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**ACKNOWLEDGMENTS**—Many persons participated in the various activities of the 1970 census. Primary direction of the program was performed by **Conrad Taeuber**, former Associate Director for Demographic Fields, assisted by **David L. Kaplan**, 1970 Census Coordinator, and in conjunction with **Paul R. Squires**, then Associate Director for Data Collection and Processing, and **Joseph Waksberg**, then Associate Director for Statistical Standards and Methodology.

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Major support for this report was provided by the National Institute of Child Health and Human Development, U.S. Public Health Service, Department of Health, Education, and Welfare.

The procedures for sample selection, sample weighting, and computation of sampling variances were developed in the Statistical Methods Division, under the supervision of **Morton Boisen**, Chief, and **Robert H. Hanson**, assisted by **William T. Alsbrooks**,

**Peter A. Bounpane**, **Barbara A. Boyes**, and **Carlton W. Pruden**.

Geographic plans and procedures were developed in the Geography Division under the supervision of **William T. Fay**, then Chief, and **Robert C. Klove** and **Gerald J. Post**.

Data collection activities were administered by the Field Division, **Richard C. Burt**, Chief, with the assistance of the directors of the Bureau's data collection centers.

Systems and processing procedures were developed under the direction of **Morris Gorinson**, Assistant Chief, Demographic Census Staff. **Florence Wright**, assisted by **John F. Powell** and **Orville M. Slye**, was responsible for the clerical procedures and **Roger O. Lepage**, assisted by **William R. Ball**, **Howard R. Dennis**, **Stephen E. Goldman**, and **George H. McLaughlin**, was responsible for the computer programming. **Donald R. Dalzell** was responsible for the computer procedures and programs used for the electronic preparation of tables in this report.

The manual processing and microfilming of the questionnaires and the review of tabulation controls were performed in the Data Preparation Division (formerly Jeffersonville Census Operations Division), under the direction of **Robert L. Hagan**, then Chief, with the assistance of **Rex L. Pullin**. The manual coding operations were supervised by **John C. Campbell**, assisted by **Herbert J. Hough**, **Joe D. Kolb**, and **Leo C. Schilling**. **William L. Pangburn** supervised the microfilming operation. **Dan N. Harding**, assisted by **Nora H. Shouse**, was responsible for the tabulation review work.

FOSDIC and computer processing were performed in the Computer Services Division

under the supervision of **James R. Pepal**, Chief, and **C. Thomas DiNenna**, Assistant Division Chief. Development of the FOSDIC equipment was directed by **William M. Gaines**, and **McRae Anderson**. Development of the automatic microfilming equipment was directed by **Anthony A. Berlinsky**.

Publications planning, editing, composition, and printing procurement were performed in the Publications Services Division; under the direction of **Raymond J. Koski**, Chief, by **Milton S. Andersen**, **Gerald A. Mann**, and **Wayne H. Massey**.

Important contributions were made by **Robert B. Voight** and **Sherry L. Courtland** in the planning and coordination of the 1970 census program; by **Lucille D. Catterton** in the planning of the tabular materials; and by **John W. H. Spencer**, **Sol Dolleck**, and **M. Douglas Fahey** in the systems design and operations for processing the census data.

Library of Congress Card No. 72-600036

## SUGGESTED CITATION

U.S. Bureau of the Census  
Census of Population: 1970  
SUBJECT REPORTS  
Final Report PC(2)-3B  
Childspacing and Current Fertility

U.S. Government Printing Office  
Washington, D.C. 1975

For sale by the  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402—Price \$8.35  
Stock Number 003-024-01141-7

**1970  
CENSUS OF  
POPULATION**

SUBJECT REPORTS

**Childspacing and  
Current Fertility**

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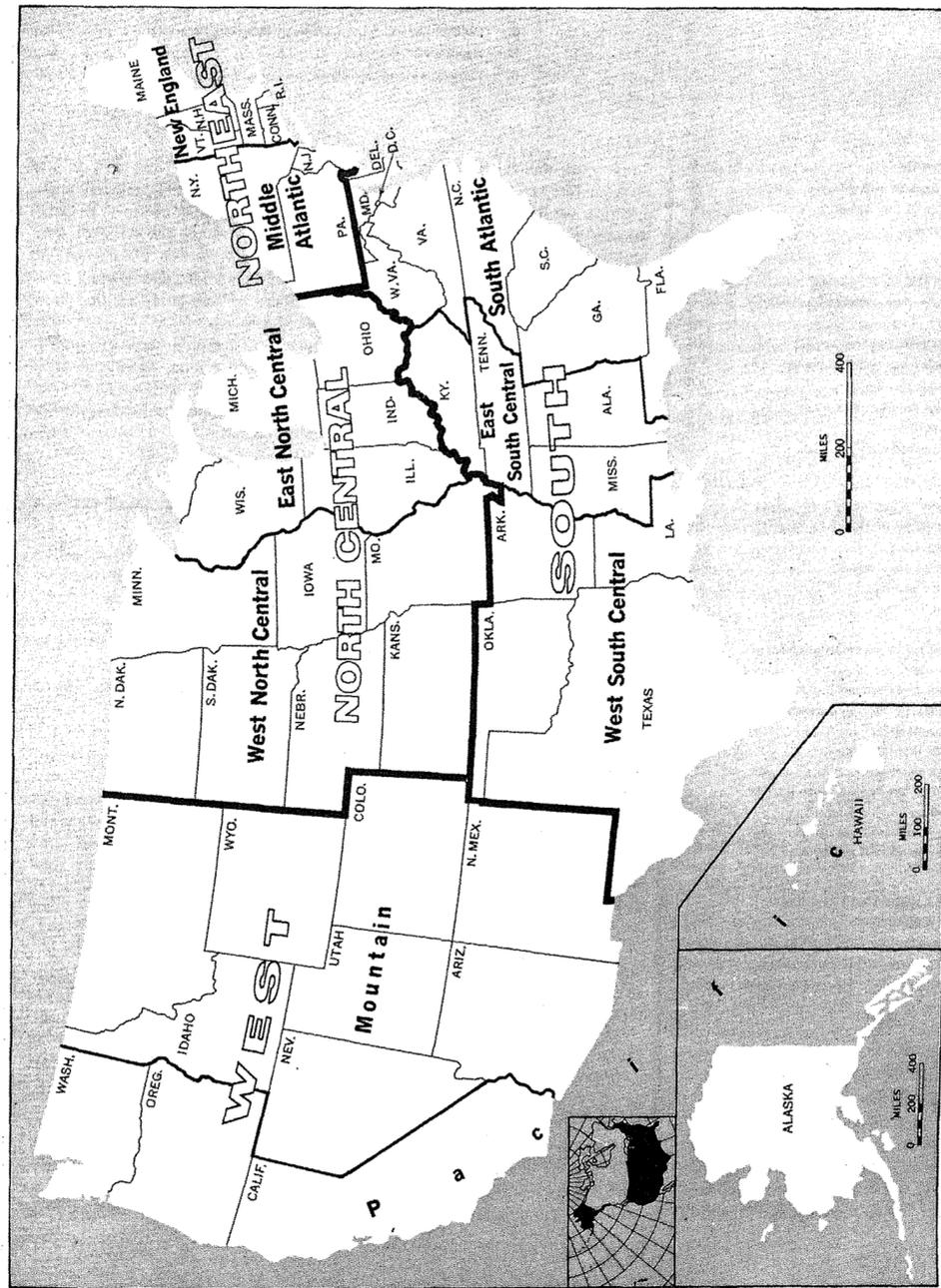
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Regions and Geographic Divisions of the United States



U.S. DEPARTMENT OF COMMERCE BUREAU OF THE CENSUS

# INTRODUCTION

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### GENERAL

This report presents statistics for the United States on the fertility histories of women in terms of the numbers of children born by reconstructed successive ages and successive marriage durations. The data are based on the 1970

Census of Population, which was conducted as of April 1, 1970. Legal provision for this census was made in the Act of Congress of August 31, 1954 (amended August 1957), which codified Title 13, United States Code.

A major portion of the information compiled from the 1970 Census of Population appears in Volume I, **Characteristics of the Population**, which focuses on the presentation of data for States, counties, places, and other areas of the United States. The present report is part of Volume II, **Subject Reports**, wherein most reports concentrate on the presentation of national and regional data for a particular subject. A list of Volume II subject reports from the 1970 census is presented on page II. For a description of Volumes I and II, as well as other elements of the data dissemination program of the 1970 Population and Housing Census, see Appendix E, "Publication and Computer Summary Tape Program."

The content and procedures of the 1970 census were determined after evaluation of the results of the 1960 census, consultation with a wide variety of users of census data, and extensive field pretesting. A number of changes were introduced in 1970 to improve the usefulness of the census results. For the characteristics shown in this report, the changes do not affect to any appreciable extent the comparability of the 1970 data with those for 1960.

More detailed information on the technical and procedural matters covered in the text of this report can be obtained by writing to the Director, Bureau of the Census, Washington, D.C. 20233.

This study of childspacing and current fertility, with data based in part on a 5-percent sample and in part on a

1-percent sample of the 1970 census, was supported by a research grant from the National Institute of Child Health and Human Development, U.S. Public Health Service, Department of Health, Education, and Welfare. The products of this study include both the present report and a special public use sample computer tape with supplemental information on the fertility histories of individual women. The public use sample tape is described in greater detail below in the section on "Related Materials."

**Organization of the text.**—The text consists of this introduction and Appendixes A through E, which appear after the tables. The introduction contains information relating specifically to the principal subject of this report, including definitions of terms and a discussion of editing and adjustment procedures. Appendix A provides general information concerning the presentation of data in this series of reports and the collection and processing procedures of the 1970 census. Appendix B describes the various area classifications (e.g., urban and rural residence, urbanized areas, etc.) and also explains the residence rules used in counting the population. Appendix C provides brief definitions and explanations of subjects covered in cross-classifications in this report and other reports in this series. Appendix D presents information on sources of error in the data, sampling variability, ratio estimation, and editing procedures. Appendix E summarizes the data dissemination program.

**Content of the tables.**—Tables 1 through 26 show rates of first marriages and births, cumulated to various ages for 5-year "birth cohorts" of

women born in 1920 to 1954. These data are cross-classified by urban-rural residence, race, Spanish origin, education, occupation of husband (for women married once with husband present), occupation of woman, family income in 1969, and ratio of family income to poverty level in 1969. Tables 27 through 38 present data on the spacing of births in relation to the mother's date of first marriage. Data in these tables are for 5-year "marriage cohorts" of women who first married in 1950 to 1969, cross-classified by the same characteristics listed above for tables 1 through 26 and by age at first marriage and number of times married.

Tables 39 through 45 show probabilities of first, second, and third order births at various intervals since first marriage for women in 5-year marriage cohorts. Tables 46 through 48 show numbers of women in marriage cohorts from 1955 to 1969 according to their labor force status and number of children ever born. Tables 49 through 51 deal with the spacing of births among remarried women as compared with women married only once.

Tables 52 through 65 relate births 0 to 4 years ago and own children under 5 years old to age of woman. These tables are cross-classified by urban-rural residence, race, Spanish origin, marital status, education, labor force status, occupation of husband, family income in 1969, and relationship to head of household.

Tables 66, 67, and 70 show annual birth rates for single years and/or averaged annual birth rates for 5-year periods from 1955 to 1969. Tables 68, 69, 71, and 72 present percentage distributions of first births in calendar periods by the interval from first marriage of

the mother or of second and higher order births by the interval from the previous birth to the same mother. These tables are cross-classified by race.

Tables 73 through 87 are concerned with averaged annual probabilities of first, second, third, fourth, and fifth and higher order births. The probabilities are cross-classified by urban-rural residence, race, age of woman, 5-year calendar periods from 1955 to 1969, and interval from either first marriage or birth of previous child to January 1 of each specified calendar year.

Tables 88 through 98 show comparative distributions of women according to whether or not they had borne children before their first marriage. Cross-classification characteristics in these tables are race, age at birth of first child, education of woman, age at first marriage, labor force status of woman, family income in 1969, and education, occupation, and income of husband.

Tables 99 through 102 show patterns of progression from first to second child and from second to third child according to the sex of the previous child. These data are cross-classified by race, education, and labor force status of the mother. Tables 103 through 107 present distributions comparing women with all children ever born still present in the household to women with one or more children ever born absent from the household. Cross-classification variables for these tables are race, duration of marriage, and age. Finally, table 108 presents data on single and multiple births in specified calendar periods by age of mother and number of children in the birth event by whether or not the date of birth was allocated.

**Sample size.**—The statistics in this report, with the exception of those in tables 66, 67, 70, and 73 through 87, are based on the 5-percent sample. The statistics in tables 66, 67, 70, and 73 through 87 are based on a 1-percent sample. The sample data are weighted to represent the total population (see "Data Collection Procedures" in Appendix A). The sample weights in the 5-percent sample have unequal values, whereas the sample weights for the 1-percent sample all equal 100; hence the numbers shown from the 1-percent sample end in "00", whereas those shown from the 5-percent sample may end in any combination of digits. An explanation of the ratio estimation procedure and information on the sampling variability associated with the data are contained in Appendix D.

## RELATED MATERIALS

**Special public use sample computer tape.**—In conjunction with the production of this report, a special 1-in-100 public use sample computer tape was also created. A detailed description and documentation of this tape can be obtained from the Chief, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

Several features make this tape different from other public use tapes previously published by the Bureau of the Census. First of all, households and group quarters are included only if they contain one or more women eligible for the study, i.e., either a woman 14 to 54 years old (single women included) or a woman 55 years old or over who first married after 1949. Secondly, a special supplemental record is added for each eligible woman. The supplemental record contains recodes and derived data re-

lating to her first marriage (if ever married), to her husband (if present), and to each of her children ever born (if any). Finally, special geographic coding is provided which identifies individual States or groups of States, urban-rural residence, and each of the 25 urbanized areas of 1 million or more inhabitants in 1970.

**1970 census reports.**—No other 1970 census report contains data which relate to spacing of children or to births in specified calendar periods. However, data on children ever born, based on a 20-percent sample, have been published in chapter C, Parts 1 through 53, of the 1970 Census of Population, Volume I, **Characteristics of the Population**. More extensive data on children ever born have been published in the Volume II fertility report, PC(2)-3A, **Women by Number of Children Ever Born**, where numbers and rates of children ever born are shown by age of woman and, in a few cases, by year of first marriage. Several other Volume II reports also show fertility-related data. Some examples are PC(2)-1F, **American Indians**; PC(2)-4B, **Persons by Family Characteristics**; PC(2)-6A, **Employment Status and Work Experience**; and PC(2)-9A, **Low-Income Population**.

Tables 1 through 26 of the present report show rates of first marriage cumulated to various ages of the woman for various birth cohorts and by selected social and economic characteristics. Data relating to first marriage are also shown in two other Volume II reports: PC(2)-4C, **Marital Status**, and PC(2)-4D, **Age at First Marriage**.

**Reports from earlier censuses.**—This report presents in one volume the

same types of fertility data that are contained in two separate 1960 census reports entitled PC(2)-3B, **Childspacing**, and PC(2)-3C, **Women by Children Under 5 Years Old**. A third fertility report from the 1960 census was published under the title of PC(2)-3A, **Women by Number of Children Ever Born**; like the PC(2)-3A report from the 1970 census, the type of data contained therein is different from the childspacing and period fertility data shown in the present report.

**1950 census reports.**—A special report entitled **Fertility**, which is Part 5, chapter C of Volume IV of the 1950 Census of Population, presents national statistics on number of children ever born and on number of own children under 5 years old, for women by urban-rural residence, age, race, marital status, duration of marriage, labor force status of the woman, years of school completed by the woman, and major occupation group of husband in the experienced civilian labor force. The report also presents data on children ever born for States and their urban and rural parts and for persons of Spanish surname in five Southwestern States. An appendix presents material on the quality of the data.

**Current Population Survey.**—Data on various aspects of fertility, including childspacing, progressive fertility for age and marriage cohorts of women, and birth expectations, are published in Series P-20 of the **Current Population Reports**. These data are collected by the Bureau of the Census through its Current Population Survey (CPS). The CPS currently gathers information from a sample of about 50,000 households.

Some Series P-20 reports related to fertility are: No. 186, "Marriage, Fer-

tility, and Childspacing: June 1965"; No. 211, "Previous and Prospective Fertility: 1967"; No. 263, "Fertility Histories and Birth Expectations of American Women: June 1971"; and No. 265, "Fertility Expectations of American Women: June 1973"; and No. 269, "Prospects for American Fertility: June 1974." Of the reports listed above, Nos. 186 and 263 present data most directly comparable with the childspacing information of this report.

**Vital statistics.**—Numbers of births and birth rates for single calendar years contained in this report are roughly comparable with similar information which appears in the natality volume of the annual **Vital Statistics of the United States**, published by the National Center for Health Statistics, U.S. Department of Health, Education, and Welfare. The two sets of data differ, however, in that the vital statistics are based on birth registrations and estimates of midyear population, whereas the data in this 1970 census report are based on a sample of women in households and group quarters. Moreover, in this report estimated dates of birth are allocated (by a method described below) to liveborn children who no longer reside with their mothers.

**Unpublished data.**—For most of the Volume II reports, statistics in addition to those published in the report are available on a reimbursable basis from computer tape files. Data shown for the United States as a whole are available for regions, divisions, and States, and, in a number of instances, the data for some characteristics were tabulated in greater detail than shown in the reports. Requests for unpub-

lished data, giving a specific description of the figures desired, may be made by writing to the Director, Bureau of the Census, Washington, D.C. 20233. Inquiries concerning unpublished data should be transmitted to the Bureau as soon as possible because tape files are not maintained indefinitely.

**DEFINITIONS AND EXPLANATIONS OF PRINCIPAL SUBJECTS**

The definitions and explanations below relate either to the principal subjects of this report or to subjects not elsewhere defined. Brief definitions of other items that appear in cross-classifications in the tables of this report are presented in the appendixes.

**Childspacing**

The term "childspacing" refers, in general, to the timing of births to women. It refers to the interval between marriage of a woman and the birth of a child, to the intervals between births of her successive children, to births by successive ages or successive marriage durations of the woman, and to other types of data that directly or indirectly bear on changes in the timing or spacing of births. The childspacing data are based on specific dating of events in the past, as derived from the records of the 1970 census. In contrast, other decennial census reports present fertility data as of the census date.

The data on childspacing cover all children born alive. They were derived from the woman's birth date, date of her first marriage, and the birth dates of each of her children who were still living at home at the time of the 1970 census. For example, the age of a

woman at the birth of her first child is obtained by subtraction of her birth date from that of the first child, and the interval between her first marriage and the birth of her first child is obtained by subtraction of the marriage date from the first child's birth date. The marriage date of the woman and the birth dates of children present in the home were based on direct questions asked in the census. The birth date and sex of children absent from home or deceased were estimated, as explained in the section below on "Editing."

**Children Ever Born**

The data on children ever born were derived from answers to item 25 on the 1970 census questionnaire (see facsimile of item 25 below). This question was asked of females 14 years old and over in the 15- and 5-percent samples; its purpose was to obtain the total number of live births a woman ever had.

The terminal category for recording the number of children ever born was "12 or more." In tabulating the total number of children ever born to a group of women, the relatively few women with "12 or more" children were each counted in the 1970 census report PC(2)-3A as having 13 children. Thirteen represents a mean value derived from data from other censuses, surveys, and birth registrations. For the present report, however, special

requirements of the procedures developed for allocating date of birth to children no longer living in the household led to the decision to assign a terminal value of "12" for women with "12 or more" children ever born. Any difference between rates published in the PC(2)-3A report and the present report will be minor.

When the number of children ever born was not reported for a woman, an estimated (allocated) number was assigned. Tables A-1 through A-4 of the 1970 census PC(2)-3A report show the proportions of allocations. The allocation procedures employed took into account in various ways such characteristics as the woman's race, marital status, age, years since first marriage, relationship to household head, and number of own children present. The woman who was given an allocated number of children ever born was assigned the same number of children as that reported by a previously recorded woman of matching characteristics.

**Children ever born to single women.—**

In the present report, all children ever born to single women are counted as well as those ever born to women ever married. In contrast, the number of children ever born were limited in most of the tables of the PC(2)-3A report to women who have ever been married, with single women being treated as childless for the purpose of computing rates of children ever born

25. If this is a girl or a woman—	
How many babies has she ever had, not counting stillbirths?	1 2 3 4 5 6 7 8
Do not count her stepchildren or children she has adopted.	○ ○ ○ ○ ○ ○ ○ ○
	9 10 11 12 or more None
	○ ○ ○ ○ ○ ○ ○ ○ ○ ○

INTRODUCTION—Continued

to women of all marital classes combined. Table I below is a summary, which compares rates of children ever born, both including and excluding the children of single women. As may be seen from the summary table, the differences are minor for the white population but are somewhat larger for Negroes. For women 15 years old and over, table I indicates that including the children of single women would increase the rates of children ever born by approximately 0.8 percent for whites and 7.1 percent for Negroes, and that the relative increase is much larger at younger ages than at older ages.

The data in table I include allocations (estimates) of children ever born for those women for whom no original report was available. The following percentages summarize the proportions of women receiving allocations by race and marital status (for more

detail see tables A-1 and A-2 of the PC(2)-3A report):

Percent of women with allocations		
Marital status	White	Negro
Women ever married . . . . .	5.2	10.5
Single women . . .	29.6	28.2

The allocation procedures may have tended to slightly overestimate the number of children ever born to single women, because the single women with no report on number of children ever born are more likely to be childless than the single women who did report and because the data for reporting women were used as a basis for the allocations. Women who said they were childless comprised 96.2 percent of white single women reporting on number of children ever born and 70.6

percent of reporting Negro single women.

Several factors contributed to the different rates of response for single women and ever-married women. Where self-enumeration procedures were used, the only instructions supplied for item 25 asked the respondent to "count all the children the girl or woman has ever had, even if some of them have died or no longer live with her." In reporting for some of the single women for whom no information was supplied, the respondent may have thought that the question did not apply, because the women had not yet married or had any children.

Another factor that may have contributed to differential coverage pertains to households visited by census enumerators. The instructions to the enumerator stated that a single woman was *not* to be asked the question about children ever born unless some-

TABLE I. Children Ever Born Per 1,000 Women of All Marital Statuses Combined by Race and Age of Woman: 1970

Age of woman	White				Negro			
	Single women treated as childless (1)	Children of single women included (2)	Absolute difference (3)	Column (2) as percent of column (1) (4)	Single women treated as childless (5)	Children of single women included (6)	Absolute difference (7)	Column (6) as percent of column (5) (8)
15 years and over . . . . .	1,965	1,980	15	100.8	2,226	2,385	159	107.1
15 to 19 years . . . . .	69	84	15	121.7	118	268	150	227.1
20 to 24 years . . . . .	648	674	26	104.0	918	1,205	287	131.3
25 to 29 years . . . . .	1,709	1,732	23	101.3	1,996	2,274	278	113.9
30 to 34 years . . . . .	2,551	2,569	18	100.7	2,956	3,196	240	108.1
35 to 39 years . . . . .	2,920	2,934	14	100.5	3,450	3,639	189	105.5
40 to 44 years . . . . .	2,852	2,864	12	100.4	3,520	3,649	129	103.7
45 to 49 years . . . . .	2,633	2,643	10	100.4	3,162	3,256	94	103.0
50 years and over . . . . .	2,381	2,392	11	100.5	2,787	2,851	64	102.3

one in the household was listed as her son or daughter. Enumerators were instructed, however, to ask the question of each woman 14 years old or over who had ever been married. Enumerators were provided with more elaborate instructions and clarifications than were respondents who reported through self-enumeration. Enumerators were provided with an explicit definition of a stillbirth as "a birth at which the baby showed no signs of life" and were explicitly instructed that babies born before the present marriage were to be included.

#### Cohort Fertility

Two main types of cohorts are used for the study of cohort fertility. One type is a *birth cohort* of women, such as the women born in the period 1930 to 1934. The second type is a *marriage cohort* of women, which comprises women who married for the first time in the same calendar period, such as the women who first married in 1945 to 1949.

"Cohort fertility" refers to the childbearing experience of a cohort of women as they advance through their reproductive years. Data may show the childbearing experience of the cohort at specific dates or intervals since first marriage, or the data may show the cumulative childbearing experience up to and including a specified age or interval since first marriage. Most of the data for cohorts in this report are cumulative.

The birth cohorts include women who have never married as well as women who have ever married. Because the women of any one cohort were born in the same period, they are of the same or nearly the same age at

any subsequent time. This means that the risk of death is approximately the same for all members of the birth cohort and is not important as a source of bias in the study of fertility, whereas it is important for members of marriage cohorts whose ages may differ considerably.

For birth cohorts, the cumulative data in this report are cumulated to the midpoints of years of age, e.g., 18½. The reason for cumulating to midpoints is to approximate the pattern of total fertility to the specified age that would have been found if a survey had been taken at the time the women were of that specified age. At the time of a survey women 18 years old can be at any point between their 18th birthday and the day preceding their 19th birthday. On the average they are 18½ years old. The oldest age that can be shown for each cohort is the age attained by the survey date. That is, only young ages can be shown for a young cohort. Both young and old ages can be shown for an old cohort.

It is useful to compare the fertility experience at young ages for young cohorts of women with the experience at *these same young ages* of other cohorts that subsequently had experience at the older ages. It is also useful to compare the experience of the older cohorts at both young and old ages to determine what happened in between those ages and as a crude guide for anticipating what the young cohorts may do in the future. In addition, comparison of birth cohorts makes it possible to study the trends among cohorts to determine the extent to which the larger families that were formerly achieved by the end of the reproductive period are becoming less common.

The marriage cohorts include all women who married for the first time in a period, regardless of the age at marriage and regardless of any subsequent separation, divorce, widowhood, or remarriage. (Some tables in this report limit the data to women still in intact first marriages or show data for women in remarriages by time since remarriage, but these women are subgroups of cohorts.) As time passes, the higher mortality rates among elderly women make the surviving members of a marriage cohort more and more selective of the members who married at a young age. This bias from selective mortality does not become very serious until many years after the first marriage began. An illustrative example is presented in table II to show that, even over 20 years time, selective mortality has little effect on the relative distribution of survivors by age at first marriage.

Marriage cohorts are especially useful for the study of the spacing of births in relation to the date of the mother's marriage. The data are not limited to births occurring after the marriage; those reported as occurring before marriage are also shown. The births before marriage are regarded as having negative spacing intervals and the births after marriage as having positive spacing intervals.

#### Period Fertility

"Period fertility" is a term for fertility occurring in a specified calendar period. Annual numbers and rates refer to a particular calendar year, e.g., 1964. Data are also shown for 5-year periods, e.g., 1965 to 1969, and "averaged" to show average annual numbers and rates for the years in question. The term "current fertility," which

TABLE II. Distribution of White Women by Age at First Marriage in 1965 and Anticipated Distribution of Survivors 20 Years Later, for the United States

Age at first marriage	Distribution at time of marriage	Proportion expected to survive 20 years	Distribution of marriages 20 years later
14 years and over . . . . .	100.0	.9777	100.0
14 to 17 years . . . . .	19.7	.9848	15.8
18 and 19 years . . . . .	30.0	.9830	30.2
20 and 21 years . . . . .	23.8	.9807	23.9
22 to 24 years . . . . .	18.3	.9763	18.3
25 to 29 years . . . . .	7.0	.9675	6.9
30 years and over . . . . .	5.3	.9123	5.0
Median age (years) . . . . .	(20.4)	...	(20.3)

SOURCES: Marriages in 1965 are derived from the 1970 Census of Population, PC(2)-4D, Age at First Marriage. Survival proportions are from the U.S. life table for white females: Vital Statistics of the United States, 1964, Vol. II, Part A, "Mortality."

appears in the title of this report, refers to period fertility for the years 1955 to 1969.

Annual birth registration data published by the National Center for Health Statistics, U.S. Department of Health, Education, and Welfare, are by far the best known source of period data on fertility for the United States. However, important information can be learned from dates of events obtained in censuses and surveys that is not available from the individual birth registration record. For example, data from censuses and surveys permit counts of women who were at risk of childbirth but did not have a birth in the period as well as of the women at risk who did experience a birth. Census and survey data can also reveal how many births a given woman has had in a period, and with what spacing intervals. Thus, fertility-related variables can be cross-classified by a variety of social and economic characteristics that are available from census

records but usually not available from birth registration records.

Period data are of value chiefly for showing the "force" or general state of fertility conditions at a given date, just as the speedometer of a car indicates how fast the car is going at a given instant. A total fertility rate (the sum of age-specific birth rates) based on period data is a useful summary measure that indicates how many births a *hypothetical* cohort of women would have in their lifetime if all the women survived to the end of the childbearing years (about age 45) and had experienced the given age-specific birth rates.

The total fertility rate is similar to the average number of children ever born to women over age 45 in survey data. But experience has shown that trends in total fertility rates and trends in *real* cohort fertility are not always highly correlated. Social and economic conditions are often such in a particular period that people of all ages

temporarily defer having children in an economic recession or advance them in a time of rapidly rising prosperity. When people have their children earlier (or later) than has been customary, a partly compensating change in the birth rates usually occurs in later years. Yet, early childbearing increases the length of time in which an unplanned pregnancy could occur after the family has attained a desired size. On the other hand, delayed childbearing may be followed by some curtailment in fertility due either to reduced fecundity with advancing age or to growing reluctance to have as many children as were originally wanted.

Several kinds of period fertility data are shown in this report. These include the following:

Numbers of births 0 to 4 years ago and 5 to 9 years ago and numbers of own children under 5 years old and 5 to 9 years old (tables 50 through 65)

Average annual birth rates per 1,000 women (tables 67 and 70)

Spacing of births in specific periods (tables 68, 69, 71, and 72)

Average annual probabilities of birth (tables 73 through 87)

**Births 0 to 4 years ago and 5 to 9 years ago.**—These data represent an attempt to reconstruct the total number of births that occurred during the time period specified. The data are, however, limited to those occurring to women enumerated in the 1970 census. Thus, if a woman did not survive to 1970 or if she left the United States, her births were not counted. On the other hand, if a woman migrated into the United States after any births occurred, those births were

counted in this study but not in the vital statistics of the United States.

These births include a woman's "own children" (as described below) who are of such an age as to have been born during the period in question as well as any children ever born who are absent from the household but who are estimated to have been born during the particular period of time. The dating of "births" and the ages of "own children" are taken in reference to the date of the census, April 1, 1970.

**Own children.**—The number of own children living with a woman and the birth dates of those children were determined by a computer examination of the records for every member of the household in which the woman was enumerated. Own children comprise sons and daughters of the woman, excluding (insofar as possible for purposes of the present report) any children she has adopted and her stepchildren. Adopted children and stepchildren were partly eliminated from data on own children by a procedure that dropped data for the oldest children when the number of children present exceeded the number of children ever born to the woman. Less than 1 percent of the women had more children present than children ever born.

Data on number of births and own children are classified by the age of the mother and many other characteristics *as of the census date*. Characteristics of the woman such as education, family income, and presence of husband may well differ from the conditions prevailing at the time the children were born. From one point of view such information can be even more interesting, since at the census date

women are further along towards attaining their ultimate social and economic status. It is highly desirable, in any case, to know the different fertility performance of people of lower status levels and people who attained higher levels.

Comparisons of the number of births 0 to 4 years ago and 5 to 9 years ago with the counts of own children under 5 years old and 5 to 9 years old provide an indication of the proportions of young children who are *not* living with their mother. Allowances for mortality can be made with the aid of life tables. For example, according to life tables for 1963, about 97.3 percent of newborn white infants and 95.0 percent of newborn infants of all other races would be expected to survive to become children 5 to 9 years old.

**Averaged annual birth rates.**—The rates shown in tables 67 and 70 are similar in principle to those that might be found in birth registration data. That is, the birth numerators for the rates include births occurring in the year by age and marital status of the mother at the time of birth; the denominators or bases of the birth rates are the numbers of women at the middle of the year (July 1) by age and marital status of the women at the midyear. The births in the numerators of the rates were tallied independently of the women in the denominators.

The 5-year annual averages were derived by tallying the birth events in each year separately and then dividing the totals by 5; the population bases for the birth rates were also tallied separately for each year and then averaged.

**Spacing of births.**—Tables 68 and 71 show spacing intervals of first births

from the date of the mother's first marriage, either before or after, with a special category for women who had never married as of the 1970 census. Tables 69 and 72 show spacing intervals between successive births. These intervals have been obtained by subtracting the date of event from that of another. If the quarter and year of birth of the first child coincides with the quarter and year of the mother's first marriage, the child is assumed to have been born *after* the mother's first marriage. With respect to intervals between births, two or more births occurring in the same quarter and year were assumed to be twins, triplets, etc.; it was further assumed that no two births could occur within one or two quarters of each other.

**Birth probabilities.**—These data are based on the number of births, either of a given order or of all orders, which occur during a year to a group of women who are of a given age and parity at the start of that particular calendar year. For example, if 1,250,000 women were childless and age 25 on January 1, 1966, and if 125,000 of these women bore a child during 1966, then the probability of a first-child birth during 1966 to a woman age 25 on January 1, 1966, is estimated as 1 in 10 or 0.1. Birth probabilities differ from birth rates inasmuch as rates relate births in a year occurring to women of a given age to estimates of the number of women of that age as of the midpoint of the year in question. Thus, in rates, numerators and denominators are counted independently of one another, whereas in probabilities the births counted in the numerator are limited to those occurring to women counted in the denominator.

### Birth Order

Order of birth refers to the sequential order in which a particular child was born among all the children ever born to the child's mother. For example, a first-order child is the mother's first-born child; a third-order child is the third birth that occurred to the child's mother, etc.

### Premarital or Postmarital Status of Children

Tables 88 through 91 refer to "premarital or postmarital status of children." These terms refer to whether the child was born *before* or *after* the date of the mother's *first* marriage. Because no information was available on dates of divorce, widowhood, and remarriage, the "postmarital" classification includes all children born alive to a woman at any time after her first marriage, including those born during an intact marriage and those (if any) born while the mother was divorced or widowed.

### Cumulative Numbers and Rates

Tables 1 through 26 show numbers and/or rates of marriages and births *cumulated* to the midpoints of specified ages; tables 27 through 38 show rates of births cumulated to specified intervals since the calendar quarter of first marriage. Cumulated numbers and rates are based on summations of data tallied at the specified age or interval and all preceding ages or intervals. For example, numbers of first marriages cumulated to age 18 consist of all first marriages that occurred to women at ages 14, 15, 16, 17, and up to 18 years and 6 months. Again, by way of example, first births cumulated to the

eighth quarter after first marriage consist of all births occurring in the eighth quarter and all preceding quarters, including first births occurring prior to first marriage.

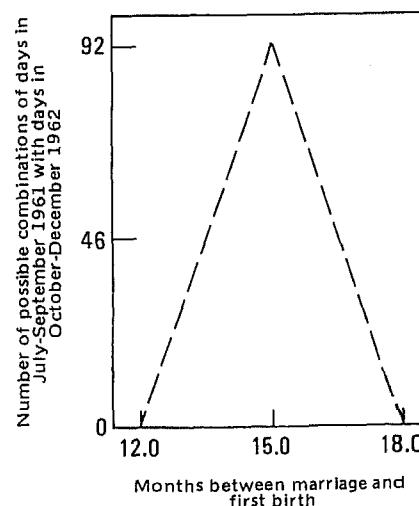
Because births and first marriages are dated in terms of calendar quarters, subtracting one date from another to make assignments to proper intervals can result in some errors of assignment. On the average, however, these errors tend to compensate for one another. For a more detailed explanation, see the section below entitled "Calendar Quarters and Intervals Between Dates."

### Calendar Quarters and Intervals Between Dates

In the tape files used for tabulation of 1970 census data, dates of birth and dates of first marriage are coded in terms of the calendar quarter (January-March, April-June, July-September, October-December) and the year. The month and day of the event are not available. The effect of using calendar quarters on the measurement of intervals between events is illustrated by the following example:

Suppose that a group of women married for the first time in July-September 1961 and that each of these women had a first child in October-December 1962. There are 5 calendar quarters in all between the two dates. If the 5 calendar quarters are multiplied by 3 months per quarter, the result is an estimated average spacing of 15 months. The true average spacing depends on how the women and their children are distributed within the two periods. If the women and their children are evenly distributed, then half of the women would have a spacing between mar-

riage and first birth of less than 15.0 months and half of more than 15.0 months. The largest number of combinations of a day in the quarter of marriage with a day in the quarter of first birth would be associated with a spacing exactly 15.0 months from the marriage day.<sup>1</sup> There would be progressively fewer combinations for successive exact spacings on either side of the peak value of 15.0 months. Half of all possible combinations would fall in a range of 27 days on either side of the median spacing of 15.0 months. The general nature of the distribution is illustrated by the following figure:



<sup>1</sup>For each of the 92 days in the marriage period (July-September), a day in the birth period (October-December) can be found that is *exactly* 15.0 months later. But there are only 91 possible combinations that yield an exact spacing of 1 day *less* than 15.0 months. There are only 90 combinations that yield an exact spacing of 2 days less than 15.0 months, and so on to a minimum of only one possible combination for the shortest interval of 1 day more than 12 months. On the other side of the midpoint of exactly 15.0 months, there are only 91 possible combinations that yield an exact spacing of 1 day *more* than 15.0 months, 90 that yield a spacing of 2 days more, and so on down to one combination for the longest possible interval of 1 day less than 18 months.

The above example illustrates the characteristics of the data that are obtained when one date expressed in calendar quarter and year is subtracted from another date expressed in calendar quarter and year. The result is a spacing interval that for a large group of women tends to correspond to the exact average spacing that might be figured from two dates in terms of a day, month, and year. In the example, "15 months" means exactly 15.0 months, not an interval such as the "15th month." Within the two calendar quarters, the possible combinations of pairs of days are such that there is concentration on intervals close to 15.0 months and very little chance of extreme errors of as much as 3 months on either side of the 15.0 months midpoint. This concentration means that even if the distribution of a large group of women is moderately skewed, the difference computed from calendar quarters and years should still come close to representing the average spacing interval for the group.

#### Age at First Marriage

The ages of women at first marriage were derived in the 1970 census by subtracting the woman's birth date from her date of first marriage. The calendar quarter (January-March, April-June, July-September, October-December) was known for each date but not the month and day. To simplify computer operations, it was assumed that the woman married after her birthday when the two dates shared the same calendar quarter. This procedure overstated by one year the age at first marriage in completed years for approximately half of the women whose two dates shared the same calendar quarter. There was no problem when the two dates involved

different calendar quarters. Assuming that the quarter of a woman's birth and first marriage are associated at random, the overstatements involve one woman in eight or about 12.5 percent of all women ever married.

When the date of first marriage was not reported, an age at first marriage was allocated by a computer edit program that took account of the woman's present age, marital status, and race, and also the age of her oldest own child living with her, if any. The computer edit assigned an age at first marriage on the basis of data recorded for the most recently processed woman with characteristics matching those of the woman who needed an allocation.

In the very rare instance in which a reported date of first marriage implied that the woman first married before age 14, the woman was assigned age 14 as her age at first marriage.

#### Times Married

Information on the number of times a person has been married is derived from a question which asks: "If this person has ever been married, has this person been married more than once?" Thus, for persons who had been married at any time before the census date, it is known whether those persons were married one time or more than one time, but it is not possible to distinguish among persons married two times, three times, etc.

#### Ratio of Family Income to Poverty Level

Tables 21 through 26 and tables 34 and 35 show cumulated first marriages and births cross-classified by the "ratio of family income to poverty level." This ratio is based on a series of pov-

erty thresholds which vary according to family size, presence and number of family members under 18 years old, sex of head of household, and farm-nonfarm residence. The ratio of family income in 1969 to poverty level is obtained by dividing the income of a family or unrelated individual by the appropriate poverty threshold.

The poverty thresholds in 1969 ranged from \$1,517 for a female unrelated individual living on a farm to \$6,123 for a nonfarm family of 7 or more persons with a male head. The average threshold for all families was \$3,380.

#### Low-Income District

A "low-income district" is defined for this report as an area in which the poverty rate (percent of persons with 1969 incomes below the poverty level) is 20 percent or more. The geographic area on which the statistics are based is the "weighting area" described in the "Ratio Estimation" section of Appendix D. These weighting areas are groups of generally contiguous enumeration districts with a minimum total population of 2,500 persons for the 15- and 20-percent samples and 25,000 persons for the 5-percent sample. They were originally defined for purposes of determining sample weighting factors. They were also utilized, however, for determining neighborhood or community characteristics, such as the percent of persons with incomes below poverty level. The concept of low-income districts as defined for this report differs from the concept employed in the 1970 Volume II report, PC(2)-9B, **Low-Income Areas in Large Cities**, where the low-income areas are defined in terms of census tracts rather than in terms of weighting areas.

### Uses and Limitations of the Data

The present report reconstructs the fertility history of women and, for women ever married, relates that history to the women's marital history. Such information permits the analysis of patterns of family building in terms of the date of the woman's first marriage and the birth dates of successive children within the same family. These patterns reveal differentials in the timing of children among various birth and marriage cohorts of women and among different social and economic subgroups within the population. These differentials in timing can shed light on corresponding differences in numbers of children ever born.

The reconstruction of fertility histories has also permitted the estimation of average annual age-specific birth rates for the 15 years prior to the 1970 census. These annual rates are shown either for single years or averaged for periods of 5 years in cross-classification with various social and economic characteristics.

The quality of response on number of children ever born in 1970 probably was similar to that in 1960. Comparisons of 1960 census reports on children ever born with matched birth registration records for 880 women ever married age 14 and over from a nationwide sample indicated that in 90 percent of cases the census report agreed exactly with the order of live birth reported on the birth certificate for the woman's latest baby. For 7 percent of the women the census report was lower (usually by 1 child) and in 2 percent it was higher, resulting in a *net* difference of 5 percent. Because many women had several children and because undercounts usually involve differences of only one

child, the average number of *children* ever born per woman differed by less than 5 percent. For example, matched white women 14 to 44 years old in the 1960 census test had an average of 2.60 children per mother according to the census reports and 2.61 according to the birth registration records. For those who were 45 years old and over the respective averages were 3.53 and 3.64, which represents a difference of 3 percent. (For further information, see Clyde V. Kiser, Wilson H. Grabill, and Arthur A. Campbell, *Trends and Variations in Fertility in the United States*, Harvard University Press, Cambridge, Mass., 1968, p. 306, table B.5.)

Various tables in this report show fertility rates for women who were single (i.e., never married) as of the 1970 census date. These data are probably of variable reliability from one group to another. The 1970 census was the first to seek data on children ever born to single women; hence, no previous experience is available as a point of comparison. Moreover, different subgroups within the population of single women may have been more willing than others to respond accurately to the question regarding children ever born.

Another limitation of the data presented in this report centers around the allocation of birth dates and sex for a woman's children who no longer live with her. Although the size of the error of estimation is unknown at the time of this writing, it is believed to be within reasonable limits. As explained in more detail in the section below on "Editing," the estimates implicitly assume that childspacing intervals for women of specified characteristics with all children present were about the same as the intervals for women with one or more children absent.

An additional limitation of the data relates to the allocation of birth dates for the children of single women. The procedures used tended to impute too many birth dates which implied that the mothers were 40 to 47 years old at the time of birth and, correspondingly, too few birth dates which would imply younger ages at childbirth. This bias has some effect on birth rates for women of all marital statuses combined, but it is most noticeable when rates are shown for single women alone.

The uses of data on the number of children ever born to women are enhanced when the data can be compared with the number of children that must be born in order to replace the women of one generation with those of the next. For example, since the sex ratio for all races (1940 to 1968 averages) is 1,052 males born for every 1,000 females, and since the 1968 U.S. life tables show 96.7 percent of female babies are expected to survive to age 27 (the approximate average age of childbearing), an average of 2,122 children per 1,000 women is required to provide 1,000 daughters who will survive to age 27. The current replacement quota, therefore, is about 2,122. A group of women (including single women as well as women ever married) whose rate of children ever born per 1,000 women falls below 2,122 has not yet reached the general replacement level of fertility. Groups of women whose rates exceed 2,122 have more than replaced themselves according to the overall replacement quota. Because sex ratios and especially mortality levels differ from group to group, replacement quotas for various groups of the population will differ.

Presented below are illustrative replacement quotas by race based on

the corresponding sex ratios at birth and on U.S. life tables for three dates:

Race	1968	1950	1940
All races ..	2,122	2,153	2,240
White ....	2,188	2,145	2,221
Negro ....	2,139	2,205	2,331

**DATA PREPARATION AND ADJUSTMENT**

**Editing**

The value of the data in this report depends in large measure on the specialized editing procedures that were employed. For that reason the procedures are described herein at some length.

Ideally, a report which presents data on the spacing of children and fertility rates in calendar periods should be based on fertility histories that have been constructed from responses to a series of questions on the date when each of a woman's children was born. For those of a woman's children who were identified as living with her at the time of the census, the birth dates were available from responses to the regular question on date of birth asked of everyone enumerated in the census. Thus, complete fertility histories were available for women who had all of their children present. For other women, it was necessary to make estimates of the birth date for each of the children who was absent.

An alternative procedure would have been to limit the data to women for whom complete fertility histories were available from census records. It was more satisfactory, however, to include estimates for women with children absent from home in order to

avoid various biases. The estimates preserved data for women with many children who had a greater likelihood of having had a child who died or was otherwise absent than a woman with fewer children. The estimates also preserved data for a woman married at a young age who was more likely to have an absent child than a woman who married at an older age. Any limitation to data for women with all children present would also have been more selective of white women than of Negro women.

The total number of children a woman had ever had was available from the response to the question on number of children ever born. The number of children no longer living with her, if any, was derivable by determining the number of her children still present in the household and then subtracting that figure from the number of her children ever born. Allocations (estimates) of birth dates for the absent children, if any, were made by a special procedure outlined later in this section.

After preliminary identification of a woman's own children living in the household with her, some exclusions were made to eliminate unlikely associations of mother and child. These exclusions included the following: (1) If a woman had married once but her husband more than once, any children born before the woman's date of first marriage were regarded as stepchildren of the woman and therefore not counted as her own natural children; (2) If a woman's son or daughter was born before the woman was 14 years old or after age 47, that child was regarded as an adopted child and not counted as her natural child; (3) If a woman had more "own children" present than she had children ever

born, the excess number was eliminated, starting from the oldest; and (4) If the difference between the birth dates of consecutive children was one or two calendar quarters, this unlikely spacing was avoided by not regarding the younger member in the pair of children as one of the woman's natural children.

The difference between the number of children ever born to a particular woman and the edited number of her own children present in the household gave the number of absent children for whom birth dates and sex had to be allocated. The goal was to make the allocations in such a manner as to preserve the information available for children living with their mother and, at the same time, to assign birth dates for the absent children to logical places before, between, or after the birth dates of the children present. An additional goal was to preserve proper distributions of time intervals between births, insofar as possible. These objectives were accomplished by matching a woman with children absent from home with a woman of similar characteristics who had all of her children living with her. The women were matched on the basis of age, race, number of children ever born, marital status, and interval since first marriage. A special procedure was then followed, as described below, to utilize the childspacing patterns observed for the woman with all children present and adapt them to the data for the woman who needed allocations for birth dates of absent children.

During the processing of records for successive households and persons, the computer maintained a "matrix" which contained information relating to childspacing intervals for women of specific characteristics (such as race,

length of marriage, number of children ever born) who had all their children present. The matrix cells were continually updated, so that, for each combination of characteristics, only data for the most recently processed woman were in storage at any given time. When the record of a woman who had absent children was being processed, the computer matched that woman with the appropriate "matrix" data needed to make the allocations. This procedure was repeated each time the record was encountered for a woman with children absent, usually with fresh data having been stored in the matrix. As a result, two consecutive women needing allocations were seldom assigned the same childspacing intervals. An example of the allocating procedure follows.

Suppose that a white woman whose first marriage occurred 17 years prior to the 1970 census reported having 4 children ever born. In the process of editing the records from the household in which she was enumerated, two persons were identified as being her children. For the two children living at home with their mother, information on date of birth and sex would be available; for the two children missing from the household, no information regarding birth date and sex would be available from the census record and so would have to be allocated. Since the date of the mother's first marriage is available, it is possible to derive the number of calendar quarters from the date of marriage to the birth date of the two children still at home. Let us suppose these two children, a female and a male, were born 17 and 38 quarters, respectively, after their mother's first marriage.

The woman with children absent would be compared with the most

recently processed woman who had all her children living with her in the household and who was white, first married 15 to 17 years prior to the census, and who had 4 children ever born. Let us suppose this woman's 4 children were born 7, 15, 26, and 35 quarters after their mother's first marriage and were, respectively, male, male, female, and male.

The oldest child of the woman requiring allocations was born 17 quarters after first marriage of mother and most nearly matches the child of the "matrix" woman that was born 15 quarters after the mother's first marriage. Two quarters are added to all spacing intervals in the matrix model, so that the 15 becomes a 17, as follows: 9, 17, 28, 37. The sex of the edited "17 quarters" child in the matrix is changed from male to female, to agree with the sex available from the census record for the "17 quarters" child of the woman requiring allocations. The second of the woman's two children remaining at home was born 38 quarters after the mother's first marriage. This child most closely matches the 37-quarters child in the adjusted matrix model. In this case, however, the "37" in the matrix model is changed to a 38 without any adjustment of the preceding numbers. (If any spacing intervals had followed the 37, they would have been adjusted by adding 1 quarter.) The 38-quarter child in the matrix is made a male to match the valid information from the census record for the 38-quarter child of the woman needing allocations.

The final spacing intervals for the woman with two children missing from the household are now assigned from the edited matrix as 9, 17, 28 and 38 quarters. The sex of the chil-

dren assigned is male, female, female, and male, respectively.

The results of the allocations preserve the original information of a female child born 17 quarters after first marriage and a male child born 38 quarters after first marriage. The missing children are assigned as a male born 9 quarters after first marriage and a female born 28 quarters after first marriage. Thus, *all* valid information is preserved from the woman needing the allocation, and the spacing information from the computer matrix is preserved *insofar as possible*.

The procedures employed for allocating birth dates to children absent from home differed for women who had ever been married and for women who had never been married as of the date of the census. For women ever married, spacing intervals of children related to the date of the mother's first marriage. For single women, however, the spacing data stored in the allocation matrix were ages of children. Subsequent review of tabulated data revealed that this procedure was adequate for single women when the woman requiring allocated data and the woman providing the allocation pattern were matched in age. However, allocations to never-married women in their forties were based on patterns derived from never-married women 35 to 39 years old. This resulted in the bias described above in the section on "Uses and Limitations of the Data."

#### Adjustment of Data to Compensate for Incomplete Cohort Experience

Tables 1 through 26 of this report show numbers of births and marriages and associated rates for "birth cohorts" of women who were born in 5-year periods from 1920-24 to

1950-54. Similarly, tables 27 through 45 show numbers of births and birth rates for "marriage cohorts" of women who were first married in specified 5-year periods from 1950-54 to 1965-69. Problems of comparability between cohorts can arise if years (or quarter years) of exposure to the events of marriage and/or childbearing are extended far enough beyond the woman's birth or her first marriage. Some of the women in a more recent cohort will not have had the same amount of exposure to the possibility of marriage or childbearing as will women in earlier cohorts. As a result, marriage or birth rates for women in the recent cohort might be lower than those of women in the earlier cohort, simply because the women in the recent cohort have not had the same amount of time to get married or have children as have the women in the earlier cohort.

To illustrate the problem outlined above, consider the data in table 2 where numbers of marriages and births are shown for six different birth cohorts of women. Comparison of the cohort of women born in 1945 to 1949 with the cohort born in 1940 to 1944 reveals the following facts:

1. Every woman in both cohorts is old enough as of the 1970 census date (April 1, 1970) to have had the possibility of experiencing an event (marriage or childbirth) through age 20.
2. All the women in the 1940 to 1944 cohort are old enough as of the census date to have had the possibility of experiencing an event through age 21.

However, women of the 1945 to 1949 birth cohort who were born

after April 1, 1949, were not old enough as of the census date to have completely lived out their 21st year and thus to have full exposure to the possibility of getting married or giving birth to a child through their 21st year. Moreover, none of the women born in 1945 to 1949 will be old enough to have had any exposure to the occurrence of event at age 26. On the other hand, all women born in 1940 to 1944 will have had complete exposure to the occurrence of events through age 25.

3. Unless the marriages and births occurring to women born in 1945 to 1949 are inflated or adjusted to allow for incomplete experience at those ages, there would be no reasonable comparison between women born in 1945 to 1949 and women born in 1940 to 1944.

The correction for incomplete cohort experience at a particular interval is to inflate the experience of that *part* of the cohort which has had full exposure to marriage or childbearing through the interval in question. The resulting value represents the projected experience for the *whole* cohort. For example, if 75 percent of the women in a birth cohort have lived long enough to be able to experience first marriage or a childbirth in the interval in question, then the number of marriages and births occurring to those women will be inflated by a factor of 1.333 (that is,  $1.00/.75$ ), as an estimate of the number of marriages or births that would have occurred if 100 percent of the cohort had been exposed to the possibility of marriage or childbirth in the interval.

This method of correction for incomplete cohort experience is based

on two assumptions: (1) It is assumed that women are born (in birth cohorts) or first married (in marriage cohorts) in equal numbers in each of the 20 calendar quarters in a 5-year period; and (2) It is also assumed that the marital or childbearing experience of the women in the cohort who did not contribute full experience to the cohort data will, when completed, be the same as that of those women who did contribute full experience. While these assumptions, especially the second, will not be invariably borne out by actual experience, they yield results which provide useful data for comparative purposes. The factors applicable to the cohort data in tables 1 through 45 are shown in text tables III, IV, and V.

Table III shows, for example, that the births experienced by women at age 22 who were born in 1945 to 1949 are to be inflated by a factor of 1.481. The procedure for arriving at this factor is outlined below. It is similar to that used for arriving at other factors in table III as well as those in tables IV and V.

Table VI shows which of the 16 quarters of life from age 20 through age 23 do (1) or do not (0) represent quarters of complete experience as of April 1, 1970, for women born in 1945 to 1949.

A woman born in the first quarter of 1945 had lived 100 complete quarter years as of April 1, 1970, the date of the census. She is old enough to have been exposed to the occurrence of events such as marriage and childbirth through all of age 23, that is, through the 93d complete quarter year of age. On the other hand, a woman born in the first quarter of 1948 was only 88 complete quarter years old as of the census date; as a result, this

woman has not been exposed to events occurring beyond the 88th quarter year of age, or not quite through age 22. A correction for this shortage of experience must project what she (and others like her) would have done if she had been exposed to the possibility of an event occurring through the 93d quarter year of age.

The proper correction for incomplete experience at age 22 for women born in 1945 to 1949 can be derived from table VI. There are 20 quarters in which women can be born in the 5-year period. A woman born in any one of these quarters must live through the 86th, 87th, 88th, and 89th quarters to experience a full year of exposure to the occurrence of events at age 22. Thus, full exposure for the 5-year birth cohort at age 22 will be 80 quarters. However, women born in 1945 to 1949 can provide full exposure in only 54 of those 80 quarters.

Hence, making the assumptions outlined above, we assume that they have experienced only 54/80 of the marriages or births that they might have experienced if they had been exposed to these events for the full 80

quarters. To correct for this deficiency, the incomplete experience is inflated by a factor of 80/54, or 1.481.

As the data are presented in tables 1 through 38, the numbers of marriages and births as well as the resulting rates are *cumulated* to specified ages or intervals since first marriage. Adjustment factors, however, were applied to *uncumulated* numbers after which cumulated numbers and rates were calculated.

As an example of the effect of adjustment for incomplete cohort experience and of the method for deriving the unadjusted data, consider table 2. For the birth cohort of 1945 to 1949 living in "central cities of urbanized areas," the cumulated births per 1,000 women of all races at age 22 is 594. As has been shown above, cohort experience at this age is incomplete and has been inflated by a factor of 1.481 (see table III). Subtracting the rate of 493 at age 21 from the rate of 594 at age 22 indicates that 101 births per 1,000 women took place at age 22. Division of 101 by the infla-

tion factor of 1.481 yields an estimate of 68 births per 1,000 women at age 22 *on an unadjusted and uncumulated basis*. Applying a similar procedure to the cumulated rate at age 21, which is the first adjusted rate for the 1945-to-1949 cohort, yields an unadjusted and uncumulated rate of 97 births per 1,000 women at age 21. Adding the 97 for age 21 and the 68 for age 22 to the cumulated rate of 382 at age 20 (which is the last unadjusted rate) yields an *unadjusted cumulated* rate of 547 at age 22. The effect of adjustment on the rate for age 22 can be seen by dividing the adjusted cumulated rate of 594 by the unadjusted cumulated rate of 547. The result is 1.086, which means that 8.6 percent of the births at age 22 were imputed by the adjustment procedure.

One of the most extensive series of adjustments occurs with the marriage cohort of 1965 to 1969 in tables 27 through 38. Table VII indicates how the adjustments were calculated and what their effects were on the cumulated births and birth rates for "total births" to women first married in 1965 to 1969, as shown in table 27.

TABLE III. Inflation Factors for Tables 1-26 To Be Applied to Uncumulated Numbers of Marriages and Numbers of Births

Age at event (year)	Year of woman's birth						
	1950-54	1945-49	1940-44	1935-39	1930-34	1925-29	1920-24
15.....	1.000	1.000	1.000	1.000	1.000	1.000	1.000
16.....	1.143	1.000	1.000	1.000	1.000	1.000	1.000
17.....	1.481	1.000	1.000	1.000	1.000	1.000	1.000
18.....	2.105	1.000	1.000	1.000	1.000	1.000	1.000
19.....	...	1.000	1.000	1.000	1.000	1.000	1.000
20.....	...	1.000	1.000	1.000	1.000	1.000	1.000
21.....	...	1.143	1.000	1.000	1.000	1.000	1.000
22.....	...	1.481	1.000	1.000	1.000	1.000	1.000
23.....	...	2.105	1.000	1.000	1.000	1.000	1.000
24.....	...	...	1.000	1.000	1.000	1.000	1.000
25.....	...	...	1.000	1.000	1.000	1.000	1.000
26.....	...	...	1.143	1.000	1.000	1.000	1.000
27.....	...	...	1.481	1.000	1.000	1.000	1.000
28.....	...	...	2.105	1.000	1.000	1.000	1.000
33.....	...	...	...	1.242	1.000	1.000	1.000
38.....	...	...	...	...	1.242	1.000	1.000
43.....	...	...	...	...	...	1.242	1.000
48.....	...	...	...	...	...	...	1.242

TABLE IV. Inflation Factors for Tables 27-38 To Be Applied to Uncumulated Numbers

Interval since first marriage	Year of woman's first marriage			
	1965-69	1960-64	1955-59	1950-54
Before first marriage .....	1.000	1.000	1.000	1.000
After first marriage:				
2 quarters .....	1.017	1.000	1.000	1.000
3 quarters .....	1.111	1.000	1.000	1.000
4 quarters .....	1.176	1.000	1.000	1.000
6 quarters .....	1.290	1.000	1.000	1.000
8 quarters .....	1.481	1.000	1.000	1.000
12 quarters .....	1.905	1.000	1.000	1.000
16 quarters .....	3.077	1.000	1.000	1.000
20 quarters .....	...	1.000	1.000	1.000
24 quarters .....	...	1.081	1.000	1.000
28 quarters .....	...	1.379	1.000	1.000
32 quarters .....	...	1.905	1.000	1.000
36 quarters .....	...	3.077	1.000	1.000
40 quarters .....	...	...	1.000	1.000
44 quarters .....	...	...	1.081	1.000
48 quarters .....	...	...	1.379	1.000
52 quarters .....	...	...	1.905	1.000
56 quarters .....	...	...	3.077	1.000
60 quarters .....	...	...	...	1.000
64 quarters .....	...	...	...	1.081
68 quarters .....	...	...	...	1.379
72 quarters .....	...	...	...	1.905
76 quarters .....	...	...	...	3.077

TABLE V. Inflation Factors for Tables 39-45 To Be Applied to Numbers of Births

Year of woman's first marriage and interval since first marriage	Inflation factor	Year of woman's first marriage and interval since first marriage	Inflation factor
First married 1965-69:		First married 1955-59:	
Less than 1 year .....	1.039	Less than 1 year to 9 years .....	1.000
1 year .....	1.290	10 years .....	1.039
2 years .....	1.739	11 years .....	1.290
3 years .....	2.667	12 years .....	1.739
		13 years .....	2.667
First married 1960-64:		First married 1950-54:	
Less than 1 year to 4 years .....	1.000	Less than 1 year to 14 years .....	1.000
5 years .....	1.039	15 years .....	1.039
6 years .....	1.290	16 years .....	1.290
7 years .....	1.739	17 years .....	1.739
8 years .....	2.667	18 years .....	2.667

TABLE VI. Complete Calendar Quarters Lived in Each of 16 Quarters Between Ages 20 and 23 Years by a Woman Born in a Specified Calendar Quarter From 1945 to 1949 and Surviving to the Date of the 1970 Census

Year and quarter of birth	Age in completed quarters at date of 1970 census	Year and quarter of year of life															
		20 years				21 years				22 years				23 years			
		78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
1945: Jan.-Mar. . . . .	100	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Apr.-June . . . . .	99	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July-Sept. . . . .	98	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oct.-Dec. . . . .	97	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1946: Jan.-Mar. . . . .	96	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Apr.-June . . . . .	95	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
July-Sept. . . . .	94	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oct.-Dec. . . . .	93	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1947: Jan.-Mar. . . . .	92	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Apr.-June . . . . .	91	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
July-Sept. . . . .	90	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
Oct.-Dec. . . . .	89	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
1948: Jan.-Mar. . . . .	88	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Apr.-June . . . . .	87	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
July-Sept. . . . .	86	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
Oct.-Dec. . . . .	85	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
1949: Jan.-Mar. . . . .	84	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Apr.-June . . . . .	83	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
July-Sept. . . . .	82	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Oct.-Dec. . . . .	81	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0

TABLE VII. Calculations to Correct for Incomplete Marriage Cohort Experience, for Women of All Races First Married in 1965 to 1969

Subject	Uncumulated			Cumulated			
	Unadjusted numbers	Inflation factor	Adjusted numbers (a)x(b)	Adjusted numbers Σ(c)	Published rate $\frac{1,000(d)}{7,276,343}$	Unadjusted numbers Σ(a)	Ratio of adjusted to unadjusted births (d)/(f)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Number of women first married in 1965 to 1969.	7,276,343	...	...	...	...	...	...
Total births in specified interval since first marriage:							
Before first marriage ..	1,047,275	1.000	1,047,275	1,047,275	144	1,047,275	1.000
After first marriage:							
2 quarters .....	1,267,614	1.017	1,289,163	2,336,438	321	2,314,889	1.009
3 quarters .....	681,899	1.111	757,590	3,094,028	425	2,996,788	1.032
4 quarters .....	526,940	1.176	619,681	3,713,709	510	3,523,728	1.054
6 quarters .....	759,205	1.290	979,374	4,693,083	645	4,282,933	1.096
8 quarters .....	618,104	1.481	915,412	5,608,495	771	4,901,037	1.144
12 quarters .....	926,668	1.905	1,765,302	7,373,797	1,013	5,827,705	1.265
16 quarters .....	550,456	3.077	1,693,753	9,067,550	1,246	6,378,161	1.422