Demographic Patterns and Family Structure in Eighteenth-Century Lancaster County, Pennsylvania

In the current debate about the social character of eighteenth-century Pennsylvania, scholars have formed ranks largely around two contrasting interpretations. One group argues that patriarchal and communal norms shaped family decisions and governed economic and social behavior. Patriarchs arranged marriages for their offspring, curbed sexual expression by the young, and—to control the marriage ages and domestic lives of their children—asserted their authority over property. Kinship ties, parental authority, and communal ideals proved significant in shaping the patterns of daily life.  

Other historians maintain that Pennsylvanians lived in an open society characterized by liberal, individualistic, competitive values. The inhabitants acted to maximize self-interest in a market economy.  

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of lineage and European custom disintegrated in this unconfined country where the private ambitions and market-oriented desires of mobile, nuclear families took hold. Germantown inhabitants, for example, are depicted as "privatistic"—that is, having pragmatic, individualistic values rather than traditional patriarchal ways structure family behavior. Similar patterns evolved in Philadelphia and in the interior of Pennsylvania where settlers pursued "liberal," middle-class goals, emphasized individual freedom more than community concerns, and worked for their own material well-being. Complicating the debate are contradictory findings concerning such foundations of social organization as nuptiality, fertility, and mortality.

Evaluating the relative strength of these arguments in the light of new evidence for Lancaster County is one purpose of this essay. This study also seeks to fill in some gaps in the knowledge of population patterns and family life in Lancaster County during three phases of its development. Lancaster County is important for a number of reasons. It was the first new county created after the initial colonization of 1682. It made significant contributions to Pennsylvania's development during the colonial and Revolutionary eras. Some features of southeastern Pennsylvania's demographic history have been reported. This study adds to our knowledge of yet another aspect of Philadelphia's regional demographic development. Lancaster County, about fifty miles from Philadelphia, was close enough to the urban center to have business, trade, political, and family connections with the city. But it was far enough away to have a separate identity and unique economic and social interests. Likewise, its demographic features differed from those of Philadelphia. This study isolates demographic patterns in Pennsylvania's rural hinterland and compares them with Philadelphia's experience. Another purpose is to compare its findings with demographic material drawn from New England and Chesapeake

4 Warner, The Private City, 3-4, and passim.
community studies. The Lancaster data, not confined to a particular religious denomination or ancestry group, are from an eighteenth-century northern, rural, county-wide sample. As such, they are of interest to scholars of nineteenth-century populations. Reconstitution of 1,378 families that resided in the county during the eighteenth century furnishes answers to a number of questions about marriage ages, family sizes, and life expectancy. Techniques developed by European historical demographers have assisted in the collection of the families’ vital data and have stimulated the analysis of the statistical compilations.

Three periods of Lancaster County’s economic and social evolution guided the sorting of these reconstituted families into marriage cohorts according to the date of marriage: before 1741, 1741-1770, and 1771-1800. The first cohort is comprised of people (292 reconstituted families) who settled after 1710 in the region that became Lancaster.

7 The basic sources which provided the vital data necessary for reconstitution of the families consisted of collections of microfilm records held by the Genealogical Society of the Church of Jesus Christ of Latter Day Saints (Mormon). Lancaster County collections are indexed on microfilm No. 822471. For a discussion of these materials, see Larry R. Gerlach and Michael L. Nicholls, “The Mormon Genealogical Society and Research Opportunities in Early American History,” WMQ 32 (1975), 625-29. Some of the sources used included Lancaster County church records, deeds, Orphan’s Court records, wills, genealogies, biographies, federal census data for 1790 and 1800, U.S. Direct Tax records from 1798, and provincial tax lists.

8 E.A. Wrigley, ed., An Introduction to English Historical Demography: From the Sixteenth to the Nineteenth Century (New York, 1966), 96-159. The state of the sources in Pennsylvania required modification of this technique. See Rodger C. Henderson, “Community Development and the Revolutionary Transition in Eighteenth-Century Lancaster County, Pennsylvania” (Ph.D. diss., S.U.N.Y. at Binghamton, 1982), 33-46, 47-94. The vital data collected on reconstitution forms is sufficiently complete to calculate many demographic indices. Incomplete records and under-reporting of vital events caused problems, but the sources establish marriage ages for 762 brides and 777 grooms from a total of 4,519 weddings. The documents permit the calculation of fertility rates and family sizes of 467 women. Estimating unrecorded infant deaths, on the assumption that when a child died before age one the span between its birth and the arrival of the next baby is less than a normal birth interval, suggests an adjustment of 156 (45.1%) first cohort babies who died during their first year of life but the event went unrecorded. Figures for the second and third cohorts were 238 (37.6%) and 413 (47.3%), respectively. Louis Henry, Manuel de demographie historique (Paris, 1970), 22-25; “Intervals Between Confinements in the Absence of Birth Control,” Social Biology 4 (1958), 200-11; “Some Data on Natural Fertility,” ibid., 8 (1961), 81-91; E.A. Wrigley, Population and History (New York, 1977), 92 (Table 3.7); Daniel Blake Smith, “Mortality and Family in the Colonial Chesapeake,” JIH 8 (1978), 412-13. Use of this method made possible the calculation of mortality rates and creation of life tables.
County in 1729. They laid out the town of Lancaster in the 1730s and witnessed its incorporation as a borough in 1742. The second cohort includes the families of 456 couples who lived in Lancaster County during a period of remarkable growth and expansion in population, wealth, and institutions. These marriage partners, some of whom were part of a heavy flow of immigration to the region until the 1750s, saw Lancaster subdivided to create York, Cumberland, and Berks counties. The members of this cohort grouping participated in the French and Indian War, and some vented their outrage over provincial defense policies against the Conestoga Indians and the Pennsylvania Assembly during the Paxton Riots. The third cohort consists of the children of 630 husbands and wives who felt the tensions that brought on the Revolution, participated in the war, and lived through the Confederation period and the Federalist era.

Lancaster County's population grew rapidly due to immigration and natural increase during the three decades after the initial stream of Swiss Mennonites in 1710. Other nationalities, Scotch-Irish, Germans, and English, trekked into the region. Huguenots moved into nearby Strasburg, and Anglican Welsh settlers took up land that became Caernarvon Township. Scotch-Irish Presbyterians, joined by numerous English and Irish Quaker families, poured into the same locale. German Lutheran and Reformed Church members added to the variety. Some came from Schoharie, New York, and settled along Tulpehocken Creek. Their proportions swelled by prolific natural increase and a

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large influx from the Palatinate and other German principalities. In 1715 the area had an estimated population of 622, a number that grew to about 1,098 by 1720, and multiplied to approximately 2,100 by 1726.\footnote{13} Within a decade, after the Assembly created the county on May 10, 1729, its population expanded to 15,360.\footnote{14} The county held over 55,000 inhabitants by 1790. Ten years later about 65,000 people resided there.\footnote{15}

In 1729 Lancaster County consisted of a large land area west and northwest of Chester County in southeastern Pennsylvania. For the next twenty years its western borders remained undefined, but its boundaries contracted to their present limits (1,700 square miles or one million acres) with the formation of York (1749), Cumberland (1750), and Berks (1752) counties.\footnote{16} For the purposes of this study, the lands that encompass present-day Lancaster, Dauphin, and Lebanon counties are of special concern. This region was bounded on the east by Chester and Berks and on the north by Northumberland County. The Susquehanna River formed the western border, and the Maryland line shaped Lancaster County’s southern edge.

Various religious groups appear similar in their demographic characteristics. Cohort composition by religious affiliation shifted between the first to third cohort groups in the following proportions: Moravians, 14.4 to 30.2; Lutherans, 9.2 to 7.9; Reformed, 8.6 to 7.9; Quakers, 47.9 to 30.2; Mennonites, 2.1 to 1.6; Presbyterians, 17.5 to 22.1; and Anglicans, 0.3 to 0.2.\footnote{17} Further study may bring to light evidence supportive of Daniel Scott Smith’s speculation that membership in ethnic and religious groups influenced demographic patterns. He argues that the motivations for, and perhaps the methods of, “family limitation were transmitted and sustained . . . through membership

\footnote{13} Henderson, “Community Development,” 15-22.
\footnote{17} Henderson, “Community Development,” 84 (Table 3), 81-89.
and participation in these groups.” Bias may possibly influence the Lancaster findings because everyone in the county did not join a church. Some critics complained of numbers of unchurched “heathens” who had the “Pennsylvania Religion”—excessive freedom of conscience and too much religious liberty. In southeastern Pennsylvania, perhaps 29 percent of the people had no church ties; in Lancaster County, an estimated 10.2 percent had no religious affiliation.

Lancaster County families lived in an area rich in natural advantages, and they engaged in general mixed farming. They enjoyed the blessing of rich fertile soil, much of it underlaid with limestone, land “well adapted to the raising of wheat and all other sorts of grain.” These productive soils yielded abundant crops. Farmers grew wheat, rye, oats, and maize, as well as flax and hemp, and kept orchards to provide apples, peaches, and cherries for dried fruit, brandy, and cider. Wheat, the major crop, was a basic food source and a commodity for foreign trade. Most farmers in the 1790s busied themselves in general mixed husbandry, concentrating on wheat for the export trade, as their predecessors had done before 1740. In 1789 Lancaster County, “the richest part of the state,” was “All Sett’ld.” By the 1790s, the county had become one of the most densely populated agricultural regions in America. Inhabited for the most part by freehold farmers, it became economically diversified in the course of the century; merchants, craftsmen, and laborers worked with their brethren in husbandry. Despite economic expansion and diversification, growing numbers of householders affected the availability and price of arable land. The population explosion generated social tensions that were reflected in trends of out-migration, more cautious use of resources by those who remained.

22 Jedidiah Morse, *The American Geography; or, a View of the Present Situation of the United States of America* (Elizabethtown, 1789), 303, 309.
behind, and an upward shift in the ages of couples who wedded for the first time.

Average age at first marriage is an economic and social barometer for any community. Shifts in the matrimonial age, the "most important single demographic variable in the study of pre-industrial societies," express crucial changes in the neighborhood. Marriage rates influence fertility and family sizes, as well as reflect mortality and life expectancy. The timing of wedlock reveals social customs and discloses trends in the economy, such as the quality of harvests and the availability of land. Marriage, then, is highly significant "whether it be considered in regard to the community or to the individuals of mankind."24

Contemporary observers overwhelmingly concluded that in eighteenth-century Pennsylvania most men and women married young. They ascribed the cause to the prosperous economy and the expansive freedom that residents enjoyed. To Benjamin Franklin, wedlock "is greater in proportion to the ease and convenience of supporting a family." More people joined in matrimony, "and earlier in life," where men obtained land to farm, learned useful crafts, or found employment as laborers. He conjectured that "our marriages are made, reckoning one with another, at twenty years of age . . . and . . . marrying early is encouraged from the prospect of good subsistence."25 Franklin's was not an isolated voice. Advantageous economic and social circumstances made it feasible for Pennsylvanians to wed early in life.26

Lancaster County church registers disclose variations over time in the male pattern of age at first marriage (see Table I). The data assembled for 777 men from a total of 4,519 weddings reveal an

23 Wrigley, ed., Introduction to English Historical Demography, 150.
25 Benjamin Franklin, Observations Concerning the Increase of Mankind, Peopling of Countries, etc. . . . (Boston, 1755), 3, 4, 8.
upward shift during the century.\textsuperscript{27} In the early years of the Lancaster County settlement, most men who married did so between the ages of twenty and twenty-nine. Very few became husbands before turning twenty. About one-fifth of the men composing the first cohort group waited until they became thirty. An upward shift in marriage ages occurred among second-cohort males, with more taking spouses during their later twenties. The mean and median ages at first marriage rose to 26.2 and 25.4 years, respectively. Third-cohort men found wives at even older ages than had their predecessors. Although 50 percent of first-cohort men wedded before they reached age twenty-five, only 43 percent of third-cohort men chose to do so. However, these slight changes must be viewed in relation to the proportions of men marrying between twenty and twenty-nine: 75.3, 78.7, and 75.4 for each of the cohorts, respectively.

Statistics for age at first marriage of 762 women reveal several configurations. Before 1741 most brides were less than twenty-five years old.\textsuperscript{28} Remarkably, 39.5 percent married before age twenty (mostly at eighteen or nineteen) and very few for the first time after they reached thirty. A smaller proportion of second-cohort brides entered matrimony at ages under twenty. However, the average and median ages at first marriage for both cohorts remained stable at 21.3 and 20.9 years, respectively. A clear shift in the pattern of bridal marriage ages became apparent in the Revolutionary era: only 27.2 percent wedded when under twenty years of age, and the percentage of women who married for the first time at age thirty or later more than doubled. The median age at marriage shifted upward, and the


\textsuperscript{28} Lancaster County women married young in light of the European pattern, according to which mean ages must be above 23 and generally 24. Hajnal, "European Marriage Patterns," 108. The age at marriage in the cohort before 1741 may be incomparably lower than the later two cohorts. Technically, this is truncation bias. Since ages are known by linking marriages back to births, those who were born before the records begin cannot have their ages at marriage calculated. Henderson, "Community Development," 41.
**TABLE I**
AGE AT FIRST MARRIAGE IN EIGHTEENTH-CENTURY
LANCASTER COUNTY, PENNSYLVANIA

<table>
<thead>
<tr>
<th>Age</th>
<th>Before 1741*</th>
<th>1741 - 1770*</th>
<th>1771 - 1800*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>15d</td>
<td>--</td>
<td>--</td>
<td>0.8</td>
</tr>
<tr>
<td>15 - 19</td>
<td>45.5</td>
<td>39.5</td>
<td>1.6</td>
</tr>
<tr>
<td>20 - 24</td>
<td>45.4</td>
<td>36.1</td>
<td>44.3</td>
</tr>
<tr>
<td>25 - 29</td>
<td>29.9</td>
<td>21.9</td>
<td>34.4</td>
</tr>
<tr>
<td>30 - 34</td>
<td>11.7</td>
<td>2.5</td>
<td>13.1</td>
</tr>
<tr>
<td>35 - 39</td>
<td>6.5</td>
<td>--</td>
<td>4.5</td>
</tr>
<tr>
<td>40 - 49</td>
<td>0.0</td>
<td>--</td>
<td>2.0</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>100.0</td>
<td>99.9</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
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</thead>
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<tr>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>22.6</td>
<td>21.9</td>
<td>20.0</td>
</tr>
</tbody>
</table>

*N = 154 men and 119 women

*b N = 244 men and 249 women

*c N = 379 men and 394 women

d = less than fifteen

* e = some totals do not equal 100 due to rounding

mean age rose from 21.3 to 22.6 years. Women married later in life by over a year during the Revolutionary upheaval.\textsuperscript{29}

The sex ratio and immigration influenced the marital patterns of Lancaster County brides and grooms. Men and women joined in wedlock at younger ages during the early decades of settlement and at older ages at the end of the century. The ratio of men aged 20-39 to women aged 15-34 within the samples is nearly equal in each successive cohort. Among the general population, immigration conspicuously tipped the balance toward men at these ages. More young bachelors than spinsters came to the colony during the early and middle decades of the century.\textsuperscript{30} During the 1740s and 1750s, more men than women of marriageable age migrated to Pennsylvania, by a ratio of 122 to 100.\textsuperscript{31} The sex ratio of Germans over sixteen years of age, arriving in Pennsylvania from 1728 to 1748, was 140.7 males to females.\textsuperscript{32} This growing pool of eligible prospective husbands encouraged women to find men who were somewhat older than themselves. Men had to compete for brides, but women could be more selective. These conditions pushed the age at marriage downward for women while they promoted a later age at wedlock for men. In Pennsylvania, the high sex ratio of the early decades evened out to 1.06 by 1790.\textsuperscript{33} Changed marital patterns emerged from the new demographic balance between the sexes after 1771. Thereafter, economic factors and political developments were the primary determinants of matrimonial ages.

\textsuperscript{29} See Table I. Women continued to take spouses below the limits of a European pattern but within the scope of an American colonial pattern. Wells, "Quaker Marriage Patterns in a Colonial Perspective," 428-30.


\textsuperscript{32} Herbert Moller, "Sex Composition and Correlated Culture Patterns of Colonial America," \textit{WMQ} 2 (1945), 121.

\textsuperscript{33} Ibid., 128. After 1770 migration to new areas lessened the influence of the sex ratio on marriage ages. Adult male emigration rates, measured by disappearance from tax lists between 1772 and 1782, approached 50 percent per decade. "Allowing for deaths and replacement of some men by their sons, the rate was 30 percent." Lemon, \textit{Best Poor Man's Country}, 73.
Custom and law clearly shared a considerable role in establishing these patterns of age at first marriage.\textsuperscript{34} Most men married for the first time between the ages of twenty and thirty-four. The numbers who found wives at this age registered 87.0 percent before 1741, 91.8 from 1741 to 1770, and 89.1 after 1771. Women took husbands when they were fifteen to twenty-nine, with the percentage dropping across the three cohorts from 97.5 to 94.9 to 90.7. Slowly, almost imperceptibly, norms regarding appropriate matrimonial ages for women altered during the eighteenth century. Among Quakers, however, little changed. The Quakers enforced numerous regulations concerning marriage, and "adult status was formalized by marriage." Between 1660 and 1760, "Quaker ideas of children . . . rarely varied," and presumably, other customs changed little.\textsuperscript{35} Family norms structured marriage patterns not only in the Quaker community, but also among German Lutherans, Reformed Church members, Moravians, Mennonites, and Scotch-Irish Presbyterians. These groups regarded wedlock as a milestone in the transition from childhood and dependence to adulthood and autonomy. Legally and socially, sons reached maturity when they attained twenty-one years of age. Daughters became adults at eighteen or when they married, whichever came first. The records of inheritance found in Lancaster County wills attest to these configurations.

Social custom affords the best explanation for the concentrated numbers of women who became wives when eighteen to twenty-four years old and men who became husbands during their twenties. An intricate combination of relationships, among them coming of age and meeting the legal requirements of inheritance, governed family creation. Parents often provided in their wills that daughters should


inherit their portion of the estate when twenty-one years old, but frequently bequeathed female offspring their shares when they turned eighteen. Young women usually wedded after they completed a term of service, received an endowment from elders, or obtained an inheritance. The inception of matrimonial status for girls closely coincided with the community's values expressed in parental expectations for brides. Indeed, these standards promoted brides' first marriages in the narrow span between their eighteenth and twenty-fourth birthdays. These considerations differed somewhat for young men.

First-cohort parents thought that an appropriate time for their sons' commitment to first marriages came after their twenty-first birthdays. In their wills, elders seldom made male offspring independent before twenty-one and only infrequently advanced them portions before that age. Custom and law reinforced parental standards. The legal age of inheritance, twenty-one, also inhibited youngsters who yearned for separate households. Certainly, young men would not have had the resources with which to contract matrimony without the assistance of kin. Boys completed formal education in their mid-teens; parents then apprenticed them to kin or neighbors until they reached maturity. Thus, these young men had to delay marriage. Few could buy or sell goods and land, establish domestic units, move, or exercise freedom of choice before they reached their majority. Acting in any other way would have been contrary to the wills and expectations of their parents and the community. In order to have land, or money for the purchase of land, first-cohort sons generally had to attain twenty-one years of age, which set some minimum standards for cohabitation. Once men passed that socially acceptable boundary for getting married, the pace of wedlock quickened, and the marriage market rapidly cleared since nearly 80 percent found wives before age thirty.

36 These comments emerged from 158 Lancaster County wills made before 1751. *Lancaster County Wills*, Book A-B, Genealogical Society of the Church of Jesus Christ of the Latter Day Saints (hereafter, GSLDS), No. 21354. See, for example, Francis Jones, Will, Dec. 5, 1737; James Patterson, Will, Oct. 3, 1735; Elizabeth Murphy, Will, April 13, 1743; Thomas Green, Will, Nov. 14, 1741; Jane Minshall, Will, Dec. 8, 1747; Jacob Flubocker, Will, Jan. 21, 1745; John Murray, Will, Sept. 17, 1744; John White, Will, Jan. 29, 1738.

37 These conclusions derived from 158 Lancaster County wills made before 1751. Book A-B, GSLDS, No. 21354. See, for example, John Hess, Will, April 10, 1733; John Harris, Will, Nov. 22, 1746; James Bury, Will, Nov. 20, 1737; John Barnet, Will, July 1, 1734; Thomas Reid, Will, Feb. 2, 1734.
Second- and third-cohort parental expectations about the timing of marriage stayed consistent with the first. The patterns of the age at wedlock remained highly structured because a combination of factors established some limitations about acceptable timing of matrimonial ties for both sexes. Elders clearly recognized that women came of age younger than men. After 1770, however, parents were less willing to allow teenage girls to marry. This behavior, in response to economic changes, was another reason for the upward shift in marriage ages after 1770.

Many parents restricted the timing and choice of marriage partners while others demonstrated a more lenient attitude. Adults set the example, guided children in the right direction, and then actively reinforced desired behavior with suitable, tangible rewards. Many fathers wrote wills which were prime examples of justice, fairness, and equality. Some children received gifts of cash and land long before their fathers made bequests. Regardless of economic status, fathers determined to assist offspring who approached maturity and independence. Husbands and wives expected obedience from their progeny and inscribed that expectation into their wills. However, these same adults endowed their young folk with cash or property at a fitting time, establishing them as competitors in the marriage market. Land exchanged hands at the time of a daughter's marriage as well as afterwards. In their wills, other men confirmed assistance formerly given to their children. Outright gifts occurred less frequently than bequests made in exchange for small cash amounts and the descendants' "Love and Affection." Fathers often sold land directly to their sons at prices well below market price. Transactions completed at or near the wedding date betokened positive encouragement from parents.

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38 These conclusions are based on analysis of 186 wills written between 1751 and 1770. Examination of an additional 186 wills made after 1771 confirm these generalizations. Lancashire County Wills, Book A-B, GSLDS, No. 21354; Book C-D, No. 21355; Book E-F, No. 21356; Book G-H, No. 21357; Book I-K, No. 21358. See also Henderson, "Community Development," 232-57, 464-81.


41 The comments on deeds of gift and sale emerged from Lancashire County Deeds, GSLDS, No. 021382-021391. See also Henderson, "Community Development," 137-40, 251-52, 477-81.
Numerous interrelated economic factors exerted pressure on the community’s demographic patterns and family structure. Land warrants, deeds, wills, and tax lists disclose the broad outlines of Lancaster County’s changing economic relationships. Arable land dwindled; average farm sizes diminished; cultivated acreage per farm intensified; and land prices rose. The community became very densely populated, causing many people to migrate from the region and society to become more differentiated along economic lines. As wealth accumulated, the upper and lower classes shared increasingly unequal portions. Wills suggest that parents asserted their authority in matrimonial matters more vigorously as the century closed largely because of intensified economic pressures. Fewer left bequests to daughters at age eighteen than had done so in earlier times. After 1770 fewer fathers wrote statements in wills suggesting that ages between sixteen and twenty-one were appropriate for their girls to marry. One man excluded his daughter from the benefits arising from his estate if she married before his wife’s remarriage or death. Children who disobeyed their fathers’ wills received reduced shares of the parental estate. Executors, guardians, and wives consented to, or withheld approval of, daughters’ marriages. Other young women inherited nothing until they became twenty-one. This behavior emerged as fathers responded to growing economic difficulties. Natural fertility and immigration aggravated these developments in a changing community. Economic necessity promoted an increase in young people’s average age at first marriage and discouraged the larger numbers who wedded later in life. For the third cohort, conditions worsened; the upward trend in marriage ages is a major sign of the direction. Changes in the age at first marriage differed throughout British America because such demographic alter-


43 Henderson, “Community Development,” 464-68.

44 See Table I.
ations reflected the particular economic and social features of the New England, Middle, and southern colonies.

The timing of matrimony in Lancaster County was strikingly similar to marriage ages among patriarchal and communal New Englanders and Middle colony Quakers (see Table II). For example, at mid-century, the average age at the altar for Lancaster males rose, while Andover, Massachusetts, men married younger. Reported marriage ages for New England before 1750 are higher than those for Lancaster County because of balanced sex ratios and parental control of adult offspring. Falling ages at marriage for New Englanders resulted from elders' inability to accumulate valuable assets to entice youngsters to wait. Conversely, Lancaster fathers had sufficient capital, and they established their offspring as long as they remained obedient. Haverhill, Massachusetts, men were usually two years younger when they married than were Lancaster grooms. The frontier status and available land in Haverhill and surrounding communities made for lower marriage ages. Older New England towns had higher ages at first marriage because sons postponed wedlock and awaited their fathers' transmittal of property to them. Before the Revolution, Lancaster grooms wedded at periods in their lives comparable to those of Middle colony Quaker men; both responded to patriarchal and communal pressures.


46 Delaware Valley Quaker men who married before 1735 probably averaged 27 years of age, since only 4.5 percent wedded when less than 21, 31.5 percent when 21-24, 27.0 percent between ages 25-19, and 36.9 percent delayed marriage to age 30 and beyond. Levy, "Tender Plants," 129-30. At Germantown, men found spouses in the 1770s, 1780s, and 1790s at mean ages of 24.7, 25.5, and 27.1, respectively. Wolf, Urban Village, 257. Other Pennsylvanians took wives when at a mean age of 25.9; Mennonites, 25.6; and Schwenkfelders, 25.7. Henderson, "Community Development," 456.
First- and second-cohort Lancaster women wedded for the first time when two or three years younger than the brides of Andover, probably because New England patriarchs wished to retain the labor of daughters and could ill afford requisite dowries. Before 1771 Lancaster females committed themselves to wedlock at about the same ages as Haverhill women.\(^47\) In contrast, Middle colony Quaker women, influenced by more severe communal values, delayed family formation about a year and one-half longer than brides in Lancaster County (see Table II).\(^48\) Lancaster couples married when considerably older than their counterparts in the southern colonies. There, during the early eighteenth century, a more highly skewed sex ratio produced universal marriage for females, but many males never married. In the Chesapeake, higher death rates and lower life expectancy prevented the development of a patriarchal, communal society along the lines of Lancaster County, until the middle of the eighteenth century. The presence of large numbers of black slaves in the Chesapeake region, especially in the tidewater, further led planters there to cultivate a patriarchal, communal model based on race and landed wealth that differed from the Lancaster County model of a “hinterland” society.\(^49\)


\(^48\) Quaker women living in the Welsh Tract and Chester County near Philadelphia took vows when about two years older than Lancaster County brides, since only 36.5 percent wedded when less than 21 years old, 29.7 percent when between 21 and 24, 20.3 percent between 25 and 29, and 13.5 percent postponed marriage until they were 30 or older. Levy, “Tender Plants,” 129-30. At Germantown during the 1770s, 1780s, and 1790s, women became brides at average ages of 22.2, 22.0, and 25.5, respectively. Wolf, *Urban Village*, 257. Other Pennsylvania women averaged 22.4 years when first married, Mennonites when 21.0, and Schwenkfelders when 22.3. Henderson, “Community Development,” 451.

\(^49\) James M. Gallman, “Determinants of Age at Marriage in Colonial Perquimans County, North Carolina,” *WMQ* 39 (1982), 179-80. For example, 76 Perquimans County, North Carolina, women who married between 1700 and 1740 chose husbands at mean and median ages of 21 and 20, respectively. But 94 men who wedded during the same period found wives at mean and median ages of 23.4 and 23. More highly skewed sex ratios explain these lower marriage ages for women. Simultaneously, men chose wives earlier in life because Perquimans held quantities of readily available land at low prices and afforded opportunities in other nonagricultural occupations. Ibid. For additional comparative data on Virginia and Maryland marriage ages, see ibid., 181.
### TABLE II

**AGE AT FIRST MARRIAGE**

**LANCASTER COUNTY, PENNSYLVANIA, ANDOVER, MASSACHUSETTS, HAVERHILL, MASSACHUSETTS, AND MIDDLE COLONY QUAKERS**

<table>
<thead>
<tr>
<th>Age</th>
<th>Lancaster Before 1741</th>
<th>Lancaster 1741 - 1770*</th>
<th>Lancaster 1700 - 1729</th>
<th>Andover 1730 - 1759*</th>
<th>Haverhill 1720 - 1760*</th>
<th>Middle Colony Quakers - 1700s†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>21</td>
<td>78</td>
<td>513</td>
<td>41</td>
<td>522</td>
<td>27</td>
<td>276</td>
</tr>
<tr>
<td>21 - 24</td>
<td>422</td>
<td>244</td>
<td>418</td>
<td>281</td>
<td>321</td>
<td>352</td>
</tr>
<tr>
<td>25 - 29</td>
<td>299</td>
<td>218</td>
<td>344</td>
<td>153</td>
<td>388</td>
<td>229</td>
</tr>
<tr>
<td>30+</td>
<td>201</td>
<td>25</td>
<td>197</td>
<td>44</td>
<td>264</td>
<td>143</td>
</tr>
<tr>
<td>Totals</td>
<td>100</td>
<td></td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>26</td>
<td>213</td>
<td>262</td>
<td>213</td>
<td>271</td>
<td>245</td>
</tr>
<tr>
<td>Median</td>
<td>25</td>
<td>209</td>
<td>254</td>
<td>209</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*N = 154 men and 119 women
*N = 294 men and 282 women
*N = 244 men and 249 women
*N = 138 men and 129 women
*N = 224 men and 210 women
*N = 213 men and 269 women

Variations in the patterns of age at first marriage evolved from, and reflected differences in, colonial economic and social development. Benjamin Franklin projected a fairly accurate assessment of women’s marriage ages, “reckoning one with another, at twenty years,”\textsuperscript{50} at least for those from Haverhill, Bristol, Perquimans, and Lancaster before 1771. His estimates fall short of the demographic realities in many ways. Mortality rates and life expectancy determined the length of marital unions, family sizes, and the number of heirs. The duration of marriages enabled elders to accumulate property and control inheritance to regulate children’s marriages. Thus, the extent of patriarchal authority and communal power depended on the duration of marriages.

Lancaster County couples generally lived long lives. The mean length of marital bonds measured 24.8, 27.1, and 23.9 years across the three cohorts. About 70 percent of the couples of each cohort continued in wedlock fifteen or more years.\textsuperscript{51} Marital unions terminated with the early deaths of women more commonly than of men. While 31.3 percent of second-cohort wives died between ages twenty and forty-nine, only 12.6 percent of the husbands died so young.\textsuperscript{52} According to known deaths for the second cohort, married males who survived to age twenty-one died at an average age of 66.6 years, but their wives died at an average age of 58.3.\textsuperscript{53} Childbearing decisively contributed to the excessive burden of mortality experienced by women. Marriages usually lasted until death dissolved them, but after 1770 divorce, separation, and abandonment reduced the duration of Pennsylvania marital ties.\textsuperscript{54}

The Revolution brought some changes to women’s places in the community. It began altering the duration of marriages and redefining female roles. Traditionally, women subordinated their interests to the wills of their husbands. Death was one avenue of relief for “unhappy and discontented husbands and wives” who remained united despite

\textsuperscript{50} Franklin, \textit{Observations Concerning the Increase of Mankind}, 3, 4, 8.
\textsuperscript{51} Henderson, “Community Development,” 143, 287, 495.
\textsuperscript{52} Ibid., 144, 319, 497.
\textsuperscript{53} Ibid., 145, 323, 497.
\textsuperscript{54} Ibid., 500-8.
serious marital strife. After 1770 some women took matters into their own hands, “eloped from . . . bed and board,” and fled unhappy marriages. Philip Shriner of Lancaster County, for example, complained that his wife “voluntarily and perversely . . . abandoned [his] bed,” ran off with another man, engaged in “adulterous intercourse,” and entered into an illegal second marriage. Michael Bowman of Manheim Township, Lancaster County, also declared that his wife “left him and associated with dishonorable men.” A number of other sources suggest that women increasingly rebelled against male domination between 1765 and 1775. Women in larger numbers and greater frequency declared themselves independent of unsatisfying relationships during and after the Revolution. Between 1777 and 1785, nine of twenty-three husbands, but only two of twelve wives, petitioning for divorce received favorable decrees. After 1784 the Pennsylvania Supreme Court had jurisdiction in divorce and alimony litigation. From 1785 to 1801, the Court made determinations in 104 cases, awarding more divorces to women than to men. In all, sixty-four women received divorces under the new system, while the Court granted only forty divorces to men. The marriage institution changed but remained popular, nevertheless; after the death of a spouse, the survivor usually remarried, but husbands more often than wives.

Remarriage patterns in Lancaster County appear rather typical compared to European configurations for the same measure (see Table III). However, differential mortality rates for husbands and wives in Lancaster generated conditions in which a strikingly different remar-

58 Pennsylvania Gazette, April 3, 1776.
riage rate evolved than that discovered elsewhere in the Middle colonies.\(^61\) Brides and grooms marrying for the first time composed 88.1 percent of Middle colony Quaker marriages, so "remarriage was not too common."\(^62\) At Germantown, however, men "frequently had second families by marrying younger women when their wives . . . died."\(^63\) The Lancaster data disclose a remarkable multiplicity of combinations. Very few men marrying for the first time sought widows as partners. When they remarried for a second, third, or fourth time, widowers frequently thought widows attractive mates, but they expressed a stronger preference for never-wedded brides. When their first husbands died, most women did not remarry. Even in death, some husbands still asserted their authority over wives. At least 36.6 percent of second-cohort men who wrote wills incorporated provisions


\(^62\) Wells, "Quaker Marriage Patterns," 422-25.

\(^63\) Wolf, Urban Village, 263, 273-75.
in them that expressed opposition to widow remarriage and penalized with economic sanctions wives who chose second mates. More frequently than not, husbands who lost wives remarried. Men who entered wedlock two or more times fathered larger families than did those who wedded only once, and they created much larger domestic units than those produced by couples whose unions ended before the conclusion of the wives' childbearing years.

Reproduction statistics for Lancaster County wives show that women bore children according to the pattern of a natural fertility curve. In one sense this was traditional behavior. There was no deliberate family limitation. From another perspective, family development in early Pennsylvania was "radical." Wealth produced orderly households and powerful parents. Also, brides married late in "traditional" European society, but earlier in Pennsylvania because of the low cost of family formation. Life expectancy encouraged lengthy unions, and durable marriage bonds resulted in large families. Women typically entered wedlock in their early twenties, when they had life expectancies of about thirty-five years. During the initial year of marriage, these wives usually gave birth to their first child. Subsequent births occurred about every two years. These patterns imply that women made no deliberate effort to limit family sizes. Births per 1,000 married women computed for 156 Lancaster Countians wedded between 1741 and

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64 The figure of 36.6 percent of husbands who opposed remarriage by their widows is based on a sample of 186 Lancaster County wills, 1751-1770. Nine wills were composed by single men, five by widowers, and nineteen made no provisions for a surviving wife, presumably because the wife had died by the time the husband prepared his will. Some widows were considered too old to remarry, some husbands assumed their wives would not remarry, and others provided benefits for widows during their "natural life." Fifty-six of 153 husbands wrote articles which may be taken as discouragement to widow remarriage. See, for example, provision for "my well Beloved Wife," and "her Maintenance while She lives providing she remains unmarried" in Peter Bower, Will, May 17, 1761. Another man made provision of a bed, "bed cloaths," horse, saddle, bridle, chest, and "her maintenance of the plantation with the preveledge of y e house while and provided she Continued unmared." See William Chambers, Will, March 1, 1765, *Lancaster County Wills*, Book B, 468-469. Henderson, "Community Development," 329-33.

65 Henderson, "Community Development," 154, 326, 513.

66 Ibid., 161, 347, 522.

### TABLE III
REMARRIAGE RATES,
LANCASTER COUNTY, PENNSYLVANIA, 1741 - 1770

<table>
<thead>
<tr>
<th>Husband's Rank at Marriage</th>
<th>Wife's Rank at Marriage</th>
<th>No of Marriages</th>
<th>% of First Marriage Partners Who Remarried</th>
<th>% of All Marriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>1st</td>
<td>447</td>
<td>--</td>
<td>80.3%</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
<td>10</td>
<td>22</td>
<td>1.8%</td>
</tr>
<tr>
<td>2nd</td>
<td>1st</td>
<td>49</td>
<td>110</td>
<td>8.8%</td>
</tr>
<tr>
<td>2nd</td>
<td>2nd</td>
<td>39</td>
<td>87</td>
<td>7.0%</td>
</tr>
<tr>
<td>2nd</td>
<td>3rd</td>
<td>1</td>
<td>02</td>
<td>0.2%</td>
</tr>
<tr>
<td>3rd</td>
<td>1st</td>
<td>1</td>
<td>02</td>
<td>0.2%</td>
</tr>
<tr>
<td>3rd</td>
<td>2nd</td>
<td>6</td>
<td>13</td>
<td>1.1%</td>
</tr>
<tr>
<td>3rd</td>
<td>3rd</td>
<td>2</td>
<td>05</td>
<td>0.4%</td>
</tr>
<tr>
<td>4th</td>
<td>2nd</td>
<td>2</td>
<td>05</td>
<td>0.4%</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>557</td>
<td>24.6</td>
<td>100.2%</td>
</tr>
</tbody>
</table>

\(a = \) Total does not equal 100 due to rounding

Source: Henderson, "Community Development," 324
1770 indicate high levels of fertility in the first years of marriage, lower rates during their middle years of childbearing, and still less fecundity as they entered their forties. Age-specific marital fertility rates calculated at five-year intervals from age fifteen to forty-nine disclose figures of .546, .508, .486, .454, .385, .233, and .030, respectively. These numbers parallel the convex shape of the natural fertility curve characteristic of populations practicing no birth control. Middle colony Quaker wives who completed childbearing by 1775 reproduced at lower rates than Lancaster women. Their marital fertility at five-year intervals from age fifteen to forty-five registered .433, .466, .423, .402, .324, and .147, respectively. Nevertheless, Quaker childbearing patterns conformed to the convex natural fertility curve, probably because "family limitation was not common among the 'pre-revolutionary' families." Even "wives who married early ceased bearing children at virtually the same age as wives who married late, the averages being 38.89 and 39.06, respectively." The Revolution brought changes in family sizes among Quakers and Lancastrians.

The average size of Lancaster County families changed slightly over the century (see Table IV). Travelers, diarists, and residents alike thought of Pennsylvania wives as exceptionally prolific, generating families in excess of ten to fifteen children. Gottlieb Mittelberger, for example, considered "the females . . . very fertile. For one marries young. . . . Whenever one meets a woman, she is either pregnant, or carries a child in her arms, or leads one by the hand. Every year, then, many children are born." An examination of 1,130 Lancaster couples

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68 Henderson, "Community Development," 366. Age-specific completed fertility rates for all three cohorts registered very high levels. Ibid., 176, 530.  
69 John Knodel, "Family Limitation and the Fertility Transition: Evidence from the Age Patterns of Fertility in Europe and Asia," Population Studies 31 (1977), 219-21 and 222 (Figure 1).  
71 Ibid., 79.  
73 Mittelberger, Journey to Pennsylvania, 81.
discloses a large proportion of parents who had one to five children. Some families grew to surprising proportions, yet the percentage of couples with eleven to fifteen youngsters remained fairly constant. A vast majority of wives gave life to six or more babies, but the Revolution brought a decline in births per marriage since more parents had one to five children and fewer wives gave birth to ten or more offspring. The proportions of men and women who married later in life increased after 1770, and births per marriage decreased. Nevertheless, little change occurred in rates of premarital pregnancy and illegitimacy.

Early Pennsylvanians consistently abided by a code of acceptable sexual behavior before married life. Social norms discouraged premarital sex and encouraged consenting adults to wed before having children. The community expected partners to make religious preparations to enter adult society, reach a legal age, and establish economic security. Most eighteenth-century Lancaster County inhabitants lived by this general set of rules. Nevertheless, aberrations occurred and change manifested itself. Only 4.6, 6.4, and 4.3 percent of the parents in the three marriage cohorts had their first children before nine months of wedlock had elapsed. Simultaneously, the mean interval between the

74 See Table IV. The average number of children born to three generations of Andover, Massachusetts, families before 1730 was 8.3, 8.1, and 7.2, respectively. Completed families averaged 8.3, 8.7, and 7.6. Greven, *Four Generations*, 201. The mean number of children per completed family in Hingham, wives married 1741-1760, was 7.2. Smith, "Demographic History of Colonial New England," 177 (Table 3). Married women, 1761-1780, produced only 6.39 babies, a number which shifted slightly downward for the marriage cohort, 1781-1800. Ibid.

75 See Table IV. Quaker wives born by 1730 produced completed families of 7.5 children, incompletely ones of 5.4, and the mean births per marriage for all families included 6.7 children. Wells, "Family Size and Fertility Control," 75. Quaker wives, born 1731-1755, gave birth to an average of 5.67 children, a figure which dropped even more for the succeeding cohort. Ibid., 75-76. Much smaller families have been reported for Germantown: Wolf, *Urban Village*, 270 (Table 18), 266-70. It has been claimed that in Chester County, between 1700 and 1800, "the average family size declined significantly (by more than two children per family)." Ball, "Dynamics of Population and Wealth in Eighteenth-Century Chester County," 633, 636, 643. Other evidence indicates that in America in 1790 the average number of children born per fertile married woman was 7.76. A.J. Lotka, "The Size of American Families in the Eighteenth-Century," *American Statistical Association Journal* 22 (1927), 163. The declining birth rate set in at least as early as 1810. Yasukichi Yasuba, *Birth Rates of the White Population in the United States, 1800-1860* (Baltimore, 1961), 24-26.
### TABLE IV
**BIRTHS PER MARRIAGE, EIGHTEENTH-CENTURY LANCASTER COUNTY, PENNSYLVANIA**

<table>
<thead>
<tr>
<th>Births</th>
<th>Marriages Before 1741</th>
<th>Marriages 1741-1770</th>
<th>Marriages 1771-1800</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>0</td>
<td>4</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>1 - 5</td>
<td>65</td>
<td>25.0</td>
<td>101</td>
</tr>
<tr>
<td>6 - 10</td>
<td>153</td>
<td>58.8</td>
<td>194</td>
</tr>
<tr>
<td>11 - 15</td>
<td>36</td>
<td>13.8</td>
<td>62</td>
</tr>
<tr>
<td>16 - 20</td>
<td>2</td>
<td>0.8</td>
<td>0</td>
</tr>
</tbody>
</table>

**Totals** | 260 | 99.9 | 363 | 100.0 | 507 | 100.1

**Mean** | 7.2 | 7.3 | 7.1

**Median** | 7.8 | 8.3 | 8.0

**Mode** | 7.0 | 8.0 | 8.0

*a = Some totals do not equal 100 due to rounding*

Source: Henderson, "Community Development," 169, 349, 523
marriage date and the arrival of the first child shifted from 12.2 months before 1741 to 12.5 months for second-cohort parents, and rose to 12.9 months in the Revolutionary period.76 Another important consideration is the very low premarital pregnancy rate in Lancaster compared to other colonial areas.

Social, religious, and legal restraints on sexual behavior acted more forcefully in Lancaster County than they did in New England. For example, in Hingham, Massachusetts, 17.4 percent of the babies born between 1701 and 1720 arrived in less than nine months from the date of their parents' marriages. This figure rose to 27.3 percent for the period 1721 to 1740 and registered 38.0 percent between 1741 and 1760.77 Trends in premarital pregnancy and illegitimacy paralleled each other in Lancaster and other areas.78 The data strongly imply that parental influence and social norms in Pennsylvania deterred sexual expression by the young outside of wedlock. The findings bolster the interpretation of historians who argue that familial and communal values, rather than individualism and competitiveness, prevailed in the social development of early Pennsylvania.

The power to enforce standards concerning premarital sex and illegitimacy depended to a great extent on the duration of marriage. Likewise, parental presence in the family over long periods of time

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77 Daniel S. Smith and Michael S. Hindus, “Premarital Pregnancy in America, 1640-1971: An Overview and Interpretation,” JIH 5 (1975), 561. For additional comparative data, see ibid., 561-64. The most striking changes in sexual mores occurred in Bristol, Rhode Island, during three twenty-year intervals between 1720 and 1780 when couples had their first child within eight months of marriage in 10, 49, and 44 percent of the cases. Demos, “Families in Colonial Bristol,” 56-57.

enhanced the elders' ability to regulate the youngsters' choices of marriage partners and their timing of wedlock. Long life added to the adults' authority to control property transfers and thus regulate these behaviors. Enforcement of familial and community values rested on survivorship. Almost all free women in the Chesapeake married, and at younger ages than northern women, but their families were smaller than those in the northern colonies because of the more severe mortality rates in the Chesapeake region. Chesapeake settlers migrated as individuals free of parental controls. They died while many of their own children were quite young. Children grew up alone, made their own choices of marriage partners, and decided when to wed. Many more women in the Chesapeake region than in the northern colonies married when less than twenty-one years old. A consideration of diseases, death rates, and life expectancy for Lancaster County indicates that parents had relatively long lives. Therefore, parents possessed the potential to insist upon and receive their children's compliance with these rules of family formation.

Pennsylvania's social and physical environment sustained the members of a growing population through relatively long lives. Children born to Lancaster parents married before 1741 enjoyed good prospects of surviving through infancy and childhood, attaining adulthood, marrying and raising sizable families, and enduring to an advanced age. Mortality patterns that emerged from the first cohort's experience changed in the period from 1741 to 1770. Infant death rates shifted upward, adult mortality increased, and, in consequence, the average life span of second cohort members decreased. These tendencies persisted into the Revolutionary era. Growing mortality was a major threat after 1740, creating a significant decline in life expectancy by the end of the century.

Mortality differences between the sexes critically influenced those who lived beyond age twenty. Men and women who survived to their twentieth birthdays held good chances of living to their fiftieth, but a


80 These conclusions derived from the preceding assessment of marriage ages and family sizes and the data presented in Tables V and VI. For a more detailed analysis of three cohorts of mortality data, see Henderson, "Community Development," 179-212, 369-445, 538-570.
larger proportion of females than males died at this stage of life. Between twenty and fifty, age-specific death rates differed significantly for the sexes. When men reached their forties, mortality rates rose sharply. For women, however, death rates rose steadily from age twenty, reached a peak in their forties, and slowed somewhat after forty-five because most of these females had passed the childbearing years. Thereafter, male and female death rates nearly equaled each other through the life span. Multiple causation, having its foundation in the disease environment, accounted for the bulge in death rates for women of childbearing age. Consumption, malaria, pleurisy, other respiratory infections, and maternal deaths during delivery or in consequence of its complications had age-specific bases. For example, a greater percentage of men ultimately succumbed to consumption, but this disease killed more females than males between ages fifteen and thirty-four. Moreover, malaria, agues, and fevers attacked females more frequently than men between ages fifteen and fifty. Respiratory infections also probably took a greater toll of adult females than males.

Colonial Pennsylvanians lived in a dangerous disease environment: epidemic and endemic diseases, more than any other cause, contributed to the higher mortality rates of infancy and childhood. Disease shortened the average life span of the people who resided in Lancaster County after 1741. Major smallpox epidemics confronted residents in 1749, throughout the period from 1757 to 1760, and in 1763, 1766, and 1769. In 1781 the onset of a smallpox epidemic coincided with an outbreak of scarlet fever and the spread of "malignant typhus" in the county. During the 1781 contagion, the Lutheran church in Lancaster conducted funerals for sixty infants and children and five mothers of childbearing age among a total of eighty-eight burials.

81 Henderson, "Community Development," 194 (Figure 11), 407 (Figure 12), and 552 (Figure 14).
82 Ibid., 192-99, 404-8, 547-54.
83 Ibid., 615-17.
84 Ibid., 196-97; Darrett B. Rutman and Anita H. Rutman, "Of Agues and Fevers: Malaria in the Early Chesapeake," WMQ 33 (1976), 31-60.
85 Henderson, "Community Development," 198.
86 Conclusions based on Lancaster County burial records. These, for the Reformed Church, are on GSLDS microfilm No. 20349; Lutherans, No. 49273; Moravians, No. 49174 and No. 20371; and Quakers, No. 38943 and No. 20466. See also Henderson, "Community Development," 421 (Figure 13) and 558 (Figure 15).
Before the epidemic, the five-year average of deaths was twenty per year. A number of factors engendered conditions in which members of the community ran higher risks of contracting diseases, especially smallpox. Intensified religious activity brought larger numbers of missionaries and itinerant preachers in contact with Indians and settlers. Indian traders also carried disease between white and particularly vulnerable Indian populations. Furthermore, the increasing population density enhanced the possibilities of catching communicable infections. Commercial activity, legal business, and familial visits brought people from separate neighborhoods together more often. High birth rates continually replenished the community with new, non-immune recruits who became highly susceptible to the next contagion. Hostilities on the frontier in the 1750s created still another menace: soldiers stationed in unsanitary barracks spread illnesses that endangered local residents. During the Revolution, military operations, hospitals for sick and wounded soldiers, and camps for prisoners of war concentrated large numbers of people in small villages, introducing contagious diseases into the surrounding community. Finally, colonials spread smallpox because unregulated inoculation imperiled the unprotected people in the vicinity. For these and other reasons, the community suffered higher death rates in the later decades of the eighteenth century.

Variations in life expectancy by sex materialized from differences in male and female death rates. Baby girls, born to Lancaster parents married between 1741 and 1770, could expect to live for an average of 35.2 years (see Table V). Having endured the hazards of infancy

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88 Ibid., 554, 558 (Figure 15).
89 Tables V and VI are based on the experiences of 1,760 females for whom ages at death have been determined for 846 including an estimated 115 unrecorded infants. Males in the sample totaled 1,838 for whom ages at death have been located for 902 including an adjustment of 123 infants whose deaths went unregistered. The adjusted infant deaths rested on methods developed by Henry, Manuel de démographie historique, 22-25, and other sources cited in note 8, above. Those for whom death dates remained undetermined have been distributed on a preferred mortality assumption, so that they lived until the day of their last appearance in the records and then followed the death rate established by those whose age at death was located. The “preferred” assumption probably overstates mortality, since cohort members were at risk to die for some time before they actually passed from observation—usually by migrating from the county. Lorena S. Walsh and Russell R. Menard, “Death in the Chesapeake,” Maryland Historical Magazine 49 (1974), 212-13. For a critique of this method, see Darrett B. Rutman and Anita H. Rutman, A Place in Time: Explicatus (New York, 1984), 37-59. Death rates for each age of life have been computed on the basis of methods detailed in E.A. Wrigley, “Mortality in Pre-Industrial England,” Daedalus 97
and early childhood, young women living to age twenty had life expectancies of 36.2 years. Male babies, however, could anticipate an average lifetime of 37.2 years at birth (see Table VI). Young men who survived to twenty years lived an average of four years longer than females who attained the same age. Life expectancy for second-cohort children declined considerably from that of the first cohort. After 1770 female expectation of life at birth, twenty, and fifty measured 35.8, 35.2, and 20.4 years, respectively. Male futures for the same stages after 1770 computed to 35.2, 36.2, and 19.3 years, respectively.

The Lancaster County mortality data and life expectancy estimates afford an opportunity not only to reassess other findings for Pennsylvania, but also to compare the data with discoveries for other regions. One author has claimed that "Lancaster appears to have been an unusually healthy urban center. . . . Epidemic disease appears to have been virtually non-existent." On the contrary, residents of the borough and county confronted great danger from infectious disease, especially after mid-century. Rather than a "decreasing trend in infant mortality during the second half of the century," Lancaster County inhabitants suffered higher baby losses after 1740. These rates persisted through the century. However, the Lancaster mortality levels never exceeded the estimate that in Pennsylvania "half the children were


90 First cohort male life expectancy at birth, twenty, and fifty registered 42.2, 41.3, and 21.0 years, respectively. Henderson, "Community Development," 205 (Table 45). First cohort female life expectancy at the same ages computed to 37.2, 33.5, and 21.7 years, respectively. Ibid., 206.

91 Ibid., 556 (Table 118), and 569 (Table 119).

92 Wood, Conestoga Crossroads, 58.

93 Wolf, Urban Village, 278-82, 284-85. Richard H. Shryock, Medicine in America: Historical Essays (Baltimore, 1966), 12. In Philadelphia, infant mortality (0-1) of 253/1,000 before the Revolution dropped to 210/1,000 in that era, and declined further in the late eighteenth century to 187/1,000. Susan E. Klepp, "Social Class and Infant Mortality in Philadelphia, 1720-1830" (Seminar Paper, Philadelphia Center for Early American Studies, Nov. 6, 1981, p. 18 [Table 5]).

94 See Tables V and VI.
TABLE V
ABRIDGED LIFE TABLE, FEMALES BORN TO LANCASTER COUNTY COUPLES MARRIED 1741 - 1770

<table>
<thead>
<tr>
<th>Year of Age</th>
<th>Rate of Mortality per 1,000</th>
<th>Of 100,000 Born</th>
<th>Number Surviving to Exact Age x</th>
<th>Number Dying Between Ages x and x+n</th>
<th>Number of Years Lived By Cohort Between x and x+n</th>
<th>Total Years Lived By Cohort From Age x on Until All Have Died</th>
<th>Average Years Lived After Age x per Person Surviving to Exact Age x</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>1,000 qx</td>
<td>lx</td>
<td>dx</td>
<td>Lx</td>
<td>Tx</td>
<td>e_x</td>
<td></td>
</tr>
<tr>
<td>0 - 1</td>
<td>171 0</td>
<td>100,000</td>
<td>17,100</td>
<td>91,450</td>
<td>3,516,956</td>
<td>35 2</td>
<td></td>
</tr>
<tr>
<td>1 - 4</td>
<td>171 3</td>
<td>82,900</td>
<td>14,200</td>
<td>303,200</td>
<td>3,425,506</td>
<td>41 3</td>
<td></td>
</tr>
<tr>
<td>5 - 9</td>
<td>57 9</td>
<td>68,700</td>
<td>3,977</td>
<td>333,557</td>
<td>3,122,306</td>
<td>45 5</td>
<td></td>
</tr>
<tr>
<td>10 - 14</td>
<td>31 6</td>
<td>64,723</td>
<td>2,045</td>
<td>318,502</td>
<td>2,788,749</td>
<td>43 1</td>
<td></td>
</tr>
<tr>
<td>15 - 19</td>
<td>47 1</td>
<td>62,678</td>
<td>2,952</td>
<td>306,010</td>
<td>2,470,247</td>
<td>39 4</td>
<td></td>
</tr>
<tr>
<td>20 - 24</td>
<td>61 8</td>
<td>59,726</td>
<td>3,691</td>
<td>289,402</td>
<td>2,164,237</td>
<td>36 2</td>
<td></td>
</tr>
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Source: Henderson, "Community Development," 437 - 445
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Source: Henderson, "Community Development," 437 - 445
dead at age five and two-thirds by age thirteen." Lancaster youngsters enjoyed better chances of survival than Middle colony Quakers, among whom 210 infants per thousand died when less than one year old and 350 children per thousand passed away before they attained age five. Welsh Tract and Chester County Quaker children had higher survival rates. Pennsylvanians in the countryside enjoyed healthier conditions and better prospects for long life than Philadelphians. The infant death rate in the city in the late 1750s registered a high of nearly 330 per thousand. The Lancaster County infant and child mortality rates are lower than those calculated for the colonial South, but are slightly higher than, though comparable to, those for New England. In consequence, this county's life expectancy exceeded that of the Chesapeake region, but measured less than that reported for New England.

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97 Levy, “Tender Plants,” 126.
99 For example, Charles Parish, Virginia, males born between 1700 and 1734 died as infants under one year of age at the rate of 183.8 per 1,000. The rates for those aged 1-4, 5-9, and 10-14 registered 100.9, 74.4, and 107.7, respectively. Lancaster males had better chances of survival to age 15. Age-specific death rates for Charles Parish females at ages 0-1, 1-4, 5-9, and 10-14 for the same period approached 180.8, 157.5, 80.2, and 229.7, respectively. Lancaster females survived in greater numbers to their fifteenth birthdays. Smith, “Mortality and Family in the Colonial Chesapeake,” 413.
100 For example, Andover, Massachusetts, children, born 1700-1729, ages 0-1, 2-9, 10-19, died at rates of 152, 52, and 64 per 1,000, respectively. Greven, *Four Generations*, 189.
101 Life expectancy for males surviving to age 20 in New England may have been 16 to 23 years greater than that for males at age 20 in Virginia and Maryland. Rutman and Rutman, “Now-Wives and Sons-in-Law,” 172. Female life expectancy at age 20 in New England may have exceeded that for women living to age 20 in the Chesapeake by as much as 22 years. Ibid. See also Rutman and Rutman, “Of Agues and Fevers,” 31-60. For additional comparative material, see James N. Gallman, “Mortality Among White Males: Colonial North Carolina,” *Social Science History* 4 (1980), 295-316, especially 306 (Table 2).
102 Expectation of life, sexes combined, for persons born to Lancaster County couples married from 1741 to 1770 at birth, age twenty, and age fifty measured 35.9, 37.9, and 19.9, respectively. Henderson, “Community Development,” 439-40. Comparable figures for the third cohort at the same ages registered 35.2, 35.6, and 19.7, respectively. Ibid., 562. Life expectancy at birth, twenty, and fifty years of age in New England computed to 36.5, 34.22, and 21.16, respectively. Maris Vinovskis, “The 1789 Life Table of Edward Wigglesworth,”
Demographic patterns in Lancaster County shifted during the eighteenth century. Marriage ages rose in response to changes in immigration, the sex ratio, and economic conditions. Birth rates moved slightly downward bringing reductions in family size. Higher infant mortality rates after mid-century lowered average adult life expectancies. These broad demographic changes in response to altered social circumstances directly influenced the structure of both the family and community.

Several discoveries from the Lancaster study support the interpretation that familial and communal standards, rather than competitive individualism and market-oriented values, governed peoples' lives. The duration of marriages and long life made parental control of children's behavior possible. Life expectancy for men and women at age twenty measured more than thirty-five years. Thus, parents lived to rear most of their children to adulthood. Large proportions of elders in the families and the community strengthened the hand of those empowered with authority to enforce customary behaviors. Patriarchal, familial, and communal norms guided daily behavior among Lancaster County inhabitants. By 1800 marriage ages for brides and grooms shifted upward in response to economic pressures. Parents continued to have their say in such matters as the timing of marriages and choice of partners. They remained able to assert themselves and willing to assist youngsters who did not defy them. Premarital sex rates remained low throughout the period. Low rates of illegitimacy paralleled this tendency, thus reaffirming the community's values concerning such behavior. Parental enforcement of these regulations remained vigorous to 1800. As the economic structure tightened, parents became less able to demand and receive compliance with strict rules. Emigration weakened the power of parental supervision. After mid-century, men seemed more inclined than ever to support traditional restraints on women. They wrote provisions in their wills to limit their widows' option of remarriage. Fathers may also have pressured younger women to make sacrifices for the good of the family by insisting on postponement of daughters' marriages. As a result, brides' average ages at first marriage increased more than those of grooms. Finally, more women initiated divorce proceedings during and after the Revolution, and the

_JEH_ 31 (1971), 580, 582; and Vinovskis, "Mortality Rates and Trends in Massachusetts Before 1860," ibid., 32 (1972), 199 (Table 5).
proportions of widows who remarried declined during the century. The Revolution may have marked a transition away from patriarchal, familial, and communal values and accelerated the change toward an individualistic society, but much evidence from the Lancaster County data suggests that there seemed to be less room for individual choice by young men and women in 1800 than there was in 1750.

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