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To the Graduate Council:

I am submitting herewith a thesis written by Walter Watkins Robinson entitled "An Examination of Open and Closed Birth Intervals by Parity and Age for White and Nonwhite Women of 1/1000 Five Percent Sample of U. S. Population of 1970." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Sociology.

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AN EXAMINATION OF OPEN AND CLOSED BIRTH INTERVALS BY PARITY AND AGE FOR WHITE AND NONWHITE WOMEN OF 1/1000 FIVE PERCENT SAMPLE OF U. S. POPULATION OF 1970

A Thesis

Presented to

the Graduate Council of

The University of Tennessee

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

---

by

Walter Watkins Robinson

March 1974

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ABSTRACT

The 1970 United States Census provides a sizable data source which is readily amenable to secondary analysis using computer applications. Data consist of information relating to mother's age, marital duration, parity, and race. Special attention is given to relationships between open and closed birth intervals by parity as these are controlled on mother's age, marital duration, and race. This study replicates Srinivasan's earlier work (1970). It finds that, while the open and the closed intervals are closely correlated with parity and age, the open interval is the stronger correlate. This study broadens the previous study by examining a sample population of the 1970 U. S. population with high contraceptive acceptance. By reporting sample calculations for whites and nonwhites, the open interval as a measure attains an even wider applicability in this study.

Several problems with quarter data are given careful consideration. The year of event is calculated from age at Census data and several problems of misclassification are discussed. Where the year cannot be retrojected from age data, the probabilities of error are given. Premarital conception from quarter data is calculated and corrected according to error probabilities.

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CHAPTER I

THESIS ORIENTATION

I. INTRODUCTION

Since the early 1930's[1] studies on childspacing behavior of women in the United States have appeared in the demographic literature. Investigations have differed in sample size[2] (large versus small), methods of selection[3] (probability versus nonprobability),

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[1] In an early study, Sydenstricker (1932) provides a cross-sectional interview study of 1036 rural native born women married once before age 30 with childbearing assumed complete and no history of permanent separation.

[2] Hastings (1971) contrived a sample from the 1960 U. S. Census for 14,488 white and 952 nonwhite couples. Leslie, Christensen, and Pearman (1955) used a cross-sectional mail questionnaire for 369 college graduates of Purdue University. Sample sizes of most other studies were usually greater than 1000. See Christensen (1938, 1939) for a sample size of 1670; Christensen and Bowden (1953), for 1531; Anderson (1947), for 944; Schachter (1958), for 7000; Freedman, Whelpton, and Campbell (1959), for 2713; Whelpton (1964), for 2986 white and 270 nonwhite; Westoff, Potter, Jr., and Sagi (1963), for 1165 white and 905 nonwhite; and Stix and Notestein (1940), for 991.

[3] Purposive sampling, a common form of nonprobability selection, studies a particular population in its entirety, as the Purdue graduates (Leslie, Christensen, and Pearman, 1955). Purposive sampling is also used by Sydenstricker (1932); Christensen (1938, 1939); Christensen and Bowden (1953); Anderson (1947); and Stix and Notestein (1940). Probability selection characterizes a total population by analysis of a representative sample of the total population. Studies using probability selection include Schachter (1958); Freedman, Whelpton, and Campbell (1959); Whelpton (1964); Westoff, Potter, Jr., and Sagi (1963); Glass and Grebenik (1954); and Grabill and Parke, Jr. (1961).

coverage[4] (regional versus national), composition[5] (homogeneous versus hetereogeneous), methods of data collection[6] (interview, questionnaire, clinical records, and record linkage), temporal range[7]

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[4]Regional studies include Sydenstricker (1932) in rural New York; Christensen (1938, 1939) in urban Utah; Christensen and Bowden (1953) in Tippecanoe County, Indiana; and Stix and Notestein (1940) of urban Jews in New York City. National and census studies include Schachter (1958) and the Current Population Survey; Freedman, Whelpton, and Campbell (1959); Whelpton (1964); Grabill, Whelpton, and Kiser (1958) in a review of the 1950 Census material; Glass and Grebenik (1954) in a census survey of England, Wales, and Scotland; and Grabill and Parke, Jr. (1961), with the United States Census Survey.

[5]Stix and Notestein (1940) study a population comprised predominately of foreign born urban Jews; Christensen (1938, 1939) studied native born white women in Utah. Other relatively homogeneous studies include Sydenstricker (1932) of women in rural New York; Christensen and Bowden (1953) of native born white once-married women in Tippecanoe County, Indiana; Leslie, Christensen, and Pearman (1955) of college graduates of Cornell University. Census studies (Grabill, Whelpton, and Kiser, 1958; Glass and Grebenik, 1954; Grabill and Parke, Jr., 1961; and Hastings, 1971) and population surveys (Schachter and Grabill, 1958) provide a representative hetereogeneous sample, limited only by the requirements of selection. The composition of a study is often determined by the method of selection; probability selection determining the more hetereogeneous sample, although this does not have to be the case.

[6]Interview studies include Sydenstricker (1932), Schachter (1958); Freedman, Whelpton, and Campbell (1959); Whelpton (1964); and Westoff, Potter, Jr., and Sagi (1961, 1963). Leslie, Christensen, and Pearman (1955); and Anderson (1947); used mail questionnaires. Christensen and Bowden (1953), and Stix and Notestein (1940), linked clinical records across time to develop their childspacing patterns.

[7]Cross-sectional studies collect data for one time period, but longitudinal studies collect comparable data for separate time periods.

(cross-sectional versus longitudinal), and in assumptions regarding the nature of fertility histories[8] (completed versus incompleted). Most early studies were confined to small purposive samples or populations contrived according to some set of selected demographic, social, or economic characteristics. Typically, analyses emphasized the closed intervals between marriage and first event and between successive events rather than the open interval. These intervals were measured in terms of modes, medians, and means. Reasons for this selective focus included: 1) the relative ease in working with a homogeneous sample; 2) the absence of ready access to computers for processing large data sets; and 3) the logical and statistical elegance in working with closed intervals.

With the increased use of probability sampling techniques in large-scale demographic research and access to computers for data analysis as well as the recent refinement in analytic techniques, more detailed measurement and description of childspacing behavior is now feasible. These recent analytic innovations permit detailed analysis of childspacing behavior as well as the study of the open interval as a predictive correlate of completed fertility performance. Such an

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[8]Studies assuming childbearing complete (Sydenstricker, 1932; Leslie, Christensen, and Pearman, 1955; and Anderson, 1947) may be underestimating childbirth intervals, since women may have children after the survey date, thus increasing interval length. This assumption is especially vulnerable in data of young couples which may have children after the survey. Unfortunately, studies of older couples, where the completed childbearing assumption is more valid, do little to develop an idea of current population trends, since the older couples do not contribute substantially to current childbearing.

approach is empirically useful if one is to understand the changes in tempo of fertility as well as fluctuations in these trends due to changes in childspacing behavior.

II. PROBLEM STATEMENT

The 1970 United States Census provides a sizable data source which is readily amenable to secondary analysis using computer applications. Data consist of information relating to mother's age, marital duration, parity, and race. Special attention is given to relationships between open and closed intervals by parity as these are controlled on mother's age, marital duration, and race.

III. THESIS ORGANIZATION

Chapter II, THEORETICAL FRAMEWORK, presents an analytical framework for a woman's reproductive history which is helpful in understanding closed and open intervals and their relations. Interval terms are defined, the analytical framework is presented, and the statistical setting for the theoretical approach is described.

Chapter III, METHODOLOGY AND HYPOTHESIS, describes the data source and the new method of data collection and treatment. The general methods for interval calculations and error probabilities in calculation are discussed. The limitations of this study sample file by age, race, and parity are discussed in light of known proportionate distributions for the U. S. An orderly presentation of birth interval hypotheses from childspacing literature completes the chapter.

Chapter IV, REPLICATION OF HYPOTHESES, examines distributive relationships for the sample and confirms or does not confirm prior empirical generalizations presented. Intuitive comprehension is aided by graphic presentation of some of the data.

Chapter V, OVERVIEW, discusses some of the weaknesses in past approaches to the study of closed and open intervals and suggests improvements.

CHAPTER II

THEORETICAL FRAMEWORK

I. SELECTED DEFINITIONS EMPLOYED

Before presenting the analytical framework of a woman's reproductive history, some of the terms used in the framework are defined:

1. An "incident" refers to marriage, birth, or survey date.

2. An "event" refers to incidents of marriage and birth in a woman's reproductive life. Marriage is the initial event and births are subsequent events.

3. The "survey date" refers to the incident of data collection.

4. "Parity" refers to the number of live children in a woman's reproductive history; with "parity i" referring to i children in birth history.

5. A "closed interval" refers to the time span T between adjoining events. A woman of parity i has i closed intervals.

6. An "open interval" refers to the time span U between the last event and the survey date. Each married woman has only one open interval.

7. A "density distribution" refers to the interval proportions from an original incident to a terminal incident,[9] with one proportion

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[9]"Incident" rather than "event" is used in order to include the open interval distribution within our definition, since the open interval has no terminal event.

in each discrete time span (in this study, quarter) where the proportion is defined as the number of incidents for the time span divided by the total number of incidents for the interval.

8. A "cumulative distribution" refers to accumulated density distributions across the entire time axis. The value of the cumulative distribution at any given time span refers to the cumulative proportion of incidents from the original incident to the given time span, inclusively.

II. ANALYTICAL FRAMEWORK

A framework for viewing the open interval as a predictive correlate for other birth measures may be developed by an analysis of the fertility history for any woman. A woman of parity i (with i children) is said to have experienced i + 1 events (one marriage event + i birth events: serially 0, 1, 2, ..., i - 1, i) in her birth interval history and the i adjoining pairs of these successive events define the bounds of i closed intervals (respectively T_0, T_1, T_2, ..., T_{i-2}, T_{i-1}). The initial event 0 is defined as the marriage with each succeeding event being a birth. The initial closed interval T_0 is the time interval between marriage and first birth, T_1 between first and second birth, and T_{i-1} between (i - 1)th birth and i^{th} birth. Between event i for a woman and the survey date at time i+, an unbounded (open, or not terminated by a birth) time interval is formed called the open birth interval U_i. At parity 0 a woman has no closed interval but one open interval U_0. A woman of any given parity $i > 0$ has one open and $i > 0$ closed intervals.

For a population of women (aggregate) at a given parity > 0. this framework adjoins to that parity one closed interval (from the last to last event to the last event) and one open interval (from the next event to the survey date). The population of women at parity 0 is not studied in this thesis since an adjoining closed interval does not exist.

Since at the time of the survey for a given woman at parity i, U_i is known but T_i is yet to be realized being in the future, this thesis compares U_i with T_{i-1} (see Figure 1). That is, the time after the last birth is compared with the time before the last birth by each parity for each woman. This thesis compares (correlates) for each parity i the open birth interval U_i with the last closed birth interval T_{i-1} by mother's age, marital duration, and race. This comparison helps determine the relationship between U_i and T_{i-1} and to what extent U_i might be used as a predictive correlate of T_{i-1}.

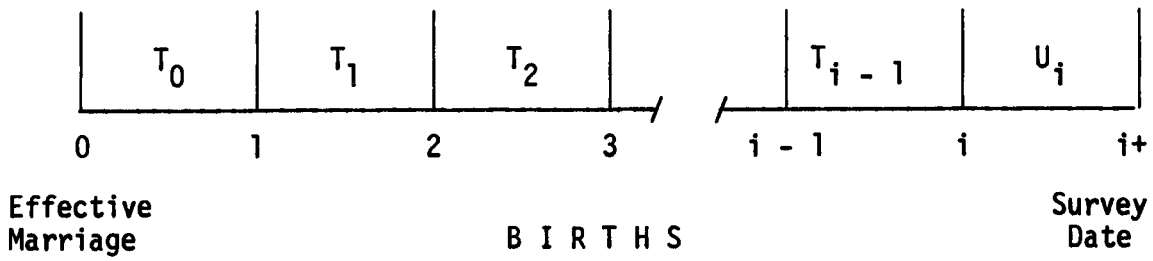


Figure 1. Analytical model of a woman's reproductive history.

III. STATISTICAL SETTING

Proceeding from different mathematical bases such as elementary probability, advanced calculus, and higher statistics, attempts (Brass, 1958; Jain, 1970; Potter, Jr., 1960, 1963; Sheps, 1964; Srinivasan, 1968) have developed relations for the mean and variance and general probability distributions for intervals between live births. The reproductive life of a woman may be considered a class of stochastic processes (especially, Markov Renewal Processes), because each new birth interval is determined by the previous interval but is completely independent of the way the previous interval has been achieved. The distribution of each new future birth interval may be predicted if assumptions are made about the pattern of births in the past and these patterns are extrapolated into the future. Extrapolating previous patterns into the future under three assumptions, general moment expressions for open intervals are developed theoretically by Srinivasan (1968). These assumptions concern themselves with rectangular distributions within T_i, occurrence of i^{th} order births, parity progression ratios, and time-dependent rates of birth occurrencies. Development of empirical correlations between U_i and T_i under each of these three assumptions is theoretically possible, yet impractical since data are unavailable. The theoretical model, however, does provide a useful analytical model in understanding demographic dependencies of birth intervals. Srinivasan (1970) quantitatively compares the open interval U_i with the associated closed interval T_{i-1} in an attempt to obtain more useful results.

One important difference between Srinivasan's articles in 1968 and in 1970 which was not emphasized in the articles is that the early article investigates relations between the open interval and the future closed interval that it forms, while the later article compares the open interval with the last closed interval for a woman. Technically the early article derives expressions of U_i in terms of T_i, while the later derives U_i in terms of T_{i-1}. This study follows the pattern of the later article.

The high correlation of the open interval U_i and the closed interval T_{i-1} with parity reflects the reliability of these measures as indirect indices of cumulative fertility (Srinivasan, 1970). While the open and the closed intervals are closely correlated with parity and age, the open interval is the stronger correlate. This suggests that the average open interval has empirical utility for measuring fertility (parity) and age in areas of the world where reliable records of birth patterns are not available (through illiteracy or lack of vital records). Srinivasan's Indian study (1970) measuring the open interval focuses on an undeveloped nation state with low contraceptive acceptance. This study broadens Srinivasan's work while examining a sample population of the 1970 U. S. Census, where contraceptive acceptance is high.

CHAPTER III

METHODOLOGY AND HYPOTHESES

I. DATA SOURCE

In this thesis childspacing performances for all once-married women with no history of marital separation and with all children currently in the household are examined using data contained in the 1/1000 five percent public use sample file published by the Bureau of the Census (U. S. Bureau of the Census, 1972). For each sample household, records were identified for head, spouse of head, other adults, and any children present. Each record contained items pertaining to demographic, social, and economic characteristics of the person, his family, and his household. By appropriate cross-referencing of selected characteristics, identification was made of persons in a household and household records were delimited to approximate the nuclear family unit.

Before a woman was included on the sample file, all necessary information for her complete reproductive history had to be present.[10] Childless women and all women who were separated from their husbands, widowed, divorced, or married more than once were eliminated in order to obtain fertility histories in which the contributory effect of

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[10]Requirements for a woman's being included on the sample file are reduced to the following: 1) both husband and wife are first married and present in the household, with no other household members than their children; 2) one or more children are present, all children born to the mother are present, and all births are single-birth; and 3) validity checks within and between records of all households are passed; both marriage data and household data must prove consistent. These restrictions reduce extraneous factors which affect childspacing or which reduce the accuracy of estimation of intervals between events.

separation upon childspacing intervals was minimized. (Previous separations not affecting order of marriage do not appear in the data and cannot be controlled.) Couples for whom number of children present in the household differs from number of children ever born were eliminated. This delimitation partly reduces potential inaccuracies which may occur in their fertility records due to death and adoption. Couples with multiple births also were deleted from the sample. (For a similar method of sample selection, see Hastings, 1970.)

II. DETAILS OF CALCULATION AND ASSOCIATED ERROR PROBABILITIES

The exact methods of calculating intervals from age deserve detailed discussion considering the extra difficulty of dealing with quarter data.[11] (See Table 1 for illustrations.) To establish a complete reproductive history for a woman, the date of each incident (marriage event, birth events, Census incident) is needed. The Census file provides: 1) quarter of marriage and age of mother at marriage, 2) quarter of each child's birth and age of each child at Census, and 3) date of Census (April 1, 1970). These data give the quarter of all events but do not supply the needed year of events, but each event is indirectly referenced by age. For a complete reproductive history, from Census data expressed in ages it is possible to calculate: 1) the year of marriage and 2) the year

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[11] Census defines January through March as quarter 0, April through June as quarter 1, July through September as quarter 2, and October through December as quarter 3. For consistency this study follows the Census definition.

Table 1. Example of woman's reproductive history and calculation of event dates and birth intervals

Family identification - 366 Number of children - 5		Census Data	Year of Marriage	Relative Quarter of Marriage	Year of Birth	Relative Quarter of Birth	Interval in Quarters from Previous Event
Father	Age	38	59	236			
	Quarter of birth	2					
	Age at marriage	27					
	Quarter of marriage	0					
Mother	Age	31	59	236			
	Quarter of birth	3					
	Age at marriage	20					
	Quarter of marriage	0					
Child 1	Age	10			60	240	4
	Quarter of birth	0					
Child 2	Age	8			61	246	6
	Quarter of birth	2					
Child 3	Age	7			62	251	5
	Quarter of birth	3					
Child 4	Age	6			63	255	4
	Quarter of birth	3					
Child 5	Age	3			66	265	10
	Quarter of birth	1					
Census	Year of Census	70			(70)	(281)	16
	Quarter of Census	1					

of each child's birth. After the years of marriage and birth are calculated, the quarter intervals between all events (closed intervals) and between the final event and Census date (open interval) may be calculated.

To obtain the year of marriage, these computations are made: 1) the age of mother at marriage (given) is subtracted from the age of mother at Census (given) giving the marital duration of mother; and 2) marital duration is subtracted from the year of mother's last birthday[12] giving the year of last birthday previous to marriage; and 3) mother's year of marriage is determined by moving forward from birth quarter in the year of last birthday previous to marriage to the marriage quarter (when marriage quarter is less than birth quarter, move forward to next year).

The preceding procedure accurately calculates the year of marriage in most cases, but a case exists in which the above steps are not valid.

This case arises when the marriage quarter is the same as the birth quarter. It becomes impossible to determine in which year the couple was married--in the year calculated or in the following year. If a woman, who was born June 10, 1945, and married June 1, 1964, were included in the Census file, her quarter of birth and quarter of marriage would both be recorded in the Census as 1, age would be 24,

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[12]The year of mother's last birthday is implied from quarter of birth; if mother is born in quarter 0 (January through March), the year of last birthday is the Census year 1970; if born in any other quarter, the year of last birthday is the previous year 1969.

and age at marriage would be 18 (see Figure 2). Applying the above procedure, the year of marriage would be calculated as of 1963, which is a contradictory classification. (This example shows that quarter data in ages cannot always accurately recreate information in years.)

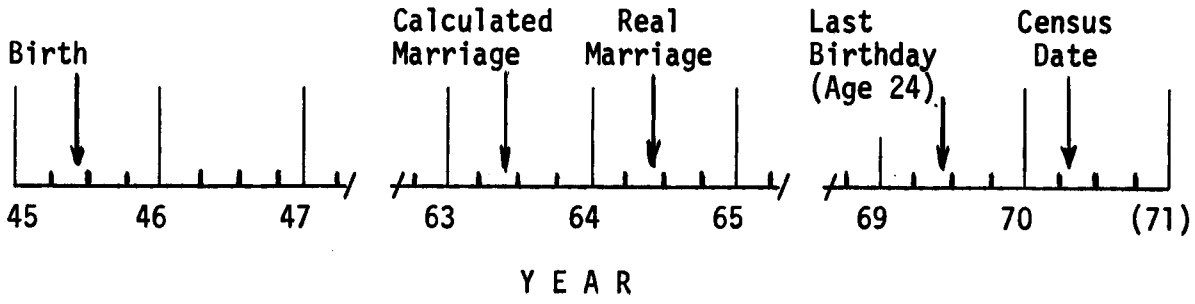


Figure 2. Example of misclassification of woman's year of marriage.

Since this type of error no doubt occurs, the percentage estimate of records in such error is required to access the accuracy of year of marriage calculations. Assuming the woman has an even chance of being married in any quarter, the probability of this calculation is the product of the separate probabilities of marriage and birth being the same quarter. Theoretically,

$$P\left\{\begin{matrix}\text{birth quarter} = \\ \text{marriage quarter}\end{matrix}\right\} = \sum_{\text{quarter}=0}^{3}\left[P\left\{\begin{matrix}\text{birth} \\ \text{quarter}\end{matrix}\right\} * P\left\{\begin{matrix}\text{marriage} \\ \text{quarter}\end{matrix}\right\}\right]$$

$$= 4\ (1/4)\ (1/4) = .250$$

Fortunately quarter probabilities of birth and of marriage have been calculated (Table 2). Knowing these, the real probabilities may be substituted into the general probability relationship.

$$P\left\{\begin{matrix}\text{birth quarter} = \\ \text{marriage quarter}\end{matrix}\right\} = .181(.255) + .298(.208) + .282(.310) + .239(.227)$$

$$= .065 + .062 + .087 + .054 = .268$$

Since only half of the occurrencies of common birth and marriage quarters will be in error, the error probability will be one-half of .250 (1/8 or .125) for the theoretical case, but as a real probability,

$$P\left\{\text{error}\right\} = 1/2\ (.268) = .134$$

Table 2. Proportion of sample file women married and born in given quarters of the year

Quarter	Birth Proportion	Married Proportion
0	.255	.181
1	.208	.298
2	.310	.282
3	.227	.239

To reduce this type of error, one can calculate the date of marriage using the husband's data and compare it with the date of marriage for the wife. In the .268 cases where the mother's data are misclassified, the husband's data have about .268 chance of also being misclassified. In case of the possibility of wife's quarter of marriage being misclassified, where the husband is not born the same

quarter as the quarter of marriage, the husband's data are used since his data are not misclassified. This possibility of using the husband's data instead of the wife's data further reduces the possibility of marriage misclassification into the incorrect year.

$$P\left\{\begin{matrix}\text{marriage}\\ \text{misclassi-}\\ \text{fication}\end{matrix}\right\} = P\left\{\begin{matrix}\text{wife}\\ \text{misclassi-}\\ \text{fication}\end{matrix}\right\} * P\left\{\begin{matrix}\text{husband}\\ \text{misclassi-}\\ \text{fication}\end{matrix}\right\}$$

$$= .268\ (.268) = .072$$

$$P\left\{\text{error}\right\} = 1/2\ (.072) = .036$$

Even if both husband's and wife's year of marriage cannot be determined exactly, the woman is accepted into the sample because the misclassification error is reduced in significance since limited emphasis is placed on the year of marriage in this study's framework.

The Census calculations of proportions agree closely with the above calculated probabilities. Of the women observed, .254 were married in their birth quarter. Of these married in their birth quarter, .072 were not able to be resolved by reference to the husband's birth quarter (he was born the same quarter as the wife, in the quarter of marriage).

$$\text{Proportion of women}\ \left\{\begin{matrix}\text{birth quarter =}\\ \text{marriage quarter}\end{matrix}\right\} = .254$$

$$\text{Proportion}\ \left\{\begin{matrix}\text{marriage}\\ \text{misclassi-}\\ \text{fication}\end{matrix}\right\} = .072$$

Deviation of the proportions observed from the probabilities calculated may be explained by noting the chance of birth or of marriage in a quarter is not a rectangular distribution (that is, some days have more chance than other for an event: early weeks of June have greater likelihood of a marriage event than other days in quarter 1). Consequently, it is remarkable that observed proportions agree as closely as they do with calculated probabilities.

To obtain a child's year of birth, subtract the child's age at Census from the year of his last birthday.[13] If the child is age 3 at Census and born in quarter 0, then 3 would be subtracted from 1970 (the year of last birthday) to give 1967 as the year of birth.

III. INTERVAL CALCULATION

From data contained in the sample file, statistical moments on open and on closed intervals and correlations between intervals were calculated for selected variables. These selected variables are race, age of mother, parity, and marital duration.

As a prerequisite to these calculations, the interval lengths themselves were derived from age data contained in the Census. All data necessary for derivation of time intervals in quarters are obtained for the following items: mother's quarter of birth, age at Census, and age at marriage and quarter of marriage; and for each child,

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[13]The year of the child's last birthday is implied from quarter of birth; if child is born in quarter 0 (January through March, the year of last birthday is the Census year 1970; if born in any other quarter, the year of last birthday is the previous year, 1969.

age at Census and quarter of birth. (Census is dated April 1, 1970.) From these data, for each mother were calculated years at marriage in quarters (event 0), year of each birth in quarters (events 1 to i), and date of Census in quarters (incident i+), Figure 3, which is the woman described in Table 1, page 13. From these calculations, the i closed intervals (T_0, T_1, T_2, ..., T_{i-2}, T_{i-1}) were obtained by subtraction of the quarter-date of event i (final event) from the quarter-date of the Census (i+). Those women married after the quarter of first birth (premarital births, negative T_0) were excluded from thesis consideration.

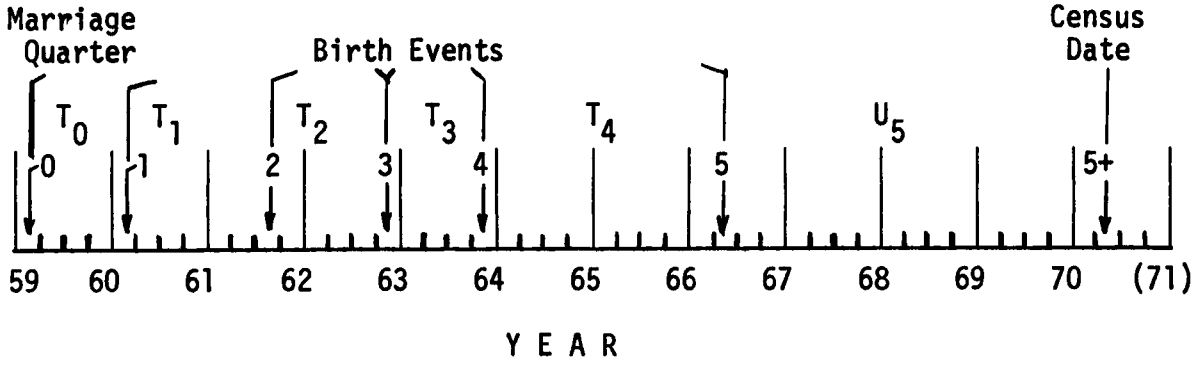


Figure 3. Example of woman from Census with five children, birth intervals calculated.

Quarter intervals are not accurate to month and day and are difficult to calculate. All quarter calculations are checked through recalculation, but this check cannot assure accuracy to less than one quarter since all data are in quarters. First, quarter and year of birth event were calculated from the Census data given, and second, the

Census data were recalculated from the quarter and year of event; the Census data recalculated agreed with the Census data given, and accuracy of calculation was thus confirmed. Fortunately, replication of empirical generalizations, herein loosely called hypotheses, does not appear to be seriously hindered by quarter data. If the Census provided all dates by month, day, and year, childspacing intervals would be more precise and easier to calculate. Certain problems of estimation which proved difficult are discussed below.

IV. PREMARITAL CONCEPTIONS AND QUARTER INTERVALS

Since the literature and some of the hypotheses in this thesis focus on the premaritally pregnant, a method of estimating premarital pregnancy is developed. Quarter intervals present a special problem in determining the percentage premaritally pregnant since some degree of error is present when working with intervals expressed in quarters. A premarital conception may be said to occur when the time interval from marriage to first birth is less than the interval of gestation. The gestation period counting from the first day of the last menstrual period is about 280 days, 10 lunar months, 40 weeks, or 3.15 quarters; since the interval from the first day of menstruation to ovulation averages 13 days, the mean interval of gestation must be 267 days, 38 weeks, or 3.0 quarters (Eastman and Hellman, 1966:218). Naegele's Rule which is used by medical men accurately predicts the date of birth: count back three months from the first day of the last menstrual period and add seven days. Deviation from this calculated date of confinement (Figure 4) follows the pattern in Table 3 (Eastman and Hellman, 1966:218).

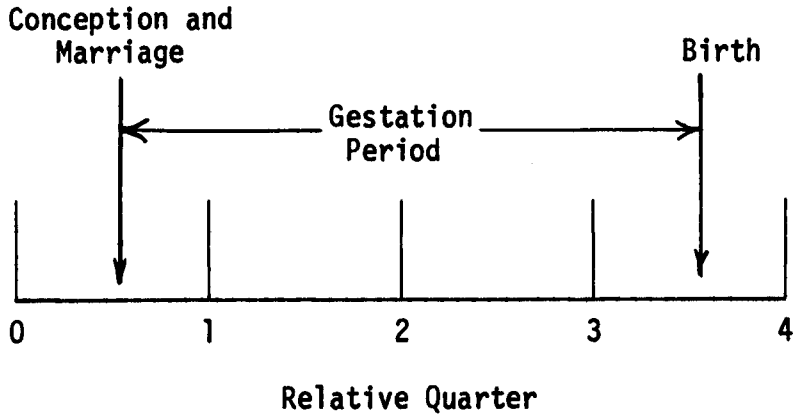


Figure 4. Interval of gestation from quarter of marriage to quarter of birth.

Table 3. Deviation from calculated day of confinement, according to Naegele's Rule, of 4656 births of mature infants

	Proportions				
Deviation in Days	Early Delivery	Early Delivery Cumulative	Delivery on Calculated	Late Delivery	Late Delivery Cumulative
0		(.575)	.041		(.575)
1-5	.185	.534		.166	.741
6-10	.131	.349		.122	.863
11-20	.157	.218		.099	.962
21-30	.045	.061		.029	.991
31+	.016	.016		.009	1.000
Total	.534		.041	.425	1.000

A premarital conception is probable when a birth occurs in the second quarter (quarter i + 2) from marriage (quarter i). From our data of Naegele's Rule, however, it is possible that marrying in the first few weeks of the second succeeding quarter does not necessarily define a premarital conception. If the proportions of Table 3 are used as probabilities, the probability of a second quarter postmarital conception may be calculated.

$$P\left\{\begin{array}{l}\text{premarital}\\ \text{conception,}\\ \text{second quarter}\\ \text{birth}\end{array}\right\} = \sum_{n=1}^{13}\left[P\left\{\begin{array}{l}\text{marriage}\\ \text{in nth}\\ \text{week of}\\ \text{quarter}\end{array}\right\} * P\left\{\begin{array}{l}\text{early delivery}\\ \text{by (n - 1)}\\ \text{weeks or earlier}\end{array}\right\}\right]$$

$$P\{PMC,SQB\}_{max} = (1/13)\ (.575 + .534 + .349 + .218 + .061 + .016)$$

$$= (1/13)\ (1.753) = .135$$

$$P\{PMC,SQB\}_{min} = (1/13\ (.575 + .349 + .218 + .061 + .061 + .016)$$

$$= (1/13)\ (1.280) = .098$$

$$P\{PMC,SQB\}_{\text{approxi-mation}} = (.135 + .098) / 2 = .233 / 2 = .116$$

Hence, in the distribution of the first parity, the proportion of births occurring within the second succeeding quarter may be construed as containing less than twelve percent of births that were not premaritally conceived. It should be noted that this calculation is rough, but the imposition of minimum and maximum probabilities define the limits of error. The probability does not account for premature births which are postmaritally conceived under the above scheme and

appear as premarital conceptions, but these constitute only a small percentage of second succeeding quarter births and are negligible.

V. STUDY SAMPLE LIMITATIONS

The U. S. sample file contains 277,755 records (representing 64,865 women). After eliminating cases which failed to meet requirements (Table 4) for inclusion in the study population, a final sample file consisting of 12,264 women was constructed. A total of 11,521 white and 743 nonwhite couples was included in the study sample file. The requirements of selection for the sample tended to overrepresent women who were just beginning their childbearing careers; that is, the lower parities, lower ages, and lower marital durations. The majority of women (61 percent) were in the first and the second parity. A majority (61 percent) were also less than 35 years old. Over half (63 percent) were married less than 15 years. Not only did the requirements of selection overrepresent lower parities but underrepresented nonwhites, especially in higher parities. The 6.5 percent nonwhite is less than the national percent for nonwhite married couples. Failure to meet the rigid requirements of selection was higher for nonwhites than for whites because of children moving off, higher deaths in the nonwhite population, and divorce and separation in the nonwhite family. In lower parities, at lower ages, and at lower marital durations, however, the percent nonwhite approaches a representative national average. Apparently the requirements of selection underrepresent nonwhites, particularly in later stages of family history.

Table 4. Accounting of women eliminated through requirements of selection

Reason for Failure of Selection	(N) Number of Women[a]	(E) Number Eliminated	(R) Remaining Number of Women
Not husband-wife family	64,865	23,957	40,908
Children ever born not equal to children in household	40,908	24,859	16,049
Multiple marriage, Birth inconsistency, Record inconsistency	16,049	3,175	12,874
Premarital birth	12,874	610	12,264

[a] N - E = R.

One suspects that the biases of over- and underrepresentation of whites and nonwhites included in the sample as opposed to national figures would parallel those noted in the study of the 1/1000 sample of the 1960 U. S. Census (Hastings, 1970, 1971). Clearly, selection for inclusion within the study sample operated against low-income nonwhites who suffer higher risks of marriage, fertility, and divorce than middle-income couples, white or nonwhite. It is certain that an analysis of study sample composition on other selected demographic, social, and economic characteristics would reveal additional biases.

VI. HYPOTHESES

The following statements involve relationships between open and closed intervals and each of these with parity, age of mother, marital

duration, mother's age at marriage, and race. These statements are treated as both empirical generalizations verified in prior research and hypotheses for further explication in this study. Pertinent tables and figures for reference are given following each statement.

Selected findings on closed intervals by parity, age, marital duration, age at marriage, and race.

1. The length of the interval from marriage to first birth is less than succeeding intervals (Appendix, page 52). Studies measuring the interval T_0 have found means of 4.8 quarters[14] (Christensen, 1938:175); 6.0 quarters (Christensen and Bowden, 1953); 6.4 quarters (Henry: see Leslie, Christensen, and Bowden, 1955); 10.0 quarters (Sydenstricker, 1932); 10.0 quarters (Whelpton and Kiser, 1950:209-257); 10.8 quarters (Anderson, 1947); and 13.2 quarters (Leslie, Christensen, and Bowden, 1955). A possible explanation for the wide differences between means, other than a real difference between populations, is that the method of data collection facilitates these differences. In a cross-sectional study, women have not completed their fertility histories and therefore statistical means are shorter than those of a longitudinal study. This abbreviation of interval length may be amended by assigning women subject to a terminal event of a given interval a part in the interval mean. This amendment corrects interval values upward for women who have not completed their reproductive history.

For the interval from marriage to first birth, Christensen and Bowden (1953) compute the mode (11 months, 3.7 quarters), and Peel (1972)

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[14]All means are translated to quarter values for consistency.

computes a mean (1.4 years; 5.6 quarters), two modes (seventh and twelfth months, 2.7 and 4.0 quarters, respectively), and a median (432 days, 4.7 quarters). The mode is limited statistically and some question is generated about the propriety of using the mean rather than the median. A mean implies a relatively normal distribution about the mean, with a standard deviation measuring the extent of spread about the mean. Without this normal distribution, the mean attributes too much significance to extreme times in skewed intervals; that is, births many years from a previous event often blur a clear relationship in the early quarters of an interval.[15] Since closed birth intervals are not distributed normally but skewed right, the median is a more helpful measure. Many studies (Sydenstricker, 1932; Christensen, 1938; Anderson, 1947; Whelpton and Kiser, 1950; Christensen, 1953a; Peel, 1972) make use of the median in cumulative distributions--some indirectly because the median picks the point where half the occurrences (events, incidents) appear above and half below.

2. Nonwhite women have shorter intervals from marriage to first birth than white women (Appendix, pages 52 - 57).

3. The length of intervals increases through the third birth but thereafter decreases (Appendix, pages 52 - 55).

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[15] In the tables of this study where intervals show little difference in mean, usually the median is quite different. In retrospect, it would have also been of value not only to express the median or the half point, but the quartiles or quarter points of each interval. Quartiles are available through the cumulative distribution which was not listed in this study.

Leslie, Christensen, and Pearman (1955) replicate the hypothesis but Christensen (1963) does not observe the decrease after the third birth. Contributing to the difference of findings is a general sparsity of data for intervals above the third birth. (This hypothesis is often stated in terms of family size, with differing interval patterns for each family size.)

4. Nonwhite women have shorter intervals than white women (Appendix, pages 52 - 55; Schachter 1958:97; Farley 1970:89).

5. The interval from marriage to first birth is associated with a significant proportion of premarital conceptions. The interval is bimodal, composed of a normal distribution about the first mode representing premarital conceptions, and a skewed right distribution about the second mode representing conceptions after marriage, and a rectangular distribution representing births completing the interval. (Appendix, pages 52, 56 - 57). Peel (1972) in the Hull Survey, and Christensen (1953:56) have graphically described the distributions. Christensen (1953) has estimated that between .116 (those with first births within the first seven lunar months of marriage) of all couples and .227 (those with first births within 266 uterogestation days of marriage) of all couples have had premarital conceptions. Generalizing, studies estimate proportions of premarital conceptions to range from .12 to .20. Other literature deals with the strong relationship between premarital conception and divorce (Christensen and Meissner, 1953; Christensen and Rubinstein, 1956).

6. For women bearing their first child after marriage, the proportion of premarital conceptions decreases as mother's age at marriage increases (Appendix, pages 52, 56 - 57). Christensen (1953) supports the above by showing that for couples less than 25 years of age .132 are premaritally conceived, but for those 25 and older .057 are premarital conceptions. Other factors than age of mother were highly related with differential proportions of premarital conception, such as age of husband, age differences between spouses at type of marriage ceremony (religious or civil), residence (rural or urban), and occupation.

7. The length of the interval from marriage to first birth varies directly with mother's age at marriage (Appendix, pages 52, 56 - 57). Christensen and Bowden (1952) report a mean interval length of 524 days (5.8 quarters) versus 594 days (6.5 quarters) for those less than 25 years of age and for those greater than 24 years of age, respectively. Christensen (1963:274) verifies the hypothesis with similar data in a later study.

8. Interval length varies directly with mother's age at marriage, with age of mother, and with marital duration (Appendix, pages 58 - 73). Sydenstricker (1932:24, 25) verifies the hypothesis by comparison of birth rates within mother's age at marriage, mother's age, and marital duration which are established indirectly through cumulative birth rates which correlate with interval length.

9. Nonwhite women begin childbearing earlier than white women (Appendix, pages 58 - 73; Farley, 1970:89; Hastings, 1971).

10. Nonwhite women have shorter intervals at early ages (less than 25) than white women (Appendix, pages 58 - 73; Whelpton and Campbell, 1960; Farley, 1970:89).

Selected findings on open intervals by parity, age, marital duration, age at marriage, and race.

11. The length of the open interval U_1 varies indirectly with parity (Appendix, pages 96 - 97; Srinivasan, 1970).

The following hypotheses were not found in the literature but have been designed parallel to similar hypotheses of closed intervals.

12. The open interval U_1 for parity 1 is shorter for nonwhite women than for white (Appendix, page 95).

13. Nonwhite women have shorter open intervals U_i at all parities than white (Appendix, page 74).

14. Nonwhite women have shorter intervals at early ages (15-19) than white (Appendix, pages 77 - 93).

15. Open interval length U_i varies directly with mother's age, marital duration, and mother's age at marriage (Appendix, page 95).

Selected findings on the relationship between closed and open intervals by parity, age, marital duration, and race.

16. The open interval U_i and the closed interval T_i vary indirectly with parity, and increasingly so in the older ages (30 and above) and in the longer marital durations (15 and above). The open interval is a stronger correlate of parity than the closed interval. (Appendix, pages 94 - 97; Srinivasan, 1970).

17. The open interval U_i and the closed interval T_i do not significantly vary with one another (Appendix, pages 98 - 100; Srinivasan, 1970).

It was expected then that these findings would be replicated in this sample. Further, in the light of the high fertility of sample nonwhites, it was also expected that nonwhites would have shorter intervals between events than whites.

CHAPTER IV

REPLICATION OF HYPOTHESES

In this chapter the various hypotheses relating open and closed intervals to parity, mother's age, and marital duration for whites and nonwhites are examined in terms of: 1) moment measures and density functions; and 2) correlation coefficients on the open and the closed variables with selected variables. Due to the length of the tables and the number of figures, data are given in the APPENDIX rather than in the text. The discussion focuses first on closed intervals, then moves to summarize data on open intervals.

I. CLOSED INTERVALS T_i

Moment measures and density functions. An examination of page 52 reveals that first moment measures for T_0 are smaller in magnitude than those values observed for T_1 through T_7, indicating shorter intervals between marriage and first birth than between succeeding events. This relationship persists regardless of race, thereby confirming Hypothesis 1. As expected in Hypothesis 2, nonwhites have shorter intervals for T_0 than do whites.

These data also show that for whites and nonwhites as parity increases up to the third birth, median and mean values for T_0 through T_2 become greater; thereafter as parity increases, the median and mean values for T_3 and over tend to become shorter, thus confirming Hypothesis 3. When whites and nonwhites are compared by parity, nonwhites tend to have shorter intervals between events than whites, confirming Hypothesis 4.

Appendix, pages 53 - 55, visually confirms these findings. The density functions on closed intervals T_0 through T_3 show that, as parity increases from one to four, the curves, initially positively skewed, tend to become less so, as well as to become less leptokurtic and more platykurtic. For density functions for T_4 and above, the skewedness of the curve tends to become positive and leptokurtic once again. It should be noted, however, that since the density functions are expressed in proportions, they probably are more sensitive in representing minor fluctuations in the data where the number of cases is small than are the computed measures which take into account the number of observations in the actual calculations.

Appendix, page 53, directly supports Hypothesis 5. A look at page 53 reveals that the density function for T_0 tends to approximate a bimodal distribution with the right-hand mode indirectly representing the occurrence of premarital conceptions and the left-hand mode assuming a distribution indicative of postmarital conceptions. It should be noted, however, that this density function does not adhere strictly to the hypothesis since data are expressed in quarters rather than in days and months. The data presented in Appendix, page 56, on cumulative proportions on T_0, quarters 0 through 4, by age for couples married less than five years, also permit one indirectly to estimate proportional occurrence of premarital pregnancy. These data indirectly confirm Hypothesis 5 that, as age increases, the proportions of women assumed to be premaritally pregnant decreases. These same data in Appendix, page 56, may also be used to substantiate Hypothesis 6, that the proportion of premarital conceptions decreases as mother's age at

marriage increases. Unfortunately, there are too few cases in each of the separate age groups to permit a detailed comparison of whites and nonwhites on premarital conceptions when controlling on age. Regardless of age, however, nonwhites had higher proportions of premarital conceptions than did whites, anticipating Hypothesis 2 above. Hypothesis 10, that nonwhites have shorter intervals at early ages (less than 25) than whites, is confirmed by Appendix, page 58. No data exist to substantiate Hypothesis 9, that nonwhites begin childbearing earlier than whites.

Appendix, page 57, presents estimates of premarital pregnancy by age and marital duration for whites and nonwhites after adjustments are made for misclassifications on intervals expressed in quarters. The same relationship again is found, as in Appendix, page 56.

Appendix, page 58, summarizes moment measures on closed intervals by mother's age at time of the Census and parity for whites and nonwhites, while Appendix, page 62, displays moment measures on closed intervals by marital duration and parity for whites and nonwhites. These two sets of data permit confirmation of Hypothesis 8, that interval length varies directly with mother's age at marriage, age of mother, and marital duration. Data in Appendix, page 62, show that, as mother's age, marital duration, and parity increase, closed intervals become longer, confirming the above hypothesis. Data in Appendix, page 58, support this finding that as mother's age increases and parity increases, the median and mean values for closed intervals tend to become larger. These two data sets also confirm Hypothesis 7, that the length of interval from marriage to first birth varies directly with mother's age at marriage.

II. OPEN INTERVALS U_i

Moment and density functions. An examination of Appendix, page 74, reveals that the median values increase in magnitude from parity 1 through parity 4 and thereafter decrease in magnitude. The means from parity 1 to parity 2 increase in magnitude and thereafter decrease. Since sample women are overrepresented in the younger ages, and have not completed their fertility histories, a significant proportion will probably go on to have at least one additional birth. The fact then that the open interval is not perfectly inversely related in a linear fashion to parity is not surprising. If childbearing careers were complete, such relationships would be found. The length of the open interval only loosely varies indirectly with parity, only partially confirming Hypothesis 11.

Data in Appendix, page 74, also show that the open interval from parity 1 to the time of the survey is shorter for nonwhites than for whites, confirming Hypothesis 12. Such a finding is expected, given the overrepresentation of nonwhite women in the younger ages, that is 15-19 and 20-24, and in those categories of shorter marital duration. In a similar fashion, these data also tend to confirm Hypothesis 13, that nonwhites have shorter open intervals than whites at all parities. While such an hypothesis is logically contradictory with Hypothesis 1 of the closed interval; the cross-sectional nature of this study sample empirically explains this contradiction.

Appendix, page 77, shows that as mother's age increases and parity increases, the open interval tends to increase. Unfortunately there are insufficient number of cases to compare whites and nonwhites

in terms of open interval distribution by parity and age of mother, hence Hypothesis 14 cannot be replicated. Similarly, Appendix, page 82, shows that as mother's age, marital duration, and parity increase, the open interval tends to increase (Hypothesis 15). Again lack of a sufficient number of cases in various subcategories precludes comparison of whites and nonwhites. The density functions of the open intervals for all parities are given in Appendix, pages 75 - 76.

III. CORRELATION COEFFICIENTS ON T_i AND U_i

An examination of Appendix, pages 98 - 99, in the first row reveals low correlations between T_i and parity and U_i and parity. While these coefficients are statistically significant, in the writer's view, they fail to be substantively significantly because they are much lower than most other significant correlations given, and assumptions of linearity for the correlation test demand a higher correlation to be significant. Confirming Hypothesis 16, Appendix, page 99, shows that, as age increases, T_i varies positively with parity among ages 15-19, and 20-24, then varies negatively with parity and increasingly so in the older ages. Since fertility tends to be curvilinearity related to age, such a finding is expected. As age increases, U_i and parity are inversely related and increasingly so in older ages. U_i is a stronger predictor of parity than in T_i, when age is controlled. Appendix, page 96, shows that, as marital duration increases, T_i and parity are initially positively related rather than negatively related. As marital duration increases, U_i and parity are negatively related, and increasingly so among groups of women with

longer durations of marriage. Again U_i is a stronger predictor of parity. Appendix, page 95, shows that as parity increases, T_i and marital duration are related but decreasingly so in higher parities. As parity increases, U_i and marital duration are positively related but decreasingly so in higher parities. U_i is again a stronger correlate than T_i of marital duration.

Appendix, page 98, row 1, shows that intervals U_i and T_i are only minimally correlated, confirming Hypothesis 17. However, when age is controlled, one finds that U_i and T_i are inversely related. Further, within the younger (15-24) and older (30 and above) ages, the relationship tends to be weaker than among women in the middle childbearing years.

Appendix, page 99, shows that the correlation of U_i and T_i when controlled by parity reveals no clear pattern. These tables then suggest that U_i is a stronger correlate than T_i of time-dependent events, confirming Srinivasan's model.

The reader will note that there has been little said of white nonwhite differences. Suffice it to say that the majority of findings herein found for whites are similar to those observed for nonwhites.

Appendix, page 96, shows the correlations of parity with the closed and open intervals controlled on age. There is a slight but positive correlation of parity with the closed interval and a slight negative correlation between parity and the open interval. Both of these correlations decrease and become negative as age increases, regardless of race. Nonwhites, however, show stronger correlations between U_i and parity than whites, which may be attributed to a higher

fertility among nonwhites in early ages (15-24) and through requirements of selection an overrepresentation of contraceptive nonwhites in later ages (30 and above).

Although not specifically stated as hypotheses, empirical generalizations related to the correlation of U_i and T_i with each other and with other variables are presented below.

The closed interval serves as a better predictive correlate of parity in early age groups, while the open interval is a better predictive correlate of parity in later age groups; these results are expected since intuitively for a high fertility area older women would be expected to have larger families and a shorter open interval. Marital duration when exchanged for age as a controlling variable produces stronger correlations (Appendix, page 97).

The open and closed intervals are better predictive correlates of age and marital duration than they are of parity. (Comparing the tables of Appendix, pages 96 - 97, with the tables of Appendix, pages 94 - 95). All correlations are positive and significant and when controlled on parity become weaker. Marital duration is more highly correlated with the open and closed intervals than is age. The open interval is a better predictive correlate of age than is the closed interval. (Appendix, page 94, controlled on parity correlates both the open and closed intervals with age.)

Whites show stronger open interval correlations with age and marital duration than do nonwhites, but nonwhites show stronger closed interval correlations with age and marital duration than do whites. The open interval is a better predictive correlate of age and marital

duration in low fertility areas than in high, and because whites have lower fertility than nonwhites, their correlations would be expected to be higher. Additionally, nonwhites might be expected to extend their childbearing over a longer number of years, and because of the biological dependencies (that is, age retards fecundity, forcing a positive correlation of age with interval length) of the closed intervals, their correlations of closed intervals with age and marital durations are higher than whites. That is, with a continuing high nonwhite birth rate into later years, the biological dependencies produce higher correlations between age and closed intervals for nonwhite than for white. Venkatacharya (1972) shows that open intervals are more subject to immediate changes in birth patterns (as through contraception) than are closed intervals. An increase in nonwhite fertility might lower nonwhite correlations of age with the open intervals.

The correlation of the open interval U with the closed interval T is low at .117 but controlling on age or parity produces negative correlations ranging generally around .3 (Appendix, pages 98 - 99). When both age and parity are controlled (Appendix, page 100), the correlations range much higher. That the open correlation is dependent upon the preceding closed interval ought to case caution over attributing too much importance to their higher correlations when controlling on age and parity. Since the correlation of T with U is relatively low compared with other correlations in this thesis, their correlation is not considered significant.

This study replicates hypotheses derived from the literature review of open and closed birth intervals and their correlations.

Additionally, several hypotheses of open intervals designed to parallel chosen hypotheses of closed intervals are verified in this study.

CHAPTER V

OVERVIEW

I. INTERVAL PROBLEMS

Some may question the utility of correlating U and T respectively with age and parity, since each of these variables is directly or indirectly a function of time. For instance, at a high parity, the interval length T must correlate negatively with parity since physiology and probability demand that a large number of children require shorter interval length. Additionally, a higher parity demands a higher age and shorter interval length, creating a strong negative correlation between age and interval length. More specifically, age and T and U are partially comprised of a common time span negating their uniqueness. Fortunately, the researcher may not be interested in the degree of independence of a variable correlate, but in the heuristic value of the variable as a predictor, since the final test of a predictive correlate is its power to measure and predict. Therefore, these conditions should not obscure high birth interval correlations and the practicality of using the open interval as an effective predictive correlate for age (given parity) or for parity (given age). Since such a correlation is predicted, special attention should be paid to cases that deviate from the expected patterns of probability.

II. RELIABILITY OF THE OPEN INTERVAL

The problem of overlapping variables forcing higher, but artificial, correlations should not obscure the importance of the findings of this study. Both the closed and the open intervals are excellent predictors of parity because of their high correlation with parity. The open interval is a better predictor than the closed interval and is also an easier interval to measure seeing that one birth date is needed rather than two. The fertility between geographic areas may be compared by measuring their mean open intervals. If something is known of the age, an even more exact measurement may be obtained. Fertility changes may be easily measured through changes in the open interval. In geographic areas where the age of women is difficult to obtain, a knowledge of the open interval and parity serve as an excellent predictor of age.

The fact that the open interval, as a dynamic measure of present birth trends, is susceptible to immediate fluctuations of contraception and social change, defines the limits of its reliability (Venkatacharya, 1972). Consequently, the use of the open interval as a fertility measure is more reliable when a trend rather than a fluctuation is being measured. Conditions under which the open interval is more reliable are in a relatively static population, or in one undergoing a slow transformation. By longitudinal analysis, one might determine if the open interval is measuring a fluctuation or a trend. If a continuing pattern between points in time appears, a trend is being measured. A longitudinal study beginning with the 1960 Census data extending to

the 1970 Census data would be helpful in determining if the open interval of 1960 was reliable as a measure anticipating birth changes of the 1960's.

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APPENDIX

Table 5. Median, mean, standard deviation, skewness and kurtosis of closed intervals (expressed in quarters) by parity, for all women, whites and nonwhites

Parity	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
1	All	3166	7.5	11.676	13.441	2.672	9.752
	White	2928	7.6	11.688	13.205	2.711	10.330
	Nonwhite	238	5.1	11.534	16.094	2.306	5.294
2	All	4312	11.2	12.714	8.206	2.182	7.720
	White	4093	11.3	12.756	8.127	2.199	7.994
	Nonwhite	219	9.5	11.932	9.546	2.006	4.549
3	All	2644	12.5	14.238	9.101	1.520	3.050
	White	2514	12.5	14.288	9.103	1.502	2.964
	Nonwhite	130	12.1	13.269	9.046	1.903	5.007
4	All	1339	11.6	13.388	8.437	1.374	2.194
	White	1262	11.6	13.401	8.478	1.382	2.230
	Nonwhite	77	11.5	13.169	7.775	1.164	1.056
5	All	494	10.3	12.261	7.737	1.352	1.865
	White	451	10.5	12.421	7.834	1.364	1.857
	Nonwhite	43	9.3	10.581	6.474	.836	-.185
6	All	176	11.0	11.511	5.950	.836	.197
	White	157	11.0	11.548	5.960	.871	.313
	Nonwhite	19	a	a	a	a	a
7	All	82	11.3	12.207	6.465	.841	.049
	White	75	11.5	12.480	6.506	.817	.011
	Nonwhite	7	a	a	a	a	a
8+	All	51	9.1	10.353	5.429	1.299	1.534
	White	41	9.3	9.976	5.685	1.397	1.622
	Nonwhite	10	a	a	a	a	a

[a]Statistics for sample sizes less than 20 are omitted.

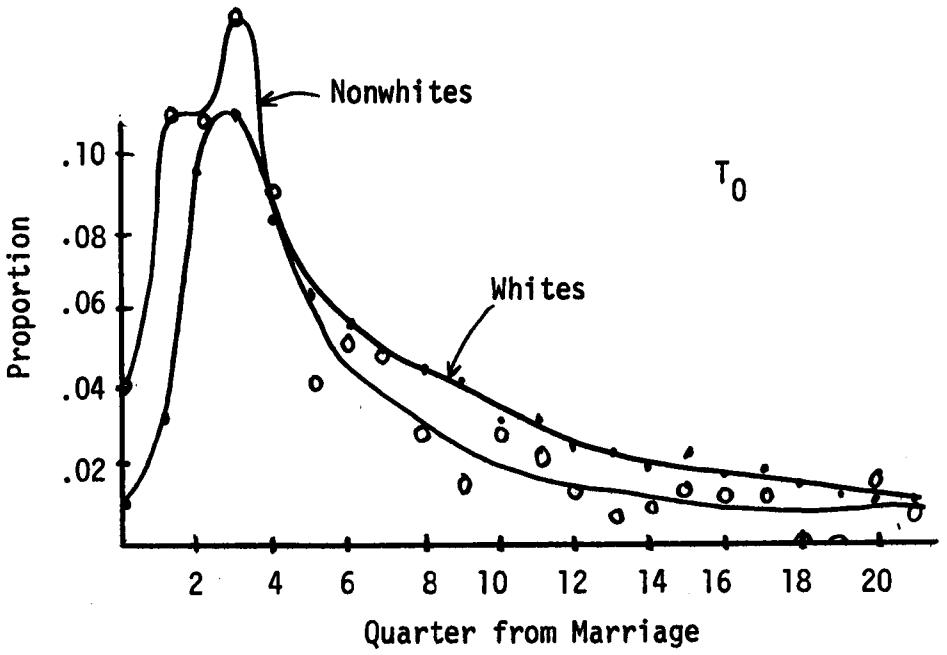


Figure 5. Parity 1, density function of interval from marriage to first birth, T_0, by quarters, for whites and nonwhites

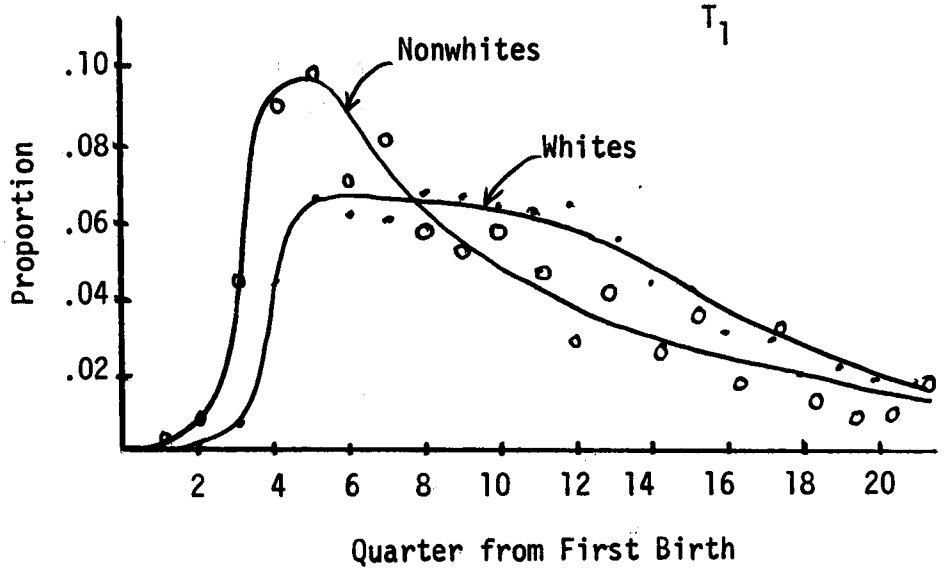


Figure 6. Parity 2, density function of interval from first birth to second birth, T_1, by quarters, for whites and nonwhites

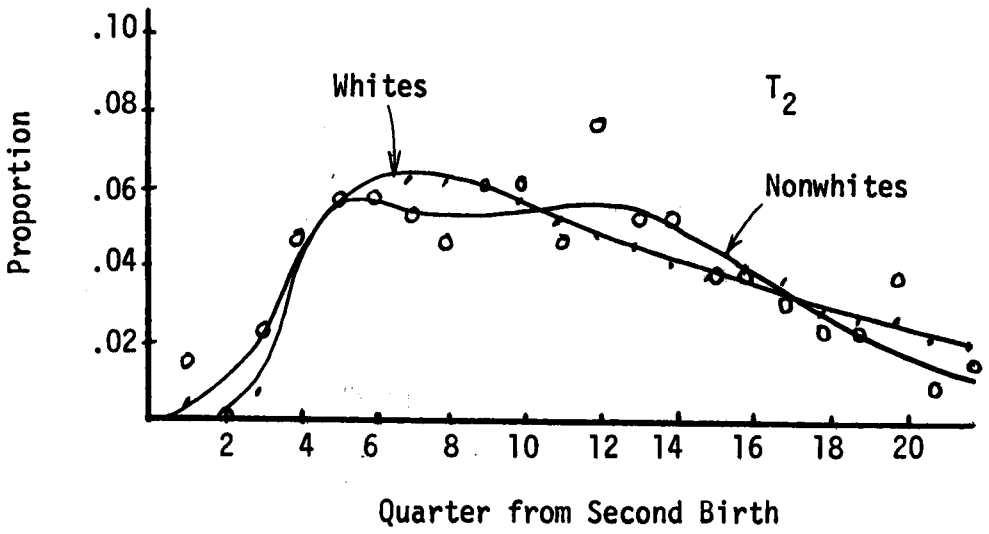


Figure 7. Parity 3, density function of interval from second birth to third birth, T_2, by quarters, for whites and nonwhites

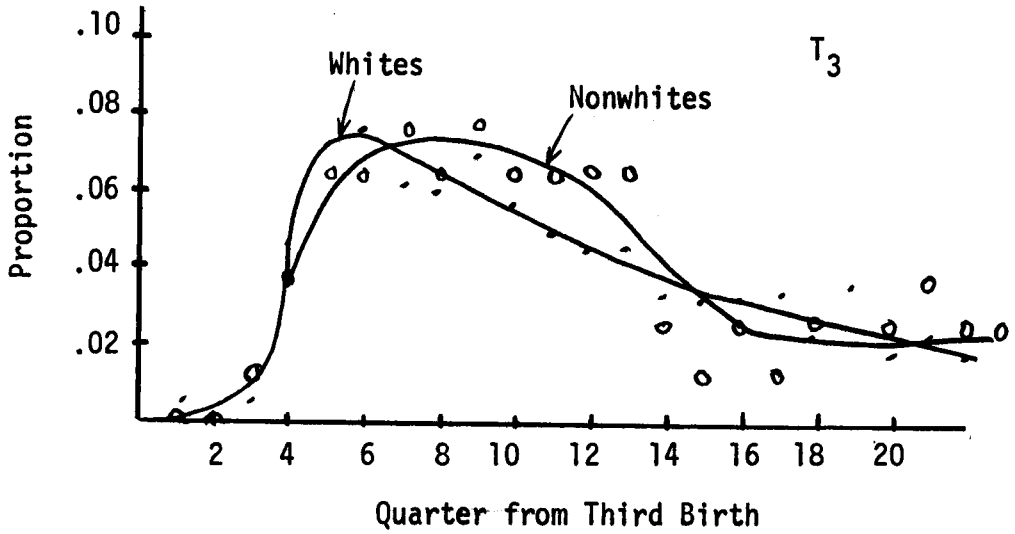


Figure 8. Parity 4, density function of interval from third birth to fourth birth, T_3, by quarters, for whites and nonwhites

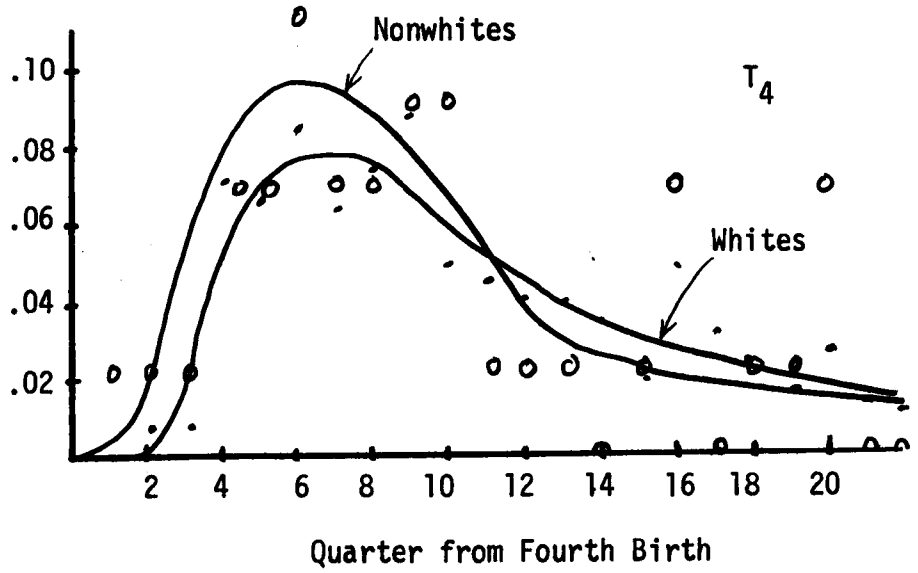


Figure 9. Parity 5, density function of interval from fourth birth to fifth birth, T_4, by quarters, for whites and nonwhites

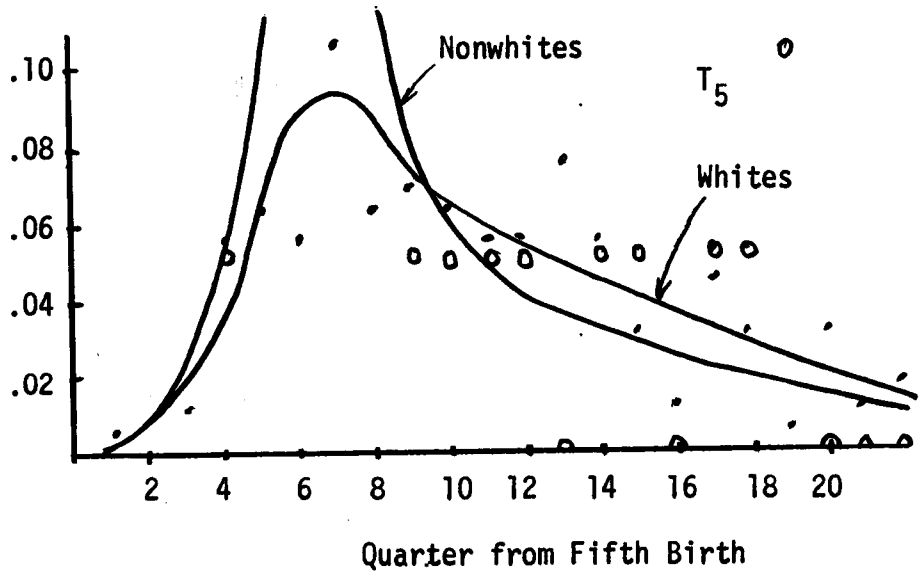


Figure 10. Parity 6, density function of interval from fifth birth to sixth birth, T_5, by quarters, for whites and nonwhites

Table 6. Cumulative proportions on time interval from marriage to first birth by age at time of Census and marital duration, for all women, whites and nonwhites

Age	Marital Duration	Race	Sample Size	Quarter from Marriage 0	1	2	3	4
15-19	0-4	All	198	.056	.202	.515	.692	.843
		White	180	.056	.189	.517	.672	.789
		Nonwhite	18	a	a	a	a	a
20-24	0-4	All	922	.017	.088	.272	.448	.555
		White	845	.012	.072	.257	.432	.541
		Nonwhite	77	.078	.260	.442	.623	.714
25-29	0-4	All	294	.010	.034	.116	.235	.350
		White	275	.007	.029	.102	.211	.324
		Nonwhite	19	a	a	a	a	a
30-34	0-4	All	38	.000	.026	.053	.132	.263
		White	35	.000	.029	.057	.143	.286
		Nonwhite	3	a	a	a	a	a
Total		All	3166	.014	.054	.154	.271	.357
		White	2928	.011	.046	.145	.260	.346
		Nonwhite	238	.042	.155	.265	.403	.496

[a]Statistics for sample sizes less than 20 are omitted.

Table 7. Calculated proportions premaritally pregnant by age at time of Census and marital duration for all women, whites and nonwhites

Age	Marital Duration	Race	Parity 0 (Childless) Sample Size (A)	Parity 1 Quarter 2 Cumulative Distribution (B)	Parity 1 Sample Size (C)	Total Sample Size (A+C)	Number Premaritally Pregnant B*C	Proportion[b] Premaritally Pregnant (Estimated) B*C / A+C
15-19	0-4	All	344	.515	198	542	102	.19
		White	322	.517	180	502	93	.18
		Nonwhite	22	a	18	40	9	.22
20-24	0-4	All	1376	.272	922	2298	253	.11
		White	1301	.257	845	2146	217	.10
		Nonwhite	75	.442	77	152	36	.24
25-29	0-4	All	412	.116	294	706	34	.05
		White	373	.102	275	648	28	.04
		Nonwhite	39	a	19	58	6	.10
30-34	0-4	All	76	.053	38	114	2	.01
		White	65	.057	35	100	2	.01
		Nonwhite	11	a	3	14	0	.00
Total		All	2311	.154	3166	5477	489	.09
		White	2146	.145	2928	5074	425	.08
		Nonwhite	165	.265	238	403	64	.16

[a]Statistics for sample sizes less than 20 are omitted.

[b]These proportions must be corrected downward to eliminate those second quarter births which are not results of premarital conceptions. All downward corrections are less than .12 (the error factor) of the estimated proportion premaritally pregnant. For discussion of error factor, see the discussion of the calculation of quarter intervals and proportionate error in quarter calculations, pages 20 - 23.

Table 8. Median, mean, standard deviation, skewness, and kurtosis of closed intervals (expressed in quarters) by parity and age at time of Census, for all women, whites and nonwhites

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
1	15-19	All	199	2.0	3.196	2.486	1.619	2.901
		White	181	2.0	3.243	2.503	1.612	2.927
		Nonwhite	18	a	a	a	a	a
	20-24	All	1088	3.8	5.634	4.438	1.950	7.065
		White	1004	4.0	5.793	4.481	1.957	7.108
		Nonwhite	84	2.3	3.738	3.373	1.600	2.616
	25-29	All	727	7.6	9.938	7.449	1.398	2.739
		White	675	7.9	10.110	7.434	1.391	2.802
		Nonwhite	52	4.5	7.712	7.355	1.693	2.692
	30-34	All	294	10.0	13.966	11.414	1.421	2.419
		White	269	10.4	13.981	11.078	1.370	2.491
		Nonwhite	25	7.5	13.800	14.841	1.547	1.323
	35-39	All	213	10.5	14.399	12.233	1.450	2.258
		White	192	10.3	14.203	12.048	1.485	2.521
		Nonwhite	21	9.5	16.190	14.009	1.145	.558
	40-44	All	182	16.0	20.676	16.888	1.146	.787
		White	170	15.3	20.171	16.598	1.216	1.029
		Nonwhite	12	a	a	a	a	a
	45-49	All	166	17.0	23.633	19.836	1.116	.490
		White	155	16.1	22.239	18.823	1.246	1.052
		Nonwhite	11	a	a	a	a	a
	50+	All	297	21.1	27.330	22.656	1.272	1.944
		White	282	20.8	27.060	22.481	1.307	2.122
		Nonwhite	15	a	a	a	a	a
2	15-19	All	36	6.0	5.972	2.384	1.213	1.449
		White	33	5.3	6.030	2.456	1.160	1.206
		Nonwhite	3	a	a	a	a	a
	20-24	All	617	7.5	8.781	4.321	1.124	1.931
		White	565	7.6	8.835	4.207	.941	.945
		Nonwhite	52	6.4	8.192	5.420	2.156	6.038
	25-29	All	1193	9.4	10.938	5.496	1.231	2.019
		White	1130	9.4	10.971	5.434	1.247	2.154
		Nonwhite	63	7.5	10.349	6.538	1.124	.559

Table 8 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	30-34	All	864	10.7	13.087	7.826	1.836	5.657
		White	828	10.8	13.251	7.873	1.840	5.627
		Nonwhite	36	7.3	9.306	5.492	.978	.329
	35-39	All	635	11.4	14.657	9.799	1.834	4.012
		White	612	11.5	14.580	9.641	1.863	4.309
		Nonwhite	23	9.9	16.696	13.448	1.188	.043
	40-44	All	508	12.5	15.220	9.127	1.586	2.845
		White	492	12.5	14.992	8.781	1.560	2.757
		Nonwhite	16	a	a	a	a	a
	45-49	All	301	13.5	16.475	10.205	1.611	3.303
		White	287	13.5	16.512	10.285	1.615	3.311
		Nonwhite	14	a	a	a	a	a
	50+	All	158	13.8	17.956	12.926	2.255	7.127
		White	146	13.8	17.897	12.949	2.339	7.614
		Nonwhite	12	a	a	a	a	a
3	20-24	All	129	6.3	8.085	3.708	1.206	1.302
		White	114	6.5	7.974	3.686	1.301	1.681
		Nonwhite	15	a	a	a	a	a
	25-29	All	609	9.4	11.266	5.973	1.044	1.000
		White	575	9.6	11.350	6.004	1.043	1.007
		Nonwhite	34	7.9	9.853	5.304	.946	.067
	30-34	All	693	11.3	13.831	8.030	1.092	1.259
		White	662	11.2	13.816	8.020	1.033	.952
		Nonwhite	31	11.8	14.161	8.355	2.259	6.980
	35-39	All	623	13.7	16.435	9.940	1.127	1.067
		White	593	13.4	16.449	9.852	1.099	.907
		Nonwhite	30	12.7	16.167	11.739	1.457	2.527
	40-44	All	391	12.3	17.028	10.753	1.442	2.382
		White	378	14.1	17.024	10.699	1.470	2.526
		Nonwhite	13	a	a	a	a	a
	45-49	All	145	13.1	16.283	11.719	1.435	2.071
		White	140	12.7	16.357	11.876	1.418	1.938
		Nonwhite	5	a	a	a	a	a

Table 8 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	50+	All	21	11.5	12.381	7.110	1.055	.911
		White	18	a	a	a	a	a
		Nonwhite	3	a	a	a	a	a
5	25-29	All	46	5.8	7.609	4.302	1.567	2.174
		White	36	6.0	8.111	4.458	1.570	10.722
		Nonwhite	10	a	a	a	a	a
	30-34	All	160	8.6	11.256	6.637	1.277	1.490
		White	141	8.6	11.433	6.813	1.269	1.365
		Nonwhite	19	a	a	a	a	a
	35-39	All	159	10.9	13.742	8.927	1.262	1.275
		White	155	11.0	13.852	8.988	1.242	1.198
		Nonwhite	4	a	a	a	a	a
	40-44	All	97	11.5	13.361	7.680	1.189	1.615
		White	89	11.3	13.180	7.754	1.280	1.865
		Nonwhite	8	a	a	a	a	a
	45-49	All	20	12.5	14.850	7.975	.297	-1.376
		White	18	a	a	a	a	a
		Nonwhite	2	a	a	a	a	a
	Others	All	12	b	b	b	b	b
		White	12	b	b	b	b	b
		Nonwhite	0	b	b	b	b	b
6	30-34	All	42	8.0	10.071	5.550	.915	-.324
		White	35	8.1	9.914	5.490	1.047	.089
		Nonwhite	7	a	a	a	a	a
	35-39	All	64	12.0	12.344	5.987	.597	-.215
		White	58	12.1	12.569	6.024	.594	-.223
		Nonwhite	6	a	a	a	a	a
	40-44	All	39	11.3	13.590	6.073	.872	-.054
		White	36	11.3	13.389	5.944	.991	.298
		Nonwhite	3	a	a	a	a	a
	Others	All	34	b	b	b	b	b
		White	28	b	b	b	b	b
		Nonwhite	6	b	b	b	b	b

Table 8 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
7	30-34	All	21	8.5	10.238	5.108	1.021	.112
		White	19	a	a	a	a	a
		Nonwhite	2	a	a	a	a	a
	35-39	All	31	10.2	12.605	6.175	.479	-.769
		White	28	11.0	12.393	6.344	.376	-.901
		Nonwhite	3	a	a	a	a	a
	Others	All	30	b	b	b	b	b
		White	28	b	b	b	b	b
		Nonwhite	2	b	b	b	b	b
8+	35-39	All	20	9.2	10.150	4.332	.593	1.554
		White	14	a	a	a	a	a
		Nonwhite	6	a	a	a	a	a
	Others	All	31	b	b	b	b	b
		White	27	a	a	a	a	a
		Nonwhite	4	b	b	b	b	b

[a]Statistics for sample sizes less than 20 are omitted.

[b]Statistics accumulated from age groups with "all" sample size less than 20 are omitted.

Table 9. Median, mean, standard deviation, skewness, and kurtosis of closed intervals (expressed in quarters) by parity, age at time of Census, and marital duration, for all women, whites and nonwhites

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
1	15-19	0-4	All	198	3.0	3.197	2.492	1.614	2.869
			White	180	3.0	3.244	2.509	1.606	2.892
			Nonwhite	18	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	20-24	0-4	All	922	3.5	4.940	3.379	1.090	.862
			White	845	3.6	5.058	3.375	1.069	.785
			Nonwhite	77	2.3	3.649	3.170	1.569	2.784
		5-9	All	163	7.5	9.092	6.278	.817	.727
			White	156	7.7	9.288	6.259	.817	.761
			Nonwhite	7	a	a	a	a	a
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29	0-4	All	294	5.9	7.350	4.494	.604	-.592
			White	275	6.2	7.596	4.496	.553	-.657
			Nonwhite	19	a	a	a	a	a
		5-9	All	389	9.1	11.254	7.467	.644	-.299
			White	361	9.3	11.413	7.470	.629	-.281
			Nonwhite	28	5.2	9.214	7.259	.885	-.425
		10-14	All	44	9.0	15.591	14.212	.891	-.522
			White	39	8.5	15.769	14.534	.872	-.584
			Nonwhite	5	a	a	a	a	a
	30-34	0-4	All	38	6.6	7.605	3.983	.569	-.365
			White	35	6.3	7.257	3.853	.643	-.218
			Nonwhite	3	a	a	a	a	a
		5-9	All	102	13.5	14.902	8.976	.399	-.726
			White	96	14.0	15.188	8.915	.352	-.701
			Nonwhite	6	a	a	a	a	a
		10-14	All	125	10.5	15.344	13.095	.963	-.027
			White	111	7.5	13.069	15.000	2.663	6.813
			Nonwhite	14	a	a	a	a	a

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		15-19	All	29	7.5	13.069	15.000	2.663	6.813
			White	27	9.2	13.667	15.390	2.552	6.142
			Nonwhite	2	a	a	a	a	a
	35-39	5-9	All	23	6.3	9.391	6.827	.754	-.879
			White	16	a	a	a	a	a
			Nonwhite	7	a	a	a	a	a
		10-14	All	51	10.1	13.627	10.139	.584	-1.056
			White	44	10.2	13.500	10.438	.593	-1.083
			Nonwhite	7	a	a	a	a	a
		15-19	All	106	11.5	15.557	14.071	1.445	1.814
			White	101	11.3	15.168	13.687	1.524	2.220
			Nonwhite	5	a	a	a	a	a
		20-24	All	27	14.3	17.037	11.700	.889	.110
			White	25	13.5	15.720	10.788	1.003	.618
			Nonwhite	2	a	a	a	a	a
		Others	All	6	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	30-34	All	66	13.0	19.106	16.400	1.209	.523
			White	59	11.2	17.034	14.887	1.409	1.176
			Nonwhite	7	a	a	a	a	a
		35-39	All	81	18.9	21.383	15.677	.671	-.376
			White	77	19.2	21.974	15.754	.616	-.450
			Nonwhite	4	a	a	a	a	a
		Others	All	35	b	b	b	b	b
			White	34	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	45-49	30-34	All	25	12.8	16.160	11.441	.539	-.901
			White	24	13.0	16.667	11.397	.487	-.931
			Nonwhite	1	a	a	a	a	a
		35-39	All	73	15.4	19.986	16.689	1.155	.707
			White	69	14.6	18.130	14.776	1.163	.863
			Nonwhite	4	a	a	a	a	a

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		40-44	All	53	21.2	29.717	21.870	.853	-.136
			White	50	21.0	28.440	21.129	.945	.221
			Nonwhite	3	a	a	a	a	a
		Others	All	15	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	50+	30-34	All	24	8.0	12.417	9.509	1.287	.689
			White	22	8.0	11.955	8.737	1.496	1.672
			Nonwhite	2	a	a	a	a	a
		35-39	All	60	14.7	16.800	12.491	1.073	.961
			White	58	14.7	16.707	12.620	1.091	.961
			Nonwhite	2	a	a	a	a	a
		40-44	All	61	31.5	32.443	18.986	.411	-.615
			White	58	29.0	31.741	18.881	.460	-.518
			Nonwhite	3	a	a	a	a	a
		45-49	All	68	27.0	30.221	20.558	.470	-.759
			White	66	27.0	30.379	20.422	.504	-.719
			Nonwhite	2	a	a	a	a	a
		50+	All	72	29.0	37.042	30.257	.965	.483
			White	63	29.0	36.294	30.165	1.012	.662
			Nonwhite	9	a	a	a	a	a
		Others	All	12	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
2	15-19	0-4	All	36	5.3	5.972	2.384	1.213	1.449
			White	33	5.3	6.030	2.457	1.160	1.206
			Nonwhite	3	a	a	a	a	a
	20-24	0-4	All	320	6.3	7.216	2.871	.642	-.096
			White	291	6.4	7.251	2.821	.605	-.164
			Nonwhite	29	5.7	6.862	3.367	.955	.293
		5-9	All	294	9.3	10.442	4.908	.744	.908
			White	271	9.5	10.491	4.708	.515	.061
			Nonwhite	23	7.5	9.870	6.956	1.685	2.692

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29	0-4	All	118	7.3	7.975	2.830	.280	-.732
			White	113	7.3	8.080	2.810	.262	-.767
			Nonwhite	5	a	a	a	a	a
		5-9	All	884	9.5	10.994	5.198	.973	.834
			White	837	9.5	11.038	5.141	.981	.902
			Nonwhite	47	7.7	10.213	6.129	.980	.116
		10-14	All	187	10.3	12.471	7.198	1.211	1.502
			White	177	10.3	12.446	7.123	1.240	1.691
			Nonwhite	10	a	a	a	a	a
		Others	All	4	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	30-34	0-4	All	226	9.4	10.987	5.242	1.175	1.651
			White	212	9.7	11.175	5.247	1.178	1.681
			Nonwhite	14	a	a	a	a	a
		5-9	All	492	11.2	13.400	7.611	1.278	1.883
			White	473	11.3	13.560	7.622	1.286	1.883
			Nonwhite	19	a	a	a	a	a
		10-14	All	129	12.6	15.791	9.810	1.380	1.537
			White	127	12.6	15.803	9.884	1.367	1.466
			Nonwhite	2	a	a	a	a	a
		Others	All	17	b	b	b	b	b
			White	16	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	35-39	5-9	All	33	8.5	10.788	4.955	.857	.043
			White	32	8.8	10.844	5.023	.818	-.063
			Nonwhite	1	a	a	a	a	a
		10-14	All	169	10.3	12.219	6.648	1.573	2.870
			White	161	10.3	12.602	6.436	1.640	3.343
			Nonwhite	8	a	a	a	a	a

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		15-19	All	356	11.7	15.618	10.878	1.779	3.457
			White	344	11.8	15.567	10.751	1.796	3.674
			Nonwhite	12	a	a	a	a	a
		20-24	All	75	14.5	17.467	10.490	.914	.143
			White	73	14.5	17.301	10.074	.915	.232
			Nonwhite	2	a	a	a	a	a
		Others	All	2	b	b	b	b	b
			White	2	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	10-14	All	41	12.5	13.805	6.349	1.245	1.472
			White	40	12.0	13.755	6.427	1.246	1.394
			Nonwhite	1	a	a	a	a	a
		15-19	All	182	11.4	14.346	9.164	1.716	3.344
			White	175	11.3	13.857	8.362	1.489	2.083
			Nonwhite	7	a	a	a	a	a
		20-24	All	255	13.5	16.365	9.542	1.451	2.225
			White	250	13.4	16.168	9.380	1.533	2.611
			Nonwhite	5	a	a	a	a	a
		Others	All	30	b	b	b	b	b
			White	27	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	45-49	15-19	All	54	11.5	12.981	6.569	.543	-.541
			White	51	11.8	13.157	6.613	.535	-.592
			Nonwhite	3	a	a	a	a	a
		20-24	All	155	13.2	16.155	9.202	1.646	3.539
			White	150	13.2	16.133	9.238	1.658	3.608
			Nonwhite	5	a	a	a	a	a
		25-29	All	71	16.2	20.592	12.913	1.227	1.273
			White	67	16.2	20.582	13.114	1.224	1.237
			Nonwhite	4	a	a	a	a	a
		Others	All	21	b	b	b	b	b
			White	19	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
	50+	15-19	All	22	8.2	10.409	4.447	.460	-.648
			White	20	9.0	10.750	4.482	.360	-.736
			Nonwhite	2	a	a	a	a	a
		20-24	All	47	13.1	16.149	9.397	1.207	1.257
			White	44	13.2	15.750	9.349	1.349	1.741
			Nonwhite	3	a	a	a	a	a
		25-29	All	47	14.2	19.574	12.880	1.359	1.131
			White	46	14.0	18.891	12.131	1.443	1.655
			Nonwhite	1	a	a	a	a	a
		30-34	All	30	17.7	22.000	16.218	2.463	7.359
			White	26	17.7	22.385	17.341	2.280	6.030
			Nonwhite	4	a	a	a	a	a
		Others	All	12	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
3	20-24	0-4	All	20	5.2	5.900	1.619	.928	.518
			White	18	a	a	a	a	a
			Nonwhite	2	a	a	a	a	a
		5-9	All	106	6.9	8.302	3.665	.989	.643
			White	93	6.8	8.129	3.627	1.091	.984
			Nonwhite	13	a	a	a	a	a
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29	5-9	All	401	9.0	10.756	5.384	.758	-.091
			White	378	9.2	10.817	5.364	.750	-.082
			Nonwhite	23	7.5	9.739	5.730	.967	-.035
		10-14	All	196	10.5	12.592	6.862	1.123	.952
			White	185	10.6	12.741	6.956	1.093	.843
			Nonwhite	11	a	a	a	a	a
		Others	All	12	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
	30-34	5-9	All	109	9.5	10.596	4.954	.690	.143
			White	97	8.9	10.320	5.001	.811	.397
			Nonwhite	12	a	a	a	a	a
		10-14	All	457	11.3	13.926	7.826	.925	.427
			White	442	11.2	13.941	7.907	.914	.372
			Nonwhite	15	a	a	a	a	a
		15-19	All	126	14.4	16.357	9.802	.931	.903
			White	122	14.4	16.213	9.347	.866	.754
			Nonwhite	4	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	35-39	10-14	All	159	12.4	13.962	7.122	1.018	1.217
			White	150	12.5	14.033	7.125	1.062	1.322
			Nonwhite	9	a	a	a	a	a
		15-19	All	390	14.2	17.415	10.678	.994	.553
			White	375	14.2	17.333	10.556	.959	.376
			Nonwhite	15	a	a	a	a	a
		20-24	All	57	14.6	18.456	10.770	.881	.299
			White	55	14.6	18.418	10.614	.947	.520
			Nonwhite	2	a	a	a	a	a
		Others	All	17	b	b	b	b	b
			White	13	b	b	b	b	b
			Nonwhite	4	b	b	b	b	b
	40-44	10-14	All	29	9.8	12.724	7.814	1.299	1.143
			White	27	9.8	12.259	6.723	1.255	1.369
			Nonwhite	2	a	a	a	a	a
		15-19	All	145	14.1	16.524	9.996	1.320	2.227
			White	141	14.2	16.574	10.079	1.310	2.169
			Nonwhite	4	a	a	a	a	a
		20-24	All	206	14.6	18.005	11.502	1.415	2.076
			White	200	14.9	17.985	11.395	1.455	2.265
			Nonwhite	6	a	a	a	a	a

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		Others	All	11	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	45-49	15-19	All	41	13.2	14.756	8.420	.855	.054
			White	38	13.0	15.026	8.566	.837	-.094
			Nonwhite	3	a	a	a	a	a
		20-24	All	73	12.8	16.712	12.161	1.525	2.152
			White	72	12.5	16.667	12.240	1.528	2.115
			Nonwhite	1	a	a	a	a	a
		25-29	All	26	16.5	19.077	14.756	.959	.172
			White	26	16.5	19.077	14.756	.959	.172
			Nonwhite	0	a	a	a	a	a
		Others	All	5	b	b	b	b	b
			White	4	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	50+	Others	All	52	b	b	b	b	b
			White	50	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
4	20-24	5-9	All	32	7.3	8.031	2.946	.238	4.375
			White	26	7.0	7.885	2.776	.499	-.731
			Nonwhite	6	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	0	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	25-29	5-9	All	111	6.6	8.378	4.241	1.242	1.230
			White	102	6.5	8.196	3.995	1.136	1.037
			Nonwhite	9	a	a	a	a	a
		10-14	All	91	9.0	10.769	5.969	.882	.076
			White	85	9.2	10.706	5.904	.881	.142
			Nonwhite	6	a	a	a	a	a
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
	30-34	5-9	All	38	6.8	8.316	3.662	.406	-.614
			White	35	7.2	8.600	3.656	.308	-.632
			Nonwhite	3	a	a	a	a	a
		10-14	All	259	9.4	11.900	6.991	1.067	.854
			White	244	9.3	11.840	7.094	1.078	.836
			Nonwhite	15	a	a	a	a	a
		15-19	All	101	11.6	14.752	9.351	1.217	1.323
			White	89	11.8	14.809	9.360	1.186	1.309
			Nonwhite	12	a	a	a	a	a
		Others	All	2	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	35-39	10-14	All	88	13.6	14.205	6.804	.270	-.930
			White	85	13.5	14.071	6.916	.300	-.911
			Nonwhite	3	a	a	a	a	a
		15-19	All	268	12.6	15.213	8.750	.989	.623
			White	260	12.6	15.146	8.652	1.010	.744
			Nonwhite	8	a	a	a	a	a
		20-24	All	46	11.3	14.500	9.239	1.167	1.1519
			White	44	11.0	14.045	9.175	1.326	2.026
			Nonwhite	2	a	a	a	a	a
		Others	All	7	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	40-44	15-19	All	78	11.0	14.833	8.930	1.224	1.265
			White	76	11.0	14.816	9.018	1.225	1.220
			Nonwhite	2	a	a	a	a	a
		20-24	All	100	15.0	17.830	11.146	1.186	.957
			White	96	15.2	17.917	11.337	1.153	.818
			Nonwhite	4	a	a	a	a	a
		Others	All	18	b	b	b	b	b
			White	17	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
	45-49	20-24	All	43	13.4	16.256	11.400	.945	.061
			White	43	13.5	16.256	11.400	.945	.061
			Nonwhite	0	a	a	a	a	a
		Others	All	32	b	b	b	b	b
			White	32	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
5	25-29	10-14	All	27	5.8	8.111	4.440	1.528	1.485
			White	23	5.8	8.087	4.641	1.567	1.435
			Nonwhite	4	a	a	a	a	a
		Others	All	19	b	b	b	b	b
			White	13	b	b	b	b	b
			Nonwhite	6	b	b	b	b	b
	30-34	10-14	All	100	8.7	10.770	5.712	1.044	.698
			White	87	8.6	10.828	5.873	1.041	.629
			Nonwhite	13	a	a	a	a	a
		15-19	All	50	9.0	12.760	8.419	1.026	.285
			White	46	9.0	13.022	8.487	1.047	.247
			Nonwhite	4	a	a	a	a	a
		Others	All	10	b	b	b	b	b
			White	8	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
	35-39	10-14	All	29	10.8	12.793	6.710	.739	-.534
			White	28	11.0	13.071	6.661	.717	-.567
			Nonwhite	1	a	a	a	a	a
		15-19	All	115	10.9	13.809	9.087	1.174	.943
			White	112	10.9	13.884	9.173	1.154	.858
			Nonwhite	3	a	a	a	a	a
		Others	All	15	b	b	b	b	b
			White	15	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	15-19	All	48	11.3	12.875	7.094	1.282	2.441
			White	43	11.5	13.000	7.300	1.279	2.316
			Nonwhite	5	a	a	a	a	a

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		20-24	All	42	12.0	14.643	8.551	.938	.568
			White	39	11.3	14.128	8.597	1.107	.940
			Nonwhite	3	a	a	a	a	a
		Others	All	7	b	b	b	b	b
			White	7	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	Others	Others	All	12	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
6	30-34	10-14	All	29	7.5	9.310	5.079	.958	-.164
			White	24	7.7	9.167	4.984	1.087	.324
			Nonwhite	5	a	a	a	a	a
		Others	All	13	b	b	b	b	b
			White	11	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
	35-39	15-19	All	43	12.5	12.977	6.345	.522	-.315
			White	40	12.6	13.125	6.333	.549	-.266
			Nonwhite	3	a	a	a	a	a
		Others	All	21	b	b	b	b	b
			White	18	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	40-44	20-24	All	23	10.7	13.130	6.334	.752	-.426
			White	21	10.7	12.905	6.024	.831	-.018
			Nonwhite	3	a	a	a	a	a
	Others	Others	All	28	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	34	b	b	b	b	b
7	Others	Others	All	82	b	b	b	b	b
			White	75	b	b	b	b	b
			Nonwhite	7	b	b	b	b	b

Table 9 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
8+	Others	Others	All	51	b	b	b	b	b
			White	41	b	b	b	b	b
			Nonwhite	10	b	b	b	b	b

[a]Statistics for sample sizes less than 20 are omitted.

[b]Statistics accumulated from age groups with "all" sample sizes less than 20 are omitted.

Table 10. Median, mean, standard deviation, skewness, and kurtosis of open intervals (expressed in quarters) by parity, for all women, whites and nonwhites

Parity	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
1	All	3166	11.5	26.984	32.521	1.926	4.530
	White	2928	11.4	27.346	32.916	1.878	4.201
	Nonwhite	238	12.0	22.534	26.857	2.727	11.914
2	All	4312	21.7	27.548	21.998	.788	-.072
	White	4093	22.0	27.772	21.995	.740	-.292
	Nonwhite	219	16.8	23.370	21.695	1.753	5.057
3	All	2644	22.4	25.265	17.229	.657	.113
	White	2514	22.8	25.463	17.169	.577	-.366
	Nonwhite	130	19.2	21.423	17.983	2.108	9.272
4	All	1339	21.2	22.980	14.714	.557	-.143
	White	1262	21.4	23.085	14.560	.521	-.269
	Nonwhite	77	17.9	21.260	17.052	1.009	1.056
5	All	494	19.4	20.791	13.375	.440	-.548
	White	451	20.2	21.379	13.542	.396	-.613
	Nonwhite	43	13.5	14.628	9.617	.358	-.922
6	All	176	15.0	18.409	12.702	.678	-.121
	White	157	15.6	18.790	12.551	.661	-.096
	Nonwhite	19	a	a	a	a	a
7	All	82	15.0	16.122	10.074	.459	-.495
	White	75	15.2	16.427	10.063	.423	-.462
	Nonwhite	7	a	a	a	a	a
8+	All	51	10.5	12.857	10.351	.939	-.389
	White	41	12.4	13.353	9.024	1.018	1.469
	Nonwhite	10	a	a	a	a	a

[a]Statistics for sample sizes less than 20 are omitted.

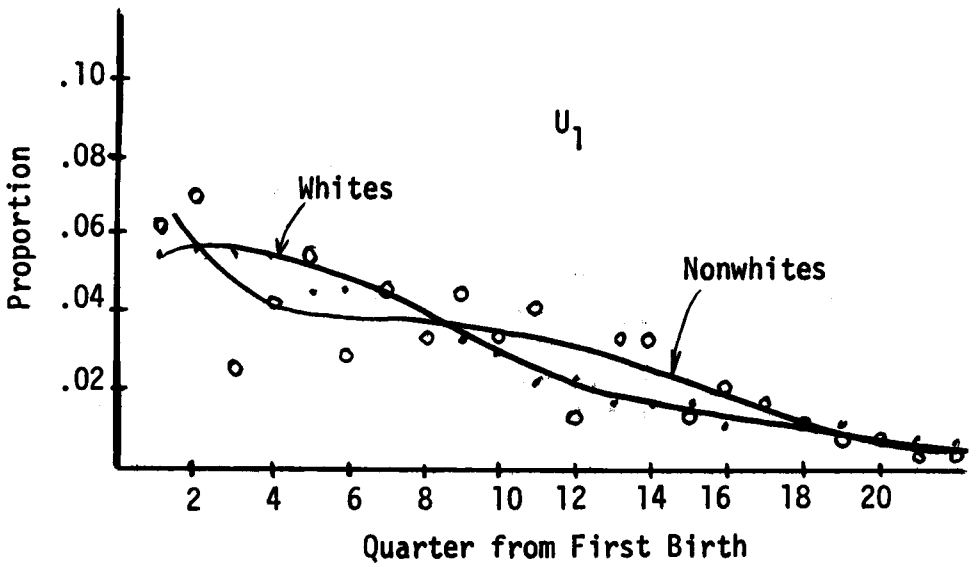


Figure 11. Parity 1, density function of interval from first birth to Census date, U_1, by quarters, for whites and nonwhites

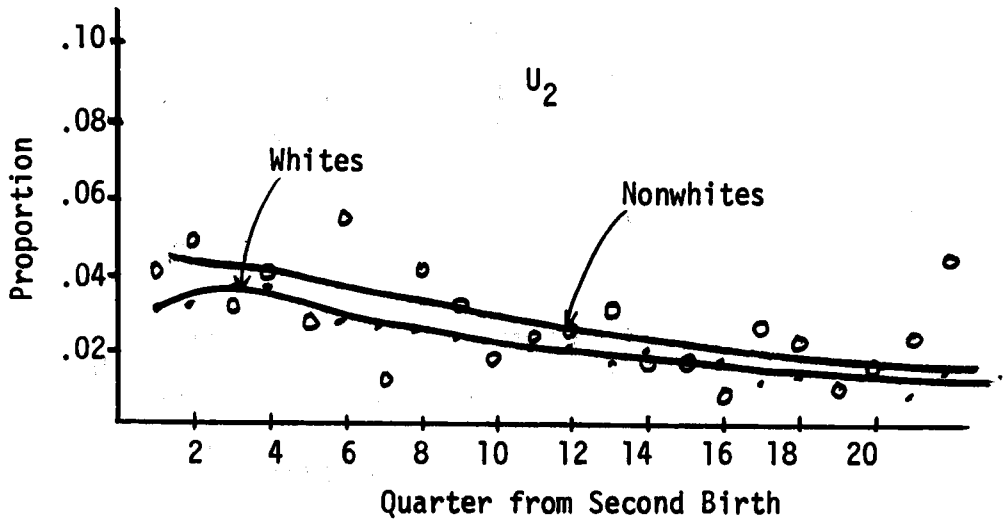


Figure 12. Parity 2, density function of interval from second birth to Census date, U_2, by quarters, for whites and nonwhites

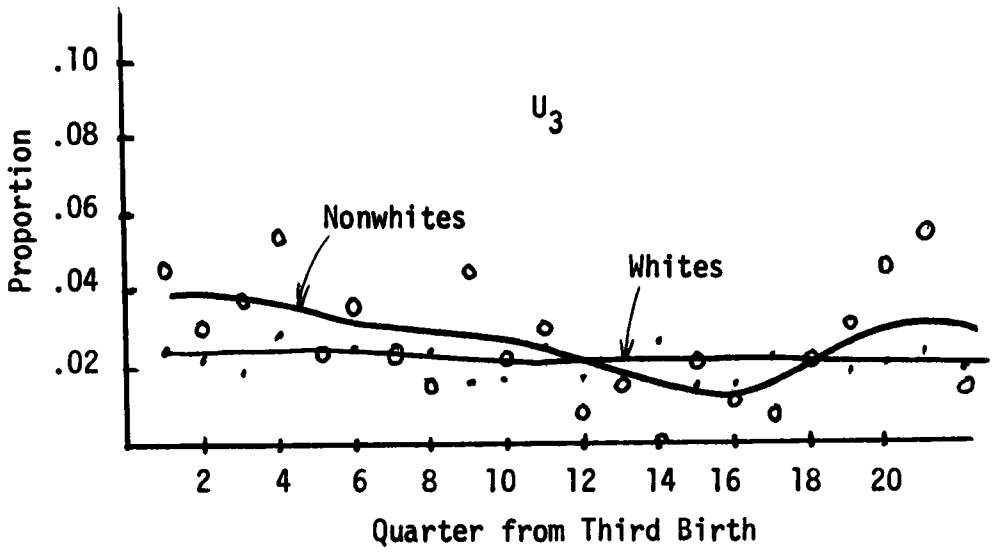


Figure 13. Parity 3, density function of interval from third birth to Census date, U_3, by quarters, for whites and nonwhites

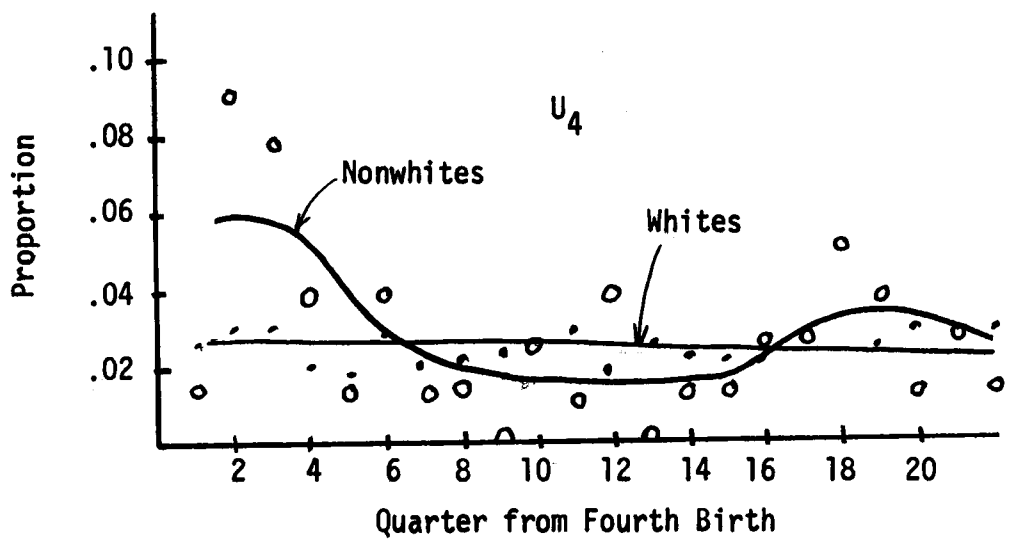


Figure 14. Parity 4, density function of interval from fourth birth to Census date, U_4, by quarters, for whites and nonwhites

Table 11. Median, mean, standard deviation, skewness, and kurtosis of open intervals (expressed in quarters) by parity and age at time of Census, for all women, whites and nonwhites

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
1	15-19	All	199	2.7	3.864	2.917	1.503	2.892
		White	181	2.7	3.845	2.919	1.586	3.276
		Nonwhite	18	a	a	a	a	a
	20-24	All	1088	6.0	7.575	5.410	1.104	1.208
		White	1004	6.0	7.567	5.369	1.059	.983
		Nonwhite	84	6.1	7.679	5.915	1.491	2.912
	25-29	All	727	10.0	13.014	9.719	.986	.516
		White	675	9.7	12.778	9.615	.973	.407
		Nonwhite	52	13.5	16.077	10.616	1.062	1.042
	30-34	All	294	22.8	25.793	18.067	.421	-.944
		White	269	22.4	25.680	17.981	.433	-.945
		Nonwhite	25	25.5	27.000	19.313	.294	-.948
	35-39	All	213	49.1	46.070	19.206	-.386	-.726
		White	192	50.2	47.349	19.101	-.521	-.537
		Nonwhite	21	30.5	34.381	16.326	.782	.081
	40-44	All	182	60.6	58.445	21.010	-.306	-.410
		White	170	60.7	59.065	20.317	-.282	-.354
		Nonwhite	12	a	a	a	a	a
	45-49	All	166	71.0	69.446	20.268	-.398	-.441
		White	155	71.6	70.413	19.689	-.415	-.331
		Nonwhite	11	a	a	a	a	a
	50+	All	297	85.6	92.249	38.732	1.005	1.260
		White	282	85.8	92.894	38.198	.986	1.194
		Nonwhite	15	a	a	a	a	a
2	15-19	All	36	2.6	3.500	1.859	.649	-.064
		White	33	2.6	3.515	1.873	.730	-.012
		Nonwhite	3	a	a	a	a	a
	20-24	All	617	5.0	6.984	5.664	2.013	8.371
		White	565	5.1	6.922	5.654	2.108	9.233
		Nonwhite	52	5.5	7.654	5.783	1.063	.186
	25-29	All	1193	11.4	13.240	9.041	.714	-.092
		White	1130	11.1	13.129	8.989	.720	-.107
		Nonwhite	63	12.9	15.222	9.812	.575	-.015

Table 11 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	30-34	All	864	24.2	24.622	13.506	.179	-.769
		White	828	24.2	24.679	13.456	.188	-.754
		Nonwhite	36	23.0	23.306	14.768	.064	-1.131
	35-39	All	635	39.0	38.050	16.092	-.204	-.428
		White	612	39.1	38.191	16.029	-.227	-.411
		Nonwhite	23	34.5	34.304	17.644	.376	-.405
	40-44	All	508	50.8	48.990	16.346	-.534	-.133
		White	492	51.3	49.378	16.162	-.563	-.068
		Nonwhite	16	a	a	a	a	a
	45-49	All	301	58.9	57.970	15.938	-.453	-.073
		White	287	59.0	58.077	15.600	-.492	-.076
		Nonwhite	14	a	a	a	a	a
	50+	All	158	66.7	68.278	19.399	.366	2.517
		White	146	67.0	68.760	17.921	.067	1.255
		Nonwhite	12	a	a	a	a	a
3	20-24	All	129	5.7	6.636	4.526	1.358	3.446
		White	114	5.8	6.658	4.643	1.410	3.486
		Nonwhite	15	a	a	a	a	a
	25-29	All	609	10.5	12.310	8.698	.666	-.351
		White	575	10.3	12.184	8.640	.703	-.273
		Nonwhite	34	15.0	14.441	9.511	.119	-1.039
	30-34	All	693	19.5	20.271	11.180	.296	-.439
		White	662	19.5	20.363	11.109	.272	-.465
		Nonwhite	31	17.5	18.323	12.645	.761	.117
	35-39	All	623	30.6	30.684	14.157	.020	-.431
		White	593	31.1	30.855	13.990	-.005	-.485
		Nonwhite	30	28.3	27.300	17.056	.495	.161
	40-44	All	391	40.7	39.253	15.392	-.321	-.364
		White	378	41.0	39.489	15.432	-.331	-.371
		Nonwhite	13	a	a	a	a	a
	45-49	All	145	47.5	48.124	13.428	-.100	-.165
		White	140	47.7	48.271	13.486	-.101	-.175
		Nonwhite	5	a	a	a	a	a

Table 11 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	50+	All	52	56.0	56.712	19.450	.615	2.882
		White	50	56.0	55.600	16.525	-.594	.051
		Nonwhite	2	a	a	a	a	a
4	20-24	All	33	2.4	4.333	3.789	1.278	.633
		White	26	2.3	4.577	4.139	1.101	-.025
		Nonwhite	7	a	a	a	a	a
	25-29	All	205	8.3	10.600	7.749	.858	.194
		White	190	8.3	10.595	7.798	.888	.262
		Nonwhite	15	a	a	a	a	a
	30-34	All	400	17.9	18.195	10.377	.318	-.435
		White	369	17.6	17.881	10.157	.308	-.389
		Nonwhite	31	19.5	21.935	12.283	.115	-1.058
	35-39	All	409	25.2	26.134	12.626	.127	-.418
		White	395	25.4	26.367	12.572	.146	-.429
		Nonwhite	14	a	a	a	a	a
	40-44	All	196	32.4	32.954	14.450	.025	-.575
		White	189	32.2	32.566	14.395	.045	-.549
		Nonwhite	7	a	a	a	a	a
	45-49	All	75	39.3	39.587	13.177	.194	-.299
		White	75	39.3	39.587	13.177	.194	-.299
		Nonwhite	0	a	a	a	a	a
	50+	All	21	48.7	50.429	12.812	.293	1.111
		White	18	a	a	a	a	a
		Nonwhite	3	a	a	a	a	a
5	25-29	All	46	8.0	11.022	9.169	.750	-.562
		White	36	7.0	10.722	9.534	.804	-.513
		Nonwhite	10	a	a	a	a	a
	30-34	All	160	14.2	15.675	10.631	.546	-.560
		White	141	14.7	16.007	10.733	.511	-.612
		Nonwhite	19	a	a	a	a	a
	35-39	All	159	21.8	22.503	12.563	.156	-.777
		White	155	21.8	22.665	12.586	.154	-.801
		Nonwhite	4	a	a	a	a	a

Table 11 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	40-44	All	97	28.7	28.505	13.607	.188	-.649
		White	89	29.2	29.225	13.735	.135	-.714
		Nonwhite	8	a	a	a	a	a
	45-49	All	20	28.0	30.350	10.378	-.484	.315
		White	18	a	a	a	a	a
		Nonwhite	2	a	a	a	a	a
	Others	All	12	b	b	b	b	b
		White	12	b	b	b	b	b
		Nonwhite	0	b	b	b	b	b
6	30-34	All	42	10.0	12.548	8.256	.442	-.952
		White	35	11.5	13.171	8.064	.308	-1.045
		Nonwhite	7	a	a	a	a	a
	35-39	All	64	13.0	16.234	12.041	.867	.232
		White	58	12.5	15.397	11.375	.859	.239
		Nonwhite	6	a	a	a	a	a
	40-44	All	39	26.5	24.385	11.652	-.319	-1.041
		White	36	27.0	25.333	10.704	-.212	-1.145
		Nonwhite	3	a	a	a	a	a
	Others	All	34	b	b	b	b	b
		White	28	b	b	b	b	b
		Nonwhite	6	b	b	b	b	b
7	30-34	All	21	14.1	14.429	8.430	.092	-.797
		White	19	a	a	a	a	a
		Nonwhite	2	a	a	a	a	a
	35-39	All	31	15.6	15.258	9.402	.358	-.723
		White	28	15.2	14.929	9.309	.304	-.726
		Nonwhite	3	a	a	a	a	a
	Others	All	30	b	b	b	b	b
		White	28	b	b	b	b	b
		Nonwhite	2	b	b	b	b	b
8+	35-39	All	20	12.2	13.000	8.547	.687	-.132
		White	14	a	a	a	a	a
		Nonwhite	6	a	a	a	a	a

Table 11 (continued)

Parity	Age	Race	Sample Size	Median	Mean	Standard Deviation	Skew-ness	Kur-tosis
	Others	All	31	b	b	b	b	b
		White	27	b	b	b	b	b
		Nonwhite	4	b	b	b	b	b

[a]Statistics for sample sizes less than 20 are omitted.

[b]Statistics accumulated from age groups with "all" sample size less than 20 are omitted.

Table 12. Median, mean, standard deviation, skewness, and kurtosis of open intervals (expressed in quarters) by parity, age at time of Census, and marital duration, for all women, whites and nonwhites

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
1	15-19	0-4	All	198	2.8	3.798	2.770	1.294	1.826
			White	180	2.8	3.772	2.756	1.365	2.167
			Nonwhite	18	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	20-24	0-4	All	922	5.2	6.362	4.045	.630	-.388
			White	845	5.2	6.353	4.044	.648	-.353
			Nonwhite	77	a	6.468	4.070	.425	-.750
		5-9	All	163	14.5	14.374	6.870	-.025	-.611
			White	156	14.4	14.077	6.737	-.057	-.669
			Nonwhite	7	a	a	a	a	a
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29	0-4	All	294	5.5	6.704	4.181	.575	-.577
			White	275	5.3	6.549	4.136	.624	-.503
			Nonwhite	19	a	a	a	a	a
		5-9	All	389	15.5	16.003	8.618	.168	-.885
			White	361	15.2	15.828	8.616	.180	-.892
			Nonwhite	28	16.5	18.250	8.479	.048	-.741
		10-14	All	44	33.5	28.750	14.113	-.594	-.836
			White	39	33.7	28.462	13.835	-.651	-.822
			Nonwhite	5	a	a	a	a	a
	30-34	0-4	All	38	4.0	6.079	3.872	1.182	1.341
			White	35	4.5	6.200	3.984	1.108	1.070
			Nonwhite	3	a	a	a	a	a
		5-9	All	102	13.7	15.892	9.458	.384	-.842
			White	96	13.6	15.750	9.446	.378	-.873
			Nonwhite	6	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		10-14	All	125	35.9	33.520	14.414	-.558	-.677
			White	111	36.4	33.919	14.142	-.519	-.738
			Nonwhite	14	a	a	a	a	a
		15-19	All	29	55.5	53.138	15.087	-1.927	4.021
			White	27	55.2	52.370	15.340	-1.856	3.671
			Nonwhite	2	a	a	a	a	a
	35-39	5-9	All	23	19.7	20.826	7.377	.311	-.803
			White	16	a	a	a	a	a
			Nonwhite	7	a	a	a	a	a
		10-14	All	51	35.9	37.490	11.012	.025	-1.130
			White	44	36.0	37.614	11.192	-.013	-1.109
			Nonwhite	7	a	a	a	a	a
		15-19	All	106	55.8	52.915	14.955	-1.252	1.769
			White	101	55.9	53.396	14.473	-1.396	2.437
			Nonwhite	5	a	a	a	a	a
		20-24	All	27	66.7	65.852	11.967	-.965	.136
			White	25	67.5	67.200	11.011	-1.094	.665
			Nonwhite	2	a	a	a	a	a
		Others	All	6	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	30-34	All	66	56.5	52.348	17.481	-.854	-.145
			White	59	58.2	54.898	15.353	-.959	.332
			Nonwhite	7	a	a	a	a	a
		35-39	All	81	69.2	67.593	17.068	-.470	-.336
			White	77	69.1	66.987	17.048	-.451	-.336
			Nonwhite	4	a	a	a	a	a
		Others	All	35	b	b	b	b	b
			White	34	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	45-49	30-34	All	25	57.5	56.320	12.844	-.860	.344
			White	24	57.0	55.917	12.958	-.798	.253
			Nonwhite	1	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		35-39	All	73	74.7	72.014	16.707	-.889	.350
			White	69	75.4	73.797	14.890	-.769	.116
			Nonwhite	4	a	a	a	a	a
		40-44	All	53	79.8	77.528	21.101	-.638	-.523
			White	50	80.0	78.760	20.402	-.673	-.401
			Nonwhite	3	a	a	a	a	a
		Others	All	15	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	50+	30-34	All	24	60.0	58.292	10.440	-.531	-.947
			White	22	61.0	58.955	10.302	-.612	-.796
			Nonwhite	2	a	a	a	a	a
		35-39	All	60	73.6	73.567	13.436	-.723	-.100
			White	58	73.6	73.500	13.649	-.701	-.194
			Nonwhite	2	a	a	a	a	a
		40-44	All	61	80.8	79.410	18.378	-.393	-.541
			White	58	81.0	80.172	17.999	-.379	-.546
			Nonwhite	3	a	a	a	a	a
		45-49	All	68	98.0	99.588	21.550	-.285	-.879
			White	66	98.0	99.379	21.652	-.279	-.887
			Nonwhite	2	a	a	a	a	a
		50+	All	72	133[b]	133.486	45.276	.064	-.795
			White	68	134[b]	134.206	44.218	.016	-.762
			Nonwhite	4	a	a	a	a	a
		Others	All	12	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
2	15-19	0-4	All	36	2.8	3.500	1.859	.649	-.064
			White	33	2.8	3.515	1.873	.630	-.012
			Nonwhite	3	a	a	a	a	a
	20-24	0-4	All	320	3.2	4.403	2.859	.731	-.323
			White	291	3.2	4.416	2.889	.736	-.311
			Nonwhite	29	3.1	4.276	2.576	.595	-.824

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		5-9	All	294	8.0	9.537	5.868	.656	-.168
			White	271	7.8	9.336	5.830	.694	-.036
			Nonwhite	23	10.5	11.913	5.923	.329	-1.213
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29	0-4	All	118	3.8	4.381	2.657	.837	-.036
			White	113	3.8	4.345	2.594	.832	.011
			Nonwhite	5	a	a	a	a	a
		5-9	All	884	11.0	12.041	7.256	.450	-.606
			White	837	10.8	11.964	7.239	.477	-.553
			Nonwhite	47	12.4	13.404	7.511	-.004	-1.176
		10-14	All	187	25.3	24.246	8.988	-.363	-.183
			White	177	25.3	24.158	9.033	-.344	-.168
			Nonwhite	10	a	a	a	a	a
		Others	All	4	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	30-34	0-4	All	226	11.9	13.677	7.390	.377	-.699
			White	212	12.0	13.726	7.341	.371	-.690
			Nonwhite	14	a	a	a	a	a
		5-9	All	492	27.6	26.913	11.131	-.357	-.460
			White	473	27.5	26.770	11.024	-.357	-.486
			Nonwhite	19	a	a	a	a	a
		10-14	All	129	41.1	37.705	14.010	-.707	-.382
			White	127	41.1	37.685	14.115	-.699	-.423
			Nonwhite	2	a	a	a	a	a
		Others	All	17	b	b	b	b	b
			White	16	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	35-39	5-9	All	33	14.6	15.788	6.809	.146	-.577
			White	32	14.5	14.719	6.906	.173	-.629
			Nonwhite	1	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		10-14	All	169	30.9	29.160	11.299	-.496	-.494
			White	161	30.9	29.248	11.251	-.519	-.403
			Nonwhite	8	a	a	a	a	a
		15-19	All	356	44.0	41.983	14.270	-.650	.124
			White	344	44.0	42.148	14.180	-.647	.175
			Nonwhite	12	a	a	a	a	a
		20-24	All	75	51.4	50.560	15.671	-.582	.818
			White	73	51.4	50.493	15.370	-.654	1.053
			Nonwhite	2	a	a	a	a	a
		Others	All	2	b	b	b	b	b
			White	2	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	10-14	All	41	51.5	27.390	10.293	-.117	-.650
			White	40	51.0	27.300	10.408	-.091	-.697
			Nonwhite	1	a	a	a	a	a
		15-19	All	182	49.1	47.082	12.689	-.769	.203
			White	175	49.5	47.697	12.286	-.774	.292
			Nonwhite	7	a	a	a	a	a
		20-24	All	255	81.5	55.071	14.178	-.641	.375
			White	250	82.0	55.160	14.139	-.682	.446
			Nonwhite	5	a	a	a	a	a
		Others	All	30	b	b	b	b	b
			White	27	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	45-49	15-19	All	54	50.0	50.037	11.198	-.535	.110
			White	51	49.7	50.392	11.038	-.508	.168
			Nonwhite	3	a	a	a	a	a
		20-24	All	155	61.1	60.387	14.350	-.784	.556
			White	150	61.3	60.533	14.236	-.811	.714
			Nonwhite	5	a	a	a	a	a
		25-29	All	71	66.8	62.535	17.229	-.759	.029
			White	67	66.7	72.493	17.472	-.746	-.001
			Nonwhite	4	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		Others	All	22	b	b	b	b	b
			White	20	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
	50+	15-19	All	22	54.0	55.091	8.569	.131	-1.061
			White	20	54.5	55.750	8.711	-.041	-1.055
			Nonwhite	2	a	a	a	a	a
		20-24	All	47	63.2	62.936	10.497	-.201	-.863
			White	44	64.0	63.614	10.504	-.346	-.718
			Nonwhite	3	a	a	a	a	a
		25-29	All	47	68.5	70.213	13.820	-.120	-.792
			White	46	69.0	70.696	13.566	-.139	-.719
			Nonwhite	1	a	a	a	a	a
		30-34	All	30	80.0	78.433	25.156	-.754	1.303
			White	26	81.0	81.654	22.724	-.406	.802
			Nonwhite	4	a	a	a	a	a
		Others	All	12	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
3	20-24	0-4	All	20	3.0	3.550	2.416	.500	-.975
			White	18	a	a	a	a	a
			Nonwhite	2	a	a	a	a	a
		5-9	All	106	6.3	7.226	4.601	1.336	3.375
			White	93	6.5	7.333	4.700	1.395	3.447
			Nonwhite	13	10.5	11.696	8.678	.319	-1.268
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	25-29		All	401	7.0	9.274	6.526	.744	-.312
			White	378	6.1	9.127	6.357	.749	-.270
			Nonwhite	23	10.5	11.696	8.678	.319	-1.268
		10-14	All	196	18.2	18.990	8.868	-.053	-.624
			White	185	18.3	18.919	8.886	-.033	-.650
			Nonwhite	11	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		Others	All	12	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
		10-14	All	196	18.2	18.990	8.868	-.053	-.624
			White	185	18.3	18.919	8.886	-.033	-.650
			Nonwhite	11	a	a	a	a	a
	30-34	5-9	All	109	9.1	10.284	7.620	.548	-.558
			White	97	9.3	10.474	7.707	.515	-.559
			Nonwhite	12	a	a	a	a	a
		10-14	All	457	19.8	20.149	9.611	.036	-.694
			White	442	19.6	20.079	9.629	.049	-.685
			Nonwhite	15	a	a	a	a	a
		15-19	All	126	29.3	29.500	11.895	-.297	-.102
			White	122	29.4	29.402	11.693	-.331	-.031
			Nonwhite	4	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	35-39	10-14	All	159	24.2	23.044	10.215	-.306	-.677
			White	150	24.5	23.313	10.192	-.311	-.682
			Nonwhite	9	a	a	a	a	a
		15-19	All	390	33.8	33.008	13.218	-.239	-.335
			White	375	34.0	32.968	13.221	-.230	-.344
			Nonwhite	15	a	a	a	a	a
		20-24	All	57	43.3	42.105	15.679	-.494	-.257
			White	55	43.3	41.709	15.349	-.617	-.280
			Nonwhite	2	a	a	a	a	a
		Others	All	17	b	b	b	b	b
			White	13	b	b	b	b	b
			Nonwhite	4	b	b	b	b	b
	40-44	10-14	All	29	20.8	21.897	10.125	.048	-.594
			White	27	22.5	22.593	9.877	.073	-.613
			Nonwhite	2	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		15-19	All	145	37.9	36.869	12.858	-.537	-.008
			White	141	37.9	36.972	12.955	-.554	-.008
			Nonwhite	4	a	a	a	a	a
		20-24	All	206	45.0	43.379	15.093	-.518	-.130
			White	200	45.4	43.530	15.198	-.534	-.133
			Nonwhite	6	a	a	a	a	a
		Others	All	11	b	b	b	b	b
			White	10	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	45-49	15-19	All	41	41.2	42.780	9.202	.316	-.315
			White	38	40.5	42.342	9.222	.361	-.266
			Nonwhite	3	a	a	a	a	a
		20-24	All	73	50.4	50.986	13.803	-.481	.327
			White	72	50.5	51.000	13.899	-.481	.284
			Nonwhite	1	a	a	a	a	a
		25-29	All	26	55.0	52.231	13.352	-.265	-.105
			White	26	55.0	52.231	13.352	-.265	-.105
			Nonwhite	0	a	a	a	a	a
		Others	All	5	b	b	b	b	b
			White	4	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	50+	Others	All	52	b	b	b	b	b
			White	50	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
4	20-24	5-9	All	32	2.4	4.375	3.842	1.235	.496
			White	26	2.4	4.577	4.139	1.101	-.025
			Nonwhite	6	a	a	a	a	a
		Others	All	1	b	b	b	b	b
			White	0	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	25-29	5-9	All	111	5.5	7.117	5.005	.949	,194
			White	102	5.6	6.069	4.889	.950	.331
			Nonwhite	9	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		10-14	All	91	13.6	14.374	8.295	.313	-.358
			White	85	13.5	14.318	8.431	.328	-.379
			Nonwhite	6	a	a	a	a	a
		Others	All	3	b	b	b	b	b
			White	3	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	30-34	5-9	All	38	9.0	8.711	4.579	.039	-.861
			White	35	8.8	8.657	4.614	.063	-.820
			Nonwhite	3	a	a	a	a	a
		10-14	All	259	16.5	16.745	9.201	.065	-.871
			White	244	16.4	16.648	9.213	.077	-.871
			Nonwhite	15	a	a	a	a	a
		15-19	All	101	23.8	25.198	10.497	.056	-.331
			White	89	23.6	24.742	10.062	.152	-.076
			Nonwhite	12	a	a	a	a	a
		Others	All	2	b	b	b	b	b
			White	1	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	35-39	10-14	All	88	18.5	17.091	9.248	-.099	-1.144
			White	85	18.4	17.129	9.221	-.070	-1.144
			Nonwhite	3	a	a	a	a	a
		15-19	All	268	27.4	27.515	11.392	-.121	-.525
			White	260	27.5	27.750	11.288	-.103	-.543
			Nonwhite	8	a	a	a	a	a
		20-24	All	46	37.0	38.087	11.905	.242	-1.100
			White	44	38.0	38.341	12.116	.181	-1.164
			Nonwhite	2	a	a	a	a	a
		Others	All	7	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	40-44	15-19	All	78	30.0	29.795	11.938	.120	-.653
			White	76	30.0	29.658	11.931	.126	-.626
			Nonwhite	2	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		20-24	All	100	37.8	36.480	14.671	-.224	-.484
			White	94	37.8	36.188	14.795	-.192	-.507
			Nonwhite	4	a	a	a	a	a
		Others	All	18	b	b	b	b	b
			White	17	b	b	b	b	b
			Nonwhite	1	b	b	b	b	b
	45-49	20-24	All	43	45.3	42.372	13.880	-.132	-.281
			White	43	45.3	42.372	13.880	-.132	-.281
			Nonwhite	0	a	a	a	a	a
		Others	All	32	b	b	b	b	b
			White	32	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
5	25-29	10-14	All	27	14.6	15.481	9.254	.114	-1.026
			White	23	14.3	15.174	9.193	.283	-.886
			Nonwhite	4	a	a	a	a	a
		Others	All	19	b	b	b	b	b
			White	13	b	b	b	b	b
			Nonwhite	6	b	b	b	b	b
	30-34	10-14	All	100	11.2	13.190	9.032	.552	-.549
			White	87	11.4	13.575	9.316	.496	-.663
			Nonwhite	13	a	a	a	a	a
		15-19	All	50	21.0	21.820	10.791	.095	-.950
			White	46	21.0	21.696	10.720	.143	-.902
			Nonwhite	4	a	a	a	a	a
		Others	All	10	b	b	b	b	b
			White	8	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
	35-39	10-14	All	29	10.8	13.379	7.812	.411	-.695
			White	28	10.5	13.321	7.941	.427	-.755
			Nonwhite	1	a	a	a	a	a
		15-19	All	115	22.4	23.965	12.165	.001	-.640
			White	112	22.5	24.161	12.127	.014	-.665
			Nonwhite	3	a	a	a	a	a

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
		Others	All	15	b	b	b	b	b
			White	15	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	40-44	15-19	All	48	26.0	25.646	12.064	.113	.844
			White	43	26.5	25.605	12.659	.119	-1.007
			Nonwhite	5	a	a	a	a	a
		20-24	All	42	33.0	32.500	14.667	.006	-.776
			White	39	34.5	34.128	13.834	-.002	-.682
			Nonwhite	3	a	a	a	a	a
		Others	All	7	b	b	b	b	b
			White	7	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
	Others	Others	All	12	b	b	b	b	b
			White	12	b	b	b	b	b
			Nonwhite	0	b	b	b	b	b
6	30-34	10-14	All	29	8.5	10.276	6.734	.541	-.822
			White	24	9.3	11.000	6.928	.443	-1.076
			Nonwhite	5	a	a	a	a	a
		Others	All	13	b	b	b	b	b
			White	11	b	b	b	b	b
			Nonwhite	2	b	b	b	b	b
	35-39	15-19	All	43	14.3	16.977	11.104	.630	-.279
			White	40	13.0	16.800	11.127	.710	-.131
			Nonwhite	3	a	a	a	a	a
		Others	All	21	b	b	b	b	b
			White	18	b	b	b	b	b
			Nonwhite	3	b	b	b	b	b
	40-44	20-24	All	23	30.5	27.783	11.289	-.771	-.230
			White	21	30.5	28.714	10.041	-.541	-.629
			Nonwhite	2	a	a	a	a	a
	Others	Others	All	28	b	b	b	b	b
			White	6	b	b	b	b	b
			Nonwhite	4	b	b	b	b	b

Table 12 (continued)

Parity	Age	Marital Duration	Race	Sample Size	Median	Mean	Standard Deviation	Skewness	Kurtosis
7	Others	Others	All	82	b	b	b	b	b
			White	75	b	b	b	b	b
			Nonwhite	7	b	b	b	b	b
8+	Others	Others	All	51	b	b	b	b	b
			White	41	b	b	b	b	b
			Nonwhite	10	b	b	b	b	b

[a]Statistics for sample sizes less than 20 are omitted.

[b]Statistics accumulated from age groups with "all" sample sizes less than 20 are omitted.

[c]Medians are approximated because they were not computed.

Table 13. Correlation coefficients on the relationships between age at time of Census and closed intervals and between age at time of Census and open intervals, by parity, for all women, whites and nonwhites

	Age and Closed			Age and Open			Sample Size		
Parity	All	White	Non-white	All	White	Non-white	All	White	Non-white
Total	.396	.388	.491	.747	.751	.676	12264	11521	743
1	.544	.536	.649	.846	.852	.757	3166	2928	238
2	.311	.305	.395	.808	.812	.739	4312	4093	219
3	.258	.254	.303	.700	.704	.615	2644	2514	130
4	.255	.260	.197	.621	.615	.716	1339	1262	77
5	.202	.162	.618	.484	.494	.257	494	451	43
6	.194	.185	a	.487	.507	a	176	157	19
7	.113	.114	a	.373	.342	a	82	75	7
8+	.267	.311	a	.424	.467	a	51	41	10

[a]Statistics for sample sizes lss than 20 are omitted.

Table 14. Correlation coefficients on the relationships between marital duration and closed intervals and between marital duration and open intervals, by parity, for all women, whites and nonwhites

	Marital Duration and Closed			Marital Duration and Open			Sample Size		
Parity	All	White	Non-white	All	White	Non-white	All	White	Non-white
Total	.449	.443	.525	.794	.797	.749	12264	11521	743
1	.599	.591	.714	.919	.922	.859	3166	2928	238
2	.376	.372	.416	.862	.863	.842	4312	4093	219
3	.309	.307	.340	.759	.756	.791	2644	2514	130
4	.284	.284	.292	.693	.684	.801	1339	1262	77
5	.227	.192	.582	.583	.593	.350	494	451	43
6	.169	.161	a	.592	.622	a	176	157	19
7	.060	.037	a	.473	.463	a	82	75	7
8+	.344	.384	a	.311	.326	a	51	41	10

[a]Statistics for sample sizes less than 20 are omitted.

Table 15. Correlation coefficients on the relationships between parity and closed intervals and between parity and open intervals, by age at time of Census, for all women, whites and nonwhites

Age	Parity and Closed			Parity and Open			Sample Size		
	All	White	Non-white	All	White	Non-white	All	White	Non-white
Total	.035	.043	.007	-.091	-.090	-.100	12264	11521	743
15-19	.368	.365	.392	-.040	-.035	-.091	237	216	21
20-24	.255	.240	.427	-.085	.081	-.130	1875	1717	158
25-29	-.000	.001	-.015	-.007	-.061	-.194	2798	2620	178
30-34	-.090	-.094	-.028	-.259	-.255	-.298	2492	2338	154
35-39	-.047	-.039	-.140	-.450	-.458	-.359	2154	2047	107
40-44	-.108	-.095	-.328	-.508	-.512	-.425	1439	1379	60
45-49	-.169	-.149	-.400	-.559	-.570	-.454	731	698	33
50+	-.246	-.240	-.351	-.413	-.431	-.115	538	506	32

[a]Statistics for sample sizes less than 20 are omitted.

Table 16. Correlation coefficients on the relationships between parity and closed intervals and between parity and open intervals, by marital duration, for all women, whites and nonwhites

Marital Duration	Parity and Closed			Parity and Open			Sample Size		
	All	White	Non-white	All	White	Non-white	All	White	Non-white
Total	.035	.043	.007	-.091	-.090	-.100	12264	11521	743
0-4	.214	.204	.345	-.215	-.215	-.217	1986	1828	158
5-9	-.113	-.119	-.021	-.346	-.339	-.443	3003	2788	215
10-14	-.119	-.115	-.162	-.482	-.475	-.572	2700	2543	157
15-19	-.074	-.058	-.264	-.579	-.582	-.533	2543	2421	122
20-24	-.108	-.096	-.353	-.615	-.611	-.658	1473	1415	58
25-29	-.301	-.287	a	-.590	a	a	339	324	15
30-34	-.293	-.278	a	-.531	-.534	a	128	119	9
35+	-.277	-.236	a	-.444	-.489	a	92	83	9

[a]Statistics for sample sizes less than 20 are omitted.

Table 17. Correlation coefficients on the relationships between closed and open intervals by age at time of Census, for all women, whites and nonwhites

Age	Race	Correlation	Sample Size
Total	All	.117	12264
	White	.112	11521
	Nonwhite	.185	743
15-19	All	-.207	237
	White	-.190	216
	Nonwhite	-.398	21
20-24	All	-.199	1875
	White	-.197	1717
	Nonwhite	-.214	158
25-29	All	-.330	2798
	White	-.330	2620
	Nonwhite	-.295	178
30-34	All	-.369	2492
	White	-.371	2338
	Nonwhite	-.358	154
35-39	All	-.402	2154
	White	-.408	2047
	Nonwhite	-.307	107
40-44	All	-.375	1439
	White	-.373	1379
	Nonwhite	-.353	60
45-49	All	-.284	731
	White	-.294	698
	Nonwhite	-.125	33
50+	All	-.101	538
	White	-.103	506
	Nonwhite	-.065	32

Table 18. Correlation coefficients on the relationships between closed and open intervals by parity, for all women, whites and nonwhites

Parity	Race	Correlation	Sample Size
Total	All	.117	12264
	White	.112	11521
	Nonwhite	.185	743
1	All	.295	3166
	White	.295	2928
	Nonwhite	.322	238
2	All	.064	4312
	White	.061	4093
	Nonwhite	.094	219
3	All	-.149	2644
	White	-.155	2514
	Nonwhite	-.056	130
4	All	-.209	1339
	White	-.216	1262
	Nonwhite	-.101	77
5	All	-.313	494
	White	-.345	451
	Nonwhite	-.000	43
6	All	-.290	176
	White	-.268	157
	Nonwhite	a	19
7	All	-.383	82
	White	-.408	75
	Nonwhite	a	7
8+	All	-.130	51
	White	-.135	41
	Nonwhite	a	10

[a]Statistics for sample sizes less than 20 are omitted.

Table 19. Correlation coefficients between closed and open intervals by parity and age at time of Census, for all women, whites and nonwhites

Age	Race	Parity 1	2	3	4	5	6	7	8
15-19	All	-.195	-.313	a	a	a	a	a	a
	White	-.179	-.296	a	a	a	a	a	a
	Nonwhite	a	a	a	a	a	a	a	a
20-24	All	-.203	-.164	-.230	-.081	a	a	a	a
	White	-.207	-.156	-.206	-.008	a	a	a	a
	Nonwhite	-.176	-.224	a	a	a	a	a	a
25-29	All	-.391	-.298	-.346	-.267	-.288	a	a	a
	White	-.397	-.295	-.340	-.270	-.304	a	a	a
	Nonwhite	-.269	-.325	-.416	a	a	a	a	a
30-34	All	-.496	-.340	-.438	-.388	-.416	-.318	-.302	a
	White	-.482	-.347	-.443	-.407	-.450	-.296	a	a
	Nonwhite	-.622	-.280	-.357	-.262	a	a	a	a
35-39	All	-.453	-.403	-.510	-.516	-.585	-.504	-.515	-.200
	White	-.479	-.390	-.524	-.522	-.603	-.485	-.532	a
	Nonwhite	-.217	-.621	-.339	a	a	a	a	a
40-44	All	-.577	-.397	-.584	-.571	-.468	-.548	a	a
	White	-.535	-.391	-.598	-.574	-.456	-.485	a	a
	Nonwhite	a	a	a	a	a	a	a	a
45-49	All	-.587	-.329	-.548	-.648	a	a	a	a
	White	-.582	-.342	-.553	-.648	-.298	a	a	a
	Nonwhite	a	a	a	a	a	a	a	a
50+	All	-.271	-.162	-.197	-.507	a	a	a	a
	White	-.133	-.160	-.220	a	a	a	a	a
	Nonwhite	-.313	a	a	a	a	a	a	a

[a]Statistics for sample sizes less than 20 are omitted.

VITA

The author, Walter Watkins Robinson, is a native of the Community of Pegram, 16 miles west of Nashville, in Middle Tennessee, where he resided the first 19 years of his life, from birth in 1944. He is a 1962 graduate of Bellevue High School, Nashville, and obtained in 1966 a Bachelor of Arts degree from David Lipscomb College, in Nashville. During 1966 and 1967 he was employed as a Computer Programmer at Life and Casualty Insurance Company in Nashville. Since 1968, he has been employed by Union Carbide Corporation at the Oak Ridge Gaseous Diffusion Plant. During the school year 1971 he was a student Teaching Assistant for the Department of Sociology, The University of Tennessee, Knoxville.

Interests include social and ethical reading. Recreation is tennis. He is married to Sandra Lynn Crouch, formerly of Nashville, and has two children, Thomas, 7, and Lynnette, 5.