican-American husbands of Mexican-American wives and 13.5 percent of those married to Anglos have less than eight years of education. At the second level of educational attainment, 8-11 years, ethnicity makes no apparent difference in the probability of becoming a father. Among those husbands who have a high school education or more, the effect of ethnicity is negative. At these levels of educational attainment, Mexican-American men are less likely than Anglo men to be fathers.
The comparison of the lines representing the effects of husband's education on progression for Anglos and Mexican Americans demonstrates the importance of including husband's characteristics in the study of minority fertility. In the main effects model, which describes the effects of economic characteristics for the entire sample, husband's education does not add to the variation in the probability of a first birth that can be explained by wife's education alone (Table 16). The inclusion of the interaction term indicates that while this may represent the effect of education among Anglo husbands, husband's education also affects fertility decisions at parity one if the husband is Mexican American.

Mexican-American Identity, Education, and the Second Birth

At parity two the effects of ethnicity and education on the odds on couples having added a second child are estimated (Table 17). Like the odds on progression to parity one, the odds on progression to parity two are very high. Only a small minority of all couples with children have only one child. The comparison of Figure 8-a and 8-b indicates very similar effects of ethnicity as they are conditioned by educational attainment at parity levels one and two.

Among these relatively few couples who have had very low fertility, there is a negative effect of ethnicity that is more pronounced at higher levels of educational attainment. Holding constant husband's characteristics, Mexican-American
wives with twelve or more years of education would be significantly less likely than Anglo wives to have had a second child.

The negative effect of husband's education on progression if he is Mexican American contrasted with the slightly positive effect if the husband is Anglo also results in a negative effect of ethnicity among husbands with higher than average educational attainment. As with the decision to have a first child, Mexican-American husband's education has a significant effect on the couple's decision to have a second child.

Mexican-American Identity, Education, and the Third and Fourth Births

The effects of ethnicity and education on the decision to have a first or second child are relevant to a small minority of this sample. The large majority of couples have at least two children. Parity three, the birth of the third child, is of particular interest because it is at this point that couples may first escape social pressures to become parents or to give their only child a sibling. The negative interpretations of childlessness and the pressures not to raise an only child are not unique to Mexican-American culture but appear to be a part of a more general pronatalist attitude of the majority culture as well (Blake, 1966a). From a different perspective, parity three is important because it is the birth of the third child that represents the difference between stability and growth in Western populations characterized by low infant mortality.
At parity three wife's ethnicity has a positive effect on the odds on progression. Controlling for the effects of husband's characteristics, Mexican-American wives are more likely to have had a third child at every educational level. Among all wives, education has a negative effect on the likelihood of a third birth. That negative effect is only slightly more pronounced for Mexican Americans (Figure 8-c).

Among husbands, the effects of education and ethnicity are similar to those observed at parities one and two. A third child is more likely for Mexican-American than Anglo husbands who have completed twelve years of schooling or less. A third child is less likely for Mexican-American husbands with a college education. As with the decision to have first and second children, the decision to have the third child does not appear to be affected by husband's educational attainment among Anglos. The effect of Mexican-American husband's education on the decision to have a third child is nearly as great as that of wife's education.

At all levels of education Mexican-American wives are somewhat more likely than Anglo wives to have had a fourth birth. The effect of ethnicity is diminished as years of schooling increase. The pattern of interaction of husband's education and ethnicity is very similar to that observed at parity three. Again, husband's education has a significant negative effect on fertility only if the husband is Mexican American.
Mexican-American Identity, Education, and Fifth and Sixth Births

Mexican-American wives with a high school education or less are more likely to have had fifth and sixth children than Anglos with comparable educations. Among those with college educations, the differences by ethnicity are greatly diminished. At higher educational levels, there is little difference in the odds on progression by ethnicity among wives.

The effects of the interaction of ethnicity and education as they are plotted in Figures 8-a through 8-g mirror the effects predicted by the minority status hypothesis. The accelerated negative effect of education resulting in equal or lower odds on progression among Mexican Americans of higher than average educational attainment is evidence in support for the minority status hypothesis. If the processes described by Goldscheider and Uhlenberg apply to Mexican Americans, the lower odds on progression associated with higher than average education may be interpreted as a form of compensation for the barriers faced by Mexican Americans in attaining these levels of education.

It is also argued that education is of central importance to the process of assimilation (Bean and Swicegood, 1982). If the norms and values communicated as part of the educational process are predominantly those of the Anglo culture, the result may be an accelerated loss of distinctly ethnic characteristics among those Mexican Americans with increased exposure to the
formal and informal socialization that is part of the educational process.

Mexican-American Identity and Income

Both the child quality hypothesis and the opportunity cost hypothesis predict a negative effect of educational attainment on fertility. The interaction of ethnicity and education suggest that the effects predicted by these two economic hypotheses are more pronounced among Mexican Americans. Although education influences the quality of children desired and the costs of diverting wives' time from the labor force to raising children, if these effects are controlled, income is expected to have a positive effect on fertility. If pronatalist norms and values have been maintained as a vital part of Mexican-American culture, this underlying positive effect of income on fertility may be most pronounced if the husband or wife is Mexican American. In the following section, the effects of husband's income as it is conditioned by ethnicity are described.

In the present analysis husband's income is used as an indicator of the resources potentially available to meet the costs of children. Holding constant the negative effects of education on fertility, it is argued that couples with more resources will have more children. Greater financial resources would make it possible for a couple to have more children of the quality they consider appropriate. Those resources also make the contribution
of wife's labor force participation less important to the maintenance of an expected standard of living. If there is a distinctly pronatalist aspect of Mexican-American culture, a positive effect of income would be expected net of the effects of education.

In this portion of the analysis, the interaction of husband's ethnicity and income is added to equations which already include terms describing the interaction of education and ethnicity:

\[ Y = k + b_1 (WFED) + b_2 (HSHED) + b_3 (HSINC) + b_4 (WFETH) + b_5 (HSET) + b_6 (WFED \times WFETH) + b_7 (HSED \times HSET) + b_8 (HSINC \times HSET) + e \]

This equation tests for the possibility that within levels of educational attainment income has a positive effect on the likelihood that Mexican-American couples will decide to have additional births. Table 18 shows the regression coefficients derived from this equation for parities one to seven. As in the analysis of education and ethnicity, the likelihood of progression to higher order births is not affected by these measures of socioeconomic status and ethnicity. Figures 9-a through 9-g show the effects of husband's ethnicity and income on couples' fertility as they are estimated by equation 7-6.

Mexican-American Identity, Income, and First Births

At parity one the inclusion of an interaction term specifying a unique effect of income for Mexican-American husbands is significant but negative. Holding constant the effects of education, those
Table 18. Regression of Logged Odds on Progression on Ethnicity and Educational Attainment of Husband and Wife, Husband's Income, the Interaction of Ethnicity and Education of Husband and Wife, and the Interaction of Ethnicity and Husband's Income by Parity.*

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-.220</td>
<td>-.149</td>
<td>-.212</td>
<td>-.226</td>
<td>-.064</td>
<td>-.019**</td>
<td>-.017**</td>
</tr>
<tr>
<td>Husband's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.020</td>
<td>.045</td>
<td>.002</td>
<td>-.049</td>
<td>-.079</td>
<td>-.030**</td>
<td>-.035**</td>
</tr>
<tr>
<td>Husband's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>.121</td>
<td>.078</td>
<td>-.034</td>
<td>-.037</td>
<td>-.072</td>
<td>-.065</td>
<td>-.018**</td>
</tr>
<tr>
<td>Wife's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-.247**</td>
<td>.100**</td>
<td>.363</td>
<td>.372</td>
<td>.643</td>
<td>.726</td>
<td>.607</td>
</tr>
<tr>
<td>Husband's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>1.260</td>
<td>1.369</td>
<td>1.182</td>
<td>1.022</td>
<td>.758</td>
<td>.795</td>
<td>.626</td>
</tr>
<tr>
<td>Wife's</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-.091</td>
<td>-.157</td>
<td>-.045</td>
<td>-.048</td>
<td>-.094</td>
<td>-.130</td>
<td>-.111</td>
</tr>
</tbody>
</table>
Table 18, continued

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARITY LEVEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Husband's Ethnicity X Education</td>
<td>-.226</td>
<td>-.265</td>
<td>-.182</td>
<td>-.130</td>
<td>-.100</td>
<td>-.134</td>
<td>-.018**</td>
</tr>
<tr>
<td>Husband's Ethnicity X Income</td>
<td>-.346</td>
<td>-.270</td>
<td>-.108</td>
<td>-.091</td>
<td>-.055</td>
<td>-.077**</td>
<td>-.111</td>
</tr>
<tr>
<td>Constant</td>
<td>2.691</td>
<td>2.121</td>
<td>1.396</td>
<td>.916</td>
<td>.380</td>
<td>-.015</td>
<td>-.240</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.29606</td>
<td>.49819</td>
<td>.56217</td>
<td>.62491</td>
<td>.61024</td>
<td>.50386</td>
<td>.34034</td>
</tr>
</tbody>
</table>

* estimated from eq. 7-6

** p > .05
Figure 9. Effects* of Husband's Income, in Quintiles, on Progression by Ethnicity and Parity Level.

* computed from regression equations in Table 18
Figure 9, continued

9-c. Parity 3

9-d. Parity 4
Figure 9, continued

Husband's Income in quintiles

9-e. Parity 5

Husband's Income in quintiles

9-f. Parity 6

Husband's Income in quintiles

9-g. Parity 7
Mexican-American husbands more able to afford the costs of children are less likely to have started a family than those with lower incomes. This is unexpected given the positive effect of measures of socioeconomic status on the expected fertility of a younger generation of Mexican Americans.

The inclusion of interaction terms to distinguish the effects of income for Anglos and Mexican Americans does yield a positive effect of income on the likelihood of starting a family among Anglo husbands. This is equally unexpected given the prediction that pronatalist aspects of Mexican-American culture would be reflected in a positive effect of income the decision of Mexican-American husbands to become fathers. Without the inclusion of the interaction terms to differentiate the effects of income by ethnicity, husband's income was estimated to have a positive effect on the likelihood of the birth of a first child, increasing the odds on progression to parity one by a factor of .049 for each income level. This coefficient apparently was depressed by the inclusion of Mexican-American husbands for whom there is a negative effect of income. When this negative effect is specified in an interaction term, the result is an increase in the estimated odds on Anglos having a first child to a factor of .121 with each income quintile. The interaction of income and ethnicity is such that among husbands with below average income, Mexican Americans are more likely to have started families.
but at the highest levels of income, Mexican Americans are less likely to have had a first child.

Mexican-American Identity, Income, and the Second Birth

Although this finding applies to the small minority who remain childless, it is especially supportive of the minority stated hypothesis. This hypothesis suggests that lower fertility is one mechanism minority group members may use to overcome barriers to their achievement or maintenance of higher than average socio-economic status. The process may be most powerful at the point of the initial decision to have any children at all. The interaction of ethnicity with income and with education at parity one suggests that childlessness is associated with achieving or maintaining high status for a small but significant minority of Mexican Americans.

The effects of husband's ethnicity and income at parity two are quite similar to those described at parity one. Income has a negative effect on the odds on a couple having a second child if the husband is Mexican American. The main effects model (Table 16) describes husband's income as having no significant effect on progression to a second child. This appears to be the result of the negative effect of income for Mexican-American husbands offsetting a positive effect of income for Anglo husbands. With the inclusion of the interaction term, the main effect of income, now defined as the effect of income for Anglos, is significant
and positive. At lower income levels Mexican-American husbands are much more likely to become fathers of second children than are Anglos. Ethnicity is not a factor in the odds on progression to a second child among those at the highest income level. This repeats the pattern predicted by the minority status hypothesis.

**Mexican-American Identity, Income, and Third or Higher Order Births**

At parity levels three to six, the effects of husband's income on the odds on progression are negative for Anglos and Mexican Americans. At most levels there is a slight acceleration of that negative effect for Mexican-American husbands. At these parity levels the interaction is not sufficient to result in a convergence of the odds on progression by ethnicity as seen at parity one and two. Couples in which the husband is Mexican American are more likely to have added a child at each of these parity levels. At parity seven, income retains a negative effect if the husband is Mexican American.

**General Observations and Conclusions**

The analysis of the effects of the interaction of ethnicity with education or income indicates that economic variables affect progression in a predictable way and that socioeconomic variables have a greater negative impact on Mexican-American fertility. The negative effect of wife's education described by the opportunity cost and child quality hypotheses is seen for both Anglo and
Mexican-American wives. That effect is somewhat accelerated for Mexican-American wives. The negative effect of wife's education on fertility is nearly equalled by the effect of husband's education if the husband is Mexican American. The effect of an Anglo husband's education is inconsistent or not significant.

This analysis of education and ethnicity by sex has two important implications for the study of minority fertility. The accelerated effect of wife's education and the added effect of husband's education among Mexican Americans suggests that education may be instrumental in the rate of assimilation of lower fertility norms. Second, the effect of education on couples' fertility can be adequately represented by wife's education in an Anglo sample. That is clearly not the case among Mexican Americans, where wife's education captures only a part of the effect of education on a couple's fertility.

In the analysis of the interaction of income and ethnicity, a positive effect of income that would indicate underlying pronatalist values among Mexican Americans was not detected. Resources, as indicated by husband's income, do not appear to have a positive influence on fertility if the husband is Mexican American. A positive effect of resources on fertility was detected early in the family building process of Anglo husbands.

At lower levels of socioeconomic status, ethnicity does have a positive effect on fertility. As the interaction terms introduced in this analysis describe the effects of ethnicity,
the significance of ethnicity is diminished at higher levels of socioeconomic status. Many plots of the effects of socioeconomic variables on the odds on progression by ethnicity parallel the model which represents the terms of the minority status hypothesis. This is most apparent in the effects of socioeconomic status and ethnicity on progression at lower parity levels, where ethnicity has a negative influence on fertility for a significant minority of high status Mexican Americans. This suggests that the process of compensation described by the minority status hypothesis is most relevant at early stages of family building. This would be expected if there is an important tradeoff of fertility and status attainment. The decision to remain childless or to limit a family to only one child would have a greater impact on the attainment or maintenance of higher than average socioeconomic status than the decision to limit a family to four rather than five children.

As the distribution of Anglos and Mexican Americans by education and income (Tables 13-15) indicates, however, the great majority of Mexican-American husbands and wives fall in the lower ranges of socioeconomic status. Ethnicity still has a significant positive effect on fertility at these levels of socioeconomic status. If aspects of ethnic culture are linked to higher fertility of most Mexican Americans, fertility may be associated with involvement in ethnic culture. In the following chapter the effects
of indicators of ethnic integration, language use, and generation on the fertility of Mexican-American couples are analyzed.
CHAPTER 8

LANGUAGE USE AND FERTILITY: THE EFFECTS OF ETHNIC INTEGRATION AND OPPORTUNITY COSTS

The effects of Mexican-American identity and socioeconomic status on fertility were presented in Chapter 7. Rather than describing the effects of ethnicity and socioeconomic status on completed family size, the final product of a sequence of decisions about fertility, parity progression ratios were used to describe the effects of these variables on couples' decisions to have one more child at each stage of the family building process.

Ethnicity appears to have affected the decision to have an additional child at most stages of the family building process. That is not to say that the effects of ethnicity are consistent among all Mexican Americans. At higher than average levels of socioeconomic status, Mexican Americans were less likely to have one more child than their Anglo counterparts. Those Mexican Americans at lower levels of socioeconomic status were more likely to have additional children than Anglos of similar educational attainment or income. The higher fertility of these Mexican-American husbands and wives cannot be dismissed as relevant to only a minority at the extremes of the distribution of education or income. The majority of Mexican Americans are in this lower
range of income or education, and it is apparently their fertility that accounts for the higher than average mean family size of Mexican Americans as a group.

While most Mexican-American husbands and wives are more likely to have additional children at each parity level than their socioeconomic status alone would predict, simply explaining higher fertility as attributable to ethnic culture has been criticized for its failure to provide positive evidence of the importance or even existence of unique subcultural values (Lopez and Sabagh, 1978). The residual fertility thought to reflect pronatalist values could as well be the result of a failure to make a full accounting of the socioeconomic processes that affect the fertility of Mexican Americans. To better establish ethnic culture as the basis of higher than average Mexican-American fertility, the effects of ethnic integration are analyzed in this chapter. If the pronatalist values associated with Mexican-American culture shape behavior, fertility should vary with measures of identity with that culture.

Language Use and the Fertility of All Couples

The initial analysis of the effects of ethnic integration will include Anglo husbands and wives in order to describe the extent to which the pronatalist norms and values thought to affect Mexican-American fertility are characteristics which distinguish Mexican Americans from other ethnic groups. It is possible that
Mexican-American couples who speak Spanish at home have more children because of a more general set of "traditional" attitudes that can be observed among all couples who identify with an ethnic culture. A positive effect of using any language other than English at home on fertility in the entire sample would discount explanations that describe Mexican-American culture as uniquely pronatalist.

Language as a Measure of Opportunity Costs

The inclusion of Anglo husbands and wives also provides evidence relevant to the test of an alternate explanation of the positive effect of Spanish language use on the fertility of Mexican-American women. Swicegood (1982) hypothesizes that the economic theory describing the opportunity costs of childrearing links Spanish language use to higher fertility. English proficiency is viewed as human capital which, along with education and training, is associated with increased employability and higher wages. If Spanish language use means lower levels of English proficiency, the opportunity costs of childrearing would be lower among Spanish speaking women. The inclusion of Anglo husbands and wives and Mexican-American husbands in the analysis of language and fertility make it possible to detect several patterns implied by the logic of Swicegood's socioeconomic interpretation of the association of language use and fertility.
The utility of measuring fertility as the likelihood of progression from one birth to the next is apparent in analyzing the effects of opportunity costs. Higher order births should not have the same impact on women's labor force participation as lower order births. The opportunities for a mother of four to work outside the home are probably low enough that the birth of a fifth child has only minor effects on her labor force participation. It is expected that the opportunity costs of children are more likely to be reflected in decisions concerning lower order births (Hout, 1978). The impact of language should be the greatest at lower parity levels if it is an indirect indicator of human capital and therefore opportunity costs.

The data available to this study make it possible to describe language characteristics in terms of use and ability. The variables WFENG/VW and HSENG/VW describe those who do not speak English at home but who speak it very well. The variables WFENG/VW and HSENG/VW describe those who do not speak English at home and do not speak English very well. If the ability to use English in the workplace affects the fertility of Mexican-American women who speak Spanish, there should be a significant difference in the fertility of Spanish speaking women who describe themselves as speaking English very well (WFENG/VW) and those who do not (WFENG/VW). There should be very little difference in the fertility of women who speak English at home and those who speak another language but speak English very well.
Another pattern should be apparent with the inclusion of Anglo women in the sample. If the opportunity costs associated with remaining out of the paid labor force are lower for women who do not speak English very well, the language they do speak should be irrelevant. Anglo women who do not speak English at home, especially those who do not speak English very well, are expected to experience the same lower opportunity costs as Mexican-American women with similar language characteristics. If this is the case, the effect of language use or ability on fertility should not vary with ethnicity. Finally, since childrearing tasks are traditionally allocated to wives, a theory which stresses the importance of opportunity costs would not predict an effect of husband's language characteristics on fertility net of the effects of wife's characteristics.

These patterns of the association of fertility and the language characteristics of Anglo and Mexican-American husbands and wives that would support Swicegood's hypothesis should be detected in the coefficients estimated from the following equation which predicts the odds on progression to each successive birth in the family building process.

\[
Y = k + b_1 (WFETH) + b_2 (SHETH) + b_3 (WFENG/VW) + b_4 (WFENG/VW) + b_5 (HSENG/VW) + b_6 (HSENG/VW) + b_7 (WFBIRTH) + b_8 (HSBIRTH) + e
\]

Nativity (WFBIRTH, HSBIRTH) is included as a control given the association of language and foreign birth and the possible
association between nativity and fertility. The effects of ethnicity, language, and nativity on the likelihood of progression to additional births as they are estimated by this equation for parity levels one to eight are reported in Table 19.

In order to detect differences in the pattern of effects of language on fertility by ethnicity, terms describing the interaction of wife's ethnicity and language characteristics, husband's ethnicity and language characteristics, and nativity and ethnicity were added to the main effects model described in equation 8-1.

\[
Y = k + b_1 (WFETH) + b_2 (HSETH) + b_3 (WFENG/VW) + b_4 (WFENG/VW) + b_5 (HSENG/VW) + b_6 (HSENG/VW) + b_7 (WFBirth) + b_8 (HSBirth) + b_9 (WFETH \times WFENG/VW) + b_{10} (WFETH \times WFENG/VW) + b_{11} (HSETH \times HSENG/VW) + b_{12} (HSETH \times HSENG/VW) + b_{13} (WFETH \times WFBirth) + b_{14} (HSETH \times HSBirth) + e
\]

The effects of language use and nativity, conditioned by ethnicity as they are estimated in equation 8-2, are presented in Table 20.

Table 19 presents the coefficients estimated by the main effects model. If opportunity costs link fertility and language use, the main effects of wife's language use should be adequate in describing that association for all women, and the effect of language on fertility should be more pronounced for women who do very well. The regression coefficients for WFENG/VW
Table 19. Regression of Logged Odds on Progression on Ethnicity and Ethnic Integration by Parity.

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>-.044</td>
<td>.247</td>
<td>.571</td>
<td>.365</td>
<td>.467</td>
<td>.379</td>
<td>.261</td>
<td>.015*</td>
</tr>
<tr>
<td>HSETH</td>
<td>.655</td>
<td>.661</td>
<td>.635</td>
<td>.641</td>
<td>.196</td>
<td>.550</td>
<td>.352</td>
<td>-.001</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.071*</td>
<td>.026*</td>
<td>-.134</td>
<td>-.141</td>
<td>.082</td>
<td>.167</td>
<td>.047*</td>
<td>.172*</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.012*</td>
<td>.047*</td>
<td>.246</td>
<td>.390</td>
<td>.212</td>
<td>.237</td>
<td>.216</td>
<td>.229</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.270</td>
<td>-.112*</td>
<td>.182</td>
<td>-.040*</td>
<td>.225</td>
<td>-.119</td>
<td>.156</td>
<td>.177*</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.316</td>
<td>-.078*</td>
<td>.126</td>
<td>.262</td>
<td>.639</td>
<td>.247</td>
<td>.295</td>
<td>.499</td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>-.104*</td>
<td>-.403</td>
<td>-.157</td>
<td>-.041*</td>
<td>-.013*</td>
<td>.161</td>
<td>.041*</td>
<td>-.175</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>-.818</td>
<td>-.456</td>
<td>-.166</td>
<td>.004*</td>
<td>.018*</td>
<td>.011*</td>
<td>.030*</td>
<td>-.045*</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>2.682</td>
<td>2.230</td>
<td>.583</td>
<td>-.125</td>
<td>-.365</td>
<td>-.471</td>
<td>-.416</td>
<td>-.223</td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>.21576</td>
<td>.26677</td>
<td>.79306</td>
<td>.87233</td>
<td>.88755</td>
<td>.86266</td>
<td>.74122</td>
<td>.39789</td>
</tr>
</tbody>
</table>
Table 19, continued

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>1 = Mexican American</td>
</tr>
<tr>
<td>b</td>
<td>1 = language other than English spoken at home, speaks English very well</td>
</tr>
<tr>
<td>c</td>
<td>1 = language other than English spoken at home, does not speak English very well</td>
</tr>
<tr>
<td>d</td>
<td>1 = foreign born</td>
</tr>
</tbody>
</table>

*p > .05

estimated from equation 8-1
Table 20. Regression of Logged Odds on Progression on Ethnicity and the Interaction of Mexican-American Identity and Ethnic Integration by Parity.

<table>
<thead>
<tr>
<th></th>
<th>PARITY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td><strong>Ethnic Identity</strong></td>
<td></td>
</tr>
<tr>
<td>WFETH</td>
<td>-1.210</td>
</tr>
<tr>
<td>HSETH</td>
<td>-.720</td>
</tr>
<tr>
<td><strong>Ethnic Integration</strong></td>
<td></td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.261</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.631</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>-.321</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>-.835</td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>-.141*</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>-.931</td>
</tr>
<tr>
<td><strong>Interaction Effects</strong></td>
<td></td>
</tr>
<tr>
<td>WFETH X WFENG/VW</td>
<td>1.595</td>
</tr>
<tr>
<td>WFETH X HSENG/VW</td>
<td>1.759</td>
</tr>
</tbody>
</table>

Note: Asterisks indicate statistical significance.
### Table 20, continued

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction Effects, continued</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSETX HSENG/VW</td>
<td>1.311</td>
<td>1.102</td>
<td>.229</td>
<td>.046*</td>
<td>-.602</td>
<td>-.480</td>
<td>.073*</td>
<td>.249*</td>
</tr>
<tr>
<td>HSETX HSENG/VW</td>
<td>1.890</td>
<td>1.687</td>
<td>.629</td>
<td>.483</td>
<td>.251</td>
<td>.012*</td>
<td>.338</td>
<td>.630</td>
</tr>
<tr>
<td>WFBirth</td>
<td>.378</td>
<td>.344</td>
<td>.206</td>
<td>.388</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSETX HSBirth</td>
<td>.465</td>
<td>.128*</td>
<td>.319</td>
<td>-.237</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.728</td>
<td>.590</td>
<td>-.118</td>
<td>-.360</td>
<td>-.398</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.50569</td>
<td>.45911</td>
<td>.82649</td>
<td>.87379</td>
<td>.91993</td>
<td>.75645</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* *p > .05*

estimated from equation 8-2
should be positive and significantly larger than those estimating the effect of non-English use at home although English is spoken very well (WFENG/VW). Husband’s language characteristics should not have an additional effect on fertility.

The effects of language as an indicator of opportunity costs in the main effects models (Table 19) are ambiguous. The impact of opportunity costs should be observed on fertility decisions made before lower order births, yet the effects of language on the odds on a first or second birth are not statistically significant. Inconsistencies in the effects of language are seen in comparing coefficients describing the effects of WFENG/VW on the likelihood of third and fourth births to the effects of that variable on the likelihood of fifth and sixth births. Wives who do not speak English at home but speak English proficiently are less likely than English speakers to have third and fourth births, but they are more likely to have higher order births. For those who do not speak English proficiently, there is an effect of language on fertility only at higher order births. The positive effect of not speaking English very well on fertility persists to the eighth birth, well beyond the point in the opportunity costs represented by one more birth should be a factor in fertility decisions. At most parity levels, husband’s language characteristics add to the effects of wife’s language use or proficiency on fertility.

Some of the inconsistencies in the main effects model are resolved with the inclusion of interaction terms to distinguish
the effects of language between Mexican Americans and Anglos (Table 20). Figure 10 shows plots of the effects of wife's language use and English speaking ability on the likelihood of first to fifth births by ethnicity. These effects are represented by the variables $WFENG/VW$ and $WFENG/VW$ for Anglo women and by the sum of each of these variables and the corresponding interaction term for Mexican-American women. The effects of language in Figure 10 are plotted against the origin, 0, which represents the odds on progression at each parity level if English is spoken at home.

As Figure 10 shows, wife's language use and ability have very different effects on the likelihood of additional births, depending on ethnicity. Speaking Spanish at home increases the probability of Mexican-American wives having at least one more child up to the fifth child. Anglo wives who do not speak English at home are either equally likely or somewhat less likely to have one more child. While this pattern diminishes at successive parity levels, there is no evidence that among Anglo wives speaking a language other than English at home or not being able to speak English very well has a positive effect on fertility. If opportunity costs link language use and fertility, a uniform association for all wives would be expected.

Figure 11 shows the effects of husband's language characteristics on the likelihood of a couple adding one more child up to their fifth child. The pattern of effects is very similar
Figure 10. Effects of Wife’s Language Use and English Speaking Ability on the Likelihood of Progression by Ethnicity and Parity.*

* computed from equation 8-2
Figure 11. Effects of Husband's Language Use and English Speaking Ability on the Likelihood of Progression by Ethnicity and Parity.*

* computed from equation 8-2
to the effects of the language characteristics of wives. Mexican-American husbands' use of Spanish at home is associated with higher fertility. Anglo husbands' use of a language other than English at home generally has either no effect or a negative effect on fertility. If the sample used in this study had been confined to Mexican-American wives, the effects of their language use would support Swicegood's interpretation of the positive effects of Spanish language use on fertility. However, it is difficult to explain an effect of husband's language use and English speaking ability in terms of opportunity costs. Among Mexican Americans the use of Spanish by the husband adds to the effect of wife's language characteristics on fertility.

Ethnic Integration and the Fertility of Anglos and Mexican Americans

The effects of integration in an ethnic culture appear to be specific to Mexican-American culture. There does not appear to be a pronatalist effect of ethnic integration among Anglos who are maintaining ties to an ethnic culture. If this were the case, both husband's and wife's language characteristics might be significant, but there would not be an interaction term distinguishing the effects of speaking Spanish at home among Mexican Americans and the effects of speaking a language other than English among Anglos.

The inclusion of husbands and Anglo women in the preceding analysis suggests that neither traditional attitudes that may
be shared by all couples who identify with an ethnic culture and continue to use a language other than English at home nor the opportunity costs associated with English proficiency satisfactorily account for the association of language use and the fertility of Mexican-American couples. At the same time, the pattern of higher fertility associated with the use of Spanish by either husbands or wives is predicted if couples are influenced by pronatalist norms and values which may be expressed in Mexican-American culture.

Language Use and the Fertility of Mexican-American Couples

It has been established that language has a unique effect on the fertility of Mexican-American husbands and wives. The more detailed analysis that follows will address the possibility that the effect of language is an artifact of nativity or socio-economic status. The sample in this analysis is restricted to couples in which the husband and wife are Mexican American. Table 21 shows the effects of language use and English speaking ability on the fertility of couples as those effects are estimated in equation 8-3.

\[ Y = k + b_1 (WF\text{BIRTH}) + b_2 (HS\text{BIRTH}) + b_3 (WF\text{ENG}/VW) + b_4 (WF\text{ENG}/VW) + b_5 (HSE\text{NG}/VW) + b_6 (HSE\text{NG}/VW) + e \]

\[ \text{eq. 8-3} \]

Those husbands and wives who speak Spanish at home are more likely to have had at least one more child at every stage.
Table 21. Regression of Logged Odds on Progression on Language Use and English Speaking Ability and Nativity by Parity, Mexican-American Couples Only.

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFENG/VW</td>
<td>1.339</td>
<td>1.080*</td>
<td>.632</td>
<td>.174*</td>
<td>.331</td>
<td>.191*</td>
<td>.236*</td>
<td>.048*</td>
<td>.069*</td>
</tr>
<tr>
<td>WFENG/VW</td>
<td>1.280</td>
<td>2.279</td>
<td>.914</td>
<td>.794</td>
<td>.457</td>
<td>.396</td>
<td>.434</td>
<td>.241*</td>
<td>.407</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>1.210</td>
<td>1.170</td>
<td>.751</td>
<td>.418</td>
<td>.244</td>
<td>.065*</td>
<td>.274</td>
<td>.161*</td>
<td>.164*</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>1.373</td>
<td>1.206</td>
<td>.870</td>
<td>.647</td>
<td>.724</td>
<td>.450</td>
<td>.408</td>
<td>.424</td>
<td>.369</td>
</tr>
<tr>
<td>WFBRTH</td>
<td>-.162*</td>
<td>-.272*</td>
<td>.040*</td>
<td>-.005*</td>
<td>-.033*</td>
<td>.059*</td>
<td>.041*</td>
<td>-.192</td>
<td>-.067</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>-.587</td>
<td>-.464</td>
<td>-.281</td>
<td>-.121</td>
<td>.038</td>
<td>-.035*</td>
<td>.031*</td>
<td>.049*</td>
<td>-.149*</td>
</tr>
<tr>
<td>Constant</td>
<td>.174</td>
<td>.261</td>
<td>.260</td>
<td>.090</td>
<td>-.085</td>
<td>.097</td>
<td>-.661</td>
<td>-.091</td>
<td>.030</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.42604</td>
<td>.37498</td>
<td>.25762</td>
<td>.30496</td>
<td>.32320</td>
<td>.19542</td>
<td>.18406</td>
<td>.16907</td>
<td>.26857</td>
</tr>
</tbody>
</table>

* $p > .05$
of the family building process up to the ninth child. There is no indication that husbands' language use and English speaking ability are less important than wives'. Beyond the third birth, the language variables that describe English speaking ability as not very well (WFENG/VW and HSENG/VW) have a more pronounced effect on the likelihood of additional births. Again, if husbands were not included, this pattern of effects for those who do not speak English very well could be interpreted as evidence of the importance of opportunity costs. That this pattern is observed for both husbands and wives suggests that the effect of language may be an artifact of socioeconomic status.

Language, Socioeconomic Status, and Fertility

As seen in the previous chapter, the negative effects of socioeconomic status on fertility are more pronounced among Mexican Americans. The negative effects of education on progression are significant for both husbands and wives. Among Anglos, wife’s education adequately describes the effects of education on a couple's fertility. The effect of husband's income is consistently negative among Mexican Americans. Among Anglos there is a positive effect of husband's income on progression at the first two parity levels.

Given the importance of socioeconomic status to Mexican-American fertility and the lower status associated with Spanish use among Mexican Americans, it cannot be claimed at this point
that Spanish use is any more than an indicator of educational attainment. In order to establish the effects of Spanish language use at home net of the socioeconomic differences that can be observed by language use, wife's education, husband's education, and husband's income were included in equations regressing the odds associated with progression on language characteristics and nativity.

\[ Y = k + b_1 (WFBIRTH) + b_2 (HSBIRTH) + b_3 \frac{WFENG}{VW} + \]
\[ b_4 \frac{WFENG}{VW} + b_5 \frac{HSENG}{VW} + b_6 \frac{HSENG}{VW} + b_7 (WFED) + e \]
(eq. 8-4)

\[ Y = k + b_1 (WFBIRTH) + b_2 (HSBIRTH) + b_3 \frac{WFENG}{VW} + \]
\[ b_4 \frac{WFENG}{VW} + b_5 \frac{HSENG}{VW} + b_6 \frac{HSENG}{VW} + b_7 (HSED) + e \]
(eq. 8-5)

\[ Y = k + b_1 (WFBIRTH) + b_2 (HSBIRTH) + b_3 \frac{WFENG}{VW} + \]
\[ b_4 \frac{WFENG}{VW} + b_5 \frac{HSENG}{VW} + b_6 \frac{HSENG}{VW} + b_7 (HSINC) + e \]
(eq. 8-6)

If the apparent effects of language in Table 21 are actually the effects of education or income, these socioeconomic variables should replace the effects of language. Again, progression ratios defined at each parity level are well suited to this analysis since the effects of language and socioeconomic status on ethnicity may vary at different stages of family building.

A comparison of the plots of the effects of wife's language characteristics on progression in Figure 12 illustrates the extent
Figure 12. Effects of Wife’s Language Use, English Speaking Ability, and Educational Attainment on the Odds on Progression by Parity Level.*

* computed from equation 8-4
to which the effects of wife's education modify the effects of wife's language characteristics on fertility. Wives who speak English very well but who speak Spanish at home are more likely than English speakers to have had first, second, third, and fifth births (line a of Figure 12). Those effects as they are modified by the inclusion of wife's education (equation 8-4) are plotted by line b. The distance between these two lines provides an estimate of the extent to which wife's education accounts for the apparent effect of wife's language use. Lines a and b in Figure 12 are nearly indistinguishable, which suggests that among those who speak English very well, the positive effect of speaking Spanish at home cannot be attributed to the effects of wife's education on fertility.

Women who do not speak English at home and who do not speak English very well are more likely than English speakers to have had additional births at every point in the family building process except parity 8 (line c of Figure 12). The comparison of line c and line d, which plot the effect of not speaking English very well net of the effects of education, indicates that the lower educational attainment of these women accounts for a portion of the effects attributed to language use and English speaking ability. The effects of education diminish but do not displace the effects of language use among these women.

Among women who are proficient in English, the effects of speaking Spanish at home do not reflect educational effects
on fertility. Among those who do not speak English very well, 
higher fertility is attributable in part to educational effects. 
Controlling for education, the fertility of all Spanish speaking 
women is quite similar. This suggests that it is speaking Spanish, 
not a lack of English proficiency, that distinguishes the effects 
of wife's language characteristics on fertility.

Figure 13 is a similar plot of the effects of husbands' 
language use and ability net of wife's language characteristics.
Couples where the husband is proficient in English but speaks 
Spanish at home are more likely to have first, second, third, 
fourth, fifth, and seventh births (line a of Figure 13). As 
in the analysis of wife's language characteristics and education, 
a comparison of lines a and b shows the extent to which the effect 
of language is modified by the inclusion of educational character­
istics. Again, the effect of speaking Spanish at home is not 
attributable to educational effects among those husbands who 
speak English very well.

Couples where the husband speaks Spanish at home and 
does not speak English well are more likely to have had additional 
children at every parity level (line c of Figure 13). The comparison 
of lines c and d indicates that the apparent effect of Spanish 
use among these husbands is in part attributable to the lower 
educational attainment of husbands who do not speak English very 
well. As was the case for wives, there is very little difference 
in fertility that can be attributed to variation in English
Figure 13. Effects of Husband's Language Use, English Speaking Ability, and Educational Attainment on the Odds on Progression by Parity.
proficiency among Spanish speakers. The results of the analysis using husband's income as the control for socioeconomic status yields very similar results. Table 22 presents the effects of language use controlling for husband's income.

Language, Nativity, and Fertility

The effects of being foreign born on fertility are either not significant or are difficult to interpret when language spoken at home is included with nativity. The effects of nativity are seen for Mexican-American couples in Table 21. It appears that while speaking Spanish is associated with higher fertility, being born in Mexico is not. There are several interpretations that these results suggest. First, it may be language is the more accurate index of ethnic integration among adults. Because date of immigration is not controlled, many who were raised in the United States are included as foreign born along with more recent arrivals. The country where the respondent was raised may be the more appropriate measure. Second, it may be that the proximity of Mexico dilutes the effect of being foreign born. All husbands and wives in this sample live in the border states of Arizona, Texas, or New Mexico. Continued contact with friends and relatives in Mexico may be sufficiently easy for foreign born and native born alike that generation does not have the meaning here that it did for earlier European immigrants.
Table 22. Regression of Logged Odds on Progression on Language Use, English Speaking Ability and Nativity of Husbands and Wives, and Husband's Income by Parity, Mexican-American Couples Only.

<table>
<thead>
<tr>
<th>PARITY LEVEL</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFENG/VW</td>
<td>1.371</td>
<td>1.082</td>
<td>-.523</td>
<td>.048*</td>
<td>.223</td>
<td>.139*</td>
<td>.196*</td>
</tr>
<tr>
<td>HSENG/VW</td>
<td>1.249</td>
<td>1.156</td>
<td>.727</td>
<td>.393</td>
<td>.216</td>
<td>-.024</td>
<td>.203*</td>
</tr>
<tr>
<td>WFBIRTH</td>
<td>-.103*</td>
<td>-.152*</td>
<td>-.092*</td>
<td>-.011*</td>
<td>-.029*</td>
<td>.038*</td>
<td>-.040*</td>
</tr>
<tr>
<td>HSBIRTH</td>
<td>-.523</td>
<td>-.387</td>
<td>-.193</td>
<td>-.075*</td>
<td>-.056*</td>
<td>-.029*</td>
<td>.033*</td>
</tr>
<tr>
<td>HSINC</td>
<td>-.280</td>
<td>-.222</td>
<td>-.248</td>
<td>-.216</td>
<td>-.238</td>
<td>-.160</td>
<td>-.147</td>
</tr>
<tr>
<td>Constant</td>
<td>1.024</td>
<td>.871</td>
<td>1.058</td>
<td>.773</td>
<td>.633</td>
<td>.657</td>
<td>.304</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.55917</td>
<td>.50380</td>
<td>.42436</td>
<td>.49425</td>
<td>.49637</td>
<td>.32208</td>
<td>.25106</td>
</tr>
</tbody>
</table>

\* \( p > .05 \)
General Observations and Conclusions

The analysis of language and fertility was undertaken to evaluate a cultural explanation of higher Mexican-American fertility. If cultural norms and values are important factors contributing to higher Mexican-American fertility, it is expected that fertility would also vary with measures of ethnic integration within the Mexican-American population. That relationship was observed with respect to Spanish use at home in this analysis. The possibility that this higher fertility is part of a more general ethnic phenomena was not supported in the analysis of language use which included Anglos. Likewise, the explanation of the association of language and fertility as due to different opportunity costs was not supported in the analysis which included husbands. Controls for socioeconomic status in the Mexican-American portion of the sample indicate that the effect of language use on fertility cannot be explained in terms of educational or economic differences associated with language use.

The shortcoming of this analysis is that unlike Swicegood's analysis, this study does not explain the linkage between language use and fertility in terms of testable hypotheses. It may be that language retention is an indicator of commitment to an ethnic culture that describes children as an important part of adult roles or in some other way reinforces pronatalist values. It may be that Spanish language use implies greater access to the ethnic media which reinforce these values. The data available
to this analysis do not permit a direct test of the association of language and ethnic media exposure or of the content of ethnic media with respect to family values or adult roles as they may affect fertility. Neither do these data provide a more direct measure of individuals' identification with or commitment to ethnic culture or the values individuals perceive as essential to that culture. This analysis has described the pattern of language use and fertility that would be expected if culture has played an important role in the fertility of these couples. There is little support in these data for competing structural explanations of the observed association of language use and fertility.
CHAPTER 9
SUMMARY AND DISCUSSION

This study was designed to assess the extent to which the factors which shape the fertility expectations of Anglo and Mexican-American adolescents are similar to factors affecting the fertility of members of their parents' generation. The higher fertility expectations of the Mexican-American adolescents are quite clearly linked to ethnic integration, measured in terms of language use at home and generation. Several items used to measure ethnicity, ethnic integration, and socioeconomic expectations in the study of adolescents are quite similar to measures of adult characteristics in the 1980 Census, making some comparisons possible.

In particular, two striking findings in the study of adolescent expectations defined questions for this study. The first was the finding that while Mexican-American adolescents as a group expect more children than do Anglos, the effect of ethnicity on the expectations of males was more pronounced than for females. This was attributed in part to the greater differences in the Anglo and Mexican-American adult role expectations of males.
This finding is of particular importance because previous research has frequently used only female characteristics to study fertility in the interests of economy or ease of analysis. If ethnic norms and values more clearly affect the fertility expectations of males than females, the decision to use wife's characteristics as proxies for the couple's characteristics in research reduces the probability that the effects of ethnicity will be observed. Furthermore, evidence that the effects of wife's education on fertility are generally greater than those of husband's education suggests that the use of wife's characteristics may bias findings toward socioeconomic rather than cultural effects.

In the study of adolescent expectations, a positive interaction of the effects of ethnicity and socioeconomic status on fertility expectations was observed. That fertility expectations increase with socioeconomic status among Mexican Americans accounts for the attention given the interaction of ethnicity and status as they affect actual fertility in this study. Other studies of the actual fertility of other minority groups generally describe a negative effect of status on fertility that is more pronounced for the minority group than the majority group members.

The Major Findings and Their Relationship to Fertility Expectations

The positive effects of expected socioeconomic status on the fertility expectations of Mexican-American adolescents was considered to be evidence that pronatalist values are part
of Mexican-American ethnic culture. This led to the development of a cultural model pertaining specifically to groups thought to have distinctly pronatalist values as part of their cultural heritage. Since higher status implies the ability to realize values, the advantaged members of a minority group may expect to have higher rather than lower average fertility described by the minority status hypothesis.

Economic theories as well as norms and values pertaining to the family and adult roles thought to characterize Mexican-American culture were presented as possible sources of higher Mexican-American fertility. Economic effects were measured by education of the spouses and husband’s income; the effects of norms and values were measured by ethnic identity, Anglo or Mexican-American; and measures of ethnic integration included language and nativity.

The findings in this study provide support for hypotheses that are derived from economic theories of fertility. However, economic characteristics do not entirely account for the differences in Anglo and Mexican-American fertility observed in this sample. Ethnicity conditions the effects of socioeconomic status on fertility. Ethnic integration, measured in terms of Spanish use in the home, is associated with higher levels of fertility among Mexican-Americans.

The predicted effects of the child quality and opportunity costs hypotheses were observed in the negative effects of husband’s
and wife's education on fertility. The greater negative effect of wife's education is consistent with the prediction that while education plays a role in shaping the child quality expectations of both parents, the opportunity costs of childrearing to wives make wife's education the major influence on fertility.

A comparison of the effects of economic variables in subgroups defined by ethnicity indicates that the negative effects of socioeconomic status are more pronounced among Mexican Americans. This finding directly contradicts the evidence from adolescents, i.e., the positive effects of socioeconomic status on expected fertility. The negative effect of education observed for all wives is more pronounced for Mexican-American wives than for Anglos. The educational attainment of both husbands and wives affects Mexican-American fertility. Among Anglos, husband's education does not have an effect on fertility independent of the effect of wife's education.

The greater effects of educational attainment on the fertility of Mexican Americans is consistent with the minority status hypothesis. This hypothesis predicts an interaction of socioeconomic status and minority status that yields high minority fertility at the lower levels of socioeconomic status and unusually low fertility among minority group members with higher than average socioeconomic attainment. The lower than average fertility among the advantaged portion of the minority group is interpreted as
a strategy of compensation for the barriers to attainment faced by minority group members.

The contrasting effects of income on the fertility of Anglos and Mexican Americans offers further empirical support for the applicability of the minority status hypothesis to Mexican-American fertility. For Anglos, income has a slightly positive effect on fertility controlling for the effects of education. Among Mexican Americans, that effect is negative. At lower levels of income, Mexican Americans have larger families than do Anglos, but Mexican Americans with higher than average incomes have similar or smaller families.

However, cultural characteristics also shape fertility. At most levels of socioeconomic status, Mexican-American identity has a positive effect on fertility. Those effects are more pronounced if they are measured in terms of husband's characteristics. Mexican-American identity of the husband has a greater effect on the fertility of a couple than wife's identity. Ethnic integration, an indicator of the influence of ethnic norms and values on fertility, found support among Mexican-American husbands whose language use at home affected mean family size net of the effects of education or income. Controls for socioeconomic variables indicate that the apparent effects of wife's language use on fertility were artifacts of the effects of educational attainment. That these effects reflect Mexican-American culture specifically was indicated by the finding that among Anglos the maintenance
of ethnic ties does not have a positive effect on fertility. Thus the effect of ethnic integration on fertility reflects values specific to Mexican-American culture and husband's integration in that culture that has the greater influence than wife's on couple's fertility.

That the findings with respect to the effects of socioeconomic variables on actual fertility are inconsistent with the effects of expected status on fertility expectations is not entirely unexpected. Anglo adolescents exhibit little awareness of any association between fertility and socioeconomic status, and Mexican Americans miscalculate what that association will be. As Stolzenberg and Waite's (1977) study of labor force participation plans and the fertility expectations of adult women suggest, the negative association between fertility and other economic factors may not be appreciated until after the birth of the first child. However, the effects of culture among adolescents appear to continue into the adult years. For example, the effects of ethnic integration measured in terms of the language use of Mexican-American husbands in particular is consistent with the fertility expectations study.

The Use of Parity Progression Ratios

The choice of analytical strategies used to study fertility implies certain assumptions about couples' fertility decision making and the effect of social and economic variables on that process. The results reported above were obtained from the regression
of family size on variables representing the effects of ethnicity or socioeconomic status. This analytical strategy implies that couples adopt a lifetime plan for childbearing early in marriage, thus the analysis focuses upon the effect of characteristics of the couple on that decision. If couples are thought to make more than a single decision about fertility, describing their completed family size using regression implies that the effects of cultural or socioeconomic characteristics were the same each time the couple was faced with the decision to have another child.

Alternately, the use of parity progression ratios implies that separate decisions are made at each birth interval and that the importance of economic and cultural factors may vary at different stages of the family building process.

This strategy is especially appropriate for the study of minority fertility for several reasons. First, use of economic variables alone is problematic because education often has a negative effect on fertility while income has a positive effect. The interplay of these variables is difficult to describe given the well established association of education and income. Parity progression identifies the different points in the family building process where each socioeconomic variable is influential. Second, ethnic norms and values may not have the same impact at every stage of family building. The social pressures on a couple not to remain childless and not to raise an only child are not unique to Mexican-American culture. Therefore, the effects of uniquely
pronatalist norms and values associated with ethnic culture may only be observed beyond the first and second births.

Additional Findings Using Parity Progression

The economic theories that predict education and income effects on fertility are more clearly described by analysis of couples' sequence of fertility decisions. In the entire sample, wife's education alone has a negative effect on the first and second births. This is consistent with the opportunity costs hypothesis since the births that have the greatest effect on mothers' labor force participation plans are those lower order births. Husband's education adds to the effect of wife's education only at the point of deciding on the third child. The effect of husband's education can be interpreted as a concern for child quality. It is likely that only after the second child do considerations about the resources available to the children already born enter the decision to have another child.

Husband's income has a positive effect on couples' decisions to start a family and to have a second child. After the second child, income either has no effect or a negative effect, which is consistent with the notion that income is positively related to couples' ability to control fertility. If having children and not having an only child are the norms of family building, couples with greater financial resources may be able to better meet these ideals. In addition, income may be associated with
a minimum level of security viewed by many as a prerequisite
to starting families.

As would be expected given more general pronatalist norms
to have first and second children, ethnicity has a positive effect
on the fertility decisions of most Mexican Americans at parity
three and beyond. The interaction of economic variables and
ethnicity at the lower parity levels adds to the support found
for the minority status hypothesis in the regression analysis.
If lower fertility is thought to be a strategy by which minority
group members compensate for barriers to higher status attainment,
those effects should be seen at the lower parity levels. Not
having a fourth or fifth child would hardly compensate for barriers
to achievement in the way that remaining childless or having
only one child would. It is precisely at these lower parity
levels that the interaction of ethnicity and education is most
clear. While there is not a significant difference in the probability
of a first birth among Anglo or Mexican-American women at the
lower levels of socioeconomic status, Mexican-American women
at the highest levels of educational attainment are less likely
than Anglos to have had a first child. A similar pattern is
seen in terms of the second birth.

The minority status hypothesis is also supported in the
pattern of effect of income and ethnicity on fertility at the
lower parity levels. The income of Anglo husbands has a positive
effect on the likelihood of a first or second child. Among
Mexican-American husbands, in contrast, income has a negative effect on the likelihood of becoming a father or having a second child. At the lower income levels, Mexican-American men are more likely than Anglos to have a first child; at the higher levels they are less likely to have children. It is generally only after parity three that Mexican-American identity has a positive effect on the likelihood of having additional children at all levels of socioeconomic status.

The effects of ethnicity and socioeconomic status diminish and have no significant effects on the likelihood of couples having additional children at the highest parity level, which can be interpreted in several ways. First, the sample size is greatly diminished at these higher parity levels where the decision to have, for instance, a tenth child is relevant. Second, it may be that neither cultural nor economic variables influence this decision but that other factors not measured in this data set are important to the decision to have children at these parity levels. Finally, it may be that these births are less likely the result of a decision at all but rather were unplanned, independent of the factors thought to shape couples' fertility.

Language Use as an Index of the Effects of Mexican-American Cultural Norms on Fertility

The logic of parity progression was also applied to the question of the adequacy of language use as an indicator of ethnic integration and the extent to which the association of language
use and fertility can be interpreted as evidence of the effects of pronatalist norms and values that are unique to Mexican-American culture. Two hypotheses argue against this interpretation. First, it may be that the pronatalist effects of speaking a language other than English at home can be found among all couples who are maintaining ties to any ethnic culture. Second, it has been argued that the higher fertility associated with Spanish language use among Mexican-American women is based on the lower opportunity costs of childbearing if a lack of English proficiency diminishes the wage earning potential of these women.

The inclusion of Anglo husbands and wives in the analysis of language effects provides little support for these alternative hypotheses. There is no indication that Anglos who do not speak English at home have larger families. Controlling for the effects of socioeconomic status, these Anglos have, if anything, smaller families. These findings suggest that rather than reflecting a more traditional orientation of all those who may be maintaining ethnic ties, the norms and values associated with larger families are more uniquely Mexican-American.

The opportunity costs hypothesis is not supported by this analysis. If lack of English proficiency is the determining factor in higher fertility, this effect should be observed among all women who are not proficient in English regardless of the language they do speak. This is not the case. It is only among Mexican-American women that the higher fertility of non-English
speakers is observed. In addition, if it is opportunity costs that link language and fertility, there should be no effect of language use of husbands on fertility net of wife's language use. However, at nearly every parity, the use of Spanish at home increases the odds on an additional child, and husband's language use affects fertility independent of the effects of wife's language characteristics.

These results indicate that the higher fertility of Mexican Americans who speak Spanish at home does not reflect a more traditional outlook among all those maintaining ties to an ethnic culture or the effects of opportunity costs on fertility. The pattern of effects supports the notion that language use is an indicator of ethnic integration. The positive effect of Spanish use on the fertility of Mexican Americans is indicative of identification with a culture of which pronatalist norms and values are a part.

**Fertility as an Indicator of Social Processes**

Fertility may be viewed as an indicator of other social processes: as a marker of the assimilation of a minority group in American culture, as indicated by socioeconomic and cultural models of fertility, or as an index of discrimination (Ritchey, 1976).
Assimilation

The least complicated model of differential fertility attributes ethnic effects to differences in socioeconomic status. This model implies that there are no cultural differences between groups but that the apparent differences in variables like fertility are the product of differences in socioeconomic status. That ethnic groups, like Mexican Americans, have higher than average fertility rates merely reflects their overrepresentation at lower levels of education or income which are responsible for their higher fertility rates.

This explanation is based on the notion that the choices people make are largely shaped by economic factors that operate without respect to possible cultural differences. If this explanation accurately represents the role of ethnicity and socioeconomic status in shaping fertility behavior, the differences we now attribute to cultural differences should disappear with the equitable distribution of minority group members at all levels of socioeconomic status. However, insofar as statistical controls model the effects of such equitable distribution, this study provides very little support for the notion that ethnic differences are really socioeconomic differences.

A different model views ethnic differences as a marker of the success of the process of assimilation. While immigrant groups may at the onset display distinctive patterns of fertility at all levels of socioeconomic status, these are attributed to
the cultural values and socialization of immigrants which shape their tastes or preferences about fertility decisions net of the effects of socioeconomic variables. Fertility differences attributed to different norms and values are expected to disappear in subsequent generations as immigrant groups are increasingly exposed to the culture of the receiving society. That this has been the experience of older European immigrant groups lends support to the use of fertility as an observable marker of the process of displacement of ethnic norms and values.

In this study a more subtle process was observed in the relationship of socioeconomic status and ethnicity and their effects on the fertility of Mexican Americans. Those Mexican Americans who have remained at the lower levels of socioeconomic status exhibit much higher fertility than would be predicted by status alone. Among those at higher than average levels of socioeconomic status, unusually low fertility is more common. This evidence suggests that the process of assimilation is uneven insofar as those in the higher levels of socioeconomic status are the first to adopt the norms and values of the majority culture because of their more frequent educational and occupational contacts outside the minority group.

Discrimination

A less benign interpretation is suggested in the work of Goldscheider and Uhlenberg (1969) and extended by Ritchey (1975). The higher than average fertility at the lower levels
of socioeconomic status may be a reaction to the perception that upward mobility is not an attainable goal, such that the costs to family satisfactions of pursuing that goal are too great relative to the likelihood of success. The lower than average fertility of those minority group members who have attained higher than average status is seen as evidence of the barriers they faced in achieving or maintaining this status.

Because lower fertility is a form of compensation employed by those few minority group members who have attained higher status and the higher fertility of those at lower levels of socioeconomic status may be an indicator of their perceived prospects for social mobility, Ritchey (1975) interprets the coefficient describing the interaction of minority status and socioeconomic status as an index of discrimination. If the barriers to upward mobility faced by the minority group members are no greater than those faced by the majority, the tradeoffs in terms of fertility and status attainment made by members of the minority group should be no different than those made by the majority. To the extent that minority group members have compensated for barriers to their success, the negative effects of higher status on fertility will be more pronounced. Ritchey has demonstrated the utility of this strategy comparing the association of fertility and socioeconomic status among blacks in different regions of the United States.
An extension of this study would involve the comparison of the interaction of ethnicity and status in their effects on fertility among Mexican Americans using time rather than region as the basis of comparison. If the opportunity structure of Mexican Americans has improved over time, the interaction of the effects of socioeconomic status and ethnicity on fertility should be less pronounced for couples aged 40-44 in the 1980 Census data than among couples of that same age drawn from the 1970 or 1960 Census data. In addition, if the opportunity structure faced by younger cohorts of Mexican Americans is appreciably different than that faced by older cohorts, the interaction of ethnicity and education on income should be less pronounced among the 30-34 cohorts than older cohorts. The evidence presented here suggests that for members of the 40-44 cohort, higher than average status attained by Mexican Americans has been at the expense of values that are a part of their cultural heritage and that the price of that attainment was greater than that paid by Anglos.

This study has assessed the effects of Mexican-American identity on fertility. For the few Mexican Americans who have achieved higher than average status, ethnic identity is linked to lower than average fertility, a pattern predicted by the minority status hypothesis and observed among other minority groups who do not have distinctly pronatalist norms and values.
For most Mexican Americans, ethnic identity is linked to higher than average fertility. This study does not address the mechanisms by which that higher fertility is supported, but the cultural theory implies the importance of reference groups to attitudes toward the importance of the family as a social institution and adult sex role expectations. How these attitudes vary by ethnicity to affect fertility behavior cannot be addressed in this data set. A longitudinal study of the adolescents whose fertility expectations prompted this study would contribute to an understanding of the links between ethnicity and fertility as well as the process by which fertility expectations and other life plans are finally negotiated.
APPENDIX A

SAMPLE SELECTION

The following items were used to select couples from the Public Use Microdata Sample files for Arizona, Texas, and New Mexico (Bureau of Census, 1983a). The mnemonic listed at the left is that used by the Census Bureau in files and publications pertaining to the 1980 Census. The asterisk indicates inclusion in the sample.

Female respondents were initially selected on the basis of marital status, the number of times they had been married, and age.

<table>
<thead>
<tr>
<th>MARITAL STATUS</th>
<th>*now married, except separated widowed divorced never married</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIMESMAR</td>
<td>Has this person been married more than once?</td>
</tr>
<tr>
<td></td>
<td>N/A (under 15 years of age or never married)</td>
</tr>
<tr>
<td></td>
<td>*once</td>
</tr>
<tr>
<td></td>
<td>more than once</td>
</tr>
<tr>
<td>AGE</td>
<td>age at last birthday</td>
</tr>
</tbody>
</table>

Women aged 40-44 who were married only once and living with their spouses at the time of the Census were paired with their spouses using information pertaining to the relationship.
of persons in each household. The following items were used
to establish the race or ethnicity of both spouses. Only couples
in which both husband and wife are Anglo or Mexican American
were retained in the sample.

**RACE**

Is this person--

*White
  Black or Negro
  Japanese
  Chinese
  Filipino
  Korean
  Vietnamese
  Indian (American)
  Asian Indian
  Hawaiian
  Guamanian
  Samoan
  Eskimo
  Aluet
*Other--Specify (Spanish write-in entries were included)

**SPANISH**

Is this person of Spanish/Hispanic origin or descent?

*No (not Spanish/Hispanic)
*Yes, Mexican, Mexican-Amer., Chicano
  Yes, Puerto Rican
  Yes, Cuban
  Yes, other Spanish/Hispanic

Respondents who described themselves as white and not
of Spanish origin were coded as Anglo in this study. Those who
described themselves as white or who wrote in a response coded
by the Census Bureau as a "Spanish write-in" and who indicated
Mexican as their type of Spanish origin were coded as Mexican
American.
APPENDIX B

MEASURES OF FERTILITY, SOCIOECONOMIC STATUS, AND ETHNICITY

Couples' Fertility

The following question was asked of all persons born before April 1, 1965 (those 15 and over at the time of the Census):

FERTILITY If this person is female—

How many babies has she ever had, not counting still births?

Do not count her step children or children she has adopted.

Education

For both husband and wife, education is defined as the number of years of school completed. This measure is derived from the combination of two items pertaining to education.

GRADE What is the highest grade (or year) of regular school this person has ever attended?

Response categories from which the respondent could choose were nursery school and kindergarten; elementary and secondary school years 1-12; college, 1 to 8 or more years; and never attended school. This last category and nursery school and kindergarten were assigned scores of 0. Other grades or years were recomputed to represent the number of years of school attended.
A second variable was used to determine completion of the highest grade or year in school.

FINGRADE Did this person finish the highest grade or year attended?

- now attending this grade (or year)
- finished this grade (or year)
- did not finish

For respondents who indicated that they had finished this grade, the highest year or grade of school attended was used as the measure of number of years of school completed. For those who did not finish, a score of the highest grade attended minus one was assigned.

**Income**

INCOME8 Income from all sources in 1979

Respondents were instructed to enter a dollar figure that represents or approximates their income, earned and unearned, in 1979.

**Language Use and Ability**

LANG1 Does this person speak a language other than English at home?

- yes
- no

ENGLISH (asked only of those who responded positively to LANG1)

How well does this person speak English?

- Very well
- Well
- Not well
- Not at all
**Generation**

**IMMIG**

When did this person come to the United States to stay?

- N/A (born in the United States or outlying areas or born abroad of American parents)
- 1975-1980
- 1970-1974
- 1965-1969
- 1960-1964
- 1950-1959
- before 1950

Those respondents for whom N/A was coded are native born.

**Rural or Urban Residence**

The A sample includes an item describing the housing unit which is used here as an indicator of urban or nonurban residence.

**AREATYPE**

- Central city of SMSA
- SMSA, outside central city
- SMSA, central city/remainder not separately identified
- Mixed SMSA, non-SMSA area
- Outside SMSA

These five categories were coded by the Census Bureau according to its designation of areas. Those respondents whose household was described as outside SMSAs are considered to be living in a nonurban area.
REFERENCES


223


Westoff, Charles F., Robert G. Potter, Jr., and Philys C. Sagi.


