Section XVI.-South African Life Table No. 2.
185. Previous South African Life Tables.-The only Life Tables
whieh are knowII to have been Which are known to have been prepared and published in relation
to South African conditions are those referred to hereunder. Mr. C. B. Elliott made an investigation of the mortality
experienee of the South African Mutual Life Assurance Society
for the period 1845 to 1879 but the numbers under observation
 were small, and Mr. .lliott considered. that too much reliance
should not be placed upon the results. Mr. Chareses Gordon
constructed a Life Thable for the same Society based on fifty should not be placed upon the results. Mr. Charles Gordon
constructa a Llif Trabe for the same Society based on fifty
year's experience ( 1845 to 1895 ), graduating it by a combination year's experience (1845 to 1895), graduating it by a combination
of Woolhouss's and Acklands methods. A Life Table for the
E. European population of Johannesburg was constructed by the
late Dr. G. . . Iaynard, based on the 1910 Munieipal Census,
late and two Years' reeords of deaths. Mr. C. W. Kops, lecturer at
the Univerity of the Witwatersand constructed a Life Table
for European males based on the 1918 and for Eurverean males based on the 1918 and 1921 Population Cen-
suses and the deaths during the three years 1919-1921. This

 the throe years 19 Poplation Census of 1922 , and the deaths during
of that Censhed in the Final Report Portions of these Tables are shown below compared with S.A.
Life TTable No. 2. The fact that is immediately evident is the continuous improvement. The South Ammedian Mutyal Life Table, Which may be regarded as representing healthy males for a fifty
year period from 1845 onwards, is not as favourabie as Dr. Mayyear period from 1845 onwards, is not as tavourable as Dr. May-
nard for Johanoesburf for all males for the complete expectation
of life, while Mr. Kopps' table and the S. A. Life Tables No. 1 and 2 are each provressively somenhat more favourable. This accords
generally with the experience of other countries.
Mr. George King made an investigation on behalf of the
Southern Life Association of Atrica some yyars ago on their Southern Life Association of Atrica some years ago on their
mortaity experience between 1891 and 1912, but a mortality
table was not constructed. Mr. D. Spence Fraser, Mr. D. Spence Fraser, F.F.A., A.I.A., Actuarial Adviser to
the Union Government has been kind enough to furnish the Census
Ofice with the mether Office with the mortalitity table he constructed from the mortality
exprerience of pensionenrs of the osouth African Railways and
Harbours for the vears $1911-1923$. The experience refers to experience of pensioners of the South African Railways and
Harbours for the years 1911-1923. The experience refers to
1, tri9 pensions granted on attaining the age limeit for pension 1,519 pensions granted on attaining the age limit for pension
purposes and to 827 pensions granted on account of retrenchment.
Pensions granted on account of til health or accident were not purposes and
Pensions gra
included.
The following information will be of interest if read in connection
with the comparative tables given elsewhere :-
 It will be seen that the expectation of life is slightly lower
at the ages of 50 and 60 , but slightly higher at the age of 70 than South African Table No. 1 , and that the probability of living
10 years is higher tht the age of 50 lower at the age of 60 and 10 years is higher at the age of 50 , 10 .
practically identical at the age of 70 .
It must be remembered that the period covered is on the whole
earlier than South African Tabbe No. 1. Moreover, Mr. Spence
Trese Fraser states that the mortality tended to be lower towards the
end than at the beigming of the period, and that further investi. gations since 1923 tended to show a rather lower mortality.
186. South African Life Table No. 2 - The Life Table published in
this section has been constructed throughout by the same methods as those mplloyed in the ease of tite Thable No. 1 except in the
case of very oid ages as mentioned below.

As to the period of the table, there were two alternatives. Either
it might be based as was Tabbe No. 1 on a three years mortality
 five years mortality experience based on the mean between the
two Censuses of 1921 and 1926. It must be admitted, that whereas
 date by the time it is published, the same criticism is not valid
Where Life Toables aan be constructed for intervals of five years
hetreen ter between two Population Censusses. A A series or tatbles constructed
as Table No. 1 would utilize three years mortality and as Table No. 1 would utilize three years mortality and onit two
in every five years, while the latter would utize the mortality
experience of every year and would reprosent experience of every year and would represent a a period whose midid-
point would be only thirty months earlier than the former. The point would be only thirty months earlier than the former. The
fact however that
naire with regange in the Populat to
nend naire with reagar to age hand ifficted a counsion crable decereasion in
the number of misstatements of age in 1926 made it seem advisable the number of mistataments of age in 1922 made it sem advisable
to avoid ntilizing he figusures for 1921, moroever a direct compari-
son with Life Table No. 1 is obtained more readily hy utilizing to avoid utiizing the figures for 1921 ; moreover a direct compari-
son with Life Table No. 1 is obtained morer readily ybutilizig
a similar period and method; so that on the whole it was thought a simiar period and method; so that on the whale it was thought
wiser to oconstuat atable cented on 1926 though the question
of the advisability of in future constructing tables covering of the advisability of in future constructing tables covering a
five years period between two Censuses is one that will no doubt
receive due consideration in the future five years priod betwen two Censuses
receive due consideration in the future
With certain diffierences the methods employed by Mr. George
King in preparing Life TThbes No. 8 for England and Wales were
followed in consuch followed in constructing South African Life Table No.. . The
increasing interest shown in his method of osculatory interpolation incereasing nterest shown in his method of osculatory interpolation,
the colosenss with which it follows the even a ata and its general
simplieity has justified that choice; so the same method was chosen simplieity has justified that choiee; so the same method was choser
in constructing Life Table No. 2.
It was assumed that at the date of the Census, the 4th May,
1926, the days of births of persons of each year of age from one year upwards were evenly distributed through that year. With
that assumption a cellculation from vital and migration statistics that assumption a calculation from vital and migration statistics
was made and adjusted figures for the population living the the
3oth June 1926 were obtained. The assumation of a uniform 3oth June 1926 were obtained. The passumption of a a unitorm
geometrial incrase in each age group assumed by Mr. King
was not thought to in en geometrical increase in each age group assumed by Mr. King,
was not thought to be suitale for south Africa where there is is
known to be an uneven distribution of population, and for this known to be an uneven distribution of population, and for this
reason his method was not followed in obtaining the figures for reason his method was not followed in obtaining the figures for
the mean population, although in this short period it did not
involve any great discrepancy. involve any great discrepaney
There is a tendency in every Census for some persons to make
incorreets statements of age, and as far as this tendency is confined to an inclination for round numbers (such as figures terminating
in 0 and to a less degree in 8,2 and 5 ), these inaceuracies in 0 and to a less degree in 8,2 and 5 ), these inaceuracies can
be largely mmoothed out by adopting a asatisfactory quinquennial
groupiny and then grouping and then redistributing the a sigures in in each quinquen in dual
proportion. The same tendency has been observed in the cese proportion. The same tendency has been observed in the case o
the ages rendered in returns of death. It would seem therefore that the ages rendered in returns of death. It would seem therefore that
the same psychologial ause operated both where persons are
asked to give theer own agese and where persons are recuired to
 misstatements were on the whole due to i innorance of the exact year
of sage n person might say his ago was anout 50 or about 60
and return it as 50 or 60 , or he might say it was between 50 and and return it as 50 or 60 , or he might say it was between 50 and
60 and return it as 55 or again he might sy he was getting on
to 60 or was a bit over 60 and might return it as 58 or 6 .
Where, however, there are deliberate misstatements of age all
tending to be understatements in one perios of life and overstatetending to be understatements in one period of life and overstate
ments in another no mathematitial Iormula however ingenious
will remove the error, unless, of course the degree of misten will remove the error, unless, of course, the degree of misstatement
is known. All that con be hoped is that rraeter acouracy will
result from the spread of the knowedge that the int result trom the spread of the kenowledge that the informatyion is
not asked for out of iale curiosity but is utilized for scientifi not asked for out of ide euriosity but is utilized for scientiic
calculations of national interest. It is not known to what extent
deliberate mistatatements occur that are likely to give some bias
to the caleclultaioss but arrangements are being made to test this
in the next Population Census.
Heturns it a careful examination of the Population and mortality returns it appeared best to group ayes into quinquennial groups
on the basis either of thoose whose ifial ligit ented in $4-8$ and
and or else in $2-6$ and $7-1$. $9-3$ or else in $2-6$ and $7-1$. There seemed to be little to chose
betwwen the two ; at certain periods of life one appeared to be
sishtly better between the two; at certain periods of life one appeared to be
stightly better than the other. As, however the rouping of
$4-8,9-3$ was utilized in the construction of Life Table No. 1, it $4-8,9-3$ was utilized in the construction of Life The Table No. 1, it
was decided to retain it for Life Table No. 2.
The mean population and the deaths for three years 1925 to
1927 were arranged in quinquennial groups for the age periods 1927 were arranged in quinquennial groups for the age period
4 to 8,9 to 13 , 14 to 18 , etco, as far as 99 to 103 . The value for $m_{x}$, the central death rate (i.e. .eaths divided. by poruuation
for the eentral age of each group from 11 years to 96 was obtained or the central age of each group from 11 years to 96 was obtained
rom the formul $u_{x+2-2 w_{x}-.000 \Delta^{2} w_{x-5}}$ where $u_{x+2}$ is the
 of five values of the population or deaths for ages $x$ to $(x+4)$.
The rate of mortality, or the probability of dying in the course of a year, i.e. $q_{x}$, was calculated by the formula $q_{x}=\frac{2 m_{x}}{2+m_{x}}$ for each sex for the ages $11,16,21$, up to 96 . The intervening values
of the rate of mortality were obtained from functions of Log of the rate of mortality were obtained from functions of Loog
( $\left.q_{z}+\cdot 1\right)$ by osculatory Interpolation by means of curves of the
( 4 . $q_{\mathrm{x}}+\cdot 1$ by Osclatory Interpolation by means of curves of the
hird order, which had the same first differential coefficient at their points of contact at the ages $16,21,26$, etc
thiter
The formulae were :-
$\delta u_{1}=.2 \Delta u_{0}+.12$

$\delta^{2} u_{1}=.04 \Delta^{2} u_{0}$
$\delta^{3} u_{1}=\cdot 024 \Delta^{3} u_{0}$
where the symbol $\delta$ is used for annual and $\Delta$ for quinquemmial
differences.
This gave a complete table for $q_{x}$ from 16 to 91 .
In preparing Lite Table No. 1 various methods were tried for ompleang the table at the higher ages by means of a fourth
consteres. between five values of functions of $p_{x}$ and $q_{z}$ vithout suceess owing to the fact that $p_{x}$ tended to increase anter
a certain age. Finally the curve for $p_{x}$ wes a certain age. Finally the curve for $p_{x}$ was drawn and graphically
completed and the functions for the higher gages read off to three
places of decimals. This hwer places of decimals. This, however, involved an assumptoio three
$q_{x}$ would approximate to unity before the age of 110 for which $q_{x}$ would approximate to unity before the age of 110 for which
there is no proot. The same
structing Life Thable No structing Life Table No. 2. After a considerabie amount of
examination of the different functions it was discovered that

 pleted in this mamer.
It is extremely difficult in a small community such as South
Africa to be certain whether the few persons that attain age in the e first place give their aleses correctly and secondly whether
it is merely a fortuitous sample not it is merely a fortuitous sample ent representing a normal distri-
bution. The end of the table can therefore only be regarded a reasonable approximation. Arrangements have, however, been
made with the Old Age Pensions Office to secure full details of
Oatd made with the Old Age Pensions Office to secure fuwl details o
Old A Ae Pensioners and it is hoped when information has accum
lon lated for a f fow years to to make apedet when information has examination of hamu- returns
and possibly to construct a Life Table for persons over 65 . and possibly to construct a Life TTabled eformination of the returns
Old Age Pensioners are approximately
one over 65 it may be possible to fit their probability ourve to to the next South African Life Table. At any rate it will throw considerable
light on the subject.

157

An examination of the ages of young children was made,
omparing the statistics derived from reorrds of birthts and deaths

Number of Chiddren Living on the 30 the June, 1926

| Ag. | мим. |  |  | Fmanats. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Bith } \\ & \text { phe } \end{aligned}$ |  | Difiter: |  |  | ${ }_{\substack{\text { pifier } \\ \text { ences }}}$ |
|  |  | $\begin{aligned} & 21,067 \\ & 20,319 \\ & 19,725 \\ & 20,035 \\ & 20,472 \end{aligned}$ |  | 20,588 | 20,082 | 486 and ar8 ar8 688 |

A very marked improvement took place in the declaration of less than a quarter of the the sum of of the differenceces in a similar table prepared for the 1921 Census. This is due to the great improve-
nent in the statement of ages that occurred on account of date of birth heing asked for ion addation occurred on an account of date
anounts net difference mounts to about one per cent. and is difificult to explain. It
is not due to immigration as shown by the migration It is possible that some births were not registered or there mayn be
a sight tendeney to understate ases of chiddren a sight tendency to understate ages of children about 5 . Th
matter will be investigated in the light of the 1931 Census. The number taken into account at the age exactly 0 was th
sum of the births from the second half of 1924 to the end of th
 ne year of age in the years 1924 to 1926 ; the number taken int
nccount at the age exactly 2 the sums of the births from the second half of 1922 to the first hall of 1925 less the buirths from the the deaths
under one year of of age in the ent under one year of age in the years 1923 to 1925 and the sum of
the deats age 1 and under 2 in the years 1924 to 1926 , and so
on for the numbers aged exactly 3 , 4 , and 5 years.
deaths wates of mortality derived from the records of births and deaths were obtained by dividing the deaths in each year of age 0
to 1,1 to 2 , ete., up to 5 to 6 in the years 1925 to 1927 by the
numbers living as found above.
The following table gives the results:-

| Agr. | мйн. |  |  | femars. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Deaths. | Retar orf | $\underbrace{\substack{\text { Numpre }}}_{\text {Numbers }}$ | Deaths. | $\underbrace{}_{\substack{\text { Rate of } \\ \text { Mootality. }}}$ |
|  | $\begin{array}{ll} \text { gisposig } \end{array}$ |  |  |  | 3,969 1,977 are 234 194 131 134 |  |

The column $q_{q}$ had then been completed for age 0 to 5 for 11
and for 16 onwards, and the remainder was constructed by inter polation by means of a Lagrange fourth difiference formula, the
values for the five years 45 , 1116 and 17 beine this method produced satisfactory results for the males it did no for the fomales, owing to the fact that the rates ofros 3 to 5 are
not in the same even progression as in the case of males. It was not in the same even progression as in the case of males. It was
therefore decided to use a Llagrange third difference formula
utilizing the four years 5 an utilizing the four years $5,11,16$ and 17 for therence females which
produced a curve elosely fitting the given data.

158

The Lagrange formula is of the following form:$q_{x}=q_{c} \frac{(x-b)(x-c) \ldots(x-n)}{(a-b)(a-c) \ldots(a-n)}+\mathrm{q}_{s} \frac{(x-a)(x-c) \ldots(x-n)}{(b-a)(b-c)} \ldots(b-n)$ $+\cdots+q_{n}\left(\frac{(x-a)(x-b)(x-c)}{(n-a)(n-b)(n-c)}\right.$
Where four orders of differences are taken $q_{\sigma}=q_{4}, q_{d}=q_{5}$
 The closeness with which the life tables are in accord with
the data can be seen in the following statement comparing the the data can be seen in the following statement comparing the
expected with the actual deaths for different age groups. As expected with the actual deaths for dififerent age groups. As
the calcolations for the agese 0 ot 5 were made direct from the vital
statistis there ore no difterences in their cases. the calculations tor the ages 0 to were made din
statistics there are no differeces in their cases.

|  | matr. |  |  | framie. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Actay- |
|  | Positive. | Xeative. |  | Postive. | Negative. |  |
|  | $\begin{gathered} \frac{8}{8} \\ \frac{8}{2} \\ \frac{10}{10} \\ \frac{8}{7} \\ \frac{7}{9} \\ \hline \frac{5}{9} \\ \hline \frac{8}{9} \end{gathered}$ | $\begin{aligned} & - \\ & \frac{-}{2} \\ & \frac{2}{15} \\ & \frac{-}{11} \\ & \frac{11}{8} \\ & \frac{8}{4} \\ & \frac{3}{3} \\ & \frac{10}{7} \\ & \frac{7}{8} \end{aligned}$ |  |  | $\begin{aligned} & \overline{7} \\ & \frac{1}{1} \\ & \frac{2}{2} \\ & \hline \frac{1}{2} \\ & \frac{2}{6} \\ & \hline \frac{8}{15} \\ & \frac{15}{16} \\ & \frac{6}{6} \\ & \hline \\ & \hline \end{aligned}$ |  |
|  | ${ }^{68}$ | ${ }_{8}$ | - | ${ }^{63}$ | ${ }^{6}$ | + ${ }^{3}$ |
|  |  |  |  |  |  |  |

The total deviation in the case of males is nil and in the case of
females 3. The differencess are in no oase considerable eo that the tables may be considered to be satisfactory. It would har
be possible to obtain a closer agreement with the data.
The function $q_{x}$, the probabiilty of dying within 2 year after
ttaining the a age $x$, having been obtained for every age for both
 fom it. For general convenience these are explained. The
unction $p_{x}$ the perobability of living one year from age $x$, together
 The column $l_{x}$ gives the number surviving according to Life Table to the exact age $x$. Tre irst value ot the tather is called
he radix, and for the South African Life TTable the radix is $1,000,000$ $t$ the age 0 . The column is obtained by a continued mult tiplication
 eteven each pair of figures in the first column. The column
$L_{x}$ is the number of years lived in the year of age $x$ to $(x+1)$, and, therefore, represents the mean population between ayes $x$
and $(x+1)$. It is assumed that except for the year 0 to 1 the
deaths that occur in each year of life are uniformly distributed over the year of age. . In the case of the first year of life more
deaths occur in the first few months than in the latter part. In the three years 1925 to $1927,4,976$ male and 3,969 female and 2,858 female children died under the age of six months, that is $73 \cdot 191318$ per cent. and 72.008062 per cent. respectively.
For the construction of the $\mathrm{L}_{x}$ table it may, therefore, be assumed For the construction of the $L_{x}$ table it may, theretiore be assumed
that out of each mithion male children born 54,481 die before
the the age of six months, and, out of each million female children
born 45,192 die before the age of six months. The first figures born 45,192 die before the age of six months. The first figures
in the column are thus 945,519 and 955, ,008 respectively, and the other figures are the mid-points between each two consecutive
values of the function $l_{x}$. The column $\mathrm{T}_{x}$ is the population of the Life Table above the
moment of age $x$. This is obtained by the continued summation

The column ${ }_{e}^{x}$ is the complete expectation of life, or the
total future lifetime which on the average will be lived by a person total future lifetime which on the average will be lived by a person
agged exactly $x$. It is obtained by dividing each figure in the aged exactly $x$. It is obtained dy diviving each figure e in the
column $\mathrm{T}_{x}$ by the corresponding figures in the column $l_{x}$. Comparative tables are given for all the South African Life
Tables and for New Zealand, Australia, England and Wales, and the Irish Frre State showing At cortain ages sal the completee
axpectation of life (b) the rate of mortaily or the number who may be expected to die within a year of 1,000 attaining a particular age, (c) the number of survivors
probability of surviving 10 years.
It will be seen at once that the improvement in the South
Arican tables is very largely It will be seen at once that the improvement in the South
African tables is very largely due to the marked decrease in the
mortality rates of young child dren which has been a conspicuous mortality rates of young children which has been a conspicuous
feature in reeent years. The death rate of children under one year
 coude infantile mortality rate in 1910 and 1911 was 38.4 per cent.
higher' than in 1926 and 1927 . The mortality of young children higher' than in 1926 and 1922 . The mortaily or young children
in IIr. Kops' table is the one weak point in an otherwise admirable
calculation He eppears to have assumed that the death rates calculation. He appears to have assumed that the death rates
in the first and second six months of life were equal and to have in the irst
ajdusted his crude entes too drastically. His crude mortality
rate for males at birth was $93 \cdot 18$ as compared with 87.84 in Life rate for males at birth was 93.18 as compared with 87 . 84 in Lite
Tatele No. 1. As the mortality was somewhat higher in 1919
 rather than his adjusted rate of 78.38 . Tha death rate of young
children in Johamnesburg in 1908 to 1910 was probably higher than for south Atrice as a a whole at that dase, so that comparison
cannot readily be made with Dr. Maynard's table for this period cannot readily be made with Dr. Maynares's table for this period
of life.
The expectation of life at 2 has
years inereased in the five years period from $45 \cdot 26$ to $46 \cdot 27$ in the case of maless and from
$48 \cdot 15$ to $49 \cdot 34$ in the casé of females, whereas at birth the expectation of life increased during the same period by over two years.
tise
In comparing the South African Life Table with other countries it will be eond that it lies between that for Australia and that
for England and Wales. At birth the expectation of life is about and Wales. It onlows this intermediate course until about 60
when the expectation of life is slightly more favourable than when the expectation of life is slightly more favourable than
Austraila and continues of for the older ages. New Zealand
which has probably the best exhe which has probably the best expectation in the world has an
expectation at birth of about five years in the case of males and expectation at birth of about five years in the ase of males and
four years in the case of females greater than that for South Atrica.
At the same time when making this comparison with other
countries, it must be remembered that one is comparing the European population of the Union with the entire population Eungland and Wales. It is probable that the south African than the everage population of England and Wales. This factor
should therefore be borre in mind.
187. Rates of Mortality of Women by Marital Condition. - An experimental calculation of $q_{q}$ for females according to marital condition
was made by the same method with whioh the Life Table for all feWas made by the same method with which the Life Table for all fe-
males was constructed. A close examination of the e nales was constructed. A close examination of the pivotal valu
however, revealed the fact that the data at certain ages was small to oevive reliable results.
mor exa example an in increase of on more death per annum at each year of age of unmarried women
between 64 and 68 would have increased the mortality rate by 20 per cent. The rates, therefore, did not always increase ste by step as the age increased. A table showing a portion of the
calculated rates is given below but calculated rates is given below but even this must be used with
caution. A few broad conclusions appear however, to be established. caution. A few wroad conclusions appear however, to be established
During the period at which women most frequently marry, viz: : to 28, the rate of mortality for mort marrieq wounenty marry, viviz: : 19
higher than that for unmarried. The mortality rate for widow (with whom are included divorced personss) is hage her widows that
for married women. The sil shtly y for married women. The slightly lower rate at the age of 46 and
the disproportionaly
high rate at
51
(in the case of widows) is probably due to the paucity of the material. The somewhat
sudden jump in the rate for sudden jump in the rate for unmarried females between 26 and
31 might possibly be due to a tendeny for unmarried women
belonging to the latter group to under
 is, however, no avalable information on this matter. It was not
thought avisabe to carry the taleculations beyond the age of
76 , nor worth while the to interpolate the intermediate vol out on 76 , nor worth while to interpolate the interesediate valaues. It
would have been possible by taking 10 year instead of 5 year
perids to would have been possible by taking 10 year instead of 5 year
period to have prowed graduated tables but they would have
lost their direct relation to Life Table No lost their direct relation to Life Table No. 2. In these circum
stances it was decided not to carry the investigation any further but as calculations of this nature have never hitherto been made the
partial results are sufficiently interesting to be made pulle

South african life table no Female Mortality $\left(1,000 q_{x}\right)$ by Martral Condition.

| Age. |  | Married. | ${ }_{\text {Widuoce and }}^{\text {Divoreal }}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| ${ }_{26}^{21 .}$ |  | 3.3882 |  | ${ }^{2.7366}$ |
| ${ }_{\substack{31 \\ 36}}$ |  |  |  | ${ }_{\substack{3.3884 \\ 4.1228}}^{\substack{\text { a }}}$ |
| 41. | \% |  | 5.7889 |  |
| ${ }_{\substack{46 \\ 51 \\ 51}}$ |  |  | core $\begin{gathered}6.11199 \\ 11.1379\end{gathered}$ |  |
| ${ }_{6}^{56}$ |  |  |  |  |
| ${ }_{7}^{66}$ |  |  |  |  |
| 76. |  | ${ }_{\substack{43 \\ 74.81298}}$ | ${ }_{\substack{48.8821 \\ 80.4015}}^{\text {cos }}$ |  |

188 . Values of Annuities and Single and Annual Premiums.- - Value
 Table No. 2 haventeen calculated for both ( $P_{x}$ ) based on Lit
of age at the rates 4 , 4 tand 5 per cent
 Afrian Mutual Mortality Tables referred to above. In that
puticiation the value of an annuity of $1\left(a_{s}\right)$ was calculated fo
each age from 15 to 96
 somewhat lower all through than those calculated from Souti
African Table No. 2.
The tale The tables are pablished in their entirety, but the same quali-
fiction with regard tof figures at extreme old ageses referred to earlier
in this renort in this report necessarily applies to these calculations as well a
to the Life Table itself from which they have been derived.

table clexi (b)-south african life tables No. 2. females.

table clxi (b)-south african life tables No. 2-(Contimued). females.

| ${ }_{(x)}^{\text {(f) }}$ | ${ }_{x}$ | $d_{x}$ | $p_{x}$ | ${ }_{q}$ | $L_{\text {L }}$ | $\mathrm{T}_{x}$ | ${ }^{2}$ | ${ }_{\substack{\text { Age } \\(\text { (e) }}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 70 \\ & 71 \\ & 72 \\ & 78 \\ & 74 \\ & 74 \end{aligned}$ |  |  |  |  |  |  | 10.42 9.59 9.82 8.81 8.32 8 | 70 71 78 78 78 78 |
| $\begin{aligned} & 75 \\ & 76 \\ & 78 \\ & 78 \\ & 78 \end{aligned}$ |  | $\begin{aligned} & 27,837 \\ & 28,287 \\ & 28,076 \\ & 27,394 \\ & 26,524 \end{aligned}$ |  |  | $\begin{aligned} & 373,295 \\ & 345,232 \\ & 317,051 \\ & 298,316 \\ & 262,357 \end{aligned}$ |  |  | $\begin{aligned} & 75 \\ & 70 \\ & 78 \\ & 78 \\ & 78 \end{aligned}$ |
| $\begin{gathered} 80 \\ 80 \\ 88 \\ 88 \\ 88 \\ 88 \end{gathered}$ |  |  |  |  |  |  | $\begin{gathered} 5: 856 \\ 5.76 \\ \hline \end{gathered}$ | $\begin{gathered} 80 \\ 80 \\ 88 \\ 88 \\ 88 \\ 84 \end{gathered}$ |
| $\begin{aligned} & 85 \\ & 87 \\ & 88 \\ & 88 \\ & 88 \\ & 88 \end{aligned}$ |  |  |  | $\begin{aligned} & 1272351 \\ & \hline \end{aligned}$ |  |  |  | 85 80 88 88 80 80 |
| $\begin{aligned} & 90 \\ & 91 \\ & 92 \\ & 98 \\ & 94 \end{aligned}$ |  |  |  | $\begin{array}{r} \cdot 2379471 \\ \cdot 2496888 \\ .2681913 \\ \cdot 2878413 \\ -3086060 \end{array}$ |  |  | $\begin{aligned} & 3 \cdot 111 \\ & 2: 93 \\ & 2: 738 \\ & 2: 758 \\ & 2: 38 \end{aligned}$ | 90 90 92 93 93 94 |
| $\begin{aligned} & 95 \\ & 96 \\ & 96 \\ & 98 \\ & .98 \\ & .99 \\ & \hline \end{aligned}$ |  | $\begin{gathered} 2,508 \\ \text { a, } 1,1092 \\ \text { and } \\ 528 \\ 588 \end{gathered}$ |  |  |  |  | $\begin{aligned} & 2 \cdot 292 \\ & 2.02 \\ & .1 .98 \\ & 1.80 \\ & 1.68 \end{aligned}$ | 95 96 98 98 98 98 |
| $\begin{aligned} & 100 \\ & 100 \\ & \text { 100 } \\ & 102 \\ & 103 \\ & 104 \end{aligned}$ |  | $\begin{aligned} & 356 \\ & \begin{array}{l} 305 \\ 2108 \\ \\ \hline 88 \\ 28 \end{array} \end{aligned}$ |  | $\begin{aligned} & \text { - } 4589279 \\ & \hline \end{aligned}$ |  | $\begin{gathered} 1,228 \\ \hline \end{gathered}$ |  | ( |
|  |  | ${ }_{1}^{2}$ |  |  | ${ }_{1}^{2}$ | $\begin{array}{r} 28 \\ 8 \\ 8 \\ -\quad 1 \end{array}$ | $\begin{gathered} 1.09 \\ \substack{1.97 \\ .84 \\ -50 \\ -50} \end{gathered}$ | (106 $\begin{gathered}\text { 106 } \\ \text { 107 } \\ \text { 108 } \\ \text { 109 } \\ \text { 108 }\end{gathered}$ |

Table clxit.-comparison of various south african life tables at certain ages.

| Ase. | Male. |  |  |  |  | Female. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \text { Mr. C. W. Kops. } \\ & \text { 1919-21. } \end{aligned}$ | Johaneshurg. | cisi. Mrutual |  |  | Johanesburg. |
| (a) Complete Expectation of Life (e $e_{x}$ ). |  |  |  |  |  |  |  |  |
|  |  | $\begin{array}{r} 55 \cdot 61 \\ 59 \cdot 94 \\ 60 \cdot 26 \\ 59 \cdot 79 \\ 59 \cdot 14 \\ 58 \cdot 34 \\ 54 \cdot 02 \\ 45 \cdot 26 \\ 37 \cdot 08 \\ 29 \cdot 16 \\ 21 \cdot 86 \\ 15 \cdot 14 \\ 9 \cdot 53 \\ 5 \cdot 56 \\ 3 \cdot 11 \\ 1 \cdot 33 \end{array}$ |  |  |  |  |  |  |
| (b) Ratr of Mortaitity (1,000q ${ }_{\text {d }}$ ). |  |  |  |  |  |  |  |  |
|  | $\underset{\substack{74.44 \\ 18.70}}{\substack{20 \\ \hline}}$ <br>  <br>  <br> $\underset{\substack{2.179 \\ 1.74 \\ 1.49}}{ }$ <br> ${ }_{\substack{3.44 \\ 4 \\ \hline 16}}^{3}$ <br> 7.16 <br> 12.27 <br> 0.27 <br> 24.71 <br> $51 \cdot 69$ <br> 1.65 <br> $119 \cdot 12$ $251 \cdot 46$ <br> 457.99 |  |  | $\begin{array}{r} 125 \cdot 35 \\ 32 \cdot 57 \\ 14 \cdot 15 \\ 9 \cdot 05 \\ 5 \cdot 55 \\ 3 \cdot 79 \\ 2 \cdot 23 \\ 4 \cdot 42 \\ 7 \cdot 38 \\ 12 \cdot 73 \\ 19 \cdot 86 \\ 31 \cdot 62 \\ 56 \cdot 34 \\ 121 \cdot 18 \\ 570 \cdot 97 \end{array}$ |  | $\begin{array}{r} 62 \cdot 76 \\ 18 \cdot 38 \\ 7 \cdot 70 \\ 4 \cdot 14 \\ 3 \cdot 43 \\ 2 \cdot 37 \\ 1 \cdot 48 \\ 2 \cdot 60 \\ 3 \cdot 98 \\ 5 \cdot 43 \\ 8 \cdot 63 \\ 17 \cdot 25 \\ 42 \cdot 97 \\ 103 \cdot 09 \\ 237 \cdot 95 \\ 456 \cdot 30 \end{array}$ | $73 \cdot 88$ $20 \cdot 76$ $9 \cdot 15$ $5 \cdot 35$ $4 \cdot 25$ $3 \cdot 04$ $1 \cdot 64$ $3 \cdot 34$ $5 \cdot 06$ $6 \cdot 20$ $9 \cdot 45$ $18 \cdot 66$ $45 \cdot 64$ $119 \cdot 99$ $238 \cdot 34$ $443 \cdot 00$ |  |
| (c) Number of Survivors ( $\left(l_{x}\right)$. |  |  |  |  |  |  |  |  |
|  | $\begin{array}{r} 1,000,000 \\ 925,563 \\ 908,252 \\ 901,567 \\ 897,325 \\ 894,218 \\ 883,978 \\ 864,911 \\ 832,490 \\ 786,225 \\ 716,110 \\ 602,702 \\ 423,372 \\ 183,309 \\ 25,553 \\ 422 \end{array}$ | $1,000,000$ 912,156 892,420 884,467 879,395 876,372 865,897 844,152 807,557 757,842 680,810 567,732 392,052 169,494 26,526 475 | $1,000,000$ 921,62 891,09 877,738 871,03 867,03 867,034 856,035 831,295 783,876 727,300 650,938 535,662 364,149 160,010 24,95 241 | 1,000,000 874,650 846,160 834,190 826,640 822,050 822,050 806,590 786,970 746,270 685,760 594,430 594,430 474,860 325,540 143,240 |  | 1,000,000 937,239 920,012 912,928 909,150 906,027 897,639 897,639 880 853,043 814,143 814,143 763,378 674,230 508,429 249,095 41,231 780 780 |  | ,000,000 887,340 859,210 853,350 853,350 848,620 832,790 813,380 813,380 780,760 780,760 736,560 671,870 561,080 404,750 217,060 45,430 740 |
| (d) Probablity of Surviting 10 Years (top $p_{x}$ ). |  |  |  |  |  |  |  |  |
| 0 10 20 30 40 80 80 700 90 100 |  | - 86590 <br> - 97489 <br> . 93844 <br> - 83391 <br> .69056 .43233 <br> - 15650 | -85604 .97110 .94296 .92783 .89501 .82291 -67981 -43941 -15595 .00966 |  | $\begin{gathered} - \\ \cdot \mathbf{-} \\ \cdot 95514 \\ \cdot 92448 \\ \cdot 88442 \\ \cdot 68422 \\ \cdot 64596 \\ \cdot 31672 \\ \cdot 19679 \\ - \end{gathered}$ | $\begin{gathered} \cdot 89764 \\ \cdot 98127 \\ \cdot 96845 \\ \cdot 95440 \\ \cdot 93765 \\ \cdot 88322 \\ \cdot 75409 \\ \cdot 48993 \\ \cdot 16552 \\ \cdot 01892 \\ - \end{gathered}$ |  | $\begin{aligned} & \cdot \\ & \cdot \\ & \cdot \\ & -97669 \\ & -95990 \\ & -94339 \\ & -81217 \\ & -73510 \\ & -53628 \\ & -20930 \\ & \cdot 01629 \end{aligned}$ |

table clxiil.-COMParison of south african life table No. 2, with those of other countries

|  | Male. |  |  |  |  | Female. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age. |  |  |  |  |  |  | New Zealand. |  | $\begin{aligned} & \text { England and } \\ & \text { Wales No. } 9 . \end{aligned}$ | $\begin{gathered} \text { Irish } \\ \text { Free State. } \\ 1925-27 . \end{gathered}$ |
| (a) Completre Expectation of Life ( $e_{e}$ ) . |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{r}0 \\ \frac{1}{2} \\ 3 \\ 4 \\ 10 \\ 10 \\ 20 \\ 30 \\ 90 \\ 50 \\ 70 \\ 70 \\ 90 \\ 100 \\ 100 \\ \hline\end{array}$ |  |  |  |  |  |  |  |  |  |  |
| (b) Rate of Mortaltity ( $1,000 q_{z}$ ). |  |  |  |  |  |  |  |  |  |  |
| 0 2 2 2 3 4 10 20 20 40 50 60 70 70 90 100 100 |  |  |  |  |  |  |  |  |  |  |
| (c) Number of Survivors ( $l_{x}$ ). |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 0 \\ & 1 \\ & \frac{1}{2} \\ & 3 \\ & 3 \\ & 4 \\ & 5 \\ & 10 \\ & \hline 20 \\ & 30 \\ & 40 \\ & 50 \\ & 60 \\ & 70 \\ & 80 \\ & 90 \\ & 100 \end{aligned}$ | 1,000,000 925,563 908,252 901,567 897,325 897,325 894,218 883,978 883,978 864,911 832,490 832,490 786,225 716,110 602,702 423,372 183,309 25,553 422 | $1,000,000$ 949,830 943,110 938,750 935,810 933,380 924,820 908,530 881,770 843,340 784,940 688,510 503,630 236,420 29,980 40 | ,000,000 928,680 915,120 909,400 905,550 905,550 902,830 893,890 876,970 847,430 847,430 808,130 743,300 633,860 633,860 443,320 186,140 21,410 $\begin{array}{r}170 \\ \hline\end{array}$ | $1,000,000$ 910,040 888,750 879,420 873,700 869,550 856,930 837,480 805,490 762,940 699,160 588,040 395,260 150,350 17,100 | $\begin{array}{r} 1,000,000 \\ 922,840 \\ 905,390 \\ 897,120 \\ 891,770 \\ 887,930 \\ 877,150 \\ 856,300 \\ 816,860 \\ 769,750 \\ 706,570 \\ 599,270 \\ 425,330 \\ 195,500 \\ 33,998 \\ 912 \end{array}$ |  | $1,000,000$ 961,500 955,610 951,600 948,940 946,790 939,990 925,090 897,280 862,770 813,380 724,950 566,440 285,810 46,390 120 |  | $1,000,000$ 930,580 910,690 901,670 895,990 891,820 879,090 859,380 830,190 793,810 742,460 652,020 484,010 222,950 34,470 | $\begin{array}{r} 1,000,000 \\ 936,540 \\ 919,250 \\ 910,610 \\ 905,200 \\ 901,170 \\ 889,330 \\ 864,150 \\ 819,440 \\ 768,270 \\ 703,240 \\ 596,660 \\ 428,200 \\ 211,890 \\ 46,940 \\ 2,197 \end{array}$ |
| (d) Probabiuty of Surivining 10 Years ( Iop $_{\text {p }}$ ) |  |  |  |  |  |  |  |  |  |  |
| 10 20 20 30 30 60 70 80 90 100 |  |  | .89389 .98107 .96632 .95362 .91978 .85276 .69940 .41988 .11502 .00794 |  | $\begin{aligned} & \cdot 87715 \\ & \cdot \\ & \cdot 97623 \\ & \cdot 95394 \\ & \cdot 94233 \\ & \cdot 91792 \\ & \cdot 84814 \\ & \cdot 70975 \\ & \cdot 45964 \\ & \cdot 17390 \\ & \cdot 02683 \end{aligned}$ | .89764 .98127 .96845 .95440 .93765 .88322 .75409 .48993 .16552 .01892 | .93999 .98415 .96994 .96154 .94275 .89128 .78135 .50457 .16231 .00259 | $\begin{array}{r} \cdot 91314 \\ .98458 \\ .96863 \\ .95628 \\ .94037 \\ .89576 \\ \cdot 78077 \\ .49607 \\ \cdot 15598 \\ \cdot 01463 \\ - \end{array}$ |  |  |

table cleiv．－statistics on which south african life table No． 2 is based．



気気気言

table clixv.-south african life table No. 2.

table clexvi.-south african life table no. 2.


| м. |  | males. |  |  |  |  |  | F. 5. |  |  | females. |  |  |  | F. ¢. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ${ }^{a_{x}}$ | $\mathrm{A}_{x}$ | $\mathrm{P}_{x}$ | Age. | ${ }^{*}$ | ${ }^{4} x$ | $\mathrm{P}_{x}$ | Age. | ${ }^{a_{x}}$ | ${ }^{A_{x}}$ | $\mathrm{P}_{x}$ | ${ }_{\text {Agea }}$ | ${ }^{a_{x}}$ | ${ }^{A_{x}}$ | $\mathrm{P}_{x}$ |
|  | $\begin{array}{\|l\|l\|} \hline 16.581 \\ 17.881 \\ 18.807 \\ 18.107 \\ 18.005 \\ 18.005 \end{array}$ | $\begin{gathered} \text { He828 } \\ \hline \end{gathered}$ |  | $\begin{aligned} & 55 \\ & 56 \\ & 58 \\ & 58 \\ & 58 \\ & 59 \\ & 59 \end{aligned}$ | $\begin{gathered} 10.791 \\ 10.791 \\ 10.508 \\ 10.088 \\ 10.002 \\ 9.732 \end{gathered}$ |  |  |  |  |  |  | 55 56 57 58 59 59 5 | $\begin{aligned} & 110.59 \\ & \hline 10 \end{aligned}$ |  |  |
|  |  |  |  | $\begin{aligned} & 60 \\ & 61 \\ & 68 \\ & 68 \\ & 64 \\ & 64 \end{aligned}$ |  |  |  |  | $\begin{gathered} 18.324 \\ 18 \\ 18.225 \\ 18 \\ 18.1 .185 \\ 18 \cdot 125 \end{gathered}$ |  |  | $\begin{aligned} & 60 \\ & 60 \\ & 60 \\ & 60 \\ & 68 \\ & 63 \\ & 68 \end{aligned}$ |  |  | -0:124 <br> OH467 <br> -1848 <br> -05030 <br> -0533 |
| $\begin{aligned} & 10 \\ & 11 \\ & 12 \\ & 18 \\ & 14 \end{aligned}$ |  | $\begin{aligned} & 10.956 \\ & .10966 \\ & .111580 \\ & \hline 112708 \\ & \hline 12198 \end{aligned}$ |  | $\begin{aligned} & 65 \\ & 68 \\ & 67 \\ & 68 \\ & 68 \\ & 68 \end{aligned}$ | $\begin{aligned} & 8.0 .000 \\ & 7.758 \\ & 7.168 \\ & 7.688 \\ & 8.882 \end{aligned}$ |  |  | $\begin{aligned} & 10 \\ & 11 \\ & 11 \\ & 13 \\ & 14 \\ & 14 \end{aligned}$ |  |  |  | 65 68 68 68 68 68 |  |  |  |
| $\begin{aligned} & 15 \\ & 16 \\ & 17 \\ & 18 \\ & 19 \end{aligned}$ | $\begin{aligned} & 17.368 \\ & 17.270 \\ & 17 \\ & 17.106 \\ & 17.05 \\ & 16.599 \end{aligned}$ |  |  | $\begin{aligned} & 70 \\ & 70 \\ & 78 \\ & 78 \\ & 78 \end{aligned}$ |  | $\begin{gathered} .68996 \\ .68681 \\ .68879 \\ 68973 \\ 60377 \\ \hline \end{gathered}$ |  | $\begin{aligned} & 15 \\ & 16 \\ & 17 \\ & 18 \\ & 19 \end{aligned}$ |  |  |  | $\begin{aligned} & 70 \\ & 72 \\ & 78 \\ & 78 \\ & 78 \\ & 78 \end{aligned}$ | $\begin{aligned} & 7.094 \\ & \hline \text { P9 } \end{aligned}$ |  |  |
| $\begin{aligned} & 20 \\ & 20 \\ & 20 \\ & 28 \\ & 28 \end{aligned}$ |  |  |  |  | $\begin{aligned} & 5 \cdot 190 \\ & 4: 980 \\ & 4: 884 \\ & 4: 849 \\ & 4: 209 \end{aligned}$ |  |  | 20 20 20 28 23 24 24 | $\begin{gathered} 17.272 \\ 17 \\ \hline \end{gathered} 17.183$ |  | $\begin{aligned} & .00711 \\ & .00738 \\ & .00766 \\ & .00794 \\ & \cdot 00824 \end{aligned}$ | $\begin{aligned} & 75 \\ & 76 \\ & 77 \\ & 78 \\ & 79 \end{aligned}$ | $\begin{aligned} & 5.547 \\ & 5: 580 \\ & 5: 5050 \\ & \text { an: }: 8057 \\ & 4.547 \end{aligned}$ |  |  |
| $\begin{aligned} & 25 \\ & 28 \\ & 28 \\ & 28 \\ & 28 \end{aligned}$ |  |  |  | $\begin{aligned} & 80 \\ & 81 \\ & 80 \\ & 88 \\ & 88 \\ & 84 \\ & \hline 8 \end{aligned}$ |  |  | $\begin{aligned} & \cdot 15348 \\ & \cdot 16356 \\ & \cdot 17457 \\ & \cdot 18628 \\ & \cdot 19828 \end{aligned}$ | $\begin{aligned} & 25 \\ & 26 \\ & 27 \\ & 28 \\ & 28 \\ & 28 \end{aligned}$ |  |  | $\begin{aligned} & \cdot 00856 \\ & .00888 \\ & .00922 \\ & .00957 \\ & .00994 \end{aligned}$ | $\begin{aligned} & 80 \\ & 81 \\ & 80 \\ & 88 \\ & 88 \\ & 84 \\ & \hline 1 \end{aligned}$ |  | (7817 |  |
| $\begin{aligned} & 30 \\ & 31 \\ & 32 \\ & 38 \\ & 38 \end{aligned}$ |  | $\begin{aligned} & \cdot 20399 \\ & \cdot 21090 \\ & \cdot 21803 \\ & \cdot 22529 \\ & \cdot 23261 \end{aligned}$ | $\begin{aligned} & 01022(12) \end{aligned}$ | $\begin{aligned} & 85 \\ & 86 \\ & 87 \\ & 88 \\ & 88 \end{aligned}$ |  |  |  | $\begin{aligned} & 30 \\ & 30 \\ & 32 \\ & 32 \\ & 33 \\ & 34 \end{aligned}$ |  | $\begin{aligned} & \cdot 17819 \\ & \cdot 18385 \\ & \cdot 18970 \\ & \cdot 19573 \\ & \cdot 20198 \end{aligned}$ |  | $\begin{gathered} 85 \\ 86 \\ 88 \\ 88 \\ 88 \\ 88 \end{gathered}$ |  |  |  |
| 35 36 37 38 38 |  |  | $\text { on } 10.15$ | $\begin{aligned} & 90 \\ & 91 \\ & 90 \\ & 93 \\ & 98 \\ & 94 \end{aligned}$ |  |  | $\begin{aligned} & \cdot 26914 \\ & \cdot 28289 \\ & \cdot 29918 \\ & \cdot 31628 \\ & \cdot 33421 \end{aligned}$ | $\begin{aligned} & 35 \\ & \begin{array}{c} 36 \\ 37 \\ 38 \\ 38 \\ 38 \end{array} \\ & \hline \end{aligned}$ |  |  | .0125 <br> .01305 <br> . 01417 <br> -01478 | $\begin{gathered} 90 \\ 91 \\ 92 \\ 98 \\ 94 \\ 94 \end{gathered}$ |  |  | (25097 |
| $\begin{aligned} & 40 \\ & 41 \\ & 48 \\ & 43 \\ & 43 \end{aligned}$ |  |  |  | $\begin{aligned} & 95 \\ & 96 \\ & 97 \\ & 98 \\ & 989 \end{aligned}$ | $\begin{aligned} & 1.196 \\ & 1.1289 \\ & 1.1295 \\ & 1.1065 \end{aligned}$ |  |  | $\begin{aligned} & 40 \\ & 48 \\ & 48 \\ & 48 \\ & 48 \end{aligned}$ |  |  |  | $\begin{gathered} 95 \\ 98 \\ 98 \\ 98 \\ 99 \\ 99 \end{gathered}$ |  |  | (34650 |
| $\begin{aligned} & 45 \\ & 46 \\ & 48 \\ & 48 \\ & 48 \end{aligned}$ |  |  |  | $\begin{aligned} & 100 \\ & 100 \\ & 1020 \\ & 1020 \\ & 1024 \end{aligned}$ | $\begin{aligned} & .978 \\ & .888 \\ & .889 \\ & .7888 \\ & \hline 870 \\ & \hline \end{aligned}$ |  |  | $\begin{aligned} & 45 \\ & 48 \\ & 48 \\ & 48 \\ & 49 \end{aligned}$ |  |  |  | $\begin{gathered} 100 \\ \text { 年 } 100 \\ \text { 108 } \\ 104 \\ 104 \end{gathered}$ |  | $\begin{aligned} & 9.9050 \\ & \hline 902010 \end{aligned}$ |  |
| $\begin{aligned} & 50 \\ & 50 \\ & 50 \\ & 50 \\ & 53 \\ & 54 \\ & \hline 4 \end{aligned}$ |  | $\begin{aligned} & \cdot \\ & \cdot 37896 \\ & \cdot 39043 \\ & \cdot 40217 \\ & \cdot 41412 \\ & \cdot \end{aligned} 42624$ |  | $\begin{aligned} & 105 \\ & \begin{array}{l} 100 \\ 1107 \\ 108 \\ 108 \\ 109 \end{array} \end{aligned}$ |  | $\begin{array}{r} \cdot 92340 \\ \cdot 92675 \\ \cdot 93050 \\ \cdot 93785 \\ \cdot 95238 \end{array}$ |  |  |  |  |  | $\begin{aligned} & 105 \\ & 100 \\ & 1108 \\ & 1108 \\ & 109 \end{aligned}$ | $\begin{gathered} .559 \\ .459 \\ .485 \\ .285 \end{gathered}$ |  |  |

expectation of life ( $e_{x}$ ) and mortality ( $d_{x}$ ) of european males and females at each year of age.



South African Life Tabirs, 1926 (No. 2).

probablitity of death per 1,000 females ( $1,000 q_{z}$ ), and survivors of $1,000,000$ females born ( $\left(z_{x}\right)$ at South Abrican Liff Tabliss, 1926 (No. 2)


Graph LXXV.

