Demographic situation of Population Movement in Japan 1920-1937.

by

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I. (A) We made a pattern; or "schema" of the trend of
        birth and death rate which the European civilized
        countries have shown for about last 100 years.
        By adopting the birth & death rate in such
        countries as in England, Sweden, France &
        Germany etc. piling them as shown in piled
        photos, & fitting the curve of 3rd degree to
        them, we made a "Schema".

   (B) The curves are as follow :

Birth rate: $Y = -0.0000066X^3 - 0.003961X^2 - 0.00001X$
± 34.873

Death rate: $Y = 0.0000333X^3 - 0.002959X^2 - 0.13042X$
± 25.304

Natural increase rate: $Y = -0.0000399X^3 - 0.001001X^2$
$\pm 0.13041X \pm 9.569$

        We can divide the period into the following by
the characteristics of the directions shown by the trend
of both birth and death rate.

The 1st Period...The period in which the natural increase
   is ascending, as the birth rate is more remarkably
   rising, than the death rate is rising.

The 2nd Period...The period in which the birth rate
   begins to decline but the natural increase rate is
   ascending for the death rate is also so remarkably
   declining.

The 3rd Period...The Period in which the decline of the
   birth rate is so speedy & even accelerative, but it
   seems almost to be at its minimum & in abeyance.
   Accordingly, the natural increase rate rapidly
   declines.
The 4th Period...At this period still the birth rate
   goes on declining. We might go so far as to declare
   that it is even possible to decline to zero. On the
   other hand, the death rate can never be lowered down

                                                    to

to zero.   The change in the age composition at
3rd period necessarily raises the death rate.   So
that the birth-curve & the death-curve are tended
to cross with one another.   Since this crossing, the
population begins to display the absolute decrease.

II.   The trend of the birth & death rate in Japan from
1920 to 1937 (just before the Chinese emergency)
is as follows:

birth rate: $Y = -0.00759X^2 \pm 0.32182X \pm 33.312$

death rate: $Y = 0.02202X^2 \pm 41237X \pm 19.163$

natural increase rate: $Y = -0.0296X^2 - 0.09056X \pm 14.148$

The demographic situation of population
movement in Japan during these periods is equivalent
to that of the 2nd period above-mentioned & it can
be said that just before the Chinese emergency such
a situation was already to be seen.

III.   Since 1920 when the climax of the birth rate was
reached, it evidently began to decline.   The
decline of birth rate during these periods in Japan
was so rapid as it was so in England since 1877.
In Japan, this decline was decidedly faster than
in Germany.
Comparing Japan with England & Germany as to this,
the Japanese declining birth-vate was time lag
by 44 years.

Japan		England & Wales		Germany	
Year	Birth Rates	Year	Birth Rates	Year	Birth Rates
1916	32.7	1872	35.6	1872	39.5
17	32.3	73	35.4	73	39.7
18	32.2	74	36.0	74	40.1
19	31.6	75	35.4	75	40.6
20	36.2	76	36.3	76	40.9
21	35.1	77	36.0	77	40.0
22	34.2	78	35.6	78	38.9
23	34.9	79	34.7	79	38.9
24	33.8	80	34.2	80	37.6
25	34.9	81	33.9	81	37.0
26	34.8	82	33.8	82	37.2
27	33.6	83	33.5	83	36.6
28	34.4	84	33.6	84	37.2
29	33.0	85	32.9	85	37.0
30	32.4	86	32.8	86	37.1
31	32.2	87	31.9	87	36.9
32	32.9	88	31.2	88	36.6
33	31.6	89	31.1	89	36.4
34	30.0	90	30.2	90	35.7
35	31.6	91	31.4	91	37.0
36	39.9	92	30.4	92	35.7
37	30.6	93	30.7	93	36.8