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ESTIMATED LIFE TABLES FOR  
THE UNITED STATES, 1850-1900

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Many requests have been made over the years for the full life tables in this paper in their full form. One of the reasons for issuing this paper is to make these tables more widely available. The author wishes to thank Samuel H. Preston for his help and advice on this project. This paper is part of NBER's research program in the Historical Development of the American Economy. Any opinions expressed are those of the author and not those of the National Bureau of Economic Research.

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ABSTRACT

This paper presents three sets of estimated life tables by sex for the total and white populations of the United States for the second half of the nineteenth century. The first set uses the Brass [1975] two parameter logit model with the 1900/02 Death Registration Area life tables as the standards. Available empirical American life tables for the period 1830-1911 are used to establish the relationship between the level and structure of mortality. Data on deaths for the ages 5-19 in the year prior to the census (from the decennial federal censuses of 1850-1900) are actually used to obtain the national tables. The second set of life tables also uses the census mortality data for the ages 5-19 but fits Coale and Demeny [1966] West Model life tables. Both these sets of life tables were derived following procedures in Haines [1979]. The third set of life tables was estimated from the public use micro-sample of the 1900 U.S. census from data on the number of children ever born, the number of children surviving, and the age structure of surviving children to women aged 14-34.

Given the lack of national life tables for the United States prior to the early twentieth century, it is hoped that these tables will be of value in research on mortality and on issues for which mortality and survival probabilities by age, sex, and race are used. The overall results confirm that the sustained modern mortality transition in the United States did not begin until approximately 1880. Prior to that time, it appears that mortality was not under control.

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Mortality in the United States prior to the early part of the twentieth century remains a controversial topic. Unlike the measurement of fertility, where the federal decennial censuses after 1800 provide some evidence of the fertility transition using child-woman ratios [e.g., Yasuba, 1962; Forster and Tucker, 1972; Schapiro, 1986], no comparable source exists for mortality. Vital registration was left to the states. Massachusetts was the first to institute a statewide system of vital statistics collection in 1842. The data were of good quality by the middle 1850s [Gutman, 1956]. But other states were slow to follow suit. When the first permanent national Death Registration Area (DRA) was established in 1900, it comprised only ten states and the District of Columbia.<sup>1</sup> It contained only 26% of the nation's population, was more urban (62.9%) than the national average (39.7%), had relatively few blacks (only 4.4% of the national total), and had slightly more foreign born (22.4%) than the nation overall (13.6%). The first life tables for the DRA were produced for 1900/02 and 1909/11 (for the DRA of 1900) [Glover, 1921], but the entire nation was not covered until 1933.

This lack of information, has prompted considerable speculation about levels and trends in American mortality in the 19th century. For instance, Coale and Zelnik [1963] assumed a smooth decline in mortality from the level found in the Jacobson life table for Massachusetts and Maryland for 1850 [Jacobson, 1957].<sup>2</sup> Taeuber and Taeuber [1958, p. 264] assumed virtually no change in mortality prior to about 1850, while Thompson and Whelpton [1933, p. 230] projected a rather steady decline over the course of the century, although they saw an acceleration after about 1880. Easterlin [1977], arguing from first principles, believed that increasing income per capita offset the negative effects of rising urbanization and the influx of the foreign born and that mortality declined from at least about 1840.

Other recent work, using a variety of sources, has clarified the picture a bit. Meeker [1972] believed that mortality improved little before 1880 and may actually have worsened. He saw a decline in death rates from about 1880 partly as a consequence of advances in public health and sanitation. The idea that mortality may have deteriorated earlier in the 19th century has received

support from the work of Fogel [1986] and Pope [1992], who have used genealogical data. Those results suggest decline expectations of life at age 20 ( $e_{20}$ ) between the 1830s and the 1850s [Pope, 1992, Table 9.4]. Unfortunately, these data do not permit reliable estimates of infant and child mortality.

Condran and Crimmins [1980], using available mortality data reported in the censuses of 1890 and 1900, found strong evidence of mortality reduction in the 1890s in both rural and urban areas. Haines [1979] employed existing historical life tables of reasonable quality and census mortality data for the ages 5-19 to fit two types of model life tables for the period 1850-1900. One of the main findings was that sustained, irreversible mortality decline began only from about 1880. This accords with the results of Kuznets [1958] that (rural) death rates in the United States decline only from the 1870s. Preston and Haines [1991] utilized data from the public use micro-sample of the 1900 U.S. federal census to make indirect estimates of infant and child mortality for the entire nation. They made use of the information on children ever born and children surviving, as well as the age structure of surviving children, by age and marriage duration of mother. These results indicate that the DRA life tables for 1900/02 overestimated the child mortality of the white population by a modest amount and substantially overestimated the mortality of black children. This appears due to the more urban nature of the DRA, especially for blacks.<sup>3</sup> While the issues still remain partly unresolved, we now have a much superior picture of the mortality situation of the United States in the later 19th and early 20th centuries.

The purpose of the present paper is to present the actual life tables derived in the course of the work of Haines [1979] and Preston and Haines [1991, ch. 2]. In addition, simply to providing more detailed information on mortality itself, these tables can be of assistance, for example, in own-children fertility estimation, census-survival migration estimation, in providing probabilities for finding certain family structures in the census, and in making estimates of working life.

Three sets of life tables are give in Appendix A to this paper. The first were derived in Haines [1979] using a Brass two parameter logit model fitted to available American life tables of reasonable quality for the period 1830-1911. Briefly, the  $l_x$  functions of the existing life tables were fitted to the function

$$Y_x = \alpha + \beta * Y_{sx}$$

$$\text{where } Y_x = \text{logit}(1 - l_x) = .5 * \ln[(1 - l_x)/l_x]$$

for actual life tables with a radix ( $l_0$ ) equal to one.  $Y_{sx}$  is the logit of the "standard" life table, which was chosen as that for the population (for males and females separately) of the DRA in 1900/02. The " $\alpha$ " parameter provides an indicator of mortality level, ranging from about +.8 in high mortality populations to about -.8 in low mortality populations. The " $\beta$ " parameter gives the relationship of child to adult mortality (also know as the "tilt" of the mortality schedule). The range of  $\beta$  is from about .7 for child mortality unfavorable relative to adult mortality to about 1.4 for child mortality favorable relative to adult mortality. For the standard ( $Y_{sx}$ ),  $\alpha = 0$  and  $\beta = 1.0$ . The fitted  $\alpha$ 's and  $\beta$ 's were then plotted against each other and a time pattern was examined. A relationship between  $\alpha$  and  $\beta$  was estimated in order to permit the fitting of only one parameter ( $\alpha$ ). This latter was necessary because the data (death rates at ages 5-9, 10-14, and 15-19) would not permit the fitting of the  $\beta$  parameter.

The second set of life tables uses the Coale and Demeny [1966] Model West system. Historical American life tables were used in the construction of Model West. Also, an examination of the congruence between the 1900/02 DRA life tables and a close Model West table (level 13) revealed a very good fit [Preston and Haines, 1991, ch.2; Coale and Zelnik, 1963, Appendix B]. Table 1, which provides selected parameter values from the estimated tables, revels that there were some differences between the two sets of tables, especially with respect to infant ( ${}_1q_0$ ) and child ( $l_5$ ) mortality.<sup>4</sup> The values are from the logit model ("U.S. Model") and the Coale and Demeny model ("West Model"). The  $e_0$  and  $e_{10}$  values from the U.S. Model differ somewhat from those presented

in Haines [1979] because of differences in the algorithms used to calculate values of the life table beyond  $l_x$  and  $nq_x$ . The tables presented here in Appendix A are calculated by consistent algorithms and are comparable. The computation formulas are given in Appendix B.

The third set of life tables were those computed from data on children ever born, children surviving, and the age distribution of surviving own children present from the public use micro-sample of the 1900 U.S. census [Preston and Haines, 1991, ch. 2]. The estimation involved backward projecting the age structure of surviving own children present to equal the number of children ever born. The sample was confined to younger women aged 14 to 34 years to reduce problems of age and parity misstatement and of memory lapse. Other indirect methods were tried, that is, the age and duration models of Sullivan and Trussell [United Nations, 1983, ch. III], but the backward projection technique (i.e., the surviving children method) was felt to provide the best estimates. They apply roughly to 1894/95. Estimates just for the DRA states were done, and they proved relatively close to the 1900/02 DRA tables based on vital statistics for the total and white populations.

Mortality estimates for the black population from the surviving children method and the 1900 public use sample data were rather different from the published DRA tables for the black population, however. It has been noted that the population of the DRA in 1900 was quite urban, in contrast to the whole black population. Urban mortality was markedly higher than rural mortality [Preston and Haines, 1991, chs. 1 and 3]. The 1900/02 DRA life table for blacks yielded an  $e_0$  of about 33.7 years for both sexes combined, as opposed to the estimate of 41.8 years from the surviving children method applied to the 1900 public use micro-sample. Similarly, the infant mortality rate was 234 infant deaths per 1000 livebirths for blacks in the 1900/02 life table for both sexes, while the surviving children method indicated that it was 170 for the black population in the nation as a whole. No estimated life tables are presented for the black population based on the published census mortality data for the period prior to 1900. It is not clear that those data

are usable for the present analysis or which model life table system might be most appropriate. Zelnik [1969] believed that Model West was not a particularly good fit to the black mortality experience in the first half of the 20th century. Ewbank [1987] found that the United Nations Far East Model [1982] provided the best match to the historical age pattern of black American mortality. Condran [1984; Condran and Cheney, 1982] believes that Model South may be more appropriate.

Table 1 provides some selected values from the life tables in Appendix A for comparative purposes for both the total and white populations. Table 2 places these life tables in the context of a variety of other historical American life tables from the 1820s to 1939-41. These include those of Jaffe and Lourie [1942], Meech [1898], Jacobson [1957], Glover [1921], and Billings [1886].<sup>5</sup> Also included in Table 2 are the recent estimates of  $e_{20}$  by Pope [1992] from genealogical data and some life tables for Massachusetts, Suffolk County (the city of Boston), and Philadelphia calculated from original vital registration and census data.

These results confirm the impression of mortality fluctuating prior to about 1880 and a fairly steady decline in death rates thereafter, when the modern mortality transition for the white population began. More work need to be done on mortality differences by region, gender, race, ethnicity, and rural-urban residence. But the overall picture is clearer. Whether mortality actually substantially increased in the 1840s and 1850s is less obvious, but it can be seen that mortality in the United States was essentially not under control until about the 1870s. This, of course, makes the demographic transition in the United States unusual, since fertility had been declining for the white population since at least 1800 [Forster and Tucker, 1972]. While the modern mortality transition lagged by over three quarters of a century, in this respect, for the white population the mortality transition was more like that in western and northern Europe and areas of overseas European settlement (Canada, Australia, New Zealand) than was the fertility transition.

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#### FOOTNOTES

1. The Death Registration area of 1900 consisted of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Indiana, Michigan, and the District of Columbia.
2. For a critique of the Jacobson life table and its representativeness, see Vinovskis [1978]. For a discussion of mortality in 19th century Massachusetts in general, see Vinovskis [1981], ch.2 and Gutman [1956].
3. The fit of the census-based indirect estimates of child mortality for the ten states of the DRA and the District of Columbia is quite close to the Glover [1921] table for whites for 1900/02. The estimates of less reliable for the black population because of the small number of black women of the relevant ages in the 1900 public use micro-sample. See Preston and Haines [1991], ch. 2.
4. Table 1 presents the infant mortality rate ( $iq_0$ ), the expectations of life at ages 0 ( $e_0$ ) and 10 ( $e_{10}$ ), survivorship to age 5 ( $l_5$ , which is survivors to age 5 out of 100,000 births), and the probability of dying between ages 20 and 60 ( $_{40}q_{20}$ ), which is roughly the span of working life.
5. For an analysis of the Meech life table covering the period 1830-1860, see Haines and Avery [1980].

Table 1. Selected Life Table Values for the United States, Total and White Populations, 1850-1900.

	1q0		e(0)		e(10)		l(5)		40q20	
	U.S. Model	West Model								
<b>Total Population</b>										
<b>Males</b>										
1850	0.24092	0.20352	37.23	37.79	46.16	44.74	67,805	70,433	0.47959	0.51398
1860	0.20210	0.17386	41.55	41.79	48.33	46.95	72,639	74,692	0.43533	0.46565
1870	0.19210	0.16259	43.03	43.43	49.23	47.84	73,993	76,342	0.41677	0.44624
1880	0.22015	0.18492	39.72	40.25	47.54	46.10	70,462	73,091	0.45112	0.48413
1890	0.16334	0.15568	44.82	44.47	49.14	48.41	77,125	77,362	0.41915	0.43403
1900	0.13356	0.14531	47.12	46.12	49.43	49.29	80,584	78,961	0.41369	0.41512
1900b		0.12973		48.69		50.55		81,478		0.38828
<b>Females</b>										
1850	0.21712	0.16099	39.43	42.56	47.48	47.87	70,155	75,085	0.44537	0.42291
1860	0.19153	0.14822	42.15	44.64	48.69	49.05	73,316	77,061	0.42179	0.39993
1870	0.17724	0.13192	44.92	47.46	50.62	50.63	75,469	79,619	0.38375	0.36943
1880	0.22980	0.16078	39.12	42.60	47.98	47.89	68,981	75,118	0.43489	0.42254
1890	0.15765	0.13172	45.60	47.49	49.96	50.65	77,454	79,651	0.39702	0.36905
1900	0.12476	0.12067	48.45	49.51	50.52	51.77	81,389	81,409	0.38603	0.34761
1900b		0.11029		51.55		52.77		83,294		0.32911
<b>White Population</b>										
<b>Males</b>										
1850	0.22829	0.19548	38.42	38.83	46.65	45.32	69,303	71,577	0.46967	0.50125
1860	0.18774	0.16524	43.17	43.04	49.08	47.63	74,421	75,953	0.41999	0.45085
1870	0.18513	0.15584	44.11	44.45	49.91	48.39	74,943	77,338	0.40307	0.43432
1880	0.21436	0.18008	40.44	40.92	47.94	46.47	71,206	73,790	0.44296	0.47611
1890	0.15675	0.14822	46.04	45.62	49.95	49.03	78,086	78,471	0.40227	0.42058
1900	0.12784	0.13524	48.51	47.78	50.43	50.09	81,503	80,617	0.39227	0.39800
1900b		0.11988		50.35		51.40		83,010		0.37038
<b>Females</b>										
1850	0.20596	0.15524	40.56	43.49	47.96	48.39	71,514	75,971	0.43606	0.41266
1860	0.17515	0.13913	44.10	46.19	49.62	49.92	75,402	78,482	0.40352	0.38308
1870	0.16633	0.12615	46.38	48.50	51.38	51.21	76,886	80,535	0.36921	0.35832
1880	0.21527	0.15359	40.59	43.76	48.61	48.55	70,732	76,227	0.41371	0.40968
1890	0.14490	0.12388	47.44	48.92	50.95	51.44	79,171	80,897	0.37751	0.35389
1900	0.11206	0.10946	50.71	51.71	51.86	52.85	83,219	83,435	0.35917	0.32766
1900b		0.10120		53.37		53.72		84,826		0.31158

SOURCE: 1850-1900 fitted to Coale and Demeny Model West and to the Brass Logit Model constructed for the U.S.. The tables were fitted to 5q5, 5q10, and 5q15 from census mortality data. The Brass Logit Model (U.S. Model) was fitted by the iterative procedure described in Haines [1979]. The life tables here were averages of the three tables fitted to each of the q's. For Model West, the tables were averaged on e(0). For the Brass Logit U.S. Model, the alpha and beta values were each averaged. 1900b represents the tables fitted by Preston & Haines [1991, ch. 2] to the age distribution of surviving children for women aged 14-34 from the 1900 U.S. census public use sample and using Coale & Demeny Model West.

TABLE 2. Child Mortality and Expectations of Life. United States, 1830-1910.

Source	Region	Period	Sex	Child Mortality <sup>a</sup>			$e_0$	$e_{10}$	$e_{20}$
				q(1)	q(2)	q(5)			
Jaffe & Lourie [1942]	44 New England Towns	1826-35	Total				51.0	42.9	
	Salem, MA & New Haven, CT	1826-35	Total				46.0	37.8	
	Boston, New York City & Philadelphia	1826-35	Total				35.9	28.0	
	Estimated U.S.	1826-35	Total				49.8	41.7	
Jacobson [1957]	Massachusetts- Maryland, White	1850	Male	.16064	.21394	.27245	40.4	47.8	40.1
			Female	.13079	.18262	.24122	43.0	48.6	41.7
Meech [1898]	United States, Whites	1830-60	Male	.16195	.21569	.27468	41.0	48.4	40.9
			Female	.13430	.18752	.24769	42.9	48.8	41.4
Kennedy [1853]	Massachusetts	1850	Male				38.3	48.0	40.1
			Female				40.5	47.2	40.2
Elliot [1857]	Massachusetts (166 towns)	1855	Total	.15510	.22670	.28540	39.8	47.1	39.9
Haines	Massachusetts	1855-56	Total	.12994		.24262	44.2	49.8	42.2
Haines	Massachusetts	1859-61	Male	.14246		.24846	43.5	49.6	41.9
			Female	.13643		.22466	45.1	52.8	42.4
Vinovskis [1972]	Massachusetts	1859-61	Male			.22646	46.4	51.6	44.0
			Female			.19193	47.3	50.1	43.0
Haines [1977]	Seven New York Counties	1850-65	Male	.14655	.18067	.21268	45.9	49.2	
			Female	.12389	.15821	.19105	48.9	51.4	
			Total	.13549	.16972	.20213	47.4	50.3	
Haines [1979]	United States [U.S. Model]	1850	Male	.24092	.28396	.32195	37.2	46.2	38.4
		1860	Male	.20210	.23979	.27361	41.6	48.3	40.3
			Female	.19153	.23041	.26684	42.1	48.7	40.9
		1870	Male	.19210	.22788	.26007	43.0	49.2	41.1
			Female	.17724	.21234	.24531	44.9	50.6	42.6
		1880	Male	.22015	.25997	.29538	39.7	47.5	39.6
			Female	.22980	.27175	.31019	39.1	48.0	40.3
		1890	Male	.16334	.19744	.22875	44.8	49.1	41.0
			Female	.15765	.19232	.22546	45.6	50.0	41.9
		1900	Male	.13356	.16480	.21252	47.1	49.4	41.1
			Female	.12476	.15572	.18611	48.4	50.5	42.3
	United States, White [U.S. Model]	1850	Male	.22829	.26997	.30697	38.4	46.6	38.8
			Female	.20596	.24684	.28486	40.6	51.4	43.9

		1860	Male	.18774	.22351	.25579	43.2	49.1	41.0
			Female	.17515	.21158	.24598	44.1	49.6	41.7
		1870	Male	.18513	.21955	.25056	44.1	49.9	41.8
			Female	.16633	.19968	.23114	46.4	51.4	43.3
		1880	Male	.21436	.25326	.28794	40.4	47.9	40.0
			Female	.21526	.25553	.29268	40.6	48.6	40.9
		1890	Male	.15675	.18926	.21914	46.0	50.0	41.7
			Female	.14490	.17722	.20829	47.4	51.0	42.8
		1900	Male	.12784	.15730	.18497	48.5	50.4	42.0
			Female	.11206	.14012	.16781	50.7	51.9	43.5
Fogel	United States,	1850-60	Male					46.7	
Pope [1992]	United States [Genealogies]	1820-29	Male					43.3	
			Female					44.9	
		1830-39	Male					44.6	
			Female					44.6	
		1840-49	Male					41.5	
			Female					37.1	
		1850-59	Male					40.8	
			Female					39.5	
		1860-69	Male					41.2	
			Female					42.2	
		1870-79	Male					44.3	
			Female					42.2	
		1880-89	Male					45.8	
			Female					42.9	
Haines	Massachusetts	1864-66	Male	.16002	.22431	.28639	38.4	45.8	38.7
			Female	.14267	.20352	.26706	41.6	48.7	41.8
Haines	Massachusetts	1869-71	Male	.16675	.21849	.26214	42.6	49.3	41.5
			Female	.16090	.19413	.23881	44.4	49.8	42.5
Haines	Massachusetts	1874-76	Male	.17941	.24772	.29812	40.0	48.9	41.3
			Female	.15449	.21967	.27050	41.8	49.4	42.2
Haines	Massachusetts	1879-81	Male	.17086	.22341	.27712	41.7	49.5	41.6
			Female	.16535	.19633	.25045	43.3	49.6	42.3
Billings [1886]	Massachusetts	1878-82	Male	.18080	.23250	.28342	41.7	49.9	42.2
			Female	.15257	.20245	.25408	43.5	50.0	42.8
Billings [1886]	New Jersey	1879-80	Male	.15153	.19398	.24132	45.6	51.6	43.3
			Female	.13121	.16939	.21217	48.0	52.5	44.5
Haines	Massachusetts	1884-86	Male	.16923	.22925	.27210	41.9	49.0	41.1
			Female	.14507	.20531	.24668	43.9	49.8	42.2
Haines	Massachusetts	1889-91	Male	.17615	.23742	.27354	41.8	49.0	41.1
			Female	.14957	.20973	.24613	44.0	49.9	42.2

Glover [1921]	Massachusetts	1890	Male	.16777	.20851	.25322	42.5	48.4	40.7
			Female	.14755	.18738	.23415	44.5	49.6	42.0
Abbott [1898]	Massachusetts	1893-97	Male	.17233	.20726	.24234	44.1	49.3	41.2
			Female	.14699	.18115	.21593	46.6	50.7	42.8
Haines	Massachusetts	1893-97	Male	.17466	.23913	.27331	42.1	49.2	41.0
			Female	.14660	.21036	.24417	44.8	50.6	42.7
Glover [1921]	DRA, Total	1900-02	Male	.13574	.16614	.19452	47.9	50.4	42.0
			Female	.11267	.14092	.16881	50.7	51.9	43.6
			Total	.12448	.15383	.18196	49.2	51.1	42.8
	DRA, Whites	1900-02	Male	.13345	.16331	.19136	48.2	50.6	42.2
			Female	.11061	.13832	.16574	51.1	52.2	43.8
	DRA, Blacks	1900-02	Male	.25326	.31098	.35615	32.5	41.9	35.1
			Female	.21475	.26990	.31944	35.0	43.0	36.9
	DRA, Urban, Whites	1900-02	Male	.15097	.18683	.22128	44.0	47.5	39.1
			Female	.12545	.15883	.19195	47.9	50.3	41.9
	DRA, Rural, Whites	1900-02	Male	.10900	.13065	.15043	54.0	54.4	46.0
			Female	.08979	.10967	.12983	55.4	54.4	46.1
Preston/ Haines [1991]	U.S., Total	1895/00	Male	.12973	.15836	.18522	49.7	50.6	42.1
			Female	.11029	.13930	.16706	51.6	52.8	44.5
			Total	.12047	.14906	.17636	50.1	51.6	43.3
	U.S., Whites	1895/00	Male	.11988	.14569	.16990	50.4	51.4	42.9
			Female	.10120	.12702	.15174	53.4	53.7	45.3
	U.S., Blacks	1895/00	Male	.18346	.22656	.26698	40.4	46.2	38.3
			Female	.15657	.20040	.24234	43.3	48.3	40.7
Glover [1921]	DRA, Total	1909-11	Male	.12495	.15016	.17282	49.9	51.1	42.5
			Female	.10377	.12743	.14883	53.2	53.3	44.7
			Total	.11462	.13908	.16113	51.5	52.2	43.5
	DRA, Whites	1909-11	Male	.12326	.14799	.17028	50.2	51.3	42.7
			Female	.10226	.12545	.14651	53.6	53.6	44.9
	DRA, Blacks	1909-11	Male	.21935	.27155	.31411	34.0	40.6	33.5
			Female	.18507	.23303	.27232	37.7	42.8	36.1
	DRA, Urban Whites	1909-11	Male	.13380	.16247	.18815	47.3	49.1	40.5
			Female	.11123	.13831	.16266	51.4	52.2	43.5
	DRA, Rural Whites	1909-11	Male	.10326	.12105	.13777	55.1	54.5	45.9
			Female	.08497	.10119	.11679	57.4	55.5	46.9
	DRA, Whites	1919-21	Male	.08025	.09815	.11158	56.3	54.2	45.6
			Female	.06392	.07757	.09279	58.5	55.2	46.5
	DRA, Blacks	1919-21	Male	.10501	.12782	.14805	47.1	46.0	38.4
			Female	.08749	.10851	.12851	46.9	44.5	37.2
	DRA, Whites	1929-31	Male	.06232	.07163	.08262	59.1	55.0	46.0
			Female	.04963	.05798	.06784	62.7	57.6	48.5
	DRA, Blacks	1929-31	Male	.08732	.10245	.11588	47.6	44.3	36.0
			Female	.07204	.08538	.09815	49.5	45.3	37.2
	U.S., Total	1939-41	Male	.05238	.05762	.06376	61.6	56.1	46.9

			Female	.04152	.04621	.05152	65.9	59.7	50.4
			Total	.04710	.05206	.05780	63.6	57.8	48.5
U.S., Whites	1939-41	Male	.04812	.05276	.05850	62.8	57.0	47.8	
		Female	.03789	.04204	.04691	67.3	60.8	51.4	
U.S., Blacks	1939-41	Male	.08238	.09088	.09918	52.3	48.3	39.5	
		Female	.06584	.07328	.08094	55.6	50.8	42.0	

Selected Cities

Haines	Suffolk Co., MA (Boston)	1855-56	Total	.17384		.34455	34.5	44.4	37.0
Haines	Suffolk Co., MA (Boston)	1859-61	Male	.18027		.34388	36.3	44.4	36.7
			Female	.15940		.29495	39.1	46.8	39.0
Haines	Suffolk Co., MA (Boston)	1864-66	Male	.19414	.28120	.35732	32.3	41.7	34.4
			Female	.19747	.28115	.35300	35.6	46.8	39.3
Haines	Suffolk Co., MA (Boston)	1874-76	Male	.20041	.29428	.35731	34.0	45.1	37.5
			Female	.18387	.27161	.33309	36.5	47.1	39.9
Billings [1886]	Boston, Whites	1879-80	Male	.21739	.28518	.34218	37.0	47.5	39.6
			Female	.18873	.25365	.30823	39.1	48.4	40.7
Haines	Suffolk Co., MA (Boston)	1884-86	Male	.20160	.28245	.33710	34.8	44.0	36.3
			Female	.17732	.25915	.31453	37.1	45.9	38.4
Haines	Suffolk Co., MA (Boston)	1894-96	Male	.17870	.26501	.31567	36.0	44.0	36.1
			Female	.15023	.23576	.28472	39.8	47.3	39.5
Glover [1921]	Boston	1900-02	Male	.15736	.19875	.24002	41.6	46.0	37.8
			Female	.13548	.16983	.21017	45.1	48.5	40.2
Glover [1921]	Boston	1909-11	Male	.13527	.16333	.19050	46.0	47.7	39.1
			Female	.11330	.13851	.16181	50.3	50.9	42.4
Haines	Suffolk Co., MA (Boston)	1929-31	Male	.07230		.10094	54.6	51.5	42.5
			Female	.07979		.08220	58.4	54.3	45.2
Haines	Philadelphia	1860-61	Total	.18531		.32837	37.3	47.9	40.1
	Philadelphia	1869-71	Total	.21300		.33249	36.2	45.7	38.0
	Philadelphia	1879-81	Total	.21915		.32047	38.1	46.8	39.0
	Philadelphia	1889-91	Total	.19668		.29722	39.5	47.6	39.7
Glover [1921]	Philadelphia	1900-02	Male	.15027	.18978	.23006	42.5	46.3	38.1
			Female	.12741	.16369	.20232	46.2	49.1	40.9
Glover [1921]	Philadelphia	1909-11	Male	.14174	.17456	.20558	45.5	48.1	39.5
			Female	.11926	.14959	.17796	49.6	51.2	42.6
Haines	Philadelphia	1919-21	Total	.08540		.12526	52.7	51.0	42.5
	Philadelphia	1929-31	Total	.06304		.08693	57.3	53.2	44.2
Billings [1886]	New York City	1878-81	Male	.26278	.35464	.42751	29.0	42.4	34.4
			Female	.22411	.31513	.38744	32.8	45.3	37.3
Billings [1886]	New York City, Whites	1879-80	Male	.23421	.32245	.38085	33.3	44.9	36.6
			Female	.20427	.28527	.34167	36.8	46.9	38.6

Billings [1886]	Brooklyn, Whites	1879-80	Male .19477	.27036	.33101	37.5	48.1	39.8
			Female .16424	.24336	.30545	39.7	49.1	41.0
Glover [1921]	New York City	1900-02	Male .15673	.20308	.24435	40.6	44.9	36.4
			Female .13298	.17564	.21542	44.9	48.2	39.7
Glover [1921]	New York City	1909-11	Male .13186	.16799	.19907	45.3	47.4	38.7
			Female .11405	.14762	.17708	49.5	50.9	42.2
Billings [1886]	Chicago, Whites	1879-80	Male .20526	.27950	.34394	38.1	50.6	42.7
			Female .15107	.22919	.29958	41.3	51.6	43.8
Glover [1921]	Chicago	1900-02	Male .12010	.15142	.18191	46.3	47.7	39.5
			Female .09762	.12764	.15676	50.8	55.0	42.9
Glover [1921]	Chicago	1909-11	Male .13066	.16079	.18980	45.9	51.5	39.0
			Female .10431	.13196	.15959	51.7	52.4	43.8

<sup>a</sup> q(1) is the probability of dying before reaching age 1. It is the infant mortality rate. q(2) and q(5) are the probabilities of dying before reaching ages 2 and 5, respectively.  $e_0$ ,  $e_{10}$ , and  $e_{20}$  are the expectations of life at birth and at ages 10 and 20.

Source: Jaffe & Lourie [1942]. Jacobson [1957]. Meech [1898]. Pope [1992]. Meeker [1972], Table 1. Glover [1921]. Haines [1977, 1979a]. Preston & Haines [1991], ch. 2. Vinovskis [1972]. Fogel [1986], Table 3. U.S. Bureau of the Census [1886] (Billings). Abbott [1898]. Various Massachusetts and Philadelphia vital statistics and census data (Haines).

## APPENDIX A

LIFE TABLES. UNITED STATES. 1850-1900.

(I) U.S. MODEL (Brass 2 parameter logit model)

TOTAL POPULATION

MALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.240916	100000	24092	83859	0.87491	3723046	37.23	0.28729
1	0.056703	75908	4304	73369	0.96276	3639188	47.94	0.05867
2	0.025490	71604	1825	70637	0.97951	3565819	49.80	0.02584
3	0.016237	69779	1133	69190	0.98582	3495182	50.09	0.01638
4	0.012252	68646	841	68209	0.97739	3425992	49.91	0.01233
5-9	0.033589	67805	2277	333331	0.97263	3357784	49.52	0.00683
10-14	0.020926	65527	1371	324209	0.97340	3024453	46.16	0.00423
15-19	0.032396	64156	2078	315585	0.95997	2700244	42.09	0.00659
20-24	0.047920	62078	2975	302952	0.94987	2384659	38.41	0.00982
25-29	0.052453	59103	3100	287765	0.94468	2081707	35.22	0.01077
30-34	0.058353	56003	3268	271845	0.93820	1793942	32.03	0.01202
35-39	0.065456	52735	3452	255045	0.93097	1522097	28.86	0.01353
40-44	0.072859	49283	3591	237439	0.92100	1267052	25.71	0.01512
45-49	0.085619	45692	3912	218682	0.90577	1029613	22.53	0.01789
50-54	0.103651	41780	4331	198075	0.88043	810931	19.41	0.02186
55-59	0.137339	37450	5143	174390	0.84450	612856	16.36	0.02949
60-64	0.176550	32306	5704	147273	0.79572	438466	13.57	0.03873
65-69	0.237948	26603	6330	117188	0.72944	291193	10.95	0.05402
70-74	0.313352	20273	6352	85482	0.64076	174005	8.58	0.07431
75-79	0.426067	13920	5931	54774	0.61616	88523	6.36	0.10828
80+	1.000000	7989	7989	33749	0.00000	33749	4.22	0.23672
	Alpha=	0.292816	Beta=	0.936345				

FEMALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.217119	100000	21712	85887	0.88250	3943125	39.43	0.25280
1	0.053965	78288	4225	75795	0.96415	3857238	49.27	0.05574
2	0.025094	74063	1859	73078	0.97973	3781443	51.06	0.02543
3	0.016178	72205	1168	71597	0.98577	3708364	51.36	0.01632
4	0.012407	71037	881	70578	0.97765	3636767	51.20	0.01249
5-9	0.032909	70155	2309	345004	0.97308	3566189	50.83	0.00669
10-14	0.020719	67847	1406	335718	0.97305	3221184	47.48	0.00419
15-19	0.033306	66441	2213	326672	0.96041	2885466	43.43	0.00677
20-24	0.046094	64228	2961	313738	0.95118	2558794	39.84	0.00944
25-29	0.051679	61267	3166	298421	0.94624	2245056	36.64	0.01061
30-34	0.055960	58101	3251	282377	0.94256	1946634	33.50	0.01151
35-39	0.059018	54850	3237	266156	0.93837	1664257	30.34	0.01216
40-44	0.064410	51613	3324	249753	0.93094	1398100	27.09	0.01331
45-49	0.074038	48288	3575	232504	0.91718	1148348	23.78	0.01538
50-54	0.092307	44713	4127	213247	0.89344	915844	20.48	0.01935
55-59	0.122270	40586	4962	190523	0.86173	702597	17.31	0.02605
60-64	0.156505	35623	5575	164179	0.81753	512074	14.37	0.03396
65-69	0.213245	30048	6408	134222	0.75361	347895	11.58	0.04774
70-74	0.288514	23641	6821	101151	0.66937	213673	9.04	0.06743
75-79	0.389814	16820	6557	67708	0.66187	112522	6.69	0.09684
80+	1.000000	10263	10263	44814	0.00000	44814	4.37	0.22902
	Alpha=	0.298698	Beta=	0.910928				

## BOTH SEXES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.228727	100000	22873	84904	0.87877	3833886	38.34	0.26940
1	0.055301	77127	4265	74611	0.96347	3748982	48.61	0.05717
2	0.025287	72862	1842	71886	0.97963	3674372	50.43	0.02563
3	0.016207	71020	1151	70421	0.98579	3602486	50.73	0.01634
4	0.012331	69869	862	69421	0.97752	3532065	50.55	0.01241
5-9	0.033241	69007	2294	339301	0.97286	3462644	50.18	0.00676
10-14	0.020820	66713	1389	330094	0.97322	3123344	46.82	0.00421
15-19	0.032862	65324	2147	321254	0.96019	2793250	42.76	0.00668
20-24	0.046985	63178	2968	308467	0.95054	2471996	39.13	0.00962
25-29	0.052057	60209	3134	293210	0.94548	2163529	35.93	0.01069
30-34	0.057127	57075	3261	277223	0.94043	1870319	32.77	0.01176
35-39	0.062158	53814	3345	260709	0.93476	1593096	29.60	0.01283
40-44	0.068531	50469	3459	243700	0.92609	1332387	26.40	0.01419
45-49	0.079687	47011	3746	225688	0.91161	1088687	23.16	0.01660
50-54	0.097841	43264	4233	205740	0.88709	863000	19.95	0.02057
55-59	0.129621	39031	5059	182509	0.85332	657260	16.84	0.02772
60-64	0.166283	33972	5649	155738	0.80689	474751	13.97	0.03627
65-69	0.225295	28323	6381	125663	0.74182	319013	11.26	0.05078
70-74	0.300630	21942	6596	93219	0.65539	193350	8.81	0.07076
75-79	0.407498	15346	6253	61095	0.63894	100131	6.53	0.10235
80+	1.000000	9092	9092	39036	0.000000	39036	4.29	0.23292

## TOTAL POPULATION

## MALES 1860

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.202095	100000	20210	86460	0.89714	4155262	41.55	0.23374
1	0.047247	79791	3770	77566	0.96902	4068802	50.99	0.04860
2	0.021283	76021	1618	75163	0.98289	3991236	52.50	0.02153
3	0.013579	74403	1010	73877	0.98814	3916073	52.63	0.01368
4	0.010260	73392	753	73001	0.98099	3842195	52.35	0.01032
5-9	0.028254	72639	2052	358066	0.97698	3769195	51.89	0.00573
10-14	0.017640	70587	1245	349822	0.97751	3411129	48.33	0.00356
15-19	0.027419	69342	1901	341956	0.96598	3061306	44.15	0.00556
20-24	0.040797	67441	2751	330324	0.95718	2719350	40.32	0.00833
25-29	0.044926	64689	2906	316180	0.95244	2389026	36.93	0.00919
30-34	0.050309	61783	3108	301144	0.94651	2072845	33.55	0.01032
35-39	0.056839	58675	3335	285036	0.93980	1771701	30.20	0.01170
40-44	0.063755	55340	3528	267878	0.93053	1486665	26.86	0.01317
45-49	0.075572	51812	3916	249269	0.91634	1218787	23.52	0.01571
50-54	0.092402	47896	4426	228416	0.89259	969518	20.24	0.01938
55-59	0.123954	43470	5388	203881	0.85846	741102	17.05	0.02643
60-64	0.161622	38082	6155	175023	0.81108	537221	14.11	0.03517
65-69	0.221482	31927	7071	141957	0.74552	362198	11.34	0.04981
70-74	0.296859	24856	7379	105833	0.65605	220241	8.86	0.06972
75-79	0.410911	17477	7182	69432	0.64777	114408	6.55	0.10343
80+	1.000000	10296	10296	44976	0.000000	44976	4.37	0.22891

Alpha= 0.167133 Beta= 0.922418

FEMALES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.191528	100000	19153	87551	0.89723	4215365	42.15	0.21876
1	0.048098	80847	3889	78553	0.96805	4127814	51.06	0.04950
2	0.022440	76959	1727	76043	0.98187	4049261	52.62	0.02271
3	0.014496	75232	1091	74665	0.98724	3973218	52.81	0.01461
4	0.011134	74141	825	73712	0.97988	3898553	52.58	0.01120
5-9	0.029639	73316	2173	361146	0.97575	3824841	52.17	0.00602
10-14	0.018705	71143	1331	352386	0.97561	3463696	48.69	0.00378
15-19	0.030174	69812	2107	343793	0.96402	3111310	44.57	0.00613
20-24	0.041958	67705	2841	331425	0.95544	2767516	40.88	0.00857
25-29	0.047283	64865	3067	316656	0.95068	2436091	37.56	0.00969
30-34	0.051468	61798	3181	301037	0.94702	2119436	34.30	0.01057
35-39	0.054564	58617	3198	285089	0.94286	1818399	31.02	0.01122
40-44	0.059868	55419	3318	268799	0.93560	1533310	27.67	0.01234
45-49	0.069212	52101	3606	251489	0.92228	1264512	24.27	0.01434
50-54	0.086858	48495	4212	231944	0.89925	1013022	20.89	0.01816
55-59	0.115961	44283	5135	208576	0.86819	781079	17.64	0.02462
60-64	0.149748	39148	5862	181082	0.82435	572503	14.62	0.03237
65-69	0.206112	33285	6861	149275	0.76036	391421	11.76	0.04596
70-74	0.281868	26425	7448	113503	0.67514	242145	9.16	0.06562
75-79	0.384733	18977	7301	76630	0.67874	128642	6.78	0.09527
80+	1.000000	11676	11676	52012	0.00000	52012	4.45	0.22448
	Alpha=	0.223391	Beta=	0.914302				

BOTH SEXES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.196683	100000	19668	87019	0.89718	4185808	41.86	0.22602
1	0.047683	80332	3830	78072	0.96852	4098789	51.02	0.04906
2	0.021876	76501	1674	75614	0.98237	4020718	52.56	0.02213
3	0.014049	74828	1051	74281	0.98768	3945103	52.72	0.01415
4	0.010708	73777	790	73366	0.98042	3870822	52.47	0.01077
5-9	0.028963	72987	2114	359648	0.97635	3797456	52.03	0.00588
10-14	0.018185	70873	1289	351141	0.97654	3437808	48.51	0.00367
15-19	0.028830	69584	2006	342904	0.96498	3086667	44.36	0.00585
20-24	0.041392	67578	2797	330895	0.95629	2743764	40.60	0.00845
25-29	0.046133	64781	2989	316431	0.95154	2412868	37.25	0.00944
30-34	0.050903	61792	3145	301096	0.94677	2096437	33.93	0.01045
35-39	0.055674	58647	3265	285070	0.94137	1795341	30.61	0.01145
40-44	0.061764	55382	3421	268356	0.93313	1510270	27.27	0.01275
45-49	0.072314	51961	3758	250411	0.91939	1241914	23.90	0.01501
50-54	0.089562	48203	4317	230224	0.89600	991503	20.57	0.01875
55-59	0.119860	43886	5260	206281	0.86344	761279	17.35	0.02550
60-64	0.155540	38626	6008	178110	0.81787	554999	14.37	0.03373
65-69	0.213610	32618	6968	145672	0.75312	376888	11.55	0.04783
70-74	0.289181	25651	7418	109709	0.66581	231217	9.01	0.06761
75-79	0.397503	18233	7248	73046	0.66346	121508	6.66	0.09922
80+	1.000000	10985	10985	48462	0.00000	48462	4.41	0.22668

## TOTAL POPULATION

MALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.192094	100000	19209	87130	0.90301	4303124	43.03	0.22047
1	0.044293	80791	3578	78679	0.97098	4215995	52.18	0.04548
2	0.019935	77212	1539	76396	0.98398	4137315	53.58	0.02015
3	0.012717	75673	962	75173	0.98889	4060919	53.66	0.01280
4	0.009608	74711	718	74337	0.98219	3985746	53.35	0.00966
5-9	0.026480	73993	1959	365066	0.97843	3911409	52.86	0.00537
10-14	0.016531	72033	1191	357190	0.97892	3546344	49.23	0.00333
15-19	0.025711	70843	1821	349660	0.96808	3189153	45.02	0.00521
20-24	0.038294	69021	2643	338498	0.95979	2839494	41.14	0.00781
25-29	0.042211	66378	2802	324886	0.95529	2500995	37.68	0.00862
30-34	0.047327	63576	3009	310359	0.94964	2176110	34.23	0.00969
35-39	0.053549	60567	3243	294728	0.94323	1865751	30.80	0.01100
40-44	0.060168	57324	3449	277998	0.93435	1571022	27.41	0.01241
45-49	0.071475	53875	3851	259748	0.92075	1293025	24.00	0.01482
50-54	0.087629	50024	4384	239162	0.89789	1033276	20.66	0.01833
55-59	0.117991	45641	5385	214740	0.86487	794114	17.40	0.02508
60-64	0.154561	40255	6222	185723	0.81863	579374	14.39	0.03350
65-69	0.213080	34034	7252	152038	0.75410	393651	11.57	0.04770
70-74	0.287601	26782	7702	114652	0.66510	241613	9.02	0.06718
75-79	0.401293	19079	7656	76255	0.66494	126961	6.65	0.10040
80+	1.000000	11423	11423	50705	0.00000	50705	4.44	0.22528
	Alpha=	0.122658	Beta=	0.908511				

FEMALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.177238	100000	17724	88480	0.90648	4492296	44.92	0.20032
1	0.042667	82276	3510	80205	0.97174	4403816	53.52	0.04377
2	0.019825	78766	1562	77938	0.98400	4323611	54.89	0.02004
3	0.012788	77204	987	76691	0.98875	4245673	54.99	0.01287
4	0.009815	76217	748	75828	0.98226	4168982	54.70	0.00987
5-9	0.026137	75469	1973	372413	0.97863	4093155	54.24	0.00530
10-14	0.016474	73496	1211	364455	0.97851	3720742	50.62	0.00332
15-19	0.026582	72286	1921	356624	0.96829	3356287	46.43	0.00539
20-24	0.036979	70364	2602	345315	0.96071	2999663	42.63	0.00754
25-29	0.041689	67762	2825	331748	0.95649	2654348	39.17	0.00852
30-34	0.045416	64937	2949	317313	0.95322	2322600	35.77	0.00929
35-39	0.048204	61988	2988	302469	0.94947	2005288	32.35	0.00988
40-44	0.052983	59000	3126	287184	0.94292	1702818	28.86	0.01088
45-49	0.061406	55874	3431	270792	0.93087	1415634	25.34	0.01267
50-54	0.077351	52443	4057	252073	0.90993	1144842	21.83	0.01609
55-59	0.103845	48386	5025	229370	0.88139	892769	18.45	0.02191
60-64	0.135080	43362	5857	202165	0.84044	663399	15.30	0.02897
65-69	0.187858	37504	7045	169908	0.77965	461233	12.30	0.04147
70-74	0.260366	30459	7930	132468	0.69678	291325	9.56	0.05987
75-79	0.361163	22528	8136	92301	0.72107	158857	7.05	0.08815
80+	1.000000	14392	14392	66556	0.00000	66556	4.62	0.21624
	Alpha=	0.136271	Beta=	0.875935				

## BOTH SEXES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.184485	100000	18448	87824	0.90477	4398245	43.98	0.21006
1	0.043460	81552	3544	79460	0.97137	4310421	52.86	0.04460
2	0.019879	78007	1551	77185	0.98399	4230961	54.24	0.02009
3	0.012753	76457	975	75950	0.98882	4153776	54.33	0.01284
4	0.009714	75482	733	75100	0.98222	4077826	54.02	0.00976
5-9	0.026304	74748	1966	368826	0.97853	4002726	53.55	0.00533
10-14	0.016502	72782	1201	360908	0.97871	3633900	49.93	0.00333
15-19	0.026157	71581	1872	353224	0.96819	3272992	45.72	0.00530
20-24	0.037620	69709	2622	341987	0.96026	2919768	41.89	0.00767
25-29	0.041944	67086	2814	328397	0.95590	2577780	38.42	0.00857
30-34	0.046348	64272	2979	313915	0.95147	2249384	35.00	0.00949
35-39	0.050811	61293	3114	298681	0.94642	1935469	31.58	0.01043
40-44	0.056488	58179	3286	282679	0.93874	1636788	28.13	0.01163
45-49	0.066318	54893	3640	265362	0.92593	1354109	24.67	0.01372
50-54	0.082365	51252	4221	245708	0.90405	1088746	21.24	0.01718
55-59	0.110745	47031	5208	222133	0.87333	843038	17.93	0.02345
60-64	0.144583	41822	6047	193995	0.82979	620905	14.85	0.03117
65-69	0.200161	35776	7161	160976	0.76718	426909	11.93	0.04448
70-74	0.273651	28615	7830	123498	0.68129	265933	9.29	0.06341
75-79	0.380739	20784	7913	84138	0.69288	142436	6.85	0.09405
80+	1.000000	12871	12871	58298	0.00000	58298	4.53	0.22078

## TOTAL POPULATION

## MALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.220150	100000	22015	85250	0.88723	3971936	39.72	0.25824
1	0.051055	77985	3982	75636	0.96652	3886686	49.84	0.05264
2	0.022946	74003	1698	73103	0.98156	3811050	51.50	0.02323
3	0.014622	72305	1057	71756	0.98723	3737946	51.70	0.01473
4	0.011037	71248	786	70839	0.97959	3666191	51.46	0.01110
5-9	0.030322	70462	2137	346968	0.97530	3595351	51.03	0.00616
10-14	0.018901	68325	1291	338398	0.97594	3248384	47.54	0.00382
15-19	0.029314	67034	1965	330257	0.96371	2909986	43.41	0.00595
20-24	0.043477	65069	2829	318271	0.95445	2579730	39.65	0.00889
25-29	0.047716	62240	2970	303774	0.94959	2261458	36.33	0.00978
30-34	0.053244	59270	3156	288460	0.94350	1957684	33.03	0.01094
35-39	0.059929	56114	3363	272164	0.93667	1669223	29.75	0.01236
40-44	0.066957	52751	3532	254926	0.92722	1397060	26.48	0.01386
45-49	0.079028	49219	3890	236372	0.91276	1142133	23.21	0.01646
50-54	0.096167	45330	4359	215750	0.88859	905761	19.98	0.02020
55-59	0.128274	40970	5255	191713	0.85407	690011	16.84	0.02741
60-64	0.166193	35715	5936	163736	0.80650	498298	13.95	0.03625
65-69	0.226257	29779	6738	132052	0.74118	334563	11.23	0.05102
70-74	0.300900	23042	6933	97875	0.65268	202510	8.79	0.07084
75-79	0.413708	16108	6664	63881	0.63797	104636	6.50	0.10432
80+	1.000000	9444	9444	40754	0.00000	40754	4.32	0.23174

Alpha= 0.218254 Beta= 0.919059

## FEMALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.229799	100000	22980	85063	0.87635	3911663	39.12	0.27015
1	0.054465	77020	4195	74545	0.96390	3826600	49.68	0.05627
2	0.025159	72825	1832	71854	0.97971	3752055	51.52	0.02550
3	0.016169	70993	1148	70396	0.98579	3680201	51.84	0.01631
4	0.012376	69845	864	69396	0.97775	3609805	51.68	0.01246
5-9	0.032728	68981	2258	339260	0.97327	3540409	51.32	0.00665
10-14	0.020537	66723	1370	330190	0.97334	3201150	47.98	0.00415
15-19	0.032917	65353	2151	321386	0.96096	2870960	43.93	0.00669
20-24	0.045378	63202	2868	308838	0.95204	2549574	40.34	0.00929
25-29	0.050660	60334	3057	294027	0.94740	2240736	37.14	0.01040
30-34	0.054637	57277	3129	278562	0.94402	1946709	33.99	0.01123
35-39	0.057410	54148	3109	262967	0.94015	1668147	30.81	0.01182
40-44	0.062448	51039	3187	247227	0.93314	1405180	27.53	0.01289
45-49	0.071565	47852	3425	230698	0.92005	1157953	24.20	0.01484
50-54	0.088975	44427	3953	212254	0.89740	927256	20.87	0.01862
55-59	0.117560	40474	4758	190476	0.86716	715002	17.67	0.02498
60-64	0.150158	35716	5363	165173	0.82492	524525	14.69	0.03247
65-69	0.204408	30353	6204	136255	0.76354	359352	11.84	0.04554
70-74	0.276741	24149	6683	104036	0.68201	223098	9.24	0.06424
75-79	0.375024	17466	6550	70954	0.67802	119062	6.82	0.09231
80+	1.000000	10916	10916	48108	0.00000	48108	4.41	0.22690

Alpha= 0.296559 Beta= 0.873440

## BOTH SEXES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.225092	100000	22509	85144	0.88176	3940647	39.41	0.26437
1	0.052802	77491	4092	75077	0.96518	3855503	49.75	0.05450
2	0.024079	73399	1767	72462	0.98061	3780426	51.51	0.02439
3	0.015414	71632	1104	71058	0.98649	3707964	51.76	0.01554
4	0.011723	70528	827	70098	0.97865	3636906	51.57	0.01179
5-9	0.031554	69701	2199	343006	0.97426	3566808	51.17	0.00641
10-14	0.019739	67501	1332	334176	0.97461	3223803	47.76	0.00399
15-19	0.031159	66169	2062	325691	0.96230	2889627	43.67	0.00633
20-24	0.044451	64107	2850	313412	0.95322	2563936	39.99	0.00909
25-29	0.049224	61258	3015	298750	0.94847	2250524	36.74	0.01009
30-34	0.053957	58242	3143	283355	0.94377	1951774	33.51	0.01109
35-39	0.058639	55100	3231	267421	0.93845	1668419	30.28	0.01208
40-44	0.064648	51869	3353	250961	0.93025	1400998	27.01	0.01336
45-49	0.075205	48516	3649	233456	0.91649	1150038	23.70	0.01563
50-54	0.092483	44867	4149	213961	0.89310	916582	20.43	0.01939
55-59	0.122786	40717	5000	191088	0.86077	702621	17.26	0.02616
60-64	0.157980	35718	5643	164483	0.81592	511533	14.32	0.03431
65-69	0.215066	30075	6468	134206	0.75263	347050	11.54	0.04820
70-74	0.288526	23607	6811	101007	0.66767	212844	9.02	0.06743
75-79	0.393894	16796	6616	67440	0.65833	111837	6.66	0.09810
80+	1.000000	10180	10180	44398	0.00000	44398	4.36	0.22929

## TOTAL POPULATION

MALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.163342	100000	16334	89056	0.91688	4481741	44.82	0.18341
1	0.040760	83666	3410	81654	0.97321	4392685	52.50	0.04176
2	0.018560	80256	1490	79466	0.98505	4311031	53.72	0.01874
3	0.011907	78766	938	78278	0.98958	4231565	53.72	0.01198
4	0.009029	77828	703	77463	0.98318	4153287	53.36	0.00907
5-9	0.025041	77125	1931	380799	0.97955	4075824	52.85	0.00507
10-14	0.015732	75194	1183	373013	0.97986	3695025	49.14	0.00317
15-19	0.024621	74011	1822	365500	0.96927	3322011	44.89	0.00499
20-24	0.036988	72189	2670	354270	0.96096	2956511	40.96	0.00754
25-29	0.041165	69519	2862	340440	0.95618	2602241	37.43	0.00841
30-34	0.046596	66657	3106	325521	0.95017	2261802	33.93	0.00954
35-39	0.053225	63551	3383	309299	0.94330	1936281	30.47	0.01094
40-44	0.060366	60169	3632	291763	0.93381	1626981	27.04	0.01245
45-49	0.072382	56537	4092	272452	0.91934	1335218	23.62	0.01502
50-54	0.089582	52444	4698	250476	0.89507	1062767	20.26	0.01876
55-59	0.121785	47746	5815	224194	0.85986	812290	17.01	0.02594
60-64	0.161044	41931	6753	192775	0.81033	588096	14.03	0.03503
65-69	0.223783	35179	7872	156212	0.74134	395321	11.24	0.05040
70-74	0.303588	27306	8290	115807	0.64720	239109	8.76	0.07158
75-79	0.423465	19016	8053	74950	0.64512	123302	6.48	0.10744
80+	1.000000	10964	10964	48352	0.00000	48352	4.41	0.22675
	Alpha=	0.082817	Beta=	0.971946				

FEMALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.157648	100000	15765	89753	0.91573	4559893	45.60	0.17565
1	0.041165	84235	3468	82189	0.97262	4470140	53.07	0.04219
2	0.019355	80768	1563	79939	0.98434	4387951	54.33	0.01956
3	0.012555	79204	994	78687	0.98894	4308012	54.39	0.01264
4	0.009671	78210	756	77817	0.98244	4229325	54.08	0.00972
5-9	0.025901	77454	2006	382253	0.97878	4151508	53.60	0.00525
10-14	0.016424	75447	1239	374140	0.97850	3769255	49.96	0.00331
15-19	0.026653	74208	1978	366097	0.96807	3395116	45.75	0.00540
20-24	0.037361	72230	2699	354406	0.96013	3029019	41.94	0.00761
25-29	0.042472	69532	2953	340276	0.95549	2674613	38.47	0.00868
30-34	0.046644	66579	3105	325130	0.95178	2334336	35.06	0.00955
35-39	0.049883	63473	3166	309450	0.94752	2009206	31.65	0.01023
40-44	0.055211	60307	3330	293211	0.94032	1699756	28.19	0.01136
45-49	0.064413	56977	3670	275712	0.92725	1406545	24.69	0.01331
50-54	0.081665	53307	4353	255653	0.90461	1130833	21.21	0.01703
55-59	0.110327	48954	5401	231267	0.87366	875180	17.88	0.02335
60-64	0.144345	43553	6287	202048	0.82929	643913	14.78	0.03111
65-69	0.201522	37266	7510	167557	0.76384	441865	11.86	0.04482
70-74	0.279546	29756	8318	127986	0.67577	274308	9.22	0.06499
75-79	0.386249	21438	8280	86489	0.69179	146322	6.83	0.09574
80+	1.000000	13158	13158	59832	0.00000	59832	4.55	0.21991
	Alpha=	0.132579	Beta=	0.940514				

## BOTH SEXES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.160426	100000	16043	89412	0.91630	4521054	45.21	0.17942
1	0.040967	83957	3440	81928	0.97291	4431642	52.78	0.04198
2	0.018967	80518	1527	79709	0.98469	4349714	54.02	0.01916
3	0.012239	78991	967	78488	0.98925	4270006	54.06	0.01232
4	0.009358	78024	730	77644	0.98280	4191517	53.72	0.00940
5-9	0.025481	77294	1970	381545	0.97916	4113873	53.22	0.00516
10-14	0.016086	75324	1212	373592	0.97916	3732328	49.55	0.00324
15-19	0.025662	74113	1902	365808	0.96865	3358736	45.32	0.00520
20-24	0.037179	72211	2685	354342	0.96054	2992928	41.45	0.00758
25-29	0.041834	69526	2909	340358	0.95582	2638586	37.95	0.00855
30-34	0.046621	66617	3106	325323	0.95099	2298228	34.50	0.00955
35-39	0.051513	63512	3272	309379	0.94546	1972905	31.06	0.01058
40-44	0.057726	60240	3477	292506	0.93714	1663526	27.61	0.01189
45-49	0.068300	56763	3877	274121	0.92339	1371019	24.15	0.01414
50-54	0.085527	52886	4523	253120	0.89996	1096899	20.74	0.01787
55-59	0.115916	48363	5606	227798	0.86692	843778	17.45	0.02461
60-64	0.152491	42757	6520	197483	0.82004	615981	14.41	0.03302
65-69	0.212381	36237	7696	161943	0.75286	418498	11.55	0.04752
70-74	0.291274	28541	8313	121920	0.66180	256555	8.99	0.06819
75-79	0.404403	20227	8180	80687	0.66861	134635	6.66	0.10138
80+	1.000000	12047	53948	0.00000	53948	4.48	0.22332	

## TOTAL POPULATION

## MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.133563	100000	13356	91051	0.93135	4711520	47.12	0.14669
1	0.036047	86644	3123	84801	0.97620	4620469	53.33	0.03683
2	0.016662	83520	1392	82783	0.98656	4535668	54.31	0.01681
3	0.010729	82129	881	81671	0.99060	4452885	54.22	0.01079
4	0.008169	81248	664	80903	0.98470	4371215	53.80	0.00820
5-9	0.022822	80584	1839	398322	0.98132	4290312	53.24	0.00462
10-14	0.014438	78745	1137	390882	0.98143	3891990	49.43	0.00291
15-19	0.022758	77608	1766	383624	0.97142	3501108	45.11	0.00460
20-24	0.034537	75842	2619	372660	0.96333	3117484	41.11	0.00703
25-29	0.038871	73222	2846	358996	0.95837	2744824	37.49	0.00793
30-34	0.044498	70376	3132	344052	0.95212	2385827	33.90	0.00910
35-39	0.051411	67245	3457	327580	0.94491	2041775	30.36	0.01055
40-44	0.058977	63787	3762	309532	0.93493	1714195	26.87	0.01215
45-49	0.071538	60025	4294	289392	0.91977	1404663	23.40	0.01484
50-54	0.089602	55731	4994	266173	0.89420	1115271	20.01	0.01876
55-59	0.123590	50738	6271	238012	0.85697	849098	16.74	0.02635
60-64	0.165221	44467	7347	203968	0.80429	611086	13.74	0.03602
65-69	0.232229	37120	8620	164050	0.73066	407118	10.97	0.05255
70-74	0.317684	28500	9054	119864	0.63103	243068	8.53	0.07553
75-79	0.444139	19446	8637	75638	0.62888	123204	6.34	0.11418
80+	1.000000	10809	10809	47567	0.00000	47567	4.40	0.22724

Alpha= 0.025462 Beta= 1.037600

FEMALES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.124757	100000	12476	91891	0.93260	4844792	48.45	0.13577
1	0.035377	87524	3096	85697	0.97638	4752901	54.30	0.03613
2	0.016870	84428	1424	83673	0.98632	4667204	55.28	0.01702
3	0.011020	83004	915	82528	0.99027	4583531	55.22	0.01108
4	0.008529	82089	700	81725	0.98442	4501003	54.83	0.00857
5-9	0.023035	81389	1875	402257	0.98107	4419278	54.30	0.00466
10-14	0.014723	79514	1171	394643	0.98063	4017021	50.52	0.00297
15-19	0.024096	78343	1888	386997	0.97093	3622377	46.24	0.00488
20-24	0.034166	76456	2612	375747	0.96330	3235380	42.32	0.00695
25-29	0.039333	73843	2904	361956	0.95851	2859633	38.73	0.00802
30-34	0.043744	70939	3103	346937	0.95449	2497677	35.21	0.00894
35-39	0.047352	67836	3212	331148	0.94988	2150740	31.71	0.00970
40-44	0.053033	64624	3427	314550	0.94231	1819592	28.16	0.01090
45-49	0.062615	61196	3832	296403	0.92878	1505042	24.59	0.01293
50-54	0.080401	57365	4612	275293	0.90535	1208639	21.07	0.01675
55-59	0.110153	52752	5811	249235	0.87285	933347	17.69	0.02331
60-64	0.146246	46942	6865	217545	0.82572	684111	14.57	0.03156
65-69	0.207106	40077	8300	179633	0.75590	466566	11.64	0.04621
70-74	0.290763	31776	9239	135784	0.66205	286933	9.03	0.06805
75-79	0.404472	22537	9116	89896	0.68138	151150	6.71	0.10140
80+	1.000000	13421	13421	61253	0.00000	61253	4.56	0.21911
	Alpha=	0.064364	Beta=	1.006350				

BOTH SEXES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.129053	100000	12905	91483	0.93198	4778565	47.79	0.14107
1	0.035704	87095	3110	85260	0.97629	4687083	53.82	0.03647
2	0.016769	83985	1408	83239	0.98644	4601822	54.79	0.01692
3	0.010878	82577	898	82110	0.99043	4518584	54.72	0.01094
4	0.008353	81679	682	81324	0.98455	4436474	54.32	0.00839
5-9	0.022931	80996	1857	400338	0.98119	4355150	53.77	0.00464
10-14	0.014584	79139	1154	392809	0.98102	3954812	49.97	0.00294
15-19	0.023443	77985	1828	385353	0.97117	3562003	45.68	0.00474
20-24	0.034347	76157	2616	374243	0.96331	3176650	41.71	0.00699
25-29	0.039108	73541	2876	360514	0.95844	2802407	38.11	0.00798
30-34	0.044112	70665	3117	345531	0.95334	2441893	34.56	0.00902
35-39	0.049332	67548	3332	329407	0.94745	2096362	31.04	0.01012
40-44	0.055933	64215	3592	312098	0.93871	1766954	27.52	0.01151
45-49	0.066968	60624	4060	292969	0.92438	1454857	24.00	0.01386
50-54	0.084889	56564	4802	270815	0.89991	1161888	20.54	0.01773
55-59	0.116708	51762	6041	243708	0.86510	891073	17.21	0.02479
60-64	0.155502	45721	7110	210831	0.81526	647365	14.16	0.03372
65-69	0.219361	38611	8470	171882	0.74358	436534	11.31	0.04928
70-74	0.303895	30142	9160	127808	0.64689	264652	8.78	0.07167
75-79	0.423822	20982	8892	82677	0.65516	136844	6.52	0.10756
80+	1.000000	12089	12089	54166	0.00000	54166	4.48	0.22319

## WHITE POPULATION

## MALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.228289	100000	22829	84705	0.88203	3841756	38.42	0.26951
1	0.054010	77171	4168	74712	0.96453	3757051	48.68	0.05579
2	0.024316	73003	1775	72062	0.98045	3682339	50.44	0.02463
3	0.015503	71228	1104	70654	0.98646	3610277	50.69	0.01563
4	0.011705	70124	821	69697	0.97837	3539623	50.48	0.01178
5-9	0.032145	69303	2228	340945	0.97381	3469926	50.07	0.00653
10-14	0.020047	67075	1345	332014	0.97449	3128981	46.65	0.00405
15-19	0.031083	65731	2043	323545	0.96154	2796967	42.55	0.00631
20-24	0.046077	63687	2935	311101	0.95174	2473422	38.84	0.00943
25-29	0.050549	60753	3071	296087	0.94662	2162322	35.59	0.01037
30-34	0.056369	57682	3251	280281	0.94022	1866235	32.35	0.01160
35-39	0.063389	54430	3450	263526	0.93306	1585954	29.14	0.01309
40-44	0.070740	50980	3606	245885	0.92318	1322428	25.94	0.01467
45-49	0.083360	47374	3949	226996	0.90810	1076543	22.72	0.01740
50-54	0.101226	43425	4396	206134	0.88297	849547	19.56	0.02132
55-59	0.134608	39029	5254	182011	0.84725	643412	16.49	0.02886
60-64	0.173724	33775	5868	154208	0.79848	461401	13.66	0.03805
65-69	0.235153	27908	6563	123132	0.73198	307194	11.01	0.05330
70-74	0.310999	21345	6638	90130	0.64270	184061	8.62	0.07365
75-79	0.424505	14707	6243	57926	0.62156	93931	6.39	0.10778
80+	1.000000	8464	8464	36005	0.00000	36005	4.25	0.23507

Alpha= 0.259452 Beta= 0.938293

## FEMALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.205960	100000	20596	86613	0.88893	4056155	40.56	0.23779
1	0.051479	79404	4088	76992	0.96580	3969543	49.99	0.05309
2	0.023976	75316	1806	74359	0.98063	3892550	51.68	0.02428
3	0.015471	73511	1137	72919	0.98639	3818191	51.94	0.01560
4	0.011873	72373	859	71926	0.97858	3745272	51.75	0.01195
5-9	0.031543	71514	2256	351931	0.97419	3673345	51.37	0.00641
10-14	0.019881	69258	1377	342849	0.97412	3321415	47.96	0.00402
15-19	0.032008	67881	2173	333975	0.96190	2978566	43.88	0.00651
20-24	0.044390	65709	2917	321251	0.95293	2644591	40.25	0.00908
25-29	0.049880	62792	3132	306129	0.94805	2323340	37.00	0.01023
30-34	0.054136	59660	3230	290224	0.94436	2017212	33.81	0.01113
35-39	0.057223	56430	3229	274077	0.94017	1726987	30.60	0.01178
40-44	0.062594	53201	3330	257679	0.93279	1452910	27.31	0.01292
45-49	0.072126	49871	3597	240362	0.91919	1195231	23.97	0.01496
50-54	0.090173	46274	4173	220938	0.89570	954869	20.64	0.01889
55-59	0.119835	42101	5045	197893	0.86420	733932	17.43	0.02549
60-64	0.153948	37056	5705	171018	0.82008	536039	14.47	0.03336
65-69	0.210624	31351	6603	140248	0.75604	365021	11.64	0.04708
70-74	0.286191	24748	7083	106033	0.67132	224772	9.08	0.06680
75-79	0.388215	17665	6858	71182	0.66811	118739	6.72	0.09634
80+	1.000000	10807	10807	47557	0.00000	47557	4.40	0.22725

Alpha= 0.267741 Beta= 0.913351

## BOTH SEXES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.216852	100000	21685	85688	0.88553	3949749	39.50	0.25307
1	0.052714	78315	4128	75879	0.96518	3864062	49.34	0.05441
2	0.024142	74187	1791	73237	0.98055	3788182	51.06	0.02445
3	0.015487	72396	1121	71813	0.98642	3714945	51.31	0.01561
4	0.011791	71274	840	70837	0.97848	3643133	51.11	0.01186
5-9	0.031837	70434	2242	346564	0.97400	3572295	50.72	0.00647
10-14	0.019962	68192	1361	337555	0.97430	3225731	47.30	0.00403
15-19	0.031557	66830	2109	328879	0.96172	2888177	43.22	0.00641
20-24	0.045213	64721	2926	316291	0.95235	2559297	39.54	0.00925
25-29	0.050206	61795	3103	301219	0.94735	2243006	36.30	0.01030
30-34	0.055225	58693	3241	285360	0.94234	1941787	33.08	0.01136
35-39	0.060231	55451	3340	268907	0.93670	1656427	29.87	0.01242
40-44	0.066568	52111	3469	251885	0.92810	1387520	26.63	0.01377
45-49	0.077606	48643	3775	233775	0.91378	1135635	23.35	0.01615
50-54	0.095565	44868	4288	213618	0.88949	901860	20.10	0.02007
55-59	0.127041	40580	5155	190011	0.85592	688241	16.96	0.02713
60-64	0.163595	35424	5795	162634	0.80954	498230	14.06	0.03563
65-69	0.222589	29629	6595	131658	0.74430	335596	11.33	0.05009
70-74	0.298292	23034	6871	97993	0.65733	203938	8.85	0.07012
75-79	0.405917	16163	6561	64414	0.64476	105945	6.55	0.10186
80+	1.000000	9602	9602	41531	0.00000	41531	4.33	0.23121

## WHITE POPULATION

## MALES 1860

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.187735	100000	18774	87422	0.90499	4316725	43.17	0.21475
1	0.044038	81227	3577	79116	0.97113	4229303	52.07	0.04521
2	0.019866	77649	1543	76832	0.98403	4150187	53.45	0.02008
3	0.012687	76107	966	75605	0.98891	4073355	53.52	0.01277
4	0.009592	75141	721	74767	0.98220	3997750	53.20	0.00964
5-9	0.026464	74421	1969	367179	0.97843	3922984	52.71	0.00536
10-14	0.016541	72451	1198	359259	0.97889	3555805	49.08	0.00334
15-19	0.025754	71253	1835	351676	0.96800	3196545	44.86	0.00522
20-24	0.038414	69418	2667	340422	0.95963	2844870	40.98	0.00783
25-29	0.042414	66751	2831	326677	0.95503	2504448	37.52	0.00867
30-34	0.047630	63920	3045	311988	0.94927	2177771	34.07	0.00976
35-39	0.053976	60875	3286	296162	0.94274	1865783	30.65	0.01109
40-44	0.060738	57590	3498	279203	0.93368	1569621	27.26	0.01253
45-49	0.072255	54092	3908	260687	0.91983	1290418	23.86	0.01499
50-54	0.088705	50183	4452	239788	0.89657	1029731	20.52	0.01856
55-59	0.119588	45732	5469	214986	0.86298	789943	17.27	0.02544
60-64	0.156823	40263	6314	185529	0.81596	574957	14.28	0.03403
65-69	0.216328	33949	7344	151383	0.75044	389428	11.47	0.04851
70-74	0.291967	26605	7768	113604	0.66039	238045	8.95	0.06838
75-79	0.406895	18837	7665	75023	0.65870	124441	6.61	0.10216
80+	1.000000	11172	11172	49418	0.00000	49418	4.42	0.22608

Alpha= 0.121362 Beta= 0.922418

FEMALES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.175146	100000	17515	88616	0.90657	4410178	44.10	0.19765
1	0.044166	82485	3643	80336	0.97067	4321563	52.39	0.04535
2	0.020644	78842	1628	77980	0.98332	4241227	53.79	0.02087
3	0.013351	77215	1031	76679	0.98824	4163247	53.92	0.01344
4	0.010263	76184	782	75777	0.98142	4086568	53.64	0.01032
5-9	0.027385	75402	2065	371848	0.97758	4010791	53.19	0.00555
10-14	0.017307	73337	1269	363512	0.97740	3638943	49.62	0.00349
15-19	0.027982	72068	2017	355298	0.96657	3275431	45.45	0.00568
20-24	0.039029	70051	2734	343421	0.95847	2920133	41.69	0.00796
25-29	0.044128	67317	2971	329160	0.95388	2576712	38.28	0.00902
30-34	0.048200	64347	3102	313979	0.95030	2247553	34.93	0.00988
35-39	0.051277	61245	3140	298374	0.94620	1933573	31.57	0.01053
40-44	0.056464	58105	3281	282321	0.93913	1635199	28.14	0.01162
45-49	0.065535	54824	3593	265137	0.92621	1352878	24.68	0.01355
50-54	0.082625	51231	4233	245572	0.90383	1087741	21.23	0.01724
55-59	0.110936	46998	5214	221956	0.87341	842168	17.92	0.02349
60-64	0.144195	41784	6025	193858	0.83007	620213	14.84	0.03108
65-69	0.199997	35759	7152	160916	0.76631	426354	11.92	0.04444
70-74	0.275812	28607	7890	123311	0.68059	265438	9.28	0.06399
75-79	0.379604	20717	7864	83925	0.69349	142127	6.86	0.09371
80+	1.000000	12853	12853	58202	0.00000	58202	4.53	0.22083
	Alpha=	0.168652	Beta=	0.914300				

BOTH SEXES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.181287	100000	18129	88035	0.90579	4364172	43.64	0.20593
1	0.044104	81871	3611	79741	0.97089	4276137	52.23	0.04528
2	0.020264	78260	1586	77420	0.98366	4196396	53.62	0.02048
3	0.013027	76675	999	76155	0.98857	4118976	53.72	0.01312
4	0.009936	75676	752	75285	0.98180	4042821	53.42	0.00999
5-9	0.026936	74924	2018	369574	0.97800	3967536	52.95	0.00546
10-14	0.016933	72906	1235	361442	0.97813	3597962	49.35	0.00342
15-19	0.026895	71671	1928	353537	0.96727	3236520	45.16	0.00545
20-24	0.038729	69744	2701	341965	0.95903	2882983	41.34	0.00790
25-29	0.043292	67042	2902	327956	0.95444	2541018	37.90	0.00885
30-34	0.047922	64140	3074	313016	0.94980	2213061	34.50	0.00982
35-39	0.052594	61066	3212	297303	0.94451	1900045	31.11	0.01080
40-44	0.058549	57855	3387	280805	0.93647	1602743	27.70	0.01206
45-49	0.068813	54467	3748	262966	0.92310	1321938	24.27	0.01425
50-54	0.085591	50719	4341	242744	0.90029	1058971	20.88	0.01788
55-59	0.115156	46378	5341	218539	0.86832	816228	17.60	0.02444
60-64	0.150355	41037	6170	189762	0.82318	597689	14.56	0.03252
65-69	0.207963	34867	7251	156208	0.75857	407927	11.70	0.04642
70-74	0.283692	27616	7834	118494	0.67072	251719	9.11	0.06612
75-79	0.392917	19782	7773	79477	0.67627	133224	6.73	0.09780
80+	1.000000	12009	12009	53748	0.00000	53748	4.48	0.22344

## WHITE POPULATION

MALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.185132	100000	18513	87596	0.90708	4411388	44.11	0.21135
1	0.042232	81487	3441	79456	0.97235	4323791	53.06	0.04331
2	0.018993	78045	1482	77260	0.98474	4244335	54.38	0.01919
3	0.012114	76563	927	76081	0.98942	4167075	54.43	0.01219
4	0.009152	75636	692	75276	0.98302	4090994	54.09	0.00920
5-9	0.025235	74943	1891	369989	0.97945	4015719	53.58	0.00511
10-14	0.015752	73052	1151	362384	0.97990	3645729	49.91	0.00318
15-19	0.024510	71902	1762	355102	0.96956	3283345	45.66	0.00496
20-24	0.036527	70139	2562	344291	0.96163	2928243	41.75	0.00744
25-29	0.040287	67577	2722	331080	0.95730	2583952	38.24	0.00822
30-34	0.045205	64855	2932	316944	0.95187	2252872	34.74	0.00925
35-39	0.051198	61923	3170	301689	0.94569	1935928	31.26	0.01051
40-44	0.057593	58753	3384	285304	0.93711	1634239	27.82	0.01186
45-49	0.068517	55369	3794	267360	0.92394	1348935	24.36	0.01419
50-54	0.084161	51575	4341	247024	0.90176	1081575	20.97	0.01757
55-59	0.113621	47235	5367	222756	0.86960	834550	17.67	0.02409
60-64	0.149334	41868	6252	193708	0.82426	611794	14.61	0.03228
65-69	0.206783	35615	7365	159666	0.76058	418086	11.74	0.04613
70-74	0.280567	28251	7926	121438	0.67202	258421	9.15	0.06527
75-79	0.393884	20325	8006	81609	0.67852	136982	6.74	0.09810
80+	1.000000	12319	12319	55373	0.00000	55373	4.49	0.22247
		Alpha=	0.090207	Beta=	0.898031			

FEMALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.166329	100000	16633	89189	0.91267	4638113	46.38	0.18649
1	0.039999	83367	3335	81400	0.97351	4548924	54.56	0.04097
2	0.018599	80032	1489	79244	0.98498	4467525	55.82	0.01878
3	0.012004	78544	943	78054	0.98944	4388281	55.87	0.01208
4	0.009217	77601	715	77229	0.98332	4310227	55.54	0.00926
5-9	0.024578	76886	1890	379705	0.97990	4232998	55.06	0.00498
10-14	0.015502	74996	1163	372074	0.97976	3853293	51.38	0.00312
15-19	0.025047	73834	1849	364545	0.97009	3481219	47.15	0.00507
20-24	0.034905	71984	2513	353640	0.96287	3116674	43.30	0.00711
25-29	0.039427	69472	2739	340511	0.95880	2763034	39.77	0.00804
30-34	0.043040	66733	2872	326483	0.95562	2422523	36.30	0.00880
35-39	0.045779	63860	2923	311994	0.95195	2096041	32.82	0.00937
40-44	0.050431	60937	3073	297002	0.94559	1784047	29.28	0.01035
45-49	0.058596	57864	3391	280843	0.93392	1487045	25.70	0.01207
50-54	0.074039	54473	4033	262283	0.91358	1206202	22.14	0.01538
55-59	0.099786	50440	5033	239618	0.88571	943919	18.71	0.02101
60-64	0.130401	45407	5921	212232	0.84542	704301	15.51	0.02790
65-69	0.182395	39486	7202	179424	0.78518	492069	12.46	0.04014
70-74	0.254484	32284	8216	140880	0.70236	312645	9.68	0.05832
75-79	0.355523	24068	8557	98949	0.73591	171766	7.14	0.08648
80+	1.000000	15511	15511	72817	0.00000	72817	4.69	0.21302
		Alpha=	0.094883	Beta=	0.872936			

## BOTH SEXES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.175501	100000	17550	88417	0.90991	4525417	45.25	0.19849
1	0.041088	82450	3388	80451	0.97295	4437000	53.81	0.04211
2	0.018791	79062	1486	78275	0.98487	4356549	55.10	0.01898
3	0.012058	77576	935	77090	0.98943	4278274	55.15	0.01213
4	0.009185	76641	704	76275	0.98318	4201184	54.82	0.00923
5-9	0.024898	75937	1891	374959	0.97968	4124909	54.32	0.00504
10-14	0.015624	74046	1157	367340	0.97983	3749950	50.64	0.00315
15-19	0.024785	72890	1807	359931	0.96983	3382610	46.41	0.00502
20-24	0.035696	71083	2537	349071	0.96227	3022679	42.52	0.00727
25-29	0.039847	68546	2731	335899	0.95807	2673608	39.00	0.00813
30-34	0.044096	65814	2902	321816	0.95379	2337709	35.52	0.00902
35-39	0.048422	62912	3046	306945	0.94889	2015893	32.04	0.00992
40-44	0.053925	59866	3228	291258	0.94145	1708948	28.55	0.01108
45-49	0.063436	56637	3593	274205	0.92905	1417690	25.03	0.01310
50-54	0.078977	53045	4189	254750	0.90781	1143485	21.56	0.01644
55-59	0.106535	48855	5205	231265	0.87785	888735	18.19	0.02251
60-64	0.139637	43651	6095	203015	0.83509	657470	15.06	0.03002
65-69	0.194292	37555	7297	169535	0.77317	454455	12.10	0.04304
70-74	0.267207	30259	8085	131080	0.68753	284920	9.42	0.06168
75-79	0.374236	22173	8298	90122	0.70702	153840	6.94	0.09208
80+	1.000000	13875	13875	63718	0.00000	63718	4.59	0.21776

## WHITE POPULATION

## MALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.214358	100000	21436	85638	0.89060	4043881	40.44	0.25031
1	0.049516	78564	3890	76269	0.96754	3958243	50.38	0.05101
2	0.022254	74674	1662	73793	0.98212	3881974	51.99	0.02252
3	0.014182	73012	1035	72474	0.98761	3808181	52.16	0.01429
4	0.010706	71977	771	71576	0.98019	3735707	51.90	0.01077
5-9	0.029430	71206	2096	350792	0.97603	3664131	51.46	0.00597
10-14	0.018348	69111	1268	342383	0.97664	3313339	47.94	0.00370
15-19	0.028471	67843	1932	334384	0.96474	2970956	43.79	0.00578
20-24	0.042258	65911	2785	322592	0.95571	2636572	40.00	0.00863
25-29	0.046413	63126	2930	308304	0.95094	2313980	36.66	0.00950
30-34	0.051835	60196	3120	293179	0.94497	2005676	33.32	0.01064
35-39	0.058399	57076	3333	277045	0.93825	1712498	30.00	0.01203
40-44	0.065317	53742	3510	259937	0.92895	1435453	26.71	0.01350
45-49	0.077189	50232	3877	241467	0.91471	1175516	23.40	0.01606
50-54	0.094069	46355	4361	220873	0.89089	934049	20.15	0.01974
55-59	0.125717	41994	5279	196773	0.85677	713176	16.98	0.02683
60-64	0.163252	36715	5994	168590	0.80964	516403	14.07	0.03555
65-69	0.222749	30721	6843	136498	0.74464	347813	11.32	0.05013
70-74	0.297324	23878	7099	101641	0.65611	211316	8.85	0.06985
75-79	0.410157	16778	6882	66688	0.64459	109675	6.54	0.10319
80+	1.000000	9897	9897	42987	0.00000	42987	4.34	0.23023

Alpha= 0.196986 Beta= 0.914480

FEMALES 1880								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.215266	100000	21527	86008	0.88478	4058674	40.59	0.25029
1	0.051305	78473	4026	76098	0.96600	3972666	50.62	0.05291
2	0.023741	74447	1767	73511	0.98085	3896568	52.34	0.02404
3	0.015274	72680	1110	72103	0.98657	3823057	52.60	0.01540
4	0.011700	71570	837	71134	0.97894	3750955	52.41	0.01177
5-9	0.031000	70732	2193	348180	0.97467	3679820	52.02	0.00630
10-14	0.019478	68540	1335	339361	0.97468	3331640	48.61	0.00393
15-19	0.031276	67205	2102	330769	0.96285	2992279	44.52	0.00635
20-24	0.043222	65103	2814	318479	0.95425	2661511	40.88	0.00884
25-29	0.048382	62289	3014	303910	0.94970	2343032	37.62	0.00992
30-34	0.052320	59275	3101	288623	0.94632	2039121	34.40	0.01075
35-39	0.055123	56174	3096	273129	0.94245	1750498	31.16	0.01134
40-44	0.060124	53077	3191	257409	0.93553	1477370	27.83	0.01240
45-49	0.069103	49886	3447	240813	0.92265	1219960	24.45	0.01432
50-54	0.086202	46439	4003	222187	0.90036	979147	21.08	0.01802
55-59	0.114352	42436	4853	200048	0.87045	756960	17.84	0.02426
60-64	0.146717	37583	5514	174131	0.82840	556913	14.82	0.03167
65-69	0.200755	32069	6438	144250	0.76702	382782	11.94	0.04463
70-74	0.273292	25631	7005	110643	0.68503	238531	9.31	0.06331
75-79	0.372318	18626	6935	75794	0.68730	127888	6.87	0.09150
80+	1.000000	11691	11691	52094	0.00000	52094	4.46	0.22443
	Alpha=	0.256351	Beta=	0.875189				

BOTH SEXES 1880								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.214823	100000	21482	85822	0.88767	4050986	40.51	0.25031
1	0.050432	78518	3960	76181	0.96675	3965164	50.50	0.05198
2	0.023016	74558	1716	77548	0.98147	3888983	52.16	0.02330
3	0.014741	72842	1074	72283	0.98708	3815334	52.38	0.01486
4	0.011215	71768	805	71350	0.97955	3743051	52.15	0.01128
5-9	0.030234	70963	2146	349452	0.97533	3671701	51.74	0.00614
10-14	0.018927	68818	1302	340832	0.97564	3322249	48.28	0.00382
15-19	0.029908	67515	2019	332528	0.96377	2981417	44.16	0.00607
20-24	0.042752	65496	2800	320480	0.95496	2648889	40.44	0.00874
25-29	0.047422	62696	2973	306047	0.95030	2328409	37.14	0.00971
30-34	0.052083	59723	3111	290837	0.94566	2022363	33.86	0.01070
35-39	0.056721	56612	3211	275033	0.94040	1731525	30.59	0.01168
40-44	0.062657	53401	3346	258641	0.93232	1456492	27.27	0.01294
45-49	0.073047	50055	3656	241135	0.91878	1197852	23.93	0.01516
50-54	0.090040	46399	4178	221549	0.89574	956717	20.62	0.01886
55-59	0.119896	42221	5062	198450	0.86377	735168	17.41	0.02551
60-64	0.154783	37159	5752	171416	0.81924	536718	14.44	0.03355
65-69	0.211484	31407	6642	140431	0.75610	365302	11.63	0.04730
70-74	0.285015	24765	7058	106180	0.67089	224871	9.08	0.06648
75-79	0.390776	17707	6919	71235	0.66619	118691	6.70	0.09713
80+	1.000000	10787	10787	47456	0.00000	47456	4.40	0.22731

## WHITE POPULATION

MALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.156752	100000	15675	89498	0.92077	4604051	46.04	0.17515
1	0.038549	84325	3251	82407	0.97469	4514554	53.54	0.03945
2	0.017530	81074	1421	80321	0.98589	4432147	54.67	0.01769
3	0.011241	79653	895	79187	0.99016	4351826	54.63	0.01131
4	0.008523	78758	671	78409	0.98412	4272639	54.25	0.00856
5-9	0.023645	78086	1846	385816	0.98070	4194230	53.71	0.00479
10-14	0.014849	76240	1132	378370	0.98098	3808414	49.95	0.00299
15-19	0.023245	75108	1746	371175	0.97098	3430045	45.67	0.00470
20-24	0.034937	73362	2563	360402	0.96312	3058870	41.70	0.00711
25-29	0.038898	70799	2754	347110	0.95857	2698468	38.11	0.00793
30-34	0.044058	68045	2998	332730	0.95286	2351358	34.56	0.00901
35-39	0.050372	65047	3277	317044	0.94630	2018628	31.03	0.01033
40-44	0.057197	61771	3533	300020	0.93722	1701584	27.55	0.01178
45-49	0.068692	58237	4000	281186	0.92335	1401564	24.07	0.01423
50-54	0.085198	54237	4621	259633	0.90000	1120378	20.66	0.01780
55-59	0.116191	49616	5765	233668	0.86594	860745	17.35	0.02467
60-64	0.154278	43851	6765	202343	0.81764	627077	14.30	0.03343
65-69	0.215575	37086	7995	165442	0.74977	424734	11.45	0.04832
70-74	0.294418	29091	8565	124043	0.65615	259292	8.91	0.06905
75-79	0.413908	20526	8496	81391	0.66172	135249	6.59	0.10438
80+	1.000000	12030	12030	53858	0.00000	53858	4.48	0.22337
	Alpha=	0.044823	Beta=	0.957382				

FEMALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.144903	100000	14490	90581	0.92296	4743962	47.44	0.15997
1	0.037790	85510	3231	83603	0.97488	4653380	54.42	0.03865
2	0.017784	82278	1463	81503	0.98561	4569777	55.54	0.01795
3	0.011544	80815	933	80330	0.98982	4488274	55.54	0.01161
4	0.008897	79882	711	79513	0.98383	4407944	55.18	0.00894
5-9	0.023870	79171	1890	391133	0.98044	4328432	54.67	0.00483
10-14	0.015151	77282	1171	383481	0.98015	3937299	50.95	0.00305
15-19	0.024629	76111	1875	375867	0.97044	3553819	46.69	0.00499
20-24	0.034606	74236	2569	364758	0.96302	3177951	42.81	0.00704
25-29	0.039442	71667	2827	351269	0.95860	2813193	39.25	0.00805
30-34	0.043437	68840	2990	336727	0.95502	2461924	35.76	0.00888
35-39	0.046587	65850	3068	321582	0.95091	2125197	32.27	0.00954
40-44	0.051725	62782	3247	305794	0.94398	1803616	28.73	0.01062
45-49	0.060558	59535	3605	288662	0.93143	1497822	25.16	0.01249
50-54	0.077105	55930	4312	268867	0.90963	1209160	21.62	0.01604
55-59	0.104734	51617	5406	244571	0.87959	940293	18.22	0.02210
60-64	0.137917	46211	6373	215123	0.83608	695722	15.06	0.02963
65-69	0.194091	39838	7732	179859	0.77127	480599	12.06	0.04299
70-74	0.271712	32106	8724	138720	0.68307	300740	9.37	0.06289
75-79	0.379010	23382	8862	94756	0.70987	162020	6.93	0.09353
80+	1.000000	14520	14520	67265	0.00000	67265	4.63	0.21587
	Alpha=	0.078827	Beta=	0.936548				

## BOTH SEXES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.150683	100000	15068	90055	0.92188	4674665	46.75	0.16732
1	0.038160	84932	3241	83020	0.97478	4584610	53.98	0.03904
2	0.017660	81691	1443	80926	0.98574	4501591	55.11	0.01783
3	0.011396	80248	915	79772	0.98999	4420665	55.09	0.01146
4	0.008715	79333	691	78974	0.98397	4340892	54.72	0.00875
5-9	0.023760	78642	1869	388539	0.98057	4261918	54.19	0.00481
10-14	0.015004	76774	1152	380988	0.98056	3873379	50.45	0.00302
15-19	0.023954	75622	1811	373580	0.97070	3492391	46.18	0.00485
20-24	0.034767	73810	2566	362636	0.96307	3118811	42.25	0.00708
25-29	0.039177	71244	2791	349243	0.95859	2756175	38.69	0.00799
30-34	0.043740	68453	2994	334780	0.95397	2406933	35.16	0.00894
35-39	0.048433	65459	3170	319368	0.94866	2072153	31.66	0.00993
40-44	0.054394	62288	3388	302972	0.94068	1752785	28.14	0.01118
45-49	0.064526	58900	3801	285000	0.92749	1449813	24.61	0.01334
50-54	0.081053	55100	4466	264334	0.90493	1164813	21.14	0.01690
55-59	0.110323	50634	5586	239204	0.87293	900479	17.78	0.02335
60-64	0.145898	45048	6572	208807	0.82707	661276	14.68	0.03148
65-69	0.204571	38475	7871	172699	0.76078	452468	11.76	0.04558
70-74	0.282788	30604	8655	131386	0.66991	279769	9.14	0.06587
75-79	0.396033	21950	8693	88017	0.68585	148383	6.76	0.09876
80+	1.000000	13257	13257	60366	0.00000	60366	4.55	0.21961

## WHITE POPULATION

## MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.127845	100000	12785	91434	0.93485	4850847	48.51	0.13982
1	0.033775	87216	2946	85478	0.97775	4759413	54.57	0.03446
2	0.015537	84270	1309	83576	0.98747	4673935	55.46	0.01567
3	0.010019	82960	831	82528	0.99122	4590359	55.33	0.01007
4	0.007625	82129	626	81804	0.98571	4507831	54.89	0.00766
5-9	0.021300	81503	1736	403175	0.98258	4426027	54.31	0.00431
10-14	0.013463	79767	1074	396151	0.98269	4022852	50.43	0.00271
15-19	0.021219	78693	1670	389291	0.97335	3626702	46.09	0.00429
20-24	0.032199	77023	2480	378917	0.96582	3237410	42.03	0.00655
25-29	0.036233	74543	2701	365964	0.96119	2858494	38.35	0.00738
30-34	0.041485	71842	2980	351761	0.95535	2492529	34.69	0.00847
35-39	0.047955	68862	3302	336054	0.94858	2140769	31.09	0.00983
40-44	0.055061	65560	3610	318774	0.93919	1804714	27.53	0.01132
45-49	0.066888	61950	4144	299390	0.92487	1485940	23.99	0.01384
50-54	0.083965	57806	4854	276897	0.90071	1186550	20.53	0.01753
55-59	0.116016	52953	6143	249404	0.86515	909653	17.18	0.02463
60-64	0.156158	46809	7310	215772	0.81414	660249	14.11	0.03388
65-69	0.221051	39500	8731	175669	0.74216	444477	11.25	0.04970
70-74	0.305076	30768	9387	130374	0.64328	268808	8.74	0.07200
75-79	0.431030	21382	9216	83867	0.65062	138434	6.47	0.10989
80+	1.000000	12165	12165	54566	0.00000	54566	4.49	0.22295

Alpha= -0.01970 Beta= 1.016000

## FEMALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.112065	100000	11207	92716	0.93984	5071172	50.71	0.12087
1	0.031592	88794	2805	87138	0.97892	4978457	56.07	0.03219
2	0.015070	85988	1296	85302	0.98778	4891318	56.88	0.01519
3	0.009849	84692	834	84259	0.99130	4806017	56.75	0.00990
4	0.007626	83858	640	83526	0.98605	4721758	56.31	0.00766
5-9	0.020632	83219	1717	411802	0.98305	4638232	55.74	0.00417
10-14	0.013196	81502	1075	404821	0.98261	4226430	51.86	0.00266
15-19	0.021636	80426	1740	397782	0.97386	3821610	47.52	0.00437
20-24	0.030753	78686	2420	387382	0.96691	3423828	43.51	0.00625
25-29	0.035502	76266	2708	374563	0.96248	3036446	39.81	0.00723
30-34	0.039604	73559	2913	360511	0.95873	2661883	36.19	0.00808
35-39	0.043013	70646	3039	345631	0.95438	2301372	32.58	0.00879
40-44	0.048351	67607	3269	329862	0.94727	1955741	28.93	0.00991
45-49	0.057334	64338	3689	312468	0.93457	1625878	25.27	0.01181
50-54	0.074020	60649	4489	292023	0.91246	1313410	21.66	0.01537
55-59	0.102138	56160	5736	266460	0.88146	1021386	18.19	0.02153
60-64	0.136802	50424	6898	234875	0.83581	754926	14.97	0.02937
65-69	0.195918	43526	8528	196311	0.76718	520052	11.95	0.04344
70-74	0.278715	34998	9755	150605	0.67333	323741	9.25	0.06477
75-79	0.393165	25244	9925	101407	0.70734	173136	6.86	0.09787
80+	1.000000	15319	15319	71729	0.00000	71729	4.68	0.21356
	Alpha=	-0.00539	Beta=	0.997719				

## BOTH SEXES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.119763	100000	11976	92096	0.93737	4961659	49.62	0.13004
1	0.032657	88024	2875	86328	0.97835	4869564	55.32	0.03330
2	0.015298	85149	1303	84459	0.98762	4783236	56.17	0.01542
3	0.009932	83847	833	83414	0.99126	4698777	56.04	0.00998
4	0.007626	83014	633	82685	0.98588	4615364	55.60	0.00766
5-9	0.020958	82381	1727	407588	0.98282	4532679	55.02	0.00424
10-14	0.013326	80654	1075	400584	0.98265	4125091	51.15	0.00268
15-19	0.021433	79579	1706	393633	0.97361	3724507	46.80	0.00433
20-24	0.031458	77874	2450	383245	0.96638	3330874	42.77	0.00639
25-29	0.035859	75424	2705	370359	0.96185	2947629	39.08	0.00730
30-34	0.040522	72719	2947	356231	0.95708	2577270	35.44	0.00827
35-39	0.045424	69773	3169	340940	0.95155	2221040	31.83	0.00930
40-44	0.051624	66603	3438	324421	0.94333	1880099	28.23	0.01060
45-49	0.061994	63165	3916	306036	0.92984	1555678	24.63	0.01280
50-54	0.078871	59249	4673	284563	0.90673	1249642	21.09	0.01642
55-59	0.108908	54576	5944	258021	0.87350	965079	17.68	0.02304
60-64	0.146244	48632	7112	225381	0.82523	707058	14.54	0.03156
65-69	0.208178	41520	8644	185992	0.75497	481676	11.60	0.04647
70-74	0.291574	32877	9586	140418	0.65864	295685	8.99	0.06827
75-79	0.411636	23291	9587	92485	0.67883	155266	6.67	0.10366
80+	1.000000	13703	13703	62781	0.00000	62781	4.58	0.21827

(II) WEST MODEL  
TOTAL POPULATION

MALES 1850								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.203522	100000	20352	86364	0.88975	3778577	37.79	0.23566
1	0.059700	79648	4755	76842	0.96027	3692213	46.36	0.06188
2	0.027808	74893	2083	73789	0.97712	3615371	48.27	0.02822
3	0.018731	72810	1364	72101	0.98361	3541582	48.64	0.01892
4	0.014188	71446	1014	70919	0.97748	3469481	48.56	0.01429
5-9	0.031539	70433	2221	346610	0.97275	3398562	48.25	0.00641
10-14	0.022822	68211	1557	337165	0.97276	3051951	44.74	0.00462
15-19	0.031766	66655	2117	327980	0.96172	2714787	40.73	0.00646
20-24	0.045006	64537	2905	315425	0.95262	2386807	36.98	0.00921
25-29	0.049873	61633	3074	300479	0.94647	2071382	33.61	0.01023
30-34	0.057374	58559	3360	284395	0.93772	1770903	30.24	0.01181
35-39	0.067490	55199	3725	266682	0.92542	1486508	26.93	0.01397
40-44	0.082187	51474	4230	246793	0.91033	1219826	23.70	0.01714
45-49	0.097831	47243	4622	224662	0.88891	973033	20.60	0.02057
50-54	0.125779	42621	5361	199705	0.85910	748371	17.56	0.02684
55-59	0.158191	37261	5894	171567	0.81572	548666	14.73	0.03436
60-64	0.215273	31366	6752	139951	0.75347	377099	12.02	0.04825
65-69	0.286354	24614	7048	105449	0.67203	237149	9.63	0.06684
70-74	0.386273	17566	6785	70865	0.56286	131700	7.50	0.09575
75-79	0.520034	10781	5606	39887	0.52517	60834	5.64	0.14055
80+	1.000000	5174	5174	20948	0.00000	20948	4.05	0.24701
		LEVEL=	9.203	.				

FEMALES 1850								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.160990	100000	16099	89536	0.90738	4256489	42.56	0.17981
1	0.053694	83901	4505	81243	0.96409	4166953	49.67	0.05545
2	0.025428	79396	2019	78326	0.97922	4085710	51.46	0.02578
3	0.016862	77377	1305	76699	0.98514	4007384	51.79	0.01701
4	0.012980	76072	987	75559	0.97867	3930686	51.67	0.01307
5-9	0.030304	75085	2275	369736	0.97297	3855127	51.34	0.00615
10-14	0.023656	72810	1722	359742	0.97248	3485390	47.87	0.00479
15-19	0.031480	71087	2238	349842	0.96446	3125648	43.97	0.00640
20-24	0.039739	68849	2736	337407	0.95781	2775807	40.32	0.00811
25-29	0.044741	66113	2958	323172	0.95239	2438400	36.88	0.00915
30-34	0.050607	63155	3196	307787	0.94673	2115228	33.49	0.01038
35-39	0.056075	59959	3362	291391	0.94132	1807441	30.14	0.01154
40-44	0.061447	56597	3478	274291	0.93500	1516050	26.79	0.01268
45-49	0.068787	53119	3654	256462	0.92090	1241759	23.38	0.01425
50-54	0.090182	49465	4461	236175	0.89697	985297	19.92	0.01889
55-59	0.117149	45005	5272	211842	0.85806	749122	16.65	0.02489
60-64	0.170013	39732	6755	181774	0.80176	537279	13.52	0.03716
65-69	0.232248	32977	7659	145739	0.72413	355505	10.78	0.05255
70-74	0.332693	25318	8423	105534	0.61635	209766	8.29	0.07982
75-79	0.460007	16895	7772	65046	0.60244	104232	6.17	0.11948
80+	1.000000	9123	9123	39186	0.00000	39186	4.30	0.23282
		LEVEL=	10.028					

## BOTH SEXES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.181742	100000	18174	88005	0.89876	4016900	40.17	0.20651
1	0.056550	81826	4627	79096	0.96228	3928895	48.02	0.05850
2	0.026553	77199	2050	76112	0.97823	3849799	49.87	0.02693
3	0.017746	75149	1334	74455	0.98442	3773687	50.22	0.01791
4	0.013549	73815	1000	73295	0.97810	3699232	50.11	0.01365
5-9	0.030907	72815	2250	358449	0.97285	3625936	49.80	0.00628
10-14	0.023269	70564	1642	348718	0.97259	3267488	46.30	0.00471
15-19	0.031647	68923	2181	339160	0.96311	2918770	42.35	0.00643
20-24	0.042306	66741	2824	326648	0.95530	2579611	38.65	0.00864
25-29	0.047206	63918	3017	312046	0.94956	2252963	35.25	0.00967
30-34	0.053844	60900	3279	296305	0.94241	1940917	31.87	0.01107
35-39	0.061548	57621	3546	279241	0.93368	1644613	28.54	0.01270
40-44	0.071397	54075	3861	260722	0.92317	1365372	25.25	0.01481
45-49	0.082690	50214	4152	240690	0.90561	1104650	22.00	0.01725
50-54	0.107138	46062	4935	217972	0.87895	863960	18.76	0.02264
55-59	0.136626	41127	5619	191587	0.83801	645988	15.71	0.02933
60-64	0.191364	35508	6795	160552	0.77914	454401	12.80	0.04232
65-69	0.257339	28713	7389	125092	0.70012	293848	10.23	0.05907
70-74	0.357166	21324	7616	87579	0.59220	168756	7.91	0.08696
75-79	0.486573	13708	6670	51864	0.56517	81177	5.92	0.12860
80+	1.000000	7038	7038	29312	0.00000	29312	4.16	0.24010
		LEVEL=	9.633					

## TOTAL POPULATION

## MALES 1860

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.173864	100000	17386	88351	0.90777	4179492	41.79	0.19679
1	0.049475	82614	4087	80202	0.96728	4091141	49.52	0.05096
2	0.022797	78526	1790	77578	0.98130	4010939	51.08	0.02308
3	0.015278	76736	1172	76126	0.98666	3933362	51.26	0.01540
4	0.011531	75564	871	75111	0.98121	3857235	51.05	0.01160
5-9	0.026589	74692	1986	368497	0.97701	3782124	50.64	0.00539
10-14	0.019299	72706	1403	360024	0.97680	3413627	46.95	0.00390
15-19	0.027183	71303	1938	351671	0.96723	3053603	42.83	0.00551
20-24	0.038504	69365	2671	340148	0.95954	2701932	38.95	0.00785
25-29	0.042490	66694	2834	326386	0.95442	2361784	35.41	0.00868
30-34	0.048812	63860	3117	311509	0.94689	2035398	31.87	0.01001
35-39	0.057626	60743	3500	294965	0.93604	1723889	28.38	0.01187
40-44	0.070679	57243	4046	276099	0.92221	1428924	24.96	0.01465
45-49	0.085448	53197	4546	254621	0.90220	1152824	21.67	0.01785
50-54	0.111316	48651	5416	229718	0.87390	898203	18.46	0.02358
55-59	0.142733	43236	6171	200751	0.83244	668486	15.46	0.03074
60-64	0.196510	37065	7284	167114	0.77289	467735	12.62	0.04358
65-69	0.265205	29781	7898	129160	0.69349	300621	10.09	0.06115
70-74	0.362712	21883	7937	89572	0.58613	171461	7.84	0.08861
75-79	0.494138	13946	6891	52501	0.55978	81890	5.87	0.13126
80+	1.000000	7055	7055	29389	0.00000	29389	4.17	0.24004
		LEVEL=	10.869					

FEMALES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.148221	100000	14822	90366	0.91551	4464286	44.64	0.16402
1	0.048695	85178	4148	82731	0.96754	4373921	51.35	0.05014
2	0.022939	81030	1859	80045	0.98128	4291190	52.96	0.02322
3	0.015174	79171	1201	78547	0.98664	4211145	53.19	0.01529
4	0.011660	77970	909	77497	0.98063	4132598	53.00	0.01173
5-9	0.027628	77061	2129	379982	0.97536	4055101	52.62	0.00560
10-14	0.021561	74932	1616	370620	0.97485	3675119	49.05	0.00436
15-19	0.028826	73316	2113	361298	0.96740	3304498	45.07	0.00585
20-24	0.036483	71203	2598	349520	0.96124	2943200	41.34	0.00743
25-29	0.041128	68605	2822	335972	0.95622	2593680	37.81	0.00840
30-34	0.046549	65784	3062	321263	0.95093	2257708	34.32	0.00953
35-39	0.051717	62721	3244	305498	0.94573	1936446	30.87	0.01062
40-44	0.056958	59478	3388	288919	0.93948	1630948	27.42	0.01173
45-49	0.064293	56090	3606	271434	0.92587	1342029	23.93	0.01329
50-54	0.084647	52484	4443	251312	0.90294	1070595	20.40	0.01768
55-59	0.110612	48041	5314	226921	0.86564	819283	17.05	0.02342
60-64	0.161051	42727	6881	196433	0.81115	592362	13.86	0.03503
65-69	0.221994	35846	7958	159336	0.73492	395929	11.05	0.04994
70-74	0.320449	27888	8937	117100	0.62838	236593	8.48	0.07632
75-79	0.446929	18952	8470	73583	0.62393	119493	6.31	0.11511
80+	1.000000	10482	10482	45910	0.00000	45910	4.38	0.22831
		LEVEL=	10.859					

BOTH SEXES 1860								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.161445	100000	16145	89345	0.91136	4316965	43.17	0.18070
1	0.049119	83856	4119	81425	0.96738	4227621	50.42	0.05058
2	0.022883	79737	1825	78770	0.98128	4146195	52.00	0.02316
3	0.015236	77912	1187	77295	0.98664	4067426	52.21	0.01536
4	0.011603	76725	890	76262	0.98091	3990131	52.01	0.01167
5-9	0.027119	75835	2057	374032	0.97618	3913869	51.61	0.00550
10-14	0.020430	73778	1507	365122	0.97582	3539837	47.98	0.00413
15-19	0.028010	72271	2024	356293	0.96730	3174715	43.93	0.00568
20-24	0.037524	70247	2636	344643	0.96036	2818421	40.12	0.00765
25-29	0.041838	67611	2829	330981	0.95529	2473778	36.59	0.00855
30-34	0.047717	64782	3091	316182	0.94886	2142797	33.08	0.00978
35-39	0.054725	61691	3376	300013	0.94082	1826615	29.61	0.01125
40-44	0.063886	58315	3725	282260	0.93080	1526602	26.18	0.01320
45-49	0.074881	54589	4088	262727	0.91409	1244342	22.79	0.01556
50-54	0.097838	50501	4941	240155	0.88868	981616	19.44	0.02057
55-59	0.126256	45561	5752	213422	0.84962	741461	16.27	0.02695
60-64	0.177998	39808	7086	181327	0.79305	528039	13.26	0.03908
65-69	0.242174	32722	7925	143801	0.71583	346712	10.60	0.05511
70-74	0.339591	24798	8421	102937	0.60951	202911	8.18	0.08181
75-79	0.467557	16377	7657	62741	0.59344	99974	6.10	0.12204
80+	1.000000	8720	8720	37233	0.00000	37233	4.27	0.23419
		LEVEL=	10.856					

## TOTAL POPULATION

MALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.162593	100000	16259	89106	0.91451	4343320	43.43	0.18247
1	0.045590	83741	3818	81488	0.96992	4254213	50.80	0.04685
2	0.020921	79923	1672	79037	0.98285	4172725	52.21	0.02116
3	0.013994	78251	1095	77681	0.98779	4093688	52.31	0.01410
4	0.010548	77156	814	76733	0.98262	4016007	52.05	0.01061
5-9	0.024708	76342	1886	376994	0.97862	3939274	51.60	0.00500
10-14	0.017960	74456	1337	368936	0.97833	3562280	47.84	0.00362
15-19	0.025441	73119	1860	360942	0.96933	3193344	43.67	0.00515
20-24	0.036033	71258	2568	349872	0.96217	2832402	39.75	0.00734
25-29	0.039684	68691	2726	336639	0.95744	2482529	36.14	0.00810
30-34	0.045558	65965	3005	322311	0.95038	2145891	32.53	0.00932
35-39	0.053877	62960	3392	306317	0.94008	1823580	28.96	0.01107
40-44	0.066305	59567	3950	287963	0.92672	1517263	25.47	0.01372
45-49	0.080741	55618	4491	266863	0.90725	1229300	22.10	0.01683
50-54	0.105820	51127	5410	242110	0.87953	962437	18.82	0.02235
55-59	0.136859	45717	6257	212943	0.83881	720327	15.76	0.02938
60-64	0.189379	39460	7473	178618	0.78027	507384	12.86	0.04184
65-69	0.257167	31987	8226	139371	0.70166	328766	10.28	0.05902
70-74	0.353757	23761	8406	97792	0.59500	189395	7.97	0.08595
75-79	0.484296	15355	7437	58186	0.57432	91603	5.97	0.12781
80+	1.000000	7919	7919	33417	0.00000	33417	4.22	0.23697
		LEVEL=	11.550					

FEMALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.131923	100000	13192	91425	0.92579	4745693	47.46	0.14430
1	0.042316	86808	3673	84640	0.97190	4654268	53.62	0.04340
2	0.019801	83134	1646	82262	0.98387	4569627	54.97	0.02001
3	0.013056	81488	1064	80935	0.98852	4487366	55.07	0.01315
4	0.010011	80424	805	80006	0.98312	4406431	54.79	0.01006
5-9	0.024212	79619	1928	393276	0.97842	4326425	54.34	0.00490
10-14	0.018886	77691	1467	384789	0.97787	3933148	50.63	0.00381
15-19	0.025438	76224	1939	376273	0.97116	3548360	46.55	0.00515
20-24	0.032328	74285	2401	365422	0.96561	3172086	42.70	0.00657
25-29	0.036517	71884	2625	352856	0.96110	2806664	39.04	0.00744
30-34	0.041371	69259	2865	339130	0.95629	2453808	35.43	0.00845
35-39	0.046156	66393	3064	324306	0.95137	2114678	31.85	0.00945
40-44	0.051228	63329	3244	308534	0.94520	1790372	28.27	0.01051
45-49	0.058557	60085	3518	291628	0.93222	1481838	24.66	0.01206
50-54	0.077582	56566	4389	271860	0.91057	1190211	21.04	0.01614
55-59	0.102268	52178	5336	247549	0.87534	918350	17.60	0.02156
60-64	0.149611	46842	7008	216688	0.82314	670801	14.32	0.03234
65-69	0.208905	39834	8321	178365	0.74873	454113	11.40	0.04665
70-74	0.304822	31512	9606	133547	0.64375	275748	8.75	0.07193
75-79	0.430235	21907	9425	85971	0.65407	142201	6.49	0.10963
80+	1.000000	12482	12482	56231	0.00000	56231	4.51	0.22197
		LEVEL=	11.984					

## BOTH SEXES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.147305	100000	14731	90278	0.92003	4540085	45.40	0.16317
1	0.043943	85270	3747	83059	0.97091	4449807	52.19	0.04511
2	0.020360	81523	1660	80643	0.98336	4366748	53.56	0.02058
3	0.013522	79863	1080	79301	0.98815	4286105	53.67	0.01362
4	0.010279	78783	810	78362	0.98286	4206804	53.40	0.01033
5-9	0.024480	77973	1909	385093	0.97850	4128442	52.95	0.00496
10-14	0.018454	76064	1404	376812	0.97807	3743349	49.21	0.00373
15-19	0.025476	74661	1902	368547	0.97022	3366537	45.09	0.00516
20-24	0.034193	72758	2488	357573	0.96389	2997990	41.20	0.00696
25-29	0.038098	70271	2677	344660	0.95928	2640417	37.57	0.00777
30-34	0.043448	67593	2937	330625	0.95336	2295757	33.96	0.00888
35-39	0.049972	64657	3231	315206	0.94580	1965132	30.39	0.01025
40-44	0.058652	61426	3603	298121	0.93612	1649926	26.86	0.01208
45-49	0.069438	57823	4015	279077	0.92000	1351804	23.38	0.01439
50-54	0.091354	53808	4916	256750	0.89547	1072728	19.94	0.01915
55-59	0.119027	48892	5819	229912	0.85772	815977	16.69	0.02531
60-64	0.168684	43073	7266	197200	0.80275	586065	13.61	0.03684
65-69	0.231607	35807	8293	158302	0.72679	388865	10.86	0.05239
70-74	0.327350	27514	9007	115053	0.62159	230563	8.38	0.07828
75-79	0.454310	18507	8408	71516	0.61516	115510	6.24	0.11757
80+	1.000000	10099	10099	43994	0.00000	43994	4.36	0.22956
		LEVEL=	11.770					

## TOTAL POPULATION

## MALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.184915	100000	18492	87611	0.90110	4025167	40.25	0.21106
1	0.053285	81509	4343	78946	0.96467	3937556	48.31	0.05501
2	0.024652	77165	1902	76157	0.97975	3858610	50.00	0.02498
3	0.016552	75263	1246	74615	0.98553	3782453	50.26	0.01670
4	0.012509	74017	926	73536	0.97983	3707838	50.09	0.01259
5-9	0.028433	73091	2078	360262	0.97542	3634302	49.72	0.00577
10-14	0.020612	71013	1464	351407	0.97529	3274041	46.10	0.00417
15-19	0.028890	69549	2009	342724	0.96518	2922634	42.02	0.00586
20-24	0.040927	67540	2764	330790	0.95696	2579910	38.20	0.00836
25-29	0.045241	64776	2931	316554	0.95146	2249119	34.72	0.00926
30-34	0.052002	61845	3216	301187	0.94347	1932566	31.25	0.01068
35-39	0.061301	58629	3594	284162	0.93208	1631379	27.83	0.01265
40-44	0.074967	55035	4126	264862	0.91778	1347217	24.48	0.01558
45-49	0.090062	50909	4585	243085	0.89724	1082355	21.26	0.01886
50-54	0.116705	46324	5406	218107	0.86839	839270	18.12	0.02479
55-59	0.148493	40918	6076	189401	0.82621	621164	15.18	0.03208
60-64	0.203501	34842	7090	156485	0.76565	431763	12.39	0.04531
65-69	0.273085	27752	7579	119812	0.68549	275278	9.92	0.06325
70-74	0.371491	20173	7494	82130	0.57745	155466	7.71	0.09125
75-79	0.503787	12679	6388	47426	0.54632	73336	5.78	0.13468
80+	1.000000	6291	6291	25910	0.00000	25910	4.12	0.24282
		LEVEL=	10.229					

FEMALES 1880								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.160779	100000	16078	89549	0.90752	4259838	42.60	0.17954
1	0.053611	83922	4499	81268	0.96415	4170289	49.69	0.05536
2	0.025386	79423	2016	78354	0.97926	4089021	51.48	0.02573
3	0.016834	77407	1303	76729	0.98517	4010667	51.81	0.01698
4	0.012958	76104	986	75591	0.97870	3933937	51.69	0.01305
5-9	0.030260	75118	2273	369905	0.97301	3858347	51.36	0.00614
10-14	0.023622	72844	1721	359920	0.97252	3488442	47.89	0.00478
15-19	0.031436	71124	2236	350029	0.96451	3128521	43.99	0.00639
20-24	0.039685	68888	2734	337605	0.95787	2778492	40.33	0.00810
25-29	0.044681	66154	2956	323381	0.95246	2440888	36.90	0.00914
30-34	0.050540	63198	3194	308006	0.94680	2117507	33.51	0.01037
35-39	0.056003	60004	3360	291620	0.94139	1809501	30.16	0.01152
40-44	0.061373	56644	3476	274528	0.93507	1517881	26.80	0.01266
45-49	0.068713	53167	3653	256704	0.92098	1243353	23.39	0.01423
50-54	0.090091	49514	4461	236418	0.89707	986649	19.93	0.01887
55-59	0.117041	45053	5273	212084	0.85819	750231	16.65	0.02486
60-64	0.169865	39780	6757	182008	0.80192	538147	13.53	0.03713
65-69	0.232079	33023	7664	145955	0.72431	356139	10.78	0.05251
70-74	0.332491	25359	8432	105716	0.61655	210184	8.29	0.07976
75-79	0.459791	16927	7783	65179	0.60278	104468	6.17	0.11941
80+	1.000000	9144	9144	39289	0.00000	39289	4.30	0.23275
		LEVEL=	10.041					

BOTH SEXES 1880								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.173520	100000	17352	88548	0.90389	4135704	41.36	0.19596
1	0.053540	82648	4425	80037	0.96435	4047156	48.97	0.05529
2	0.025059	78223	1960	77184	0.97947	3967119	50.72	0.02540
3	0.016722	76263	1275	75600	0.98532	3889935	51.01	0.01687
4	0.012754	74988	956	74490	0.97924	3814335	50.87	0.01284
5-9	0.029372	74031	2174	364720	0.97420	3739845	50.52	0.00596
10-14	0.022119	71857	1589	355310	0.97390	3375125	46.97	0.00447
15-19	0.030174	70267	2120	346036	0.96481	3019815	42.98	0.00613
20-24	0.040369	68147	2751	333858	0.95735	2673779	39.24	0.00824
25-29	0.045031	65396	2945	319618	0.95188	2339921	35.78	0.00921
30-34	0.051362	62451	3208	304237	0.94502	2020303	32.35	0.01054
35-39	0.058784	59244	3483	287512	0.93658	1716066	28.97	0.01211
40-44	0.068355	55761	3812	269276	0.92626	1428554	25.62	0.01415
45-49	0.079527	51949	4131	249419	0.90904	1159278	22.32	0.01656
50-54	0.103372	47818	4943	226733	0.88289	909859	19.03	0.02180
55-59	0.132426	42875	5678	200181	0.84271	683126	15.93	0.02836
60-64	0.185950	37197	6917	168694	0.78477	482946	12.98	0.04100
65-69	0.251196	30280	7606	132386	0.70648	314251	10.38	0.05746
70-74	0.350046	22674	7937	93528	0.59921	181865	8.02	0.08486
75-79	0.478870	14737	7057	56043	0.57624	88337	5.99	0.12592
80+	1.000000	7680	7680	32294	0.00000	32294	4.20	0.23781
		LEVEL=	10.118					

## TOTAL POPULATION

MALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.155682	100000	15568	89569	0.91861	4447131	44.47	0.17381
1	0.043207	84432	3648	82279	0.97153	4357562	51.61	0.04434
2	0.019779	80784	1598	79937	0.98380	4275282	52.92	0.01999
3	0.013214	79186	1046	78642	0.98847	4195345	52.98	0.01331
4	0.009953	78140	778	77735	0.98348	4116704	52.68	0.01000
5-9	0.023554	77362	1822	382254	0.97962	4038968	52.21	0.00477
10-14	0.017139	75540	1295	374462	0.97928	3656715	48.41	0.00346
15-19	0.024373	74245	1810	366701	0.97062	3282253	44.21	0.00493
20-24	0.034518	72435	2500	355926	0.96379	2915552	40.25	0.00702
25-29	0.037963	69935	2655	343038	0.95929	2559626	36.60	0.00774
30-34	0.043562	67280	2931	329074	0.95252	2216588	32.95	0.00891
35-39	0.051579	64349	3319	313449	0.94256	1887514	29.33	0.01059
40-44	0.063623	61030	3883	295444	0.92949	1574065	25.79	0.01314
45-49	0.077856	57147	4449	274613	0.91035	1278621	22.37	0.01620
50-54	0.102450	52698	5399	249993	0.88298	1004008	19.05	0.02160
55-59	0.133257	47299	6303	220738	0.84272	754015	15.94	0.02855
60-64	0.185006	40996	7585	186020	0.78480	533277	13.01	0.04077
65-69	0.252239	33412	8428	145989	0.70668	347257	10.39	0.05773
70-74	0.348267	24984	8701	103167	0.60044	201268	8.06	0.08434
75-79	0.478262	16283	7787	61946	0.58367	98102	6.02	0.12571
80+	1.000000	8495	8495	36156	0.00000	36156	4.26	0.23496
		LEVEL=	11.982					

FEMALES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.131721	100000	13172	91438	0.92592	4749296	47.49	0.14405
1	0.042237	86828	3667	84664	0.97195	4657858	53.64	0.04332
2	0.019763	83161	1644	82289	0.98390	4573194	54.99	0.01997
3	0.013030	81517	1062	80965	0.98854	4490905	55.09	0.01312
4	0.009991	80455	804	80037	0.98315	4409940	54.81	0.01004
5-9	0.024170	79651	1925	393442	0.97846	4329903	54.36	0.00489
10-14	0.018853	77726	1465	384966	0.97791	3936461	50.65	0.00381
15-19	0.025396	76261	1937	376461	0.97121	3551495	46.57	0.00514
20-24	0.032276	74324	2399	365622	0.96567	3175034	42.72	0.00656
25-29	0.036459	71925	2622	353069	0.96116	2809412	39.06	0.00743
30-34	0.041307	69303	2863	339356	0.95635	2456343	35.44	0.00844
35-39	0.046087	66440	3062	324545	0.95144	2116986	31.86	0.00943
40-44	0.051157	63378	3242	308784	0.94527	1792442	28.28	0.01050
45-49	0.058486	60136	3517	291886	0.93230	1483658	24.67	0.01205
50-54	0.077495	56619	4388	272124	0.91067	1191772	21.05	0.01612
55-59	0.102165	52231	5336	247814	0.87546	919648	17.61	0.02153
60-64	0.149470	46895	7009	216950	0.82329	671834	14.33	0.03231
65-69	0.208743	39885	8326	178613	0.74890	454883	11.40	0.04661
70-74	0.304628	31560	9614	133763	0.64394	276271	8.75	0.07187
75-79	0.430029	21946	9437	86135	0.65447	142508	6.49	0.10956
80+	1.000000	12508	12508	56373	0.00000	56373	4.51	0.22189
		LEVEL=	11.999					

BOTH SEXES 1890								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.144086	100000	14409	90490	0.92200	4592615	45.93	0.15923
1	0.042764	85591	3660	83432	0.97171	4502125	52.60	0.04387
2	0.019789	81931	1621	81072	0.98383	4418693	53.93	0.02000
3	0.013135	80310	1055	79761	0.98849	4337621	54.01	0.01323
4	0.009981	79255	791	78844	0.98330	4257860	53.72	0.01003
5-9	0.023879	78464	1874	387636	0.97902	4179016	53.26	0.00483
10-14	0.018003	76590	1379	379504	0.97858	3791381	49.50	0.00363
15-19	0.024899	75211	1873	371375	0.97089	3411876	45.36	0.00504
20-24	0.033435	73339	2452	360563	0.96469	3040501	41.46	0.00680
25-29	0.037247	70887	2640	347832	0.96019	2679938	37.81	0.00759
30-34	0.042476	68246	2899	333985	0.95439	2332105	34.17	0.00868
35-39	0.048889	65348	3195	318751	0.94693	1998120	30.58	0.01002
40-44	0.057460	62153	3571	301835	0.93733	1679370	27.02	0.01183
45-49	0.068198	58581	3995	282919	0.92135	1377534	23.51	0.01412
50-54	0.089877	54586	4906	260666	0.89702	1094615	20.05	0.01882
55-59	0.117380	49680	5831	233823	0.85956	833949	16.79	0.02494
60-64	0.166562	43849	7304	200985	0.80496	600126	13.69	0.03634
65-69	0.229200	36545	8376	161786	0.72929	399141	10.92	0.05177
70-74	0.324563	28169	9143	117989	0.62435	237355	8.43	0.07749
75-79	0.451294	19026	8587	73666	0.62038	119367	6.27	0.11656
80+	1.000000	10440	10440	45701	0.00000	45701	4.38	0.22844
		LEVEL=	11.982					

TOTAL POPULATION									
MALES 1900	AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
	0	0.145309	100000	14531	90264	0.92493	4612297	46.12	0.16098
	1	0.039290	85469	3358	83488	0.97417	4522033	52.91	0.04022
	2	0.017912	82111	1471	81332	0.98534	4438545	54.06	0.01808
	3	0.011944	80640	963	80139	0.98959	4357213	54.03	0.01202
	4	0.008985	79677	716	79305	0.98482	4277074	53.68	0.00903
	5-9	0.021783	78961	1720	390506	0.98121	4197769	53.16	0.00440
	10-14	0.015727	77241	1215	383169	0.98078	3807263	49.29	0.00317
	15-19	0.022769	76026	1731	375804	0.97255	3424094	45.04	0.00461
	20-24	0.032244	74295	2396	365488	0.96621	3048290	41.03	0.00655
	25-29	0.035381	71900	2544	353139	0.96207	2682802	37.31	0.00720
	30-34	0.040568	69356	2814	339745	0.95573	2329663	33.59	0.00828
	35-39	0.048129	66542	3203	324705	0.94628	1989918	29.90	0.00986
	40-44	0.059598	63340	3775	307261	0.93365	1665213	26.29	0.01229
	45-49	0.073524	59565	4379	286875	0.91504	1357952	22.80	0.01527
	50-54	0.097309	55185	5370	262501	0.88827	1071077	19.41	0.02046
	55-59	0.127700	49815	6361	233173	0.84872	808576	16.23	0.02728
	60-64	0.178320	43454	7749	197898	0.79175	575403	13.24	0.03916
	65-69	0.244679	35705	8736	156685	0.71429	377505	10.57	0.05576
	70-74	0.340027	26969	9170	111919	0.60866	220820	8.19	0.08194
	75-79	0.469088	17799	8349	68121	0.59865	108901	6.12	0.12256
	80+	1.000000	9450	9450	40780	0.00000	40780	4.32	0.23172
		LEVEL=	12.620						

FEMALES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.120670	100000	12067	92156	0.93283	4951379	49.51	0.13094
1	0.037911	87933	3334	85966	0.97489	4859223	55.26	0.03878
2	0.017659	84599	1494	83808	0.98563	4773257	56.42	0.01783
3	0.011618	83105	966	82603	0.98979	4689449	56.43	0.01169
4	0.008895	82140	731	81760	0.98483	4606846	56.09	0.00894
5-9	0.021853	81409	1779	402599	0.98053	4525086	55.58	0.00442
10-14	0.017040	79630	1357	394759	0.97996	4122487	51.77	0.00344
15-19	0.023099	78273	1808	386847	0.97376	3727728	47.62	0.00467
20-24	0.029459	76465	2253	376695	0.96863	3340881	43.69	0.00598
25-29	0.033333	74213	2474	364879	0.96447	2964186	39.94	0.00678
30-34	0.037795	71739	2711	351916	0.95999	2599307	36.23	0.00770
35-39	0.042316	69028	2921	337836	0.95526	2247390	32.56	0.00865
40-44	0.047272	66107	3125	322721	0.94915	1909555	28.89	0.00968
45-49	0.054597	62982	3439	306312	0.93660	1586834	25.20	0.01123
50-54	0.072704	59543	4329	286893	0.91584	1280522	21.51	0.01509
55-59	0.096508	55214	5329	262749	0.88204	993630	18.00	0.02028
60-64	0.141713	49885	7069	231754	0.83143	730881	14.65	0.03050
65-69	0.199868	42816	8558	192686	0.75828	499128	11.66	0.04441
70-74	0.294032	34258	10073	146110	0.65437	306442	8.94	0.06894
75-79	0.418710	24185	10127	95610	0.67693	160332	6.63	0.10592
80+	1.000000	14059	14059	64722	0.00000	64722	4.60	0.21722
		LEVEL=	12.807					

BOTH SEXES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.133086	100000	13309	91216	0.92885	4781116	47.81	0.14590
1	0.038427	86691	3331	84726	0.97465	4689900	54.10	0.03932
2	0.017703	83360	1476	82578	0.98555	4605174	55.24	0.01787
3	0.011725	81884	960	81385	0.98974	4522596	55.23	0.01180
4	0.008897	80924	720	80550	0.98488	4441211	54.88	0.00894
5-9	0.021757	80204	1745	396659	0.98092	4360661	54.37	0.00440
10-14	0.016345	78459	1282	389090	0.98039	3964002	50.52	0.00330
15-19	0.022928	77177	1770	381461	0.97316	3574911	46.32	0.00464
20-24	0.030845	75407	2326	371222	0.96744	3193451	42.35	0.00627
25-29	0.034338	73081	2509	359133	0.96330	2822229	38.62	0.00699
30-34	0.039156	70572	2763	345952	0.95789	2463095	34.90	0.00799
35-39	0.045193	67809	3064	331382	0.95080	2117144	31.22	0.00925
40-44	0.053392	64744	3457	315079	0.94147	1785762	27.58	0.01097
45-49	0.063968	61287	3920	296636	0.92599	1470683	24.00	0.01322
50-54	0.084741	57367	4861	274681	0.90240	1174047	20.47	0.01770
55-59	0.111646	52506	5862	247873	0.86597	899366	17.13	0.02365
60-64	0.159228	46644	7427	214650	0.81261	651493	13.97	0.03460
65-69	0.220888	39217	8662	174427	0.73788	436843	11.14	0.04966
70-74	0.315041	30554	9626	128706	0.63378	262416	8.59	0.07479
75-79	0.440943	20928	9228	81571	0.63918	133710	6.39	0.11313
80+	1.000000	11700	11700	52139	0.00000	52139	4.46	0.22440
		LEVEL=	12.720					

## WHITE POPULATION

MALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.195475	100000	19548	86903	0.89468	3883260	38.83	0.22493
1	0.056925	80453	4580	77750	0.96218	3796357	47.19	0.05890
2	0.026437	75873	2006	74810	0.97827	3718606	49.01	0.02681
3	0.017783	73867	1314	73184	0.98445	3643796	49.33	0.01795
4	0.013456	72553	976	72046	0.97850	3570613	49.21	0.01355
5-9	0.030196	71577	2161	352482	0.97391	3498567	48.88	0.00613
10-14	0.021866	69416	1518	343284	0.97385	3146085	45.32	0.00442
15-19	0.030522	67898	2072	334308	0.96322	2802801	41.28	0.00620
20-24	0.043241	65825	2846	322011	0.95450	2468493	37.50	0.00884
25-29	0.047869	62979	3015	307359	0.94863	2146481	34.08	0.00981
30-34	0.055051	59964	3301	291569	0.94021	1839123	30.67	0.01132
35-39	0.064814	56663	3673	274135	0.92830	1547554	27.31	0.01340
40-44	0.079064	52991	4190	254479	0.91355	1273419	24.03	0.01646
45-49	0.094471	48801	4610	232480	0.89252	1018939	20.88	0.01983
50-54	0.121854	44191	5385	207492	0.86312	786460	17.80	0.02595
55-59	0.153996	38806	5976	179090	0.82026	578968	14.92	0.03337
60-64	0.210181	32830	6900	146899	0.75874	399878	12.18	0.04697
65-69	0.280615	25930	7276	111458	0.67785	252979	9.76	0.06528
70-74	0.379880	18653	7086	75552	0.56916	141521	7.59	0.09379
75-79	0.513007	11567	5934	43002	0.53410	65969	5.70	0.13800
80+	1.000000	5633	5633	22967	0.00000	22967	4.08	0.24527
	LEVEL=	9.639						

FEMALES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.155244	100000	15524	89909	0.91105	4348679	43.49	0.17267
1	0.051444	84476	4346	81912	0.96565	4258770	50.41	0.05305
2	0.024305	80130	1948	79098	0.98015	4176859	52.13	0.02462
3	0.016099	78182	1259	77528	0.98582	4097761	52.41	0.01623
4	0.012382	76924	952	76428	0.97956	4020233	52.26	0.01246
5-9	0.029100	75971	2211	374329	0.97405	3943805	51.91	0.00591
10-14	0.022713	73760	1675	364614	0.97354	3569476	48.39	0.00459
15-19	0.030286	72085	2183	354967	0.96578	3204862	44.46	0.00615
20-24	0.038274	69902	2675	342821	0.95935	2849895	40.77	0.00780
25-29	0.043115	67226	2898	328886	0.95411	2507074	37.29	0.00881
30-34	0.048781	64328	3138	313795	0.94862	2178188	33.86	0.01000
35-39	0.054114	61190	3311	297672	0.94330	1864393	30.47	0.01112
40-44	0.059427	57879	3440	280795	0.93702	1566721	27.07	0.01225
45-49	0.066764	54439	3635	263110	0.92313	1285926	23.62	0.01381
50-54	0.087691	50805	4455	242885	0.89966	1022816	20.13	0.01834
55-59	0.114207	46350	5293	218514	0.86147	779930	16.83	0.02422
60-64	0.165980	41056	6814	188244	0.80598	561416	13.67	0.03620
65-69	0.227634	34242	7795	151722	0.72898	373172	10.90	0.05137
70-74	0.327183	26447	8653	110603	0.62176	221450	8.37	0.07824
75-79	0.454121	17794	8081	68769	0.61190	110848	6.23	0.11750
80+	1.000000	9713	9713	42079	0.00000	42079	4.33	0.23084
	LEVEL=	10.397						

## BOTH SEXES 1850

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.174937	100000	17494	88454	0.90301	4114967	41.15	0.19777
1	0.054059	82506	4460	79875	0.96400	4026513	48.80	0.05584
2	0.025316	78046	1976	76999	0.97926	3946638	50.57	0.02566
3	0.016898	76070	1285	75402	0.98517	3869640	50.87	0.01705
4	0.012890	74785	964	74284	0.97904	3794238	50.74	0.01298
5-9	0.029637	73821	2188	363635	0.97397	3719954	50.39	0.00602
10-14	0.022317	71633	1599	354169	0.97367	3356319	46.85	0.00451
15-19	0.030427	70034	2131	344845	0.96451	3002151	42.87	0.00618
20-24	0.040703	67903	2764	332608	0.95699	2657306	39.13	0.00831
25-29	0.045406	65140	2958	318304	0.95148	2324698	35.69	0.00929
30-34	0.051790	62182	3220	302858	0.94457	2006395	32.27	0.01063
35-39	0.059260	58961	3494	286072	0.93608	1703536	28.89	0.01221
40-44	0.068879	55467	3821	267786	0.92572	1417464	25.55	0.01427
45-49	0.080072	51647	4135	247896	0.90845	1149679	22.26	0.01668
50-54	0.104021	47511	4942	225202	0.88221	901783	18.98	0.02195
55-59	0.133150	42569	5668	198676	0.84190	676581	15.89	0.02853
60-64	0.186883	36901	6896	167265	0.78380	477906	12.95	0.04123
65-69	0.252255	30005	7569	131102	0.70538	310640	10.35	0.05773
70-74	0.351273	22436	7881	92477	0.59800	179538	8.00	0.08522
75-79	0.480198	14555	6989	55301	0.57430	87061	5.98	0.12638
80+	1.000000	7566	7566	31759	0.00000	31759	4.20	0.23822
	LEVEL=	10.033						

## WHITE POPULATION

## MALES 1860

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.165242	100000	16524	88929	0.91293	4304218	43.04	0.18581
1	0.046503	83476	3882	81185	0.96930	4215289	50.50	0.04781
2	0.021361	79594	1700	78693	0.98249	4134104	51.94	0.02161
3	0.014294	77894	1113	77315	0.98752	4055411	52.06	0.01440
4	0.010778	76780	828	76350	0.98229	3978096	51.81	0.01084
5-9	0.025150	75953	1910	374988	0.97824	3901746	51.37	0.00509
10-14	0.018275	74043	1353	366830	0.97797	3526758	47.63	0.00369
15-19	0.025850	72689	1879	358750	0.96884	3159928	43.47	0.00524
20-24	0.036614	70810	2593	347570	0.96156	2801178	39.56	0.00746
25-29	0.040343	68218	2752	334208	0.95673	2453608	35.97	0.00823
30-34	0.046322	65466	3032	319747	0.94956	2119399	32.37	0.00948
35-39	0.054758	62433	3419	303619	0.93913	1799652	28.83	0.01126
40-44	0.067333	59014	3974	285138	0.92566	1496034	25.35	0.01394
45-49	0.081847	55041	4505	263942	0.90606	1210895	22.00	0.01707
50-54	0.107111	50536	5413	239147	0.87821	946954	18.74	0.02263
55-59	0.138239	45123	6238	210020	0.83731	707807	15.69	0.02970
60-64	0.191054	38885	7429	175853	0.77854	497786	12.80	0.04225
65-69	0.259056	31456	8149	136908	0.69974	321933	10.23	0.05952
70-74	0.355862	23307	8294	95800	0.59291	185025	7.94	0.08658
75-79	0.486609	15013	7305	56801	0.57082	89225	5.94	0.12861
80+	1.000000	7708	7708	32424	0.00000	32424	4.21	0.23771
	LEVEL=	11.384						

FEMALES 1860								
AGE(x)	q(x)	1(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.139134	100000	13913	90956	0.92126	4618867	46.19	0.15297
1	0.045138	86087	3886	83794	0.96997	4527910	52.60	0.04637
2	0.021184	82201	1741	81278	0.98273	4444116	54.06	0.02142
3	0.013988	80459	1125	79874	0.98769	4362839	54.22	0.01409
4	0.010735	79334	852	78891	0.98202	4282964	53.99	0.01080
5-9	0.025723	78482	2019	387365	0.97707	4204073	53.57	0.00521
10-14	0.020070	76464	1535	378481	0.97653	3816708	49.92	0.00405
15-19	0.026937	74929	2018	369599	0.96950	3438227	45.89	0.00546
20-24	0.034166	72911	2491	358325	0.96368	3068628	42.09	0.00695
25-29	0.038557	70420	2715	345310	0.95894	2710303	38.49	0.00786
30-34	0.043662	67704	2956	331131	0.95392	2364993	34.93	0.00893
35-39	0.048616	64748	3148	315872	0.94887	2033862	31.41	0.00997
40-44	0.053763	61600	3312	299723	0.94267	1717990	27.89	0.01105
45-49	0.061095	58289	3561	282540	0.92941	1418268	24.33	0.01260
50-54	0.080708	54727	4417	262595	0.90720	1135727	20.75	0.01682
55-59	0.105960	50311	5331	238225	0.87105	873132	17.35	0.02238
60-64	0.154672	44980	6957	207505	0.81783	634907	14.12	0.03353
65-69	0.214696	38023	8163	169704	0.74262	427402	11.24	0.04810
70-74	0.311736	29859	9308	126026	0.63694	257697	8.63	0.07386
75-79	0.437621	20551	8994	80271	0.64033	131671	6.41	0.11204
80+	1.000000	11557	11557	51400	0.00000	51400	4.45	0.22485
		LEVEL=	11.476					

BOTH SEXES 1860								
AGE(x)	q(x)	1(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.152433	100000	15243	89939	0.91690	4457771	44.58	0.16948
1	0.045820	84757	3884	82465	0.96964	4367832	51.53	0.04709
2	0.021272	80873	1720	79961	0.98261	4285367	52.99	0.02151
3	0.014140	79153	1119	78571	0.98761	4205405	53.13	0.01424
4	0.010756	78034	839	77597	0.98216	4126834	52.89	0.01082
5-9	0.025437	77194	1964	381062	0.97766	4049237	52.46	0.00515
10-14	0.019170	75231	1442	372548	0.97725	3668175	48.76	0.00387
15-19	0.026395	73789	1948	364073	0.96916	3295627	44.66	0.00535
20-24	0.035401	71841	2543	352846	0.96261	2931554	40.81	0.00721
25-29	0.039454	69298	2734	339653	0.95783	2578707	37.21	0.00805
30-34	0.044996	66564	2995	325330	0.95173	2239055	33.64	0.00921
35-39	0.051696	63568	3286	309627	0.94399	1913725	30.10	0.01061
40-44	0.060551	60282	3650	292286	0.93419	1604098	26.61	0.01249
45-49	0.071412	56632	4044	273050	0.91785	1311812	23.16	0.01481
50-54	0.093706	52588	4928	250620	0.89301	1038762	19.75	0.01966
55-59	0.121649	47660	5798	223806	0.85478	788142	16.54	0.02591
60-64	0.172062	41862	7203	191304	0.79923	564337	13.48	0.03765
65-69	0.235439	34659	8160	152896	0.72281	373033	10.76	0.05337
70-74	0.331789	26499	8792	110516	0.61721	220136	8.31	0.07956
75-79	0.459114	17707	8130	68211	0.60707	109621	6.19	0.11918
80+	1.000000	9577	9577	41409	0.00000	41409	4.32	0.23129
		LEVEL=	11.431					

## WHITE POPULATION

MALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.155840	100000	15584	89559	0.91852	4444721	44.45	0.17401
1	0.043262	84416	3652	82261	0.97149	4355163	51.59	0.04440
2	0.019805	80764	1600	79916	0.98378	4272901	52.91	0.02002
3	0.013232	79164	1048	78620	0.98846	4192985	52.97	0.01332
4	0.009966	78117	779	77712	0.98346	4114365	52.67	0.01002
5-9	0.023581	77338	1824	382133	0.97959	4036653	52.19	0.00477
10-14	0.017158	75515	1296	374334	0.97925	3654520	48.39	0.00346
15-19	0.024397	74219	1811	366568	0.97059	3280186	44.20	0.00494
20-24	0.034553	72408	2502	355787	0.96375	2913618	40.24	0.00703
25-29	0.038003	69906	2657	342890	0.95925	2557831	36.59	0.00775
30-34	0.043608	67250	2933	328917	0.95247	2214940	32.94	0.00892
35-39	0.051631	64317	3321	313284	0.94250	1886023	29.32	0.01060
40-44	0.063685	60996	3885	295270	0.92943	1572739	25.78	0.01316
45-49	0.077922	57112	4450	274433	0.91027	1277469	22.37	0.01622
50-54	0.102527	52662	5399	249810	0.88290	1003036	19.05	0.02161
55-59	0.133339	47262	6302	220557	0.84263	753226	15.94	0.02857
60-64	0.185107	40960	7582	185847	0.78470	532669	13.00	0.04080
65-69	0.252352	33378	8423	145834	0.70656	346822	10.39	0.05776
70-74	0.348393	24955	8694	103041	0.60032	200988	8.05	0.08438
75-79	0.478400	16261	7779	61857	0.58346	97948	6.02	0.12576
80+	1.000000	8482	8482	36091	0.00000	36091	4.26	0.23501

LEVEL= 11.970

FEMALES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.126149	100000	12615	91800	0.92941	4850036	48.50	0.13742
1	0.040055	87385	3500	85320	0.97344	4758236	54.45	0.04102
2	0.018699	83885	1569	83054	0.98478	4672916	55.71	0.01889
3	0.012315	82316	1014	81789	0.98917	4589862	55.76	0.01239
4	0.009436	81303	767	80904	0.98400	4508073	55.45	0.00948
5-9	0.023002	80535	1852	398046	0.97950	4427169	54.97	0.00465
10-14	0.017939	78683	1411	389886	0.97894	4029123	51.21	0.00362
15-19	0.024238	77271	1873	381675	0.97249	3639237	47.10	0.00491
20-24	0.030855	75399	2326	371177	0.96716	3257562	43.20	0.00627
25-29	0.034883	73072	2549	358988	0.96283	2886385	39.50	0.00710
30-34	0.039536	70523	2788	345645	0.95819	2527397	35.84	0.00807
35-39	0.044185	67735	2993	331193	0.95337	2181752	32.21	0.00904
40-44	0.049198	64742	3185	315747	0.94723	1850559	28.58	0.01009
45-49	0.056525	61557	3480	299086	0.93447	1534812	24.93	0.01163
50-54	0.075079	58077	4360	279486	0.91328	1235726	21.28	0.01560
55-59	0.099312	53717	5335	255248	0.87877	956240	17.80	0.02090
60-64	0.145558	48382	7042	224305	0.82739	700992	14.49	0.03140
65-69	0.204268	41340	8444	185588	0.75363	476687	11.53	0.04550
70-74	0.299285	32895	9845	139864	0.64920	291098	8.85	0.07039
75-79	0.424321	23050	9781	90800	0.66558	151234	6.56	0.10772
80+	1.000000	13270	13270	60434	0.00000	60434	4.55	0.21957

LEVEL= 12.402

## BOTH SEXES 1870

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.140867	100000	14087	90703	0.92396	4645782	46.46	0.15531
1	0.041586	85913	3573	83805	0.97251	4555079	53.02	0.04263
2	0.019220	82341	1583	81502	0.98430	4471274	54.30	0.01942
3	0.012750	80758	1030	80222	0.98883	4389772	54.36	0.01284
4	0.009685	79728	772	79327	0.98374	4309550	54.05	0.00973
5-9	0.023279	78956	1838	390185	0.97955	4230223	53.58	0.00471
10-14	0.017553	77118	1354	382206	0.97909	3840038	49.79	0.00354
15-19	0.024322	75764	1843	374215	0.97155	3457831	45.64	0.00492
20-24	0.032677	73922	2416	363570	0.96549	3083616	41.71	0.00664
25-29	0.036395	71506	2602	351025	0.96110	2720047	38.04	0.00741
30-34	0.041504	68904	2860	337369	0.95541	2369022	34.38	0.00848
35-39	0.047807	66044	3157	322326	0.94807	2031653	30.76	0.00980
40-44	0.056269	62887	3539	305586	0.93854	1709327	27.18	0.01158
45-49	0.066958	59348	3974	286805	0.92269	1403741	23.65	0.01386
50-54	0.088400	55374	4895	264633	0.89857	1116935	20.17	0.01850
55-59	0.115733	50479	5842	237790	0.86141	852302	16.88	0.02457
60-64	0.164441	44637	7340	204835	0.80718	614512	13.77	0.03583
65-69	0.226794	37297	8459	165337	0.73179	409678	10.98	0.05116
70-74	0.321777	28838	9279	120992	0.62710	244340	8.47	0.07669
75-79	0.448278	19559	8768	75874	0.62570	123348	6.31	0.11556
80+	1.000000	10791	10791	47474	0.00000	47474	4.40	0.22730
	LEVEL=		12.190					

## WHITE POPULATION

## MALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.180077	100000	18008	87935	0.90403	4091985	40.92	0.20478
1	0.051617	81992	4232	79495	0.96581	4004050	48.83	0.05324
2	0.023838	77760	1854	76778	0.98043	3924555	50.47	0.02414
3	0.015992	75906	1214	75275	0.98603	3847777	50.69	0.01613
4	0.012079	74693	902	74223	0.98043	3772502	50.51	0.01216
5-9	0.027626	73790	2039	363855	0.97612	3698278	50.12	0.00560
10-14	0.020037	71752	1438	355165	0.97595	3334423	46.47	0.00405
15-19	0.028143	70314	1979	346624	0.96608	2979258	42.37	0.00571
20-24	0.039866	68335	2724	334866	0.95809	2632635	38.53	0.00814
25-29	0.044036	65611	2889	320832	0.95275	2297769	35.02	0.00901
30-34	0.050606	62722	3174	305674	0.94497	1976937	31.52	0.01038
35-39	0.059692	59548	3555	288852	0.93382	1671263	28.07	0.01231
40-44	0.073089	55993	4092	269735	0.91972	1382411	24.69	0.01517
45-49	0.088042	51901	4569	248080	0.89941	1112677	21.44	0.01842
50-54	0.114346	47331	5412	223126	0.87080	864597	18.27	0.02426
55-59	0.145971	41919	6119	194298	0.82894	641471	15.30	0.03149
60-64	0.200440	35800	7176	161061	0.76882	447173	12.49	0.04455
65-69	0.269635	28624	7718	123826	0.68900	286112	10.00	0.06233
70-74	0.367647	20906	7686	85316	0.58125	162285	7.76	0.09009
75-79	0.499563	13220	6604	49590	0.55212	76969	5.82	0.13318
80+	1.000000	6616	6616	27380	0.00000	27380	4.14	0.24163
	LEVEL=		10.503					

## FEMALES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.153592	100000	15359	90017	0.91210	4375572	43.76	0.17063
1	0.050798	84641	4300	82104	0.96609	4285556	50.63	0.05237
2	0.023983	80341	1927	79320	0.98042	4203452	52.32	0.02429
3	0.015881	78414	1245	77767	0.98601	4124132	52.59	0.01601
4	0.012212	77169	942	76679	0.97981	4046365	52.44	0.01229
5-9	0.028754	76227	2192	375654	0.97436	3969686	52.08	0.00583
10-14	0.022442	74035	1661	366021	0.97385	3594032	48.55	0.00454
15-19	0.029942	72373	2167	356449	0.96616	3228011	44.60	0.00608
20-24	0.037853	70206	2658	344388	0.95980	2871562	40.90	0.00772
25-29	0.042648	67549	2881	330542	0.95461	2527174	37.41	0.00872
30-34	0.048256	64668	3121	315539	0.94916	2196631	33.97	0.00989
35-39	0.053550	61547	3296	299497	0.94387	1881093	30.56	0.01100
40-44	0.058846	58252	3428	282688	0.93760	1581595	27.15	0.01213
45-49	0.066183	54824	3628	265047	0.92378	1298907	23.69	0.01369
50-54	0.086975	51195	4453	244845	0.90043	1033860	20.19	0.01819
55-59	0.113361	46743	5299	220466	0.86246	789015	16.88	0.02403
60-64	0.164820	41444	6831	190142	0.80720	568549	13.72	0.03592
65-69	0.226307	34613	7833	153482	0.73038	378407	10.93	0.05104
70-74	0.325599	26780	8719	112101	0.62332	224925	8.40	0.07778
75-79	0.452430	18060	8171	69874	0.61468	112824	6.25	0.11694
80+	1.000000	9889	9889	42950	0.00000	42950	4.34	0.23025
		LEVEL=	10.504					

## BOTH SEXES 1880

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.167271	100000	16727	88960	0.90776	4228470	42.28	0.18803
1	0.051252	83273	4268	80755	0.96592	4139510	49.71	0.05285
2	0.023930	79005	1891	78003	0.98041	4058755	51.37	0.02424
3	0.015951	77114	1230	76475	0.98601	3980752	51.62	0.01608
4	0.012156	75884	922	75405	0.98011	3904277	51.45	0.01223
5-9	0.028206	74962	2114	369524	0.97522	3828872	51.08	0.00572
10-14	0.021245	72848	1548	360369	0.97489	3459349	47.49	0.00429
15-19	0.029054	71300	2072	351321	0.96610	3098980	43.46	0.00590
20-24	0.038897	69228	2693	339410	0.95891	2747660	39.69	0.00793
25-29	0.043379	66536	2886	325462	0.95364	2408250	36.19	0.00887
30-34	0.049476	63649	3149	310374	0.94701	2082788	32.72	0.01015
35-39	0.056684	60500	3429	293928	0.93877	1772414	29.30	0.01167
40-44	0.066043	57071	3769	275931	0.92861	1478486	25.91	0.01366
45-49	0.077123	53302	4111	256231	0.91165	1202555	22.56	0.01604
50-54	0.100509	49191	4944	233594	0.88589	946324	19.24	0.02117
55-59	0.129234	44247	5718	206938	0.84628	712729	16.11	0.02763
60-64	0.181835	38529	7006	175128	0.78905	505791	13.13	0.04000
65-69	0.246528	31523	7771	138186	0.71131	330663	10.49	0.05624
70-74	0.344636	23751	8186	98293	0.60454	192477	8.10	0.08328
75-79	0.473016	15566	7363	59422	0.58499	94184	6.05	0.12391
80+	1.000000	8203	8203	34762	0.00000	34762	4.24	0.23598
		LEVEL=	10.497					

## WHITE POPULATION

MALES 1890

AGE(x)	q(x)	1(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.148217	100000	14822	90069	0.92302	4562400	45.62	0.16456
1	0.040634	85178	3461	83136	0.97327	4472330	52.51	0.04163
2	0.018551	81717	1516	80914	0.98481	4389194	53.71	0.01874
3	0.012378	80201	993	79685	0.98921	4308281	53.72	0.01246
4	0.009315	79208	738	78825	0.98440	4228596	53.39	0.00936
5-9	0.022308	78471	1751	387977	0.98071	4149771	52.88	0.00451
10-14	0.016210	76720	1244	380492	0.98031	3761794	49.03	0.00327
15-19	0.023219	75477	1752	373001	0.97201	3381302	44.80	0.00470
20-24	0.032882	73724	2424	362560	0.96553	3008301	40.80	0.00669
25-29	0.036105	71300	2574	350063	0.96129	2645741	37.11	0.00735
30-34	0.041407	68726	2846	336513	0.95483	2295678	33.40	0.00846
35-39	0.049096	65880	3234	321313	0.94523	1959164	29.74	0.01007
40-44	0.060727	62645	3804	303716	0.93249	1637851	26.14	0.01253
45-49	0.074739	58841	4398	283211	0.91369	1334135	22.67	0.01553
50-54	0.098809	54443	5379	258768	0.88671	1050923	19.30	0.02079
55-59	0.129366	49064	6347	229452	0.84694	792155	16.15	0.02766
60-64	0.180284	42717	7701	194331	0.78970	562704	13.17	0.03963
65-69	0.246916	35016	8646	153463	0.71209	368373	10.52	0.05634
70-74	0.342337	26370	9027	109280	0.60632	214910	8.15	0.08261
75-79	0.471744	17342	8181	66259	0.59420	105630	6.09	0.12347
80+	1.000000	9161	9161	39371	0.00000	39371	4.30	0.23269

LEVEL= 12.427

FEMALES 1890

AGE(x)	q(x)	1(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.123880	100000	12388	91948	0.93083	4891719	48.92	0.13473
1	0.039167	87612	3431	85587	0.97404	4799771	54.78	0.04009
2	0.018268	84181	1538	83365	0.98513	4714183	56.00	0.01845
3	0.012026	82643	994	82126	0.98943	4630818	56.03	0.01210
4	0.009212	81649	752	81258	0.98434	4548692	55.71	0.00926
5-9	0.022526	80897	1822	399928	0.97993	4467434	55.22	0.00456
10-14	0.017567	79074	1389	391899	0.97936	4067507	51.44	0.00354
15-19	0.023766	77685	1846	383811	0.97302	3675607	47.31	0.00481
20-24	0.030277	75839	2296	373455	0.96777	3291797	43.41	0.00615
25-29	0.034241	73543	2518	361419	0.96351	2918342	39.68	0.00697
30-34	0.038815	71025	2757	348231	0.95893	2556923	36.00	0.00792
35-39	0.043411	68268	2964	333930	0.95415	2208692	32.35	0.00887
40-44	0.048401	65304	3161	318619	0.94803	1874761	28.71	0.00992
45-49	0.055726	62143	3463	302060	0.93535	1556142	25.04	0.01146
50-54	0.074095	58680	4348	282533	0.91434	1254082	21.37	0.01539
55-59	0.098151	54333	5333	258331	0.88012	971550	17.88	0.02064
60-64	0.143966	49000	7054	227363	0.82906	713219	14.56	0.03103
65-69	0.202446	41945	8492	188498	0.75555	485856	11.58	0.04505
70-74	0.297109	33454	9939	142420	0.65134	297358	8.89	0.06979
75-79	0.421997	23514	9923	92764	0.67023	154937	6.59	0.10697
80+	1.000000	13591	13591	62173	0.00000	62173	4.57	0.21861

LEVEL= 12.568

## BOTH SEXES 1890

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.136205	100000	13621	91010	0.92678	4724159	47.24	0.14966
1	0.039879	86380	3445	84347	0.97367	4633148	53.64	0.04084
2	0.018398	82935	1526	82126	0.98498	4548801	54.85	0.01858
3	0.012195	81409	993	80893	0.98932	4466675	54.87	0.01227
4	0.009257	80416	744	80029	0.98438	4385782	54.54	0.00930
5-9	0.022409	79672	1785	393895	0.98034	4305753	54.04	0.00453
10-14	0.016858	77886	1313	386149	0.97986	3911858	50.23	0.00340
15-19	0.023487	76573	1798	378371	0.97252	3525708	46.04	0.00475
20-24	0.031578	74775	2361	367971	0.96666	3147338	42.09	0.00642
25-29	0.035162	72414	2546	355703	0.96241	2779366	38.38	0.00716
30-34	0.040097	69867	2801	342334	0.95689	2423664	34.69	0.00818
35-39	0.046240	67066	3101	327577	0.94971	2081330	31.03	0.00947
40-44	0.054543	63965	3489	311102	0.94030	1753753	27.42	0.01121
45-49	0.065163	60476	3941	292528	0.92464	1442651	23.85	0.01347
50-54	0.086261	56535	4877	270484	0.90081	1150123	20.34	0.01803
55-59	0.113346	51658	5855	243654	0.86408	879639	17.03	0.02403
60-64	0.161371	45803	7391	210537	0.81038	635985	13.89	0.03511
65-69	0.223296	38412	8577	170616	0.73542	425448	11.08	0.05027
70-74	0.317743	29835	9480	125474	0.63109	254831	8.54	0.07555
75-79	0.443904	20355	9036	79185	0.63360	129358	6.36	0.11411
80+	1.000000	11319	11319	50172	0.00000	50172	4.43	0.22561
	LEVEL=		12.501					

## WHITE POPULATION

## MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.135239	100000	13524	90939	0.93131	4778178	47.78	0.14871
1	0.034960	86476	3023	84692	0.97708	4687239	54.20	0.03570
2	0.015867	83453	1324	82751	0.98703	4602546	55.15	0.01600
3	0.010558	82129	867	81678	0.99080	4519795	55.03	0.01062
4	0.007931	81262	644	80927	0.98628	4438118	54.62	0.00796
5-9	0.019876	80617	1602	399080	0.98282	4357191	54.05	0.00402
10-14	0.014428	79015	1140	392224	0.98217	3958111	50.09	0.00291
15-19	0.021283	77875	1657	385230	0.97428	3565887	45.79	0.00430
20-24	0.030256	76217	2306	375322	0.96832	3180657	41.73	0.00614
25-29	0.033156	73911	2451	363430	0.96450	2805335	37.96	0.00674
30-34	0.037929	71461	2710	350528	0.95851	2441905	34.17	0.00773
35-39	0.045184	68750	3106	335985	0.94954	2091377	30.42	0.00925
40-44	0.055983	65644	3675	319032	0.93739	1755392	26.74	0.01152
45-49	0.069633	61969	4315	299057	0.91927	1436360	23.18	0.01443
50-54	0.092657	57654	5342	274914	0.89296	1137303	19.73	0.01943
55-59	0.122894	52312	6429	245487	0.85389	862389	16.49	0.02619
60-64	0.172589	45883	7919	209618	0.79764	616902	13.45	0.03778
65-69	0.238349	37964	9049	167199	0.72069	407284	10.73	0.05412
70-74	0.333078	28915	9631	120499	0.61552	240085	8.30	0.07993
75-79	0.461564	19284	8901	74169	0.61234	119586	6.20	0.12001
80+	1.000000	10383	10383	45416	0.00000	45416	4.37	0.22863
	LEVEL=		13.276					

FEMALES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.109457	100000	10946	92885	0.94052	5171297	51.71	0.11784
1	0.032243	89054	2871	87360	0.97872	5078412	57.03	0.03287
2	0.014931	86183	1287	85501	0.98787	4991052	57.91	0.01505
3	0.009796	84896	832	84464	0.99140	4905551	57.78	0.00985
4	0.007486	84064	629	83737	0.98678	4821087	57.35	0.00752
5-9	0.019290	83435	1609	413152	0.98289	4737350	56.78	0.00390
10-14	0.014879	81826	1217	406085	0.98207	4324198	52.85	0.00300
15-19	0.021035	80608	1696	398802	0.97600	3918113	48.61	0.00425
20-24	0.027036	78913	2133	389229	0.97118	3519311	44.60	0.00548
25-29	0.030644	76779	2353	378014	0.96732	3130081	40.77	0.00622
30-34	0.034776	74426	2588	365661	0.96318	2752067	36.98	0.00708
35-39	0.038930	71838	2797	352199	0.95875	2386406	33.22	0.00794
40-44	0.043656	69041	3014	337672	0.95275	2034208	29.46	0.00893
45-49	0.050999	66027	3367	321718	0.94062	1696536	25.69	0.01047
50-54	0.068204	62660	4274	302616	0.92066	1374817	21.94	0.01412
55-59	0.091288	58386	5330	278607	0.88815	1072201	18.36	0.01913
60-64	0.134485	53056	7135	247444	0.83884	793594	14.96	0.02884
65-69	0.191981	45921	8816	207566	0.76657	546151	11.89	0.04247
70-74	0.284719	37105	10565	159114	0.66365	338585	9.13	0.06640
75-79	0.408539	26541	10843	105596	0.69960	179471	6.76	0.10268
80+	1.000000	15698	15698	73875	0.00000	73875	4.71	0.21249
		LEVEL=	13.686					

BOTH SEXES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.122170	100000	12217	91937	0.93593	4974584	49.75	0.13288
1	0.033529	87783	2943	86046	0.97794	4882648	55.62	0.03421
2	0.015368	84840	1304	84149	0.98748	4796601	56.54	0.01549
3	0.010155	83536	848	83095	0.99112	4712453	56.41	0.01021
4	0.007693	82688	636	82357	0.98653	4629358	55.99	0.00772
5-9	0.019588	82051	1607	406239	0.98285	4547001	55.42	0.00396
10-14	0.014672	80444	1180	399271	0.98212	4140762	51.47	0.00296
15-19	0.021138	79264	1675	392131	0.97521	3741491	47.20	0.00427
20-24	0.028530	77588	2214	382408	0.96988	3349360	43.17	0.00579
25-29	0.031747	75375	2393	370892	0.96608	2966951	39.36	0.00645
30-34	0.036168	72982	2640	358311	0.96101	2596059	35.57	0.00737
35-39	0.041913	70342	2948	344341	0.95429	2237748	31.81	0.00856
40-44	0.049671	67394	3348	328602	0.94524	1893407	28.09	0.01019
45-49	0.060116	64047	3850	310607	0.93018	1564805	24.43	0.01240
50-54	0.080151	60196	4825	288920	0.90714	1254198	20.84	0.01670
55-59	0.106676	55372	5907	262091	0.87154	965278	17.43	0.02254
60-64	0.152847	49465	7561	228422	0.81915	703188	14.22	0.03310
65-69	0.213911	41904	8964	187112	0.74509	474765	11.33	0.04791
70-74	0.307058	32940	10115	139416	0.64171	287654	8.73	0.07255
75-79	0.432221	22826	9866	89465	0.65695	148238	6.49	0.11028
80+	1.000000	12960	12960	58774	0.00000	58774	4.54	0.22051
		LEVEL=	13.497					

(III) Preston/Haines Estimates, 1900 Public Use Sample  
 Surviving Children Method, Women Aged 14-34  
 Fitted West Model Life Tables

TOTAL POPULATION

MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.129729	100000	12973	91308	0.93461	4868784	48.69	0.14208
1	0.032900	87027	2863	85338	0.97846	4777476	54.90	0.03355
2	0.014900	84164	1254	83499	0.98783	4692138	55.75	0.01502
3	0.009905	82910	821	82483	0.99137	4608638	55.59	0.00996
4	0.007436	82089	610	81771	0.98698	4526156	55.14	0.00746
5-9	0.018946	81478	1544	403532	0.98361	4444384	54.55	0.00383
10-14	0.013792	79935	1102	396917	0.98290	4040852	50.55	0.00278
15-19	0.020447	78832	1612	390131	0.97529	3643936	46.22	0.00413
20-24	0.029052	77220	2243	380493	0.96961	3253805	42.14	0.00590
25-29	0.031770	74977	2382	368929	0.96599	2873313	38.32	0.00646
30-34	0.036330	72595	2637	356381	0.96022	2504384	34.50	0.00740
35-39	0.043359	69957	3033	342204	0.95146	2148003	30.70	0.00886
40-44	0.053946	66924	3610	325595	0.93945	1805799	26.98	0.01109
45-49	0.067540	63314	4276	305879	0.92147	1480204	23.38	0.01398
50-54	0.090312	59038	5332	281859	0.89533	1174325	19.89	0.01892
55-59	0.120457	53706	6469	252356	0.85651	892467	16.62	0.02564
60-64	0.169674	47237	8015	216146	0.80064	640111	13.55	0.03708
65-69	0.235119	39222	9222	173054	0.72397	423965	10.81	0.05329
70-74	0.329518	30000	9886	125286	0.61903	250910	8.36	0.07890
75-79	0.457707	20114	9207	.77556	0.61979	125624	6.25	0.11871
80+	1.000000	10908	10908	48068	0.000000	48068	4.41	0.22692

LEVEL= 13.650

FEMALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.110291	100000	11029	92831	0.93998	5155382	51.55	0.11881
1	0.032605	88971	2901	87259	0.97847	5062551	56.90	0.03324
2	0.015104	86070	1300	85381	0.98773	4975291	57.81	0.01523
3	0.009911	84770	840	84333	0.99130	4889910	57.68	0.00996
4	0.007576	83930	636	83599	0.98664	4805577	57.26	0.00761
5-9	0.019480	83294	1623	412414	0.98273	4721978	56.69	0.00393
10-14	0.015022	81671	1227	405290	0.98190	4309565	52.77	0.00303
15-19	0.021228	80445	1708	397954	0.97582	3904275	48.53	0.00429
20-24	0.027195	78737	2141	388331	0.97102	3506321	44.53	0.00551
25-29	0.030820	76596	2361	377076	0.96714	3117990	40.71	0.00626
30-34	0.034974	74235	2596	364684	0.96294	2740913	36.92	0.00712
35-39	0.039218	71639	2810	351169	0.95847	2376229	33.17	0.00800
40-44	0.043936	68829	3024	336585	0.95248	2025060	29.42	0.00898
45-49	0.051264	65805	3373	320592	0.94033	1688474	25.66	0.01052
50-54	0.068522	62432	4278	301463	0.92032	1367882	21.91	0.01419
55-59	0.091655	58154	5330	277443	0.88772	1066419	18.34	0.01921
60-64	0.134978	52824	7130	246293	0.83833	788976	14.94	0.02895
65-69	0.192536	45694	8798	206474	0.76599	542683	11.88	0.04261
70-74	0.285367	36896	10529	158157	0.66302	336209	9.11	0.06657
75-79	0.409215	26367	10790	104861	0.69798	178052	6.75	0.10290
80+	1.000000	15577	15577	73191	0.000000	73191	4.70	0.21283

LEVEL= 13.650

## BOTH SEXES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.120247	100000	12025	92064	0.93712	5008255	50.08	0.13061
1	0.032755	87975	2882	86275	0.97846	4916191	55.88	0.03340
2	0.015001	85094	1276	84417	0.98778	4829916	56.76	0.01512
3	0.009908	83817	830	83385	0.99134	4745499	56.62	0.00996
4	0.007505	82987	623	82663	0.98681	4662114	56.18	0.00753
5-9	0.019210	82364	1582	407864	0.98317	4579451	55.60	0.00388
10-14	0.014398	80782	1163	401001	0.98241	4171587	51.64	0.00290
15-19	0.020832	79619	1659	393946	0.97555	3770586	47.36	0.00421
20-24	0.028137	77960	2194	384316	0.97030	3376640	43.31	0.00571
25-29	0.031302	75766	2372	372903	0.96655	2992324	39.49	0.00636
30-34	0.035661	73395	2617	360431	0.96156	2619421	35.69	0.00726
35-39	0.041314	70777	2924	346577	0.95493	2258990	31.92	0.00844
40-44	0.048993	67853	3324	330956	0.94591	1912413	28.18	0.01004
45-49	0.059444	64529	3836	313055	0.93089	1581457	24.51	0.01225
50-54	0.079378	60693	4818	291421	0.90794	1268402	20.90	0.01653
55-59	0.105834	55875	5914	264593	0.87248	976980	17.48	0.02235
60-64	0.151780	49962	7583	230852	0.82025	712387	14.26	0.03285
65-69	0.212722	42379	9015	189356	0.74632	481535	11.36	0.04761
70-74	0.305701	33364	10199	141321	0.64304	292179	8.76	0.07217
75-79	0.430782	23164	9979	90875	0.66006	150858	6.51	0.10981
80+	1.000000	13186	13186	59983	0.00000	59983	4.55	0.21982
		LEVEL=	13.650					

## WHITE POPULATION

## MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(: )	P(x)	T(x)	e(x)	m(x)
0	0.119878	100000	11988	91968	0.94043	5034806	50.35	0.13035
1	0.029327	88012	2581	86489	0.98084	4942837	56.16	0.02984
2	0.013233	85431	1131	84832	0.98920	4856348	56.85	0.01333
3	0.008782	84301	740	83916	0.99236	4771516	56.60	0.00882
4	0.006585	83560	550	83274	0.98821	4687601	56.10	0.00661
5-9	0.017298	83010	1436	411460	0.98500	4604326	55.47	0.00349
10-14	0.012657	81574	1032	405289	0.98422	4192866	51.40	0.00255
15-19	0.018946	80542	1526	398893	0.97712	3787577	47.03	0.00383
20-24	0.026897	79016	2125	389765	0.97192	3388684	42.89	0.00545
25-29	0.029295	76890	2253	378821	0.96865	2998919	39.00	0.00595
30-34	0.033475	74638	2499	366943	0.96327	2620098	35.10	0.00681
35-39	0.040092	72139	2892	353466	0.95492	2253155	31.23	0.00818
40-44	0.050277	69247	3482	337532	0.94317	1899689	27.43	0.01031
45-49	0.063738	65766	4192	318349	0.92548	1562157	23.75	0.01317
50-54	0.086026	61574	5297	294627	0.89967	1243808	20.20	0.01798
55-59	0.115975	56277	6527	265068	0.86135	949182	16.87	0.02462
60-64	0.164299	49750	8174	228316	0.80618	684114	13.75	0.03580
65-69	0.229142	41576	9527	184064	0.73004	455798	10.96	0.05176
70-74	0.322915	32049	10349	134374	0.62556	271733	8.48	0.07702
75-79	0.450536	21700	9777	84059	0.63408	137360	6.33	0.11631
80+	1.000000	11923	11923	53300	0.00000	53300	4.47	0.22370
		LEVEL=	14.360					

FEMALES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.101195	100000	10120	93422	0.94578	5337285	53.37	0.10832
1	0.028734	89881	2583	88357	0.98107	5243863	58.34	0.02923
2	0.013258	87298	1157	86684	0.98924	5155506	59.06	0.01335
3	0.008684	86140	748	85751	0.99238	5068822	58.84	0.00872
4	0.006629	85392	566	85098	0.98812	4983070	58.35	0.00665
5-9	0.017435	84826	1479	420434	0.98453	4897972	57.74	0.00352
10-14	0.013476	83347	1123	413929	0.98371	4477538	53.72	0.00271
15-19	0.019145	82224	1574	407186	0.97801	4063609	49.42	0.00387
20-24	0.024896	80650	2008	398231	0.97341	3656423	45.34	0.00504
25-29	0.028319	78642	2227	387643	0.96985	3258192	41.43	0.00575
30-34	0.032027	76415	2447	375957	0.96598	2870549	37.57	0.00651
35-39	0.036071	73968	2668	363169	0.96158	2494592	33.73	0.00735
40-44	0.040864	71300	2914	349214	0.95548	2131423	29.89	0.00834
45-49	0.048330	68386	3305	333668	0.94354	1782209	26.06	0.00991
50-54	0.065008	65081	4231	314828	0.92409	1448541	22.26	0.01344
55-59	0.087579	60850	5329	290928	0.89242	1133713	18.63	0.01832
60-64	0.129492	55521	7190	259631	0.84404	842785	15.18	0.02769
65-69	0.186360	48331	9007	219140	0.77247	583154	12.07	0.04110
70-74	0.278124	39324	10937	169279	0.67009	364014	9.26	0.06461
75-79	0.401653	28387	11402	113432	0.71675	194735	6.86	0.10052
80+	1.000000	16985	16985	81303	0.000000	81303	4.79	0.20892
		LEVEL=	14.360					

BOTH SEXES 1900								
AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.110764	100000	11076	92690	0.94294	5181968	51.82	0.11950
1	0.029035	88924	2582	87400	0.98095	5089278	57.23	0.02954
2	0.013245	86342	1144	85736	0.98922	5001878	57.93	0.01334
3	0.008733	85198	744	84811	0.99237	4916142	57.70	0.00877
4	0.006607	84454	558	84164	0.98816	4831331	57.21	0.00663
5-9	0.017366	83896	1457	415838	0.98477	4747167	56.58	0.00350
10-14	0.013061	82439	1077	409504	0.98397	4331329	52.54	0.00263
15-19	0.019044	81362	1549	402938	0.97756	3921825	48.20	0.00385
20-24	0.025911	79813	2068	393895	0.97266	3518887	44.09	0.00525
25-29	0.028813	77745	2240	383124	0.96924	3124992	40.20	0.00585
30-34	0.032760	75505	2474	371340	0.96461	2741868	36.31	0.00666
35-39	0.038106	73031	2783	358199	0.95821	2370527	32.46	0.00777
40-44	0.045617	70248	3205	343231	0.94928	2012328	28.65	0.00934
45-49	0.056071	67044	3759	325821	0.93450	1669098	24.90	0.01154
50-54	0.075483	63285	4777	304481	0.91199	1343276	21.23	0.01569
55-59	0.101569	58508	5943	277682	0.87723	1038795	17.75	0.02140
60-64	0.146365	52565	7694	243592	0.82587	761113	14.48	0.03158
65-69	0.206664	44871	9273	201174	0.75259	517522	11.53	0.04610
70-74	0.298779	35598	10636	151401	0.64985	316348	8.89	0.07025
75-79	0.423419	24962	10569	98387	0.67651	164947	6.61	0.10743
80+	1.000000	14393	14393	66560	0.000000	66560	4.62	0.21624
		LEVEL=	14.360					

## BLACK POPULATION

MALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.183457	100000	18346	87708	0.90198	4045186	40.45	0.20917
1	0.052782	81654	4310	79111	0.96502	3957477	48.47	0.05448
2	0.024406	77344	1888	76344	0.97996	3878366	50.14	0.02473
3	0.016383	75457	1236	74814	0.98568	3802022	50.39	0.01652
4	0.012379	74221	919	73743	0.98001	3727208	50.22	0.01246
5-9	0.028190	73302	2066	361343	0.97563	3653465	49.84	0.00572
10-14	0.020439	71235	1456	352537	0.97549	3292122	46.21	0.00413
15-19	0.028665	69779	2000	343897	0.96545	2939585	42.13	0.00582
20-24	0.040607	67779	2752	332015	0.95730	2595689	38.30	0.00829
25-29	0.044878	65027	2918	317839	0.95185	2263673	34.81	0.00918
30-34	0.051581	62109	3204	302534	0.94392	1945835	31.33	0.01059
35-39	0.060816	58905	3582	285569	0.93260	1643301	27.90	0.01254
40-44	0.074401	55323	4116	266323	0.91836	1357732	24.54	0.01546
45-49	0.089453	51207	4581	244581	0.89790	1091409	21.31	0.01873
50-54	0.115994	46626	5408	219609	0.86911	846828	18.16	0.02463
55-59	0.147733	41218	6089	190865	0.82703	627219	15.22	0.03190
60-64	0.202578	35128	7116	157852	0.76660	436353	12.42	0.04508
65-69	0.272045	28012	7621	121009	0.68655	278502	9.94	0.06298
70-74	0.370332	20392	7552	83079	0.57860	157492	7.72	0.09090
75-79	0.502514	12840	6452	48069	0.54805	74413	5.80	0.13423
80+	1.000000	6388	6388	26344	0.00000	26344	4.12	0.24247

LEVEL= 10.320

FEMALES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.156570	100000	15657	89823	0.91020	4327218	43.27	0.17431
1	0.051963	84343	4383	81757	0.96529	4237395	50.24	0.05361
2	0.024563	79960	1964	78919	0.97994	4155638	51.97	0.02489
3	0.016275	77996	1269	77336	0.98566	4076719	52.27	0.01641
4	0.012520	76727	961	76227	0.97935	3999383	52.12	0.01260
5-9	0.029378	75766	2226	373266	0.97380	3923155	51.78	0.00596
10-14	0.022931	73540	1686	363486	0.97330	3549889	48.27	0.00464
15-19	0.030561	71854	2196	353780	0.96548	3186403	44.35	0.00621
20-24	0.038612	69658	2690	341566	0.95900	2832623	40.66	0.00787
25-29	0.043490	66968	2912	327561	0.95372	2491057	37.20	0.00889
30-34	0.049202	64056	3152	312401	0.94818	2163496	33.78	0.01009
35-39	0.054566	60904	3323	296213	0.94285	1851095	30.39	0.01122
40-44	0.059893	57581	3449	279283	0.93655	1554882	27.00	0.01235
45-49	0.067231	54132	3639	261563	0.92262	1275599	23.56	0.01391
50-54	0.088266	50493	4457	241323	0.89904	1014036	20.08	0.01847
55-59	0.114886	46036	5289	216958	0.86069	772713	16.78	0.02438
60-64	0.166910	40747	6801	186733	0.80501	555755	13.64	0.03642
65-69	0.228699	33946	7763	150322	0.72786	369022	10.87	0.05165
70-74	0.328454	26183	8600	109414	0.62051	218700	8.35	0.07860
75-79	0.455479	17583	8009	67893	0.60968	109286	6.22	0.11796
80+	1.000000	9574	9574	41393	0.00000	41393	4.32	0.23130

LEVEL= 10.320

## BOTH SEXES 1900

AGE(x)	q(x)	l(x)	D(x)	L(x)	P(x)	T(x)	e(x)	m(x)
0	0.170341	100000	17034	88757	0.90586	4182627	41.83	0.19192
1	0.052376	82966	4345	80402	0.96515	4093869	49.34	0.05405
2	0.024484	78620	1925	77600	0.97995	4013467	51.05	0.02481
3	0.016329	76696	1252	76044	0.98567	3935867	51.32	0.01647
4	0.012449	75443	939	74955	0.97968	3859822	51.16	0.01253
5-9	0.028779	74504	2144	367160	0.97472	3784868	50.80	0.00584
10-14	0.021674	72360	1568	357878	0.97440	3417708	47.23	0.00438
15-19	0.029604	70792	2096	348718	0.96546	3059830	43.22	0.00601
20-24	0.039620	68696	2722	336675	0.95814	2711112	39.47	0.00808
25-29	0.044191	65974	2915	322582	0.95277	2374437	35.99	0.00904
30-34	0.050402	63059	3178	307347	0.94604	2051855	32.54	0.01034
35-39	0.057715	59880	3456	290762	0.93769	1744508	29.13	0.01189
40-44	0.067179	56424	3791	272645	0.92745	1453746	25.76	0.01390
45-49	0.078304	52634	4121	252865	0.91037	1181101	22.44	0.01630
50-54	0.101916	48512	4944	230201	0.88442	928236	19.13	0.02148
55-59	0.130802	43568	5699	203594	0.84453	698034	16.02	0.02799
60-64	0.183857	37869	6963	171940	0.78695	494440	13.06	0.04049
65-69	0.248821	30907	7690	135308	0.70894	322500	10.43	0.05684
70-74	0.347294	23217	8063	95925	0.60192	187191	8.06	0.08405
75-79	0.475892	15154	7211	57739	0.58066	91266	6.02	0.12490
80+	1.000000	7942	7942	33527	0.00000	33527	4.22	0.23689

LEVEL= 10.320

## APPENDIX B

The data and formulas used to calculate the life tables in Appendix A are as follows:

(1) Central death rates (used to calculate the life tables 1850-1900 based on published census death data) ( $sM_5$ ,  $sM_{10}$ ,  $sM_{15}$ ):  $nM_x = (nD_x / nP_x)$ , where  $nM_x$  is the central death rate over the age interval  $x$  to  $x+n$ ,  $nD_x$  is deaths for the same age interval, and  $nP_x$  is average person years lived in the interval, approximated by the midperiod population for the age interval. Census populations were interpolated backward six months to be at the middle of the year prior to the census (December 1), which is the reference period for census deaths.

(2) Probability of dying between exact age  $x$  and exact age  $x+n$ :

$nq_x = (2 * n * nM_x) / (2 + n * nM_x)$ , where  $n$  is the size of the age interval in years.

(3) Persons remaining alive out of 100,000:  $l_x = l_{x-n} * (1 - nq_x)$

(4) The radix of the life table:  $l_0 = 100,000$

(5) Deaths in the age interval  $x$  to  $x+n$ :  $D_x = l_x - l_{x-n}$

(6) Person years lived in the age interval:

$L_x = n * (f_1 * l_x + f_2 * l_{x-n})$ , where  $f_1 = f_2 = .5$  and  $f_1 + f_2 = 1.0$ , except for the age intervals below age 5. In that case,

age(x)	$f_1$	$f_2$	
0	.33	.67	for males
0	.35	.65	for females
1	.41	.59	
2	.47	.53	
3,4	.48	.52	

(7)  $P(x) = (L_x / L_{x+n})$

(8)  $T_x = \sum_{i=x}^{\infty} L_i$

(9)  $T_\infty = e_\infty / l_\infty$

(10)  $e_x = T_x / l_x$

(11)  $e_\infty = 3.725 + .0000625 * l_\infty$

(12)  $m(x) = D_x / L_x$