The postwar peak of fertility was reached in 1957. Since that date, the total fertility rate has declined, at first only gradually, but in the past few years quite substantially. At the same time, per capita real disposable income, a commonly used index of economic conditions in correlations with fertility, has continued to rise at an average rate only slightly lower than previously. Does this mean that economic factors have had little to do with the recent fertility decline? Does it raise doubts about the explanation offered in Chapter 4 for the baby boom? While a thorough investigation of these questions is not attempted here, it is possible to determine whether in recent years economic factors have changed in at least a direction conducive to fertility decline, and to consider the implications for recent fertility projections.

As in Chapter 4, the focus is on those in the earlier childbearing ages. No attempt is made to subdivide the population further into color-nativity or other component groups, a decision partly justified by increasing homogeneity of the population [124], but chiefly by expediency. The more limited time span under study makes it possible to base the present analysis largely on the invaluable population and labor force surveys of the past two decades, which provide fairly continuous data heretofore unavailable on the economic experience and demographic behavior of component groups in the population. In keeping with our interest in the longer-term movement rather than year-to-year fluctuations, these data have been smoothed, where possible, by a three-year moving average. For the most part, attention will center on comparisons between the period of the baby boom and that of the current fertility decline. Since it is only after World War II that most of the series become available annually, I have linked them with a
prewar observation, usually for 1940, to fill out the picture for the earlier period.

In one respect, this analysis develops further the framework of Chapter 4. The analytical focus there was on the rate of change in fertility, thus making it possible to largely set aside considerations regarding the secular trend. This chapter, however, deals directly with the level of fertility; and, while not attempting a study of the long-term primary trend itself, does introduce one factor believed relevant to it, namely, the desired consumption level of those in early childbearing ages.

FERTILITY AND YOUNG ADULTS’ CIRCUMSTANCES SINCE 1940

Fertility

The fertility pattern since 1940 will be lightly touched on only, since it is more than adequately treated elsewhere [201]. Figure 30 presents three-year moving averages of the total fertility rate and age-specific birth rates for females over the period 1940–63. Only a few observations require mention.

1. The increase from 1940–42 to the peak in the late 1950’s is much greater for the age groups 15–19 through 25–29 than for the older ones. Indeed, together the three youngest age groups account for most of the rise in the total. If the rates for no other groups had changed, the rise to the 1957–59 peak in the total fertility rate would have been 44 per cent. This compares with an actual increase of 53 per cent.

2. Although there is no systematic difference between the younger and older age groups in the decline since 1957–59, the younger groups again account for most of the movement in the total (—4.3 versus —5.7 per cent, actual).

3. Within the younger age groups, there is a systematic difference by age in the recent decline. It occurs first and is greatest for those aged 15–19, followed by the 20–24, and finally, the 25–29. The peak for the 15–19 group occurs in 1956–58, ahead of that in the total, and the decline to 1961–63 is 12 per cent; for those aged 25–29, the peak is stretched out over 1957–61, and the decline to 1961–63 totals 3 per cent.
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increase of 53 per cent.
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ose aged 25–29, the peak
he to 1961–63 totals 3 per

**Figure 30**

**TOTAL FERTILITY RATE AND BIRTH RATE, BY AGE OF MOTHER, 1940–63**

*INDEX: 1949–51 = 100*

Source: Table D-1.

*Three-year moving average.*
Economic Condition

The income data assembled here are chiefly from the Current Population Survey and accordingly follow the concepts used therein. Since nonmonetary income is omitted from the Survey, the position of farmers is somewhat understated. Use is made here of the figures both for income of persons, i.e., income recipients alone, and for families, including individuals both with and without income. The figures have been adjusted to a constant price level by the consumer price index.

These are the principal impressions which emerge from inspection of the charts:

1. As previously noted, per capita disposable income, a commonly used index of economic conditions in correlations with fertility, continues to grow throughout the last decade or so, though at a somewhat lower rate than in the 1940's (Figure 31). If one considers all age groups 14 and over combined, the experience of the young male income recipient spans for which data are available (Figure 33, Part A).

2. Investigation of the aggregative movement in the experience of the younger groups 25-34 is favorable. Moreover, the
chiefly from the Current Survey, the position of being here of the figures both as alone, and for families, income. The figures have the consumer price index. Such emerge from inspection of

The concepts used therein,\(^1\) in the Current Survey, the position of being here of the figures both as alone, and for families, income. The figures have the consumer price index. Such emerge from inspection of

Table D-3.

\(^{1}\) Three-year moving average.

If one considers all age groups 14 and over combined, the same is true of the median income of male income recipients (Figure 32) and, for the somewhat shorter span for which data are available, the median income of all families (Figure 33, Part A).

2. Investigation of income experience by age makes clear that the aggregative movement in recent years is not representative of the experience of the younger age groups. This has typically been less favorable. Moreover, the differences between the younger age groups
in the timing and extent of departure from the general movement are reminiscent of the pattern for fertility—the adverse departure is earlier and greater for the younger group. Thus Part A of Figure 33 (the figure presenting income information most immediately relevant to fertility behavior) shows that the median income of families with head aged 14—24 declined for several years after 1956—58, and by 1961—63 had recovered only to a slightly higher level than the 1956—58 peak. For those with head aged 25—34, median family income in this period continued to grow, but a gradual divergence from the aggregate movement becomes apparent after 1958—60.

3. As shown in Figure 34, the movement in unemployment rates by age supports the impression that in recent years the experience of younger groups has increasingly diverged in an unfavorable direction from the average.

4. Within the younger age groups, disparate movements are apparent in recent years between the lower and higher income segments. The poorest fifth of each younger age group has had less favorable income experience than the group average (Figure 33, Parts B and C). Indeed, for the lowest fifth of the households with head aged 14—24, income has actually declined noticeably since 1956—58.

5. In the 1940's, in contrast, the age pattern of income and unemployment changes was the opposite of that which has recently developed. Income of younger age groups grew substantially more rapidly than for others. This was because, relative to the average, the proportion receiving income per recipient remained sharply toward the average groups the lowest income [22].

6. Since the economy's current income, other information is more fragmentary second and third paragraphs.

Veteran status enters. For males aged 14 and 30—34, but at a high

Housing conditions behavior. For nonfarm f
The general movement are diverse departure is earlier Part A of Figure 33 (the immediately relevant to income of families with head 1956–58, and by 1961–63 el than the 1956–58 peak. Only income in this period from the aggregate movement in unemployment rates at years the experience of an unfavorable direction
Disparate movements are and higher income segment has had less favor-ability (Figure 33, Parts B household with head aged only since 1956–58.
}

6. Since the economic situation of a family depends on more than its current income, other pertinent measures may be noted, though the information is more fragmentary and (for the measures noted in the second and third paragraphs below) of lower reliability.

Veteran status entails access to certain benefits and credit resources. For males aged 20–24, the proportion of veterans in civilian life rose to almost two-fifths in 1950; by the mid-1950’s it had dropped to somewhat over one-fifth; and, by 1961–63, to almost zero (Figure 36). Roughly similar movements are apparent for those aged 25–29 and 30–34, but at a higher level and with a lag.

Housing conditions are sometimes considered relevant to fertility behavior. For nonfarm families in which the head was aged 18–24 or

\[ \text{Figure 35} \]
MALE MONEY INCOME RECIPIENTS AS A PERCENTAGE OF MALE POPULATION, BY AGE, 1941 AND 1947–63

\[ \text{Figure 36} \]
VETERANS AS A PERCENTAGE OF MALE POPULATION, BY AGE, 1940, 1945, 1950, AND 1955–63

Source: Table D-6.
* Three-year moving average.

Source: Table D-7.
* Three-year moving average.
TABLE 3. PERCENTAGE OF NONFARM FAMILIES OWNING HOMES, BY AGE, 1930—63

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18 and over</td>
<td>46</td>
<td>41</td>
<td>51</td>
<td>56</td>
<td>58</td>
<td>58</td>
<td>56</td>
<td>59</td>
<td>56</td>
</tr>
<tr>
<td>18—24</td>
<td>11</td>
<td>12</td>
<td>21</td>
<td>17</td>
<td>16</td>
<td>14</td>
<td>7</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>25—34</td>
<td>26</td>
<td>22</td>
<td>35</td>
<td>42</td>
<td>42</td>
<td>44</td>
<td>44</td>
<td>42</td>
<td>47</td>
</tr>
<tr>
<td>35—44</td>
<td>44</td>
<td>37</td>
<td>53</td>
<td>57</td>
<td>63</td>
<td>64</td>
<td>66</td>
<td>60</td>
<td>71</td>
</tr>
<tr>
<td>45—54</td>
<td>55</td>
<td>48</td>
<td>59</td>
<td>63</td>
<td>64</td>
<td>69</td>
<td>67</td>
<td>71</td>
<td>72</td>
</tr>
<tr>
<td>55—64</td>
<td>64</td>
<td>56</td>
<td>62</td>
<td>66</td>
<td>69</td>
<td>62</td>
<td>67</td>
<td>69</td>
<td>63</td>
</tr>
<tr>
<td>65 and over</td>
<td>73</td>
<td>65</td>
<td>59</td>
<td>63</td>
<td>66</td>
<td>65</td>
<td>58</td>
<td>64</td>
<td>72</td>
</tr>
</tbody>
</table>


\* Includes farm families.

25—34, the percentage owning their own homes rose markedly between 1940 and 1949 (Table 3). Since that date, for those with head aged 18—24 the proportion has tended to drop off; \* for those with head aged 25—34, it continued to rise noticeably through 1954, but thereafter edged up only slightly.

Between 1953 and 1962, the median net worth (in current dollars) of all spending units rose, but for those with head aged 18—24 or 25—34, it declined (Table 4). As a percentage of income, the adverse movement in the net worth position of younger persons is even more marked. Among all spending units, the proportion with net worth equal to or greater than one-half annual income decreases from 63 to 59 per cent; for those with head aged 18—24, the decrease is from 21 to 15 per cent, and with head aged 25—34, from 52 to 37 per cent.

Marriage, Household Formation, and Wives' Labor Force Participation

In the interpretation of the baby boom in Chapter 4, fertility was but one of several demographic variables markedly affected by the

\* The low value for January—February 1962 is not supported by two subsequent surveys taken within twelve months of that date, and is most likely due to sampling variability.
exceptional economic situation. It is pertinent, therefore, to see whether these other variables have changed recently in a direction consistent with the earlier interpretation.

To turn, first, to marriage behavior, for the age groups under 25, the proportion ever-married rose sharply in the 1940’s, leveled off in the 1950’s, and, in recent years, shows evidence of a decline (Figure 37). As would be expected, for females this pattern is more pronounced at somewhat lower ages than for males. For the age groups over 25, following an initial rise, a leveling off is apparent but as yet there is no indication of a decline.

TABLE 4. PERCENTAGE DISTRIBUTION OF SPENDING UNITS BY AGE, BY NET WORTH, 1953 AND 1962

<table>
<thead>
<tr>
<th>Age of Head</th>
<th>14 and Over</th>
<th>18–24</th>
<th>25–34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative 0–999</td>
<td>31</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>1,000–4,999</td>
<td>23</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>5,000–9,999</td>
<td>17</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>10,000–24,999</td>
<td>18</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>25,000 and over</td>
<td>11</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Median (dollars)</td>
<td>4,100</td>
<td>4,700</td>
<td>300</td>
</tr>
</tbody>
</table>

Net worth as percentage of pre-tax money income in previous year

| Zero or negative | 16 | 17 | 25 | 33 | 19 | 25 |
| 1–49 | 21 | 24 | 54 | 52 | 29 | 38 |
| 50–99 | 11 | 13 | 13 | 9 | 16 | 16 |
| 100–199 | 15 | 15 | 6 | 3 | 17 | 12 |
| 200–499 | 20 | 17 | 1 | 1 | 15 | 6 |
| 500 and over | 17 | 14 | 1 | 2 | 4 | 3 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

The movement in household formation, shown in Figure 38, tends to lag behind that in marital status. For males aged 14-24 and 25-29, while there is no indication in recent years of a continuation of the earlier upsurge in the proportion heading husband-wife households, neither is there evidence as yet of a marked decline, although a slight downturn is perhaps indicated.

After increasing in the 1940's, the labor force participation rates of young wives tended to level off in the first half of the 1950's (Figure 39, Part B). More recently, however, they have started to climb again, so noticeably that the latest labor force projections embody a significant revision for this group. Two considerations suggest that the circumstances reflecting the underlying the earlier. In earlier years females were declining; force participation has of rates (Part A). Second, a rise in labor force participation by the increasing participation of younger men and women in the labor market for years.
that the circumstances responsible for the recent rise differ from those underlying the earlier. In the 1940's unemployment rates for young females were declining; in the recent period, the increase in labor force participation has occurred in the face of rising unemployment rates (Part A). Second, in the earlier period the rates for wives with young children grew somewhat less than those for married women as a whole; in the recent period the rates for wives with young children are chiefly responsible for the upward movement for the group as a whole (Parts C and D). These observations suggest that, while the rise in labor force participation of young wives in the 1940's was induced by the increasing tightness of the labor market as a whole—both for younger men and women—in the 1950's it arose from a deterioration in the labor market for young men relative to that of young women.

---

**Figure 38**

Percentage of Male Population in Husband-Wife Households, by Age, 1940, 1947, and 1950-63

Source: Table D-9.

*Three-year moving average.*
UNEMPLOYMENT AND LABOR FORCE PARTICIPATION RATES OF FEMALES, BY MARITAL, CHILD DEPENDENCY, AND AGE CLASSES

A. Unemployment Rate of Females, by Age, 1940, 1947-64

B. Labor Force Participation Rate, Married Females with Husband Present, by Age, 1940, 1948-64

C. Labor Force Participation Rate, Married Females with Husband Present, with Children under 6 and No Child 6-17, 1940, 1950, and 1948-84

D. Labor Force Participation Rate, Married Females with Husband Present, with Child under 6, by Age, Selected Years, 1940-63


* Three-year moving average.

For the last few years, more homogeneous segments of school graduates who did not have the variability of the small surveys of their employment experiences (Figure 40). Although the variability consequently affected labor force figures at a more microsopic level, the desired consumption is directly related to the absolute level, and the correlation is very strong.
which made it increasingly difficult for husbands to support a family and correspondingly created pressures for increasing participation by their wives.

For the last few years, insight into the experience of a somewhat more homogeneous segment of the younger population—new high school graduates who did not go on to college—is provided by recent surveys of their employment status four months after graduation (Figure 40). Although the size of the group is small and sampling variability consequently greater, there is a striking rise in the employment and labor force figures for married females in this group; a finding at a more microscopic level consistent with the view just expressed.

**Desired Consumption Level**

In the discussion of income above, the concern was with the absolute level, and the implied hypothesis was that fertility varies directly with the absolute income level, other things being equal. One
of the considerations included in the *ceteris paribus* assumption is the consumption level *desired* by the husband and wife. It is generally recognized that in considering the potential uses of additional income, a rise in the per capita stock of consumer goods available to husband and wife is an alternative to expanding the size of the family [14, 45]. Holding income constant, one would expect that fertility would vary inversely with the desired consumption level.

But do desired consumption levels change, and if so, why? This question involves us in complex conceptual issues in the economics of consumer preferences. There is an understandable reluctance among economists to explain changes in behavior in terms of changes in "tastes," which are typically taken as given. There is, however, a generally accepted proposition of immediate relevance: If one of two families with equal current income previously received higher income than at present, that family would be expected to spend more on consumption [51, 130]. In other words, experience with previous higher income levels alters "tastes" and thereby consumption behavior.

This line of reasoning may be transferred with some modification to the present problem. Young persons currently in the childbearing ages a few years before were dependent members of their parents' households, and it seems plausible that the consumption levels experienced in the parents' households among other things served to shape their current preferences in much the same way a previous higher income level would affect those of a given household. Moreover, the situation in the parents' household when the children were in their teens would seem more relevant than when the children were quite young.

If this is so, an interesting implication follows. In a developing economy the second generation's income at age 20–24 is typically greater than the first generation's was at that age. The second generation could thus achieve the consumption level the first generation had at age 20–24 and have something left over for other purposes, such as saving or increased family size. But if the desired consumption level inherited by children from their parents relates to the parents' situation not at age 20–24 but at age 20–24, the second generation's income level is lower. This line of reasoning may be transferred with some modification to the present problem. Young persons currently in the childbearing ages a few years before were dependent members of their parents' households, and it seems plausible that the consumption levels experienced in the parents' households among other things served to shape their current preferences in much the same way a previous higher income level would affect those of a given household. Moreover, the situation in the parents' household when the children were in their teens would seem more relevant than when the children were quite young.

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There is, however, one
relevance: If one of two
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consumption levels ex-
other things served to
same way a previous
household. Moreover,
the children were in their
children were quite
ollows. In a developing
age 20–24 is typically
age. The second gener-
the first generation had
other purposes, such as
ired consumption level
to the parents' situation
hypothesis is Dorothy S.
not at age 20–24 but at, say, 35–44, then it is less certain that the
second generation's income at 20–24 will suffice to achieve the desired
consumption level. In other words, there is an intergenerational effect
tending to increase consumption at a given income level. Clearly by
varying the parameters involved one could develop alternative models
in which secular growth in absolute income was accompanied by in-
creasing, decreasing, or constant fertility.

Given the purpose and scope of the present report, it is scarcely
appropriate to pursue this suggestion regarding the secular trend at
this point. Two brief points may, however, be added. First, while the
above clearly does not imply that such a model would suffice to explain
the secular trend, it obviously bears on the oft-raised question of how
to reconcile the apparent contradiction between the secular inverse
(gross) association between income and fertility, on the one hand, and
the shorter-term positive association, on the other. Second, it suggests
that in an analysis of the secular trend the actual income of those in
childbearing ages should be sharply distinguished from the factors
behind the formation of their preference patterns. Under the latter
heading would be included not only parents' income, but variables
such as religion, nativity, and one currently the subject of increasing
attention, farm-nonfarm origin.

If sufficient historical data were available on income, tangible
assets, and consumption expenditure by age, it would be possible to
investigate various relations between parents' and children's incomes,
and consider their bearing on fertility behavior. Unfortunately, the
necessary information is scarce, and an attempt is made here only to
present two largely illustrative analyses.

1. Column 2 of Table 5 shows the median income of families with
head aged 14–24, the series plotted in index form in Figure 33. Column
4 gives the income five years earlier of families with head aged 35–44,
presumably, the households in which most of those in column 2 were

4 Note should be made, however, of recent major contributions on secular fer-
tility trends by Kingsley Davis [46] and Ronald Freedman [67].
5 See Otis Dudley Duncan [51a], and citations of earlier work by Goldberg and
Freedman given therein. I have explored more fully these and other conceptual
issues raised in this Part in a recent paper "Towards a Socio-Economic Theory of
Fertility," which appeared in Fertility and Family Planning: A World View, a col-
lection of papers prepared for the University of Michigan sesquicentennial celebra-
tion, November 15–17, 1967.
living at that time. Thus, column 2 is the actual income of young families; column 4, an indicator of the desired consumption level inherited by them from their parents' households. (Clearly some adjustment in the level of column 4 would improve it as a consumption indicator, but our present interest is ultimately in the change rather than level of the series.) Column 5 of Table 5 presents the ratio of the two. In terms of the present framework this shows, e.g., that in 1953, on the average, young households were receiving incomes equal to about four-fifths of what their parents received five years ago. As was previously observed, and is shown here in column 2, absolute income leveled off for this age group around 1956–58. What is suggested by column 5, however, is that relative to desired consumption, income has been falling since about 1955–57 for this age group, a development which would clearly serve to create greater downward pressure on fertility.

It would be desirable to experiment with lags of varying length as well as to identify more precisely the relevant parent cohort, but longer time series and greater age detail are needed for a thorough investigation.

TABLE 5. TOTAL MONEY INCOME OF FAMILIES WITH HEAD AGED 14–24 COMPARED WITH THAT RECEIVED BY FAMILIES WITH HEAD AGED 35–44 FIVE YEARS EARLIER, 1953–62

<table>
<thead>
<tr>
<th>Year</th>
<th>Head Aged 14–24</th>
<th>Head Aged 35–44</th>
<th>Col. 2 ÷ Col. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>3,405</td>
<td>4,199</td>
<td>81.1</td>
</tr>
<tr>
<td>1954</td>
<td>3,496</td>
<td>4,221</td>
<td>82.8</td>
</tr>
<tr>
<td>1955</td>
<td>3,701</td>
<td>4,343</td>
<td>85.2</td>
</tr>
<tr>
<td>1956</td>
<td>3,912</td>
<td>4,570</td>
<td>85.6</td>
</tr>
<tr>
<td>1957</td>
<td>3,981</td>
<td>4,787</td>
<td>83.2</td>
</tr>
<tr>
<td>1958</td>
<td>3,916</td>
<td>4,950</td>
<td>79.1</td>
</tr>
<tr>
<td>1959</td>
<td>3,887</td>
<td>5,132</td>
<td>75.4</td>
</tr>
<tr>
<td>1960</td>
<td>3,984</td>
<td>5,389</td>
<td>73.9</td>
</tr>
<tr>
<td>1961</td>
<td>4,068</td>
<td>5,627</td>
<td>72.3</td>
</tr>
<tr>
<td>1962</td>
<td>4,077</td>
<td>5,762</td>
<td>70.8</td>
</tr>
</tbody>
</table>

Source: Same as for Table D-4.
2. Table 6 is an attempt to develop a rough impression of the longer-term movement in desired consumption levels since 1929. The table shows the value in constant dollars of tangible assets per nonfarm household after allowance for depreciation. Ideally, it would be desirable to have such information by age of household head. If, failing this, one takes the movement in the average as likely to be broadly indicative of the changing situation of the age group 35-44, then the series can be used to infer differences among successive younger cohorts in inherited consumption desires. Thus from 1929 through the late 1940's assets per household for all age groups, and presumably for those with head aged 35-44, declined and then leveled off. This suggests that the cohorts reaching childbearing age and establishing separate households toward the end of this period had been raised in less materially prosperous home environments than those reaching childbearing age earlier in the period and consequently had lower desired consumption levels. Indeed, the cohorts reaching childbearing age, say 15-19, when asset levels were lowest, roughly

The figures comprise largely homes and consumer durables, whether owned or rented. Particularly prior to the postwar period the former dominates the total, so that the series might be viewed as a crude index of housing conditions, with the depreciation adjustment providing an allowance for age of housing.
in the decade 1940–50, include those that figured most prominently in the baby boom. Since the late 1940's average assets per household have moved up noticeably, which would imply that the most recent cohorts are reaching childbearing age with desired consumption levels significantly above those of their predecessors.8

Summary and Qualifications

Let us summarize the general impression emerging from this survey of the evidence, keeping in mind its preliminary nature. In recent years young persons' income has grown only hesitantly and their unemployment rates have risen. The situation has been most severe among the lowest-income segments of these groups. Home ownership has become less prevalent among households with head aged 18–24, although it has continued to edge up slightly for those 25–34. In both groups, however, net worth position has declined, suggesting heavier pressure of liabilities. Moreover, most of the special benefits associated with war veteran status are no longer available. The labor force participation of young wives with dependent children has risen noticeably, suggesting increasing economic stress on the family. Finally, the young cohorts of recent years have come from wealthier backgrounds than their predecessors in the 1940's, and in all likelihood are entering the childbearing ages with the more expensive tastes for consumer goods thereby acquired.

These developments contrast strikingly with the unusually favorable economic circumstances of young adults in the decade or so prior to the mid-1950's. They are consistent with the hypothesis that economic factors have been, at least in part, responsible, first, in the early postwar period for the abrupt declines in age at marriage and house-

*While the U-shaped movement in assets per household seems plausible (and it is this which provides the basis in the text for inferences about the movement in desired consumption levels), the noticeably lower level of the series in 1958 than in 1929 is puzzling. Differences between the two dates in the age distribution of households might account for a part of this. Also the fact that the present figures are mean rather than median values may be relevant. There is a great difference between the two (e.g., with regard to net worth, the mean value in 1962 was $14,600 compared to a median of $4,700). Since inequality declined between 1929 and the more recent period, the median figure for net assets would presumably show a smaller decline. Nevertheless, one has the impression that the present series is biased downward at later relative to earlier dates.

Subsequent to the preparation of this analysis, I discovered that in 1956 Victor R. Fuchs [72] predicted a decline in the U.S. birth rate, partly on the basis of reasoning similar to that advanced here.

This conclusion, however, of the various shortcomings in this study—thankfully since World War II—to economic circumstances that the attempt has been made to magnitudes of the fertility factors. Further, separate component groups in the as data become available needed also of the older their quantitative importance. Finally, an effort if this is currently handicapped is presented in the source.

IMPLICATIONS FOR PERIOD RATES

In view of the limitations needs for further research the question of projecting so arises from recognizing projections is itself a problem is aptly stated by two of: “It is sometimes suggested that projections of births correlation between change ative view is that this approach to achieve the end desired.

Chapter 4 indicated with longer-term in the recent shift from the earlier interpretation considered fundamental to
hold formation and the associated rise in fertility, and second, for the more recent slowdown and gradual reversal of these demographic movements.

This conclusion, however, must be tempered by explicit recognition of the various shortcomings of the present analysis. While I have been able in this study—thanks to the new and growing fund of survey data since World War II—to probe perhaps more deeply into relevant economic circumstances than has typically been done in the past, no attempt has been made to assess the extent to which the quantitative magnitude of the fertility decline might be explained by economic factors. Further, separate examination would be desirable of various component groups in the population, for example, farm, nonwhite, and, as data become available, different socioeconomic classes. Study is needed also of the older groups in childbearing ages, even though their quantitative importance in the over-all period rates has not been great. Finally, an effort should be made at a cohort approach, though this is currently handicapped by the varying ways in which age detail is presented in the source materials.

IMPLICATIONS FOR FERTILITY PROJECTIONS

Period Rates

In view of the limited scope of the present analysis and manifest needs for further research, one may doubt the advisability of raising the question of prospective fertility changes. The justification for doing so arises from recognition that the use of economic factors in fertility projections is itself a pressing research problem. The current consensus is aptly stated by two of the authors of the recent census projections: "It is sometimes suggested that a considerable improvement in our projections of births could be achieved if account were taken of the relation between changes in fertility and economic changes. Our tentative view is that this approach is hardly feasible and that it may not achieve the end desired" [143].

Chapter 4 indicated that the postwar baby boom could be reconciled with longer-term historical experience; this chapter suggests that the recent shift from baby boom to fertility decline is consistent with the earlier interpretation. In both papers, economic factors were considered fundamental to fertility changes. Clearly, the implications of
this viewpoint for the use of studies of economic factors in projections would be of interest, even though the discussion must necessarily be exploratory. Moreover, such a discussion might serve further to illustrate the framework and highlight research needs. What follows therefore is frankly speculative and is offered not as a prediction but for whatever value it may have in furthering research in this area.

The admirably detailed population projections recently released by the Bureau of the Census provide the point of departure [144]. These present not forecasts but the implications of alternative assumptions regarding the future course of the components of population change, particularly fertility. The framework thus provided for reflection about prospective developments is extremely valuable. For the foreseeable future, the potential contribution of the present approach would seem to lie not in supplanting such a framework, but in appraising the relative plausibility of the various assumptions and perhaps suggesting new possibilities. Thus, with reference to Figure 41, which shows the four series of projected fertility rates through 1975, the pertinent question would be: Which, if any, of the projected paths is more consistent with the present analysis?

At the heart of the present explanation of postwar fertility movements are differences in income growth by age. Ideally, in looking to the future one would want projections of income by age based on a tested theory of the determinants of this distribution. Although there is no such theory available, the framework of Chapter 4 embodies a view, speculative though it may be, regarding these determinants; and we may perhaps utilize this to form some crude notion of prospective income trends for young adults compared to others. In this conception, the swing in the relative income position of young adults since 1940 has been chiefly due to corresponding swings from relatively favorable to unfavorable positions in three factors—aggregate demand, and the relative quantity and quality of younger persons. The first part of the period was characterized by high growth of aggregate demand associated with the war and early postwar boom, a relative shortage of young workers, and an unusual educational advantage of young over old; the second part, by slackened growth in aggregate demand, sub-

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For each date from 1965 on the points plotted refer, from top to bottom, to projections A, B, C, and D, respectively.
of the projected paths is postwar fertility move-
ge. Ideally, in looking to come by age based on a distribution. Although there in Chapter 4 embodies a these determinants; and the notion of prospective others. In this conception, young adults since 1940 from relatively favorable aggregate demand, and the ones. The first part of the aggregate demand asso-
ciated a relative shortage of advantage of young over aggregate demand, sub-
ref, from top to bottom,

Source: Table D-15.

* Per 1,000 female population in specified age group.

b Computed by summing age-specific rates for each five-year age group through 40–44 and multiplying the result by 5. The result is the completed fertility rate that would arise if a hypothetical cohort experienced the age-specific rates of the given date in the course of its reproductive history.

c Total live births divided by female population aged 15 to 44.

d Total live births divided by total population of all ages.
substantial growth in the relative number of younger persons, and deterioration in their educational advantage. Regarding the outlook over the next decade, the projections of educational attainment imply some additional decline in the relative advantage of younger persons in high school, though not college education (Figure 42). As for relative

**FIGURE 42**

PERCENTAGE OF THOSE AGED 25-29 AND 30-64 WITH SPECIFIED YEARS OF SCHOOL COMPLETED: ACTUAL, DECENNIALY, 1920-60; PROJECTED, QUINQUENNALLY, 1965-85

A. At Least 9, but Not More than 12 Years

B. 13 or More Years

*Source: Table D-16.*
younger persons, and de-
regarding the outlook over
tal attainment imply some
of younger persons in high
(figure 42). As for relative

25-29 AND
OFR SCHOOL
ALLY, 1920--
LY, 1965--85
12 Years

quantity, the growth rate of those aged 15-19, which has been rising
for over a decade, will start to taper off in the next ten-year period,
but that for the two succeeding age groups will be cresting (Figure
43). These considerations tend, if anything, to suggest some possible
further deterioration in the relative income position of younger per-
sons. On the other hand, it is possible (though by no means certain)
that aggregate demand growth will be higher than in the recent past
and the relative income position of younger persons will be con-
sequently helped through an improvement in their relative employ-
ment situation. As shown in Table 7, however, the decline in relative
income position of young adults in the recent past has noticeably ex-
TABLE 7. INCOME AND EMPLOYMENT OF THOSE AGED 14–24 RELATIVE TO THOSE 35–44: AVERAGE FOR PEAK TO PEAK CYCLES, 1948–63 (per cent)

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Total Money Income (Ratio of Median for Families with Head 14–24 to That for Head 35–44)</th>
<th>Civilian Employment as Percentage of Labor Force (Ratio of Rate for Males 14–24 Not Enrolled in School to That for Males 35–44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948–53</td>
<td>72.4</td>
<td>96.5</td>
</tr>
<tr>
<td>1953–57</td>
<td>68.8</td>
<td>96.0</td>
</tr>
<tr>
<td>1957–60</td>
<td>65.2</td>
<td>93.3</td>
</tr>
<tr>
<td>1960–63</td>
<td>*23</td>
<td>93.9</td>
</tr>
</tbody>
</table>

SOURCE: Col. 1, same as for Table D-4; col. 2, [202, March 1965, p. 205, Table A-12, and p. 222, Table B-8].

*Incomplete cycle.

The substantial postwar composition shifts over the general fertility rate a "bottom out" in 1965–70.

Completed Fertility

To this point the "period rates" of fertility, during a given chronol Whelpton and his colle the forefront a new set in which the basic unit population cohort, typy year(s). Thus a cohort history of the group up rate" is a cohort measure per woman (or per thousand reproductive period of childbearing this is in the

It has been stressed narily imply variations are also influenced by example, during much rate phenomenon at the did not necessarily im has in fact subsequent it might be asked wh period rates portends a

A satisfactory ans rates for the groups age. However, just as the re period rates, so cumul

10 A recent paper by Art war fertility experience fro recent fertility decline.
for all ages, one might further infer that the total fertility rate would continue to decline between 1965 and 1970 and then level off (Figure 41). The substantial positive effect on fertility of prospective age composition shifts over this period is shown by the movements in the general fertility rate and crude birth rate. The latter would actually "bottom out" in 1965-70 and show a noticeable rise in 1970-75.

**Completed Fertility**

To this point the discussion has been concerned entirely with "period rates" of fertility, that is, measures of reproductive performance during a given chronological period. Important research by P. K. Whelpton and his colleagues in the postwar period has brought to the forefront a new set of fertility measures, namely, "cohort rates," in which the basic unit of study is not a chronological period but a population cohort, typically a group of women born in a given year(s). Thus a cohort fertility measure describes the reproductive history of the group up to a specified age. The "completed fertility rate" is a cohort measure showing the total number of live births per woman (or per thousand women), on the average, over the entire reproductive period of the cohort. For cohorts currently completing childbearing this is in the neighborhood of 3.0 births per woman.

It has been stressed that variations in period rates do not necessarily imply variations in completed fertility rates, since the former are also influenced by changes in the spacing of childbearing. For example, during much of the period of the baby boom (a period rate phenomenon at the time) it was often pointed out that the boom did not necessarily imply a rise in completed fertility (though this has in fact subsequently proved to be the case). Correspondingly, it might be asked whether the recent and prospective decline in period rates portends a decline in completed size of family?

A satisfactory answer to this calls for explaining the age-specific rates for the groups aged 30 and over, which is not attempted here. However, just as the rates for ages under 30 dominate the summary period rates, so cumulative births for a cohort through age 29 com-

---

<table>
<thead>
<tr>
<th>Civilian Employment as Percentage of Labor Force</th>
<th>(Ratio of Rate for Males 14-24 Not Enrolled in School to That for Males 35-44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>96.5</td>
<td></td>
</tr>
<tr>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td>93.3</td>
<td></td>
</tr>
<tr>
<td>93.9</td>
<td></td>
</tr>
</tbody>
</table>

1 March 1965, p. 205, Table

...
prise a large share of the cohort's completed fertility. For example, if the cohort of 1945–50, which will be aged 15–19 in 1965, were to show the relevant age-specific rates of the Census C projections as it aged to 25–29 in 1975, it would have had an average of 2.1 live births per woman by that age. Clearly, the present speculation regarding the outlook through 1975 for age-specific rates up to ages 25–29 carries this cohort through the main part of its reproductive period. If this cohort were to maintain the spacing pattern used in all the Census projections (which is to say if it were to continue on the C track through the remainder of its reproductive career), its completed fertility would be 2.8 births, well below the roughly 3.3 peak now anticipated for the cohort of 1930–35 (Table 8, column 4).

Is a movement like this toward lower completed fertility likely to occur, or is a major change in child-spacing toward later age in prospect? While significant shifts in child-spacing have occurred in past experience, most notably toward earlier childbearing in the past two decades, there is nevertheless a high positive correlation between cumulative fertility through age 29 and completed fertility. Presumably this is but one indication that by age 30 the life cycle pattern of most individuals has been well established. While some shift toward later childbearing seems possible, one may speculate that with the continued growth in the educational level of females and in opportunities for them in productive employment a major reversal toward later childbearing is unlikely to occur. On these (admittedly tenuous) grounds, I venture the guess that the current movements in period fertility do imply a reduction in completed fertility.

Recent surveys show that expectations regarding completed family size for cohorts currently entering the childbearing period do not differ significantly from those of cohorts further along [68]. These results appear to contradict the suggestion made here of an incipient decline in completed fertility, and to imply that the recent decline in fertility among younger persons involves merely postponement of births which will be made up at later ages. However, a suggestion is put forward by the authors of the survey report, and some supporting evidence noted, that postponement of births may be a first step toward revising expectations downward. If correct, this would reconcile the expectations results with my speculation.

However, it is not entirely clear that the survey results are in conflict with my view. In fact, as reported in the survey itself, if one reads columns 7 and 8, you will see a picture of a rise in completed fertility through 1962. The point seems to be that the economic considerations in the series, independent of the cohort effect, are not exactly surprising, and this is the point where the survey results conflict with my view. In fact, as reported in the survey itself, later childbearing among younger persons involves merely postponement of births which will be made up at later ages. However, a suggestion is put forward by the authors of the survey report, and some supporting evidence noted, that postponement of births may be a first step toward revising expectations downward. If correct, this would reconcile the expectations results with my speculation.

However, it is not entirely clear that the survey results are in

<table>
<thead>
<tr>
<th>Birth Cohort</th>
<th>Age in 1965</th>
<th>A</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920–25</td>
<td>40–44</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1925–30</td>
<td>35–39</td>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1930–35</td>
<td>30–34</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1935–40</td>
<td>25–29</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1940–45</td>
<td>20–24</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1945–50</td>
<td>15–19</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950–55</td>
<td>10–14</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955–60</td>
<td>5–9</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: (1) Cohorts below 1930–35 are the youngest cohort, the expected fertility of which would have been eligible for marriage and fertility among earlier age groups. (2) Column (2) is derived from data provided in the survey report.

Source: Cols. 1–5, [144, Table 111. 1964 survey data were provided by the National Center for Health Statistics.)

*Birth cohort of 1940–46.*

n.a. = not available.
The current fertility decline. For example, the 15-19 in 1965, were to Census C projections as it had an average of 2.1 live present speculation regarding rates up to ages 25-29 of its reproductive period. Projections used in all the were to continue on the C pattern used in all the its completed the roughly 3.3 peak now 8, column 4).

completed fertility likely aging toward later age in its childbearing in the past positive correlation between completed fertility. Presumably life cycle pattern of most some shift toward later regulate that with the conrules and in opportunities for reversal toward later age (admittedly tenuous) event movements in period fertility.

Regarding completed family childbearing period do not further along [68]. These made here of an incipient that the recent decline in merely postponement of. However, a suggestion report, and some support-births may be a first step correct, this would recon-

The survey results are in

Table 8. Projected and Expected Number of Births Per Woman for Five-Year Birth Cohorts of Women, Birth Years, 1920-25 to 1955-60

<table>
<thead>
<tr>
<th>Birth Year</th>
<th>Projected</th>
<th>Expected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Series A</td>
<td>Series B</td>
</tr>
<tr>
<td>1920-25</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>1925-30</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>1930-35</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>1935-40</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>1940-45</td>
<td>3.5</td>
<td>3.3</td>
</tr>
<tr>
<td>1945-50</td>
<td>3.4</td>
<td>3.2</td>
</tr>
<tr>
<td>1950-55</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>1955-60</td>
<td>3.4</td>
<td>3.1</td>
</tr>
</tbody>
</table>

NOTE: (1) Cohorts below dotted line are those affected by projections for 1965 through 1975 of age specific rates for 15-19, 20-24, and 25-29. (2) Except for the youngest cohort, the expectation data refer only to those members of each cohort who would have been eligible for the 1960 CAF study. There is, therefore, an upward selection with respect to duration of marriage as these cohorts age.

SOURCE: Cols. 1-5, [144, Table A-1]; cols. 7-10, [68, Tables 3 and 7]. Unpublished 1964 survey data were provided by Ronald Freedman.

* Birth cohort of 1940-46.

n.a. = not available.

Conflict with my view. In Table 8 the expectations of various cohorts reported in the survey have been matched with the census projections. If one reads columns 7 through 10 vertically, one finds a consistent picture of a rise in completed family size through the cohort of 1931-35, followed by a gradual decline for the two subsequent cohorts. The close correspondence of the Census C and D projections with this pattern, not only in movement but in magnitude as well, is not exactly surprising since the projections utilized the surveys through 1962. The point is, however, that my analysis based on economic considerations, which relates to the cohorts below the break in the series, independently suggested the Census C series as the most plausible, and this is the one consistent with the expectations results.

The original draft of the chapter was based on the 1980, 1962, and 1963 surveys. Subsequently, Ronald Freedman kindly supplied comparable 1964 data, which proved to show the same pattern of intercohort differences as the three previous surveys.
The apparent contradiction between the survey results and my suggestion of a prospective decline in completed fertility thus stems from the fact that the size of the sample does not permit attributing statistical significance to the decline indicated by the survey results, rather than the absence of such a decline. Some reassurance about the reliability of the differences in expectations for adjacent cohorts might perhaps be drawn from the fact that all four surveys indicate a larger completed rate for the 1931-35 cohort than for the 1926-30 cohort, and a smaller rate for the 1936-42 cohort than for the 1931-35 cohort, though the magnitude of the differences vary. Clearly what is needed, however, is an increase in sample size to permit finer judgments about statistically significant differences. In this connection, it would seem desirable to strive in addition for separate observations for the 15-19 group. The cohort of 1945-50 will reach this age in 1965 and the Census C series implies a further noticeable decline in the completed rate for this group. The current survey procedures, however, would not provide a reading on this group until it is 20-24.

Conclusions on Projections

The application of the cohort approach has resulted in significantly improved population projections in recent years. Surveys of fertility expectations are of value both in the development of new projections and in appraising existing ones, as well as in analyzing ongoing fertility changes. The present discussion of economic factors suggests that such an analysis may play a role in projections work similar to that performed by the expectations surveys. If my analysis is correct, each projection series implies a pattern of income change by age. To the extent this pattern can be made more explicit (perhaps tying in, for example, with recent work on income by age at HEW [22]) the more feasible it becomes to appraise the "realism" of individual projections, in much the same way as knowledge of the completed fertility rate implied by different projections helps in evaluating them. It hardly needs to be stressed that this is a goal, and that much more basic research is needed, including of course attention to differences among population components. The complementary use of expectations surveys and studies of economic factors, illustrated in this discussion, is an attractive possibility for the longer run.