

## Below Replacement-level Fertility in Korea : A Myth or a Reality?

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### I. Introduction

"A spectre is haunting the world---the spectre of depopulation. All the powers of the worlds have yet to enter into a holy alliance to exorcise this spectre. They have a common enemy to fight : the anti-Malthusian spectre."

The above anti-Malthusian manifesto very much echoes what one often heard from economists in the 1930's who were allergic to the number "two" in the total fertility rate. In the late 1980's, this demographic manifesto of a similar vein is again resounding throughout the developed countries and in part of the developing countries in the Asian region, including Singapore and intermittently, if not frequently, Korea.

Understandably, demographers and economists are overly sensitive to the myth of number "t-

wo", exceptions being avowed Panglossian anti-natalists who are oblivious of the logic of natural decay but not to the law of natural growth.

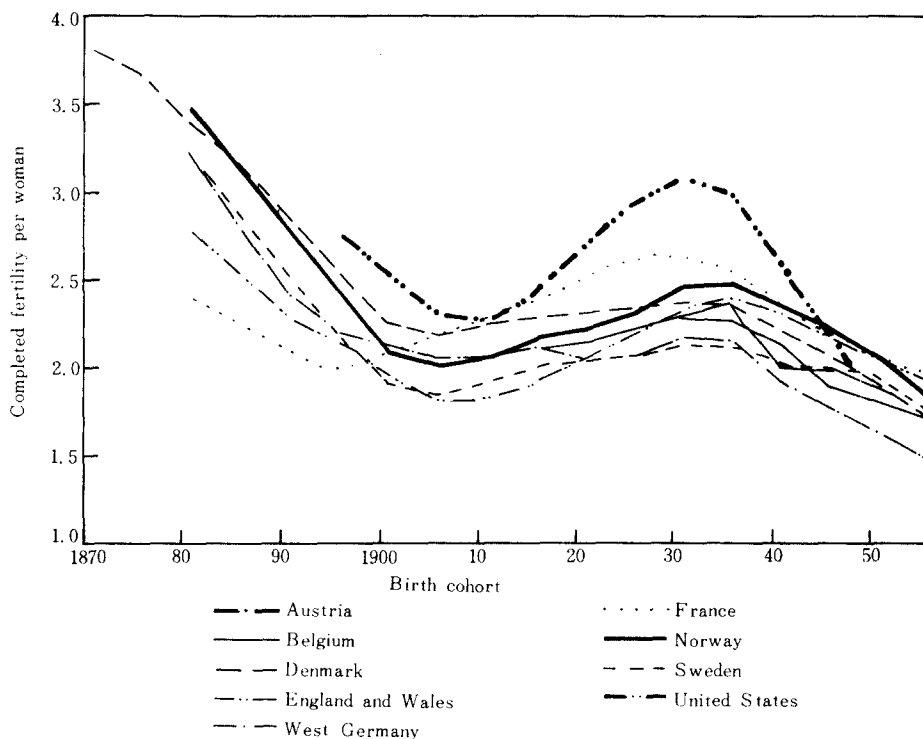
The litanies on the impending depopulation crises are well exemplified in the articles on fertility, nuptiality, and household formation and numerous books on what they call the "second demographic transition" in parts of Europe and North America.<sup>(1)</sup>

In fact, Burch and Matthews in their recent research notes<sup>(2)</sup> succinctly summarize the characteristics of the striking demographic change in the developed societies in the following manner : fall of fertility to the below-replacement level, increase in non-marital cohabitation, rising incidence of divorce, and rise in the proportion of single-parent families (broken families) and in the one or two-person households, presaging the demise of the socio-demographic terminology,

(1) Michael S. Teitelbaum, Jay M. Winter, *The Fear of Population Decline*, Academic Press (1985) ; Kingsley Davis et al (ed.), *Below-Replacement Fertility in Industrial Societies : Causes, Consequences, and Policies*, proceedings of a seminar at Hoover Institution, Stanford University, (Nov. 1985) ; Dirk J. van de Kaa, "Europe's Second Demographic Transition," *Population Bulletin*, Vol. 42, No. 1(March, 1987).

(2) Thomas K. Burch, Beverly J. Matthews, "Household Formation in Developed Societies," *Population and Development Review*, (Sept. 1987), p. 495.

Fig 1. Comparisons in Completed Cohort Fertility and Long-term Trend



“family.”

As Jean Bourgeois-Pichat<sup>(3)</sup> illustrates in Fig. 1 the changing patterns of the completed cohort fertility in several European countries and in the United States, it is apparent that in these countries, though there are differences in the onset of the below replacement-level fertility, there is observed a long-term declining population trend, which is not easily captured by the short-term fluctuations based on the period total fertility rates.

In the present paper, efforts will be made to compare changes in the fertility level in Korea, Japan, China (mainland), and Singapore, the first Asian city state to reach the below-replacement level fertility, and an attempt will be made to access what the future might hold for Korea's fertility pattern, and whether the current dow-

nward trend might continue to prevail.

## II. Below-replacement Fertility in Singapore

Table 1 indicates that in Singapore, the total fertility rate in 1960 did not differ much from that in Korea for the same period. In Korea, according to the 1960 census, the total fertility rate stood at 6.0, while for the same year in Singapore, it was 5.77.

Within a ten-year period (1960-70), the total fertility rate in Singapore was halved, and in the following 15-year period, the rate was again halved, reaching 1.62 well below the replacement level. What calls for our attention in Table 1 is the sudden and drastic decline in the total fertility rate for the Chinese from 2.06 in 1975 down to 1.26 in 1986, a level far below the 1984 total fertility level of 1.29 in West Germany,

(3) Jean Bourgeois-Pichat, “The Unprecedented Shortage of Births in Europe,” in Kingsley Davis et al (ed.), *Below-Replacement Fertility in industrial Societies*, (Nov. 1985), p. 9.

**Table 1. Changes in Total Fertility Rate in Singapore by Ethnic Category, 1960-86<sup>(4)</sup>**

Year	Total Fertility Rates			
	All ethnic groups	Chinese	Malays	Indians
1960	5.77	5.62	6.42	7.37
1965	4.77	4.31	6.31	6.69
1970	3.07	3.00	3.45	3.15
1975	2.07	2.06	2.12	1.95
1980	1.73	1.66	2.04	1.93
1985	1.62	1.47	2.12	1.92
1986	1.44	1.26	2.05	1.89

where at present the minus population increase rate is registered.

The fertility decline down to the 1.26 level for the Chinese in Singapore is accountable for, inter alia, by socio-cultural factors, not by sheer demographic and economic factors as one might have thought. The year 1986 is the "year of tiger," a year considered to be an inopportune one for marriage and childbearing according to the Chinese lunar calendar. Hence the greater amount of fertility downfall for the Chinese ethnic group compared to the Malays and the Indians over the corresponding period (1985-86).

Even if we take into account the socio-cultural factors that helped lower down the Chinese fertility level, the overall fertility level for Singapore is too low compared to other Asian countries, including Korea, mainland China, Taiwan, and Japan, where the total fertility rates are fast approaching or already overpassed the replacement level. Taking a closer look at the factors that went into lowering down the fertility level in Singapore, we find the female marriage age and the abortion ratio in that city state show a marked difference from those prevailed in Korea for the past years.

According to the 1980 marriage registration data in Singapore, the mean age at first marriage stood at little over 24 years for female, while in Korea, for the 1959 birth cohort, the female mean age at first marriage stood at 22.2, a figure calculated on the basis of the 1985 Fertility and Family Health Survey. It would be impractical to compare the marriage age data from the registration to those from the sample survey, nonetheless, one can grasp a demographic (nuptiality pattern) situation that obtained in the two respective countries of recent years.

As for the abortion ratio, for Singapore it stood at 45.0 in 1981, while for Korea, it stood at 85.4 in 1978, which declined to 74.6 in the 1985 survey. In Japan, the abortion ratio jumped from 41.4 in 1952 to 197.2 in 1960 and then declined to the 120.5 level in 1975.

Though in Korea, a downturn in abortion ratio is observed for the 1978-1985 period, the 1985 fertility and family health survey data indicate that 53 percent of the women in the fertile age category had on the average at least one induced abortion. The abortion ratio in Korea for 1978 was almost twice that in Singapore for 1981, and yet the total fertility rate in Singapore plummeted down to the 1.44 level in 1986. Then what accounts for this fertility downturn in Singapore? Certainly, the female mean age at marriage was higher in Singapore than was the case in Korea, but this single factor cannot explain all the reasons behind the fertility fall over such a short span of time. One of the primary factors that help account for this rapid fertility fall is that Singapore is a small city-state where the governmental family planning services could reach virtually every corner and sector of the society. The other factor is the socio-economic development Singapore has achieved over the past two decades and the concomitant increase in female

(4) Paul P.L. Cheung, "Beyond Demographic Transition: Industrialisation and Population Change in Singapore," paper presented at the *Fifth Asian Regional Conference of Sociologists*, Seoul, Dec. 3-5, 1987, Table 1.

labor force participation rate, which in fact is reflected in the delayed marriage and the increase in the proportion of women willing to substitute career for childbearing, a familiar pattern easily observable in other countries with the below replacement-level fertility.

The strong family planning program, coupled with the socio-economic development, helped bring about attitudinal changes toward childbearing.

### III. Situation in Japan and Mainland China

As shown in Table 2, the birth rate in Japan was halved within a 10-year period from 1947 to 1957, and the latest statistics on the birth rate and the death rate stand at 11.4 and 6.2, with a total fertility rate of 1.76 as of 1985.

An examination of the data on birth and death rates in Table 2(a) reveals that, while the death rate does not show erratic ups and downs throughout the 1947-1986 period, short-term fluctuations are seen in the birth rate over the corresponding period. A noteworthy feature in the birth rate fluctuation is the upthrust in the 1965 birth rate and a sudden dip in the birth rate the following year, and again a jump to 19.3 in 1967.

The reason, perhaps the one reason, that the birth rate in Japan fell to the 13.7 level in 1966 has to do, as was the case in Singapore, with the fact that that year was the year of "fire horse" (hinoeuma) by the lunar calendar. A Chinese legend has it that daughters born in the year of fire horse are ill-fated, and parents are not willing to bear a child that year for fear that the child born would prove to be a female. It is understandable that both for the two years (1965 and 1967) preceding and following the year of fire horse (1966) Japanese parents either rushed to have their children before the year of ill-omen arrives or delayed childbearing until after that year. Or, once the parents who inad-

Table 2(a). Birth and Death Rates in Japan  
(1947-1986)

Year	Birth rates(%)	Death rates(%)
1947	34.3	14.6
1948	33.5	11.9
1949	33.9	11.6
1950	28.1	10.9
1951	25.3	9.9
1952	23.4	8.9
1953	21.5	8.9
1954	20.0	8.2
1955	19.4	7.8
1956	18.4	8.0
1957	17.2	8.3
1958	18.0	7.4
1959	17.5	7.4
1960	17.2	7.6
1961	16.9	7.4
1962	17.0	7.5
1963	17.3	7.0
1964	17.7	6.9
1965	18.6	7.1
1966	13.7	6.8
1967	19.3	6.7
1968	18.4	6.8
1969	18.5	6.8
1970	18.8	6.9
1971	19.2	6.6
1972	19.3	6.5
1973	19.4	6.6
1974	18.6	6.5
1975	17.1	6.3
1976	16.3	6.3
1977	15.5	6.1
1978	14.9	6.1
1979	14.2	6.0
1980	13.6	6.2
1981	13.0	6.1
1982	12.8	6.0
1983	12.7	6.2
1984	12.5	6.2
1985	11.9	6.3
1986	11.4	6.2

Source: Toshio Kuroda, "Population Aging", a paper presented at the second conference of Asian Forum of Parliamentarians on Population and Development, Beijing, Sept. 23-25, 1987, p. 17.

Table 2(b). Trends in Reproduction and Natural Increase Rates in Japan(1920 – 1985)

Year	Total fertility rate	Gross reproduction rate	Net reproduction rate	Natural increase rate (%)
1920	5.24	2.56	1.59	–
1925	5.11	2.51	1.56	–
1930	4.71	2.30	1.52	–
1937	4.36	2.13	1.49	–
1940	4.11	2.01	1.44	–
1947	4.54	2.21	1.72	1.97
1950	3.65	1.77	1.51	1.72
1955	2.37	1.15	1.06	1.16
1960	2.00	0.98	0.92	0.96
1961	1.96	0.95	0.91	0.95
1962	1.98	0.96	0.92	0.95
1963	2.01	0.98	0.94	1.03
1964	2.05	0.99	0.96	1.07
1965	2.14	1.04	1.01	1.17
1966	1.58	0.76	0.74	0.70
1967	2.23	1.08	1.05	1.26
1968	2.13	1.03	1.00	1.16
1969	2.13	1.03	1.00	1.17
1970	2.14	1.03	1.00	1.19
1971	2.16	1.04	1.02	1.26
1972	2.14	1.04	1.01	1.28
1973	2.14	1.04	1.01	1.28
1974	2.05	0.99	0.97	1.21
1975	1.91	0.93	0.91	1.08
1976	1.85	0.90	0.88	1.00
1977	1.80	0.87	0.86	0.94
1978	1.79	0.87	0.86	0.88
1979	1.77	0.86	0.85	0.82
1980	1.75	0.85	0.84	0.74
1981	1.74	0.85	0.83	0.69
1982	1.77	0.86	0.85	0.68
1983	1.80	0.88	0.86	0.65
1984	1.81	0.88	0.87	0.63
1985	1.76	0.86	0.85	0.56
1986	1.80	–	–	0.52

Source: *Latest Demographic Statistics*, Institute of Population Problems, Ministry of Health and Welfare, Tokyo (1986), *1987 Population Data sheet*, Population Reference Bureau, Washington D. C.

vertently had their children on that very year of fire horse refrained from registering the births of their children by one year, which resulted in the up-turn in the 1967 birth rate as seen in Table 2(a).

A similar phenomenon is also observed in the data on the total fertility rates and net reproduction rates in Table 2(b). For 1966, the total fertility rate dipped to 1.58 from the 2.14 level of the preceding year, and the net reproduction rate fell below unity in 1966, then quickly returned to the above-replacement level the following year. Nonetheless, the total fertility rate in Japan fell to the 2.05 level in 1974, a level much similar to that (2.1) obtained for Korea in 1985, according to the 1985 Fertility and Family Health Survey. Since 1974, the total fertility rate in Japan had continued declining till 1982, and since then, it has been hovering around the 1.77-1.81 level. The net reproduction rate fell below replacement level in 1974, and has since then been fluctuating between 0.88 and 0.83.

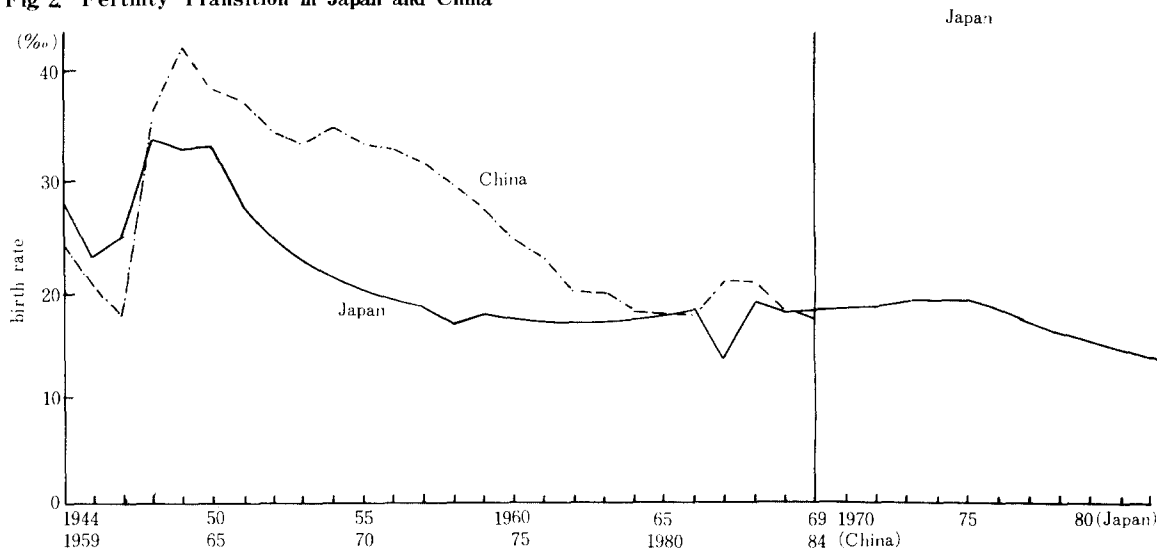
What are the factors that brought about the

fall in the birth rate? What are the characteristics of the Japanese fertility transition that are not observable in the case of other countries?

As Fig. 2 explains, the high abortion ratio following the passage of the eugenics protection law in 1948 did have a considerable effect on the fertility decline during the 1950's, a critical period in Japan's fertility transition, but what is of greater significance is the increase in female labor force participation rate. For instance, the proportion of married women engaged in non-agricultural work increased from 20.4 percent in 1955 to 51.2 percent in 1975, and the proportion is still on the increase.

Another interesting feature of the Japanese fertility decline is the unusual high rate of condom use. Japan is reported to have the highest condom use rate<sup>(5)</sup> in the world. According to the Japanese World Fertility Survey as much as 75.9 percent of currently contracepting married women were using condoms at the time of the 1974 world fertility survey. The highest condom use rate available for other developed country was

Fig 2 Fertility Transition in Japan and China



(5) Samuel Coleman, "The Cultural Context of Condom Use in Japan," *Studies in Family Planning*, Vol. 12, No. 1 (Jan. 1981), p.28.

42 percent for Finland in 1971. The fact that Japan's fertility downturn was not so much affected by the sheer economico-demographic as by socio-cultural characteristics attendant upon

changes in the parental attitude toward family planning offers much to chew upon to those demographers and economists accustomed to analyze the fertility transition in a narrow eco-

**Table 3. Changes in Total Fertility Rates and Natural Increase Rates for European Countries**

Region and country	1950	1960	1965	1970	1975	1880	1983	1984	1985	Natural increase rate(%) :1985
<b>Northern Europe</b>										
Denmark	2.58	2.54	2.61	1.95	1.92	1.55	1.38	1.40	1.45	-0.08
Finland	3.16	2.17	2.47	1.83	1.68	1.63	1.74	1.70	1.65	0.30
Iceland	3.86	4.29	3.71	3.00	2.65	2.48	2.24	2.08	1.93	0.88
Ireland	-	3.75	4.03	3.87	3.41	3.23	2.74	2.58	2.49	0.85
Norway	2.53	2.85	2.93	2.51	1.98	1.72	1.66	1.66	1.66	0.18
Sweden	2.30	2.17	2.42	1.94	1.77	1.68	1.61	1.65	1.73	0.05
United Kingdom	2.22	2.69	2.83	2.44	1.82	1.92	1.77	1.77	1.80	0.14
<b>Western Europe</b>										
Austria	-	2.65	2.68	2.30	1.83	1.65	1.56	1.52	1.47	-0.03
Belgium	2.34	2.52	2.60	2.24	1.73	1.69	1.56	1.52	1.49	0.03
France	2.93	2.73	2.84	2.47	1.93	1.94	1.79	1.81	1.82	0.38
Fed Rep Germany	2.10	2.37	2.50	2.02	1.45	1.45	1.33	1.29	1.29	-0.19
Liechtenstein	-	-	-	2.61	1.67	2.02	1.62	1.93	-	0.75
Luxembourg	-	2.29	2.41	1.97	1.63	1.51	1.45	1.43	1.39	0.03
Netherlands	3.09	3.12	3.04	2.57	1.66	1.60	1.47	1.49	1.50	0.36
Switzerland	2.40	2.44	2.61	2.10	1.61	1.55	1.52	1.53	1.51	0.23
<b>Southern Europe</b>										
Greece	2.57	2.23	2.32	2.36	2.33	2.21	1.94	1.82	-	0.24
Italy	2.49	2.41	2.55	2.43	2.19	1.66	1.51	1.50	1.42	0.06
Malta	-	-	-	-	2.20	2.20	2.20	2.20	-	0.68
Portugal	3.04	3.13	3.07	2.76	2.59	2.14	1.95	1.87	-	0.32
Spain	2.46	2.79	2.97	2.82	2.80	2.22	1.71	-	-	0.47 (1983)
Yugoslavia	3.74	3.80	2.71	2.29	2.27	2.13	-	-	-	0.68
<b>Eastern Europe</b>										
Bulgaria	2.94	2.30	2.03	2.18	2.23	2.05	2.00	1.99	-	0.12
Czechoslovakia	3.04	2.39	2.37	2.07	2.43	2.16	2.08	2.07	2.07	0.27
German Dem Rep	2.30	2.33	2.48	2.19	1.54	1.94	1.79	1.74	-	0.02
Hungary	2.60	2.02	1.82	1.96	2.35	1.91	1.75	1.74	1.83	-0.17
Poland	3.71	2.98	2.52	2.20	2.27	2.26	2.40	2.37	2.31	0.79
Romania	3.17	2.34	1.91	2.89	2.60	2.43	2.00	-	-	0.52 (1984)
USSR	2.88	2.84	2.46	2.39	2.41	2.26	2.37	2.41	-	0.88 (1984)

Source: Dirk J. van de Kaa, "Europe's Second Demographic Transition," *Population Bulletin*, (March, 1987), p. 13, Table 2; p. 19, Table 5.

nomic framework labeling children durable goods, inferior ones at that.

The vital statistics data in Table 2(a) and the trends in the net reproduction rate in Japan starting in the late 1970's up to the present provide an indication that the population in Japan already entered the so-called the "second demographic transition", though the on-set of the second transition falls behind that observed in some of the West European countries such as West Germany.

Despite that in Japan the second demographic transition started later than was the case in West European countries, it appears Japan experienced the second demographic transition much earlier than South European countries such as Greece and Italy. Though in strict demographic terms, the mean number of children ever-born per married couple differs from the total fertility rate, the former somehow can provide what the latter might have been, in the absence of the data on the total fertility rate. In Greece, the mean number of children per married couple fell from 2.42 for the 1951-55 marriage cohort to 1.96 for the cohort married ten years later, and in Italy, the mean number of children per married couple stood at 2.38 for the 1951-55 marriage cohort, which fell to 2.19 for the 1961-65 marriage cohort. <sup>(6)</sup>

But in Table 3, one notices that starting in the 1980's the extent to which fertility fell in Italy was much greater than was the case for Greece, though regional differentials in fertility decline were observed due to the divide between the South and the North in Italy. The total fertility rates in Table 3 provide an indication that due to the age structure differences between the individual countries, some of the countries listed

still maintain a 0.2-0.8 percent natural population increase rate, regardless of the fact that their total fertility rate fell below the 1.8 level.

As for the fertility transition in mainland China, as is shown in Table 4 (a), the birth rate was halved from a high level of 43.37 in 1963 to 19.91 in 1976, and ever since has been fluctuating around the 18-21 level, the only anomaly being the famine years, 1958-61, perhaps the largest in its scale recorded in history. Ashton et al<sup>(7)</sup> estimate that during the 1958-61 famine years, as many as 33 million lost or postponed their births, the affect of which is registered clearly in Table 4(b) where the total fertility rate fell sharply from a high of 6.405 in 1957 to a level as low as 3.287 in 1961, but after the famine years, the total fertility rate again bounced back to a high 6.023 level in 1962.

One noteworthy feature about the fertility transition is that even during the mid-1960's, the death rate was relatively low compared to other countries, thanks to the barefoot doctor system, and due to the low death rate, the fertility level began to fall even before the introduction of the induced family planning program on the part of the government in the late 1970's, starting with the promulgation of the new marriage law. If one may term the fertility transition in Japan a model for the family planning from below that grew up from its indigenous soil immune from intervention either from abroad or from the government agencies, the fertility transition in China may be called a model influenced from the family planning from above controlled by the governmental organizations.

In Fig. 2, the fertility transition pattern in Japan is superimposed on that of China with a 15-year displacement, for ease of comparison

(6) Francisco Munoz-Perez, "Le Declin de la Fécondité dans le Sud de l'Europe," *Population* (Nov-Dec, 1987), p.918, Table 5.

(7) Basil Ashton, Kenneth Hill, Alan Piazza, Robin Zeitz, "Famine in China, 1958-61," *Population and Development Review*, (Dec, 1984), p. 613.



Table 4(a). Birth and Death Rates in Mainland China: both Urban and Rural

area rate year	Whole country			Urban area			Rural area		
	birth rate	death rate	increase (%)	birth rate	death rate	increase (%)	birth rate	death rate	increase (%)
1950	37.00	18.00	1.90						
1951	37.80	17.80	2.00						
1952	37.00	17.00	2.00						
1953	37.00	14.00	2.30						
1954	37.97	13.18	2.48	42.45	8.07	3.44	37.51	13.71	2.38
1955	32.60	12.28	2.03	40.67	9.30	3.14	31.74	12.60	1.91
1956	31.90	11.40	2.05	37.87	7.43	3.04	31.24	11.84	1.94
1957	34.03	10.80	2.32	44.48	8.47	3.60	32.81	11.07	2.17
1958	29.22	11.98	1.72	33.55	9.22	2.43	28.41	12.50	1.59
1959	24.78	14.59	1.02	29.43	10.92	1.85	23.78	14.61	0.92
1960	20.86	25.43	-0.46	28.03	13.77	1.43	19.35	28.58	-0.92
1961	18.02	14.24	0.38	21.63	11.39	1.02	16.99	14.58	0.24
1962	37.01	10.02	2.70	35.46	8.28	2.72	37.27	10.32	2.70
1963	43.37	10.04	3.33	44.50	7.13	3.74	43.19	10.49	3.27
1964	39.14	11.50	2.76	32.17	7.27	2.49	40.27	12.17	2.81
1965	37.88	9.50	2.84	26.59	5.69	2.09	39.53	10.06	2.95
1966	35.05	8.83	2.62	20.85	5.59	1.53	36.71	9.47	2.72
1967	33.96	8.43	2.55						
1968	35.59	8.21	2.74						
1969	34.11	8.03	2.61						
1970	33.43	7.60	2.58						
1971	30.65	7.32	2.33	21.30	5.35	1.60	31.86	7.57	2.43
1972	29.77	7.61	2.22	19.30	5.29	1.40	31.19	7.93	2.33
1973	27.93	7.04	2.09	17.35	4.96	1.24	29.36	7.33	2.20
1974	24.82	7.34	1.75	14.50	5.24	0.93	26.23	7.63	1.86
1975	23.01	7.32	1.57	14.71	5.39	0.93	24.17	7.59	1.66
1976	19.91	7.25	1.27	13.12	6.60	0.65	20.85	7.35	1.35
1977	18.93	6.87	1.21	13.38	5.51	0.79	19.70	7.06	1.26
1978	18.25	6.25	1.20	13.56	5.12	0.84	18.91	6.42	1.25
1979	17.82	6.21	1.16	13.67	5.07	0.86	18.43	6.39	1.20
1980	18.21	6.34	1.18	14.17	5.48	0.87	18.82	6.47	1.24
1981	20.91	6.36	1.46	16.45	5.14	1.13	21.55	6.53	1.50
1982	21.09	6.60	1.45	18.24	5.28	1.30	21.97	7.00	1.50
1983	18.62	7.08	1.15	15.99	5.92	1.01	19.89	7.69	1.22

between the on-set of the fertility transition in the two countries.

The fact that fertility transition in Japan was largely attributable to the voluntary resort by the individual couples to induced abortion is well

testified in Fig. 2 by the unusual drop in the fertility during the 1950's, compared to the rather gradual fertility decline and sporadic rise in mainland China over the corresponding years. A slight rise in fertility in China in the early

**Table 4(b). Total Fertility Rates by Year in Mainland China**

Year	Total Fertility Rate		
	Whole country	Rural	Urban
1950	5.813	5.963	5.001
1951	5.699	5.904	4.719
1952	6.472	6.667	5.521
1953	6.049	6.183	5.402
1954	6.278	6.390	5.732
1955	6.261	6.391	5.665
1956	5.854	5.974	5.333
1957	6.405	6.504	5.943
1958	5.679	5.775	5.253
1959	4.303	4.323	4.172
1960	4.015	3.996	4.057
1961	3.287	3.349	2.982
1962	6.023	6.303	4.789
1963	7.502	7.784	6.207
1964	6.176	6.567	4.395
1965	6.076	6.597	3.749
1966	6.259	6.958	3.104
1967	5.313	5.847	2.905
1968	6.448	7.025	3.872
1969	5.723	6.263	3.299
1970	5.812	6.379	3.267
1971	5.442	6.011	2.882
1972	4.984	5.503	2.637
1973	4.539	5.008	2.387
1974	4.170	4.642	1.982
1975	3.571	3.951	1.782
1976	3.235	3.582	1.608
1977	2.844	3.116	1.574
1978	2.716	2.968	1.551
1979	2.745	3.045	1.373
1980	2.238	2.480	1.147
1981	2.631	2.910	1.390
1982	2.6	2.9	1.5

Source: Gérard Calot, "Données Nouvelles sur l'Évolution Démographique Chinoise, I-Kes Recensements de 1953, 1964, et 1982 et l'Évolution des Taux Bruts depuis 1950," *Population*, (Juillet-Oct.

1984), p. 823, Table 3; Ansley J. Coale, *Rapid Population Change in China, 1952-82*, National Academy Press (1984), p. 59, Table 3.

1980's has to do with the enforcement of the new marriage law, instituted by the government as a means of population control.

#### IV. Fertility Transition in Korea and Its Prospects

Korea's birth rate was halved between 1955 and 1980, a considerably greater span of time than were the cases in Japan and China. As Table 5 illustrates, the birth rate in Korea dropped from 45 in 1955-60 to 22.5 in 1980-85, but the recent vital statistics provide an indication that the birth rate has been fast declining in the post-1980's.

The pace at which Korea's fertility is changing can be surmised from the 1985 survey data in Table 6.

The 1985 survey in Table 6 shows that in the rural and the urban areas, compared to the fertility that obtained in 1982 survey, the fertility

**Table 5. Birth and Death Rates in Korea**

Year	Birth rate	Death rate	Increase rate (%)
1930~1935	44	24	-
1935~1940	44	23	-
1940~1945	42	23	-
1945~1950	42	23	-
1950~1955	40	33	-
1955~1960	45	16	3.02
1960~1965	42	15	2.79
1965~1970	32	13	2.35
1970~1975	30	10	1.82
1975~1980	23.9	6.7	1.56
1980~1985	22.5	6.4	1.50
1986	19.4	6.1	1.24

Table 6. Trends in Age-Specific Fertility Rates in Korea

(a) whole country

(per 1,000 women)

year age	1960 census (1)	1966 SDS (2)	1968 survey (3)	1970 census (4)	1971 survey (5)	1973 survey (6)	1974 WFS (7)	1976 survey (8)	1979 CPS (9)	1982 survey (10)	1985 survey (11)
15~19	37	15	7	13	6	10	11	10	8	12	7
20~24	233	205	146	168	88	146	159	147	145	161	162
25~29	330	380	301	278	341	301	276	275	248	245	187
30~34	257	242	201	189	234	220	164	142	94	94	52
35~39	196	150	120	101	20	88	74	49	27	23	8
40~44	80	58	65	39	41	19	29	18	7	3	1
45~49	14	7	7	7	3	3	3	1	1	-	-
TFR	6.0	5.4	4.2	3.9	4.7	3.9	3.6	3.2	2.7	2.7	2.1

(b) urban area

(per 1,000 women)

year age	1960	1966	1968	1970	1971	1973	1974	1976	1979	1982	1985
15~19	22	4	6	8	3	7	6	5	6	6	8
20~24	223	119	113	141	166	104	135	163	138	137	155
25~29	316	278	297	258	316	284	262	258	230	229	183
30~34	250	209	169	141	196	195	129	120	82	87	53
35~39	184	92	77	63	91	50	42	36	20	9	5
40~44	81	48	28	18	29	13	13	11	3	4	-
45~49	-	8	-	3	-	-	2	3	1	-	-
TFR	5.4	3.7	3.5	3.1	4.0	3.3	2.9	2.8	2.9	2.4	2.02

(c) rural area

(per 1,000 women)

year age	1960	1966	1968	1970	1971	1973	1974	1976	1979	1982	1985
15~19	48	16	8	17	9	14	16	16	9	18	4
20~24	291	243	178	189	211	206	192	173	156	185	182
25~29	354	424	305	291	363	324	298	278	289	286	200
30~34	308	284	220	212	266	249	206	173	115	110	48
35~39	237	228	147	126	144	117	103	54	38	29	17
40~44	115	96	87	50	49	25	41	26	1	3	2
45~49	-	12	11	7	4	5	4	-	1	-	-
TFR	6.7	6.5	4.8	4.4	5.2	4.7	4.3	3.6	3.1	3.1	2.27

decline for the prime child-bearing age (25-29) and for the 30-34 age category is substantial,

though in the urban area, an upward trend in fertility for the 20-24 age category is observed

Table 7. Percentage Distribution of Age-Specific Fertility Rates in Total Fertility Rate (1960-85)

age category \ year	1960	1974	1982	1985
15~19	3.23	1.54	2.23	1.68
20~24	20.31	22.20	29.93	38.85
25~29	28.77	38.55	45.54	44.84
30~34	22.41	22.91	17.47	12.47
35~39	17.09	10.34	4.28	1.92
40~44	6.97	4.05	0.56	0.24
45~49	1.22	0.42	-	-
15~49	100.00	100.00	100.00	100.00
TFR	6.0	3.6	2.7	2.1

for the 1982-85 period.

Again, a fertility "lemming effect" is shown in the comparison of age-specific fertility transition pattern for four selected years. For instance, only 49 percent of the total fertility rate was concentrated in the 20-29 age category, which increased to 75.5 percent in 1982 and again to nearly 84 percent in the latest 1985 fertility and family health survey.

In Table 7, virtually all women in fertile age terminate their childbearing by age 35, while as much as 17 percent of the total fertility rate was accounted for by the births in the 35-39 age bracket in 1960.

The emergence of the lemming effect appears to be interrelated with the steady increase in the number of men and women, some of them involuntarily, who were forced to resort to male and female sterilization, due to the government's over-ambitious campaign to lower down the fertility level down to, and below, the replacement level.

According to the results of the 1985 fertility and family health survey, male (8.9%) and female (31.6%) sterilization accounted for the largest proportion in the total family planning practice rate of 70.4% for the year 1985. Sterilization proved to be the most effective stop-gap popu-

lation quantity control means available, notwithstanding its adverse side-effects on the child and maternal health. Each year, the government set up the target number to be covered by sterilization and the field workers were assigned a set amount of workload that they were forced to carry out or bail out.

However, the afore-mentioned does not deny that there are not insignificant number of men and women who willingly resort to sterilization having had one or two children, but the fact is that there were, under the past so-called target-setting family planning system, those who fell victims to this governmental system unknowingly. Therefore, once the government's tightened "control" on the individual couples' preference for a particular type of family planning method gets loosened, chances are that the rate of the current fertility decline, in particular in the rural areas, may not continue or even slow down. The bare fact is that the family planning in Korea was initiated by the government, and it had to be in the circumstances where none were aware of the seriousness of the population problems during the critical 1945-55 period in the midst of the Korean War. Following the Korean War, Korea proved along with Taiwan an ideal testing ground for a variety of then

developing contraceptive methods, some of them were found to be very costly not to the producing industries abroad but to the Korean end-users.

Therefore, if one were to characterize the fertility transition in Korea over the past decades, one might as well term it a transition brought about by the family planning from abroad, a third species never witnessed in Japan nor in mainland China. Korea's family planning program is entirely lacking in its autochthonous nature, as the attitude, knowledge, practice toward family planning, along with the contraceptives and contraceptive devices, were imported from abroad in toto.

In this sense, the fertility decline as seen in Fig. 3 leaves the contraceptive users in Korea much to be desired.

In the socio-cultural confusion that prevailed in the post-Korean War, Korean people in the childbearing age were forced to import, not inculcate, motivation for family planning, since the government believed that the availability of contraceptives would automatically give rise to among parents motivation for limiting the number of children they would give birth to. Some of this reasoning proved to be right but at a high cost we had to pay for. The imported family planning program succeeded in teaching the contraceptive users that the family planning is for pregnancy termination but never for birth spacing. They rushed to have two or three children in quick succession (among them, not a few hurried to have four to five children in as much short period as possible before resorting to family planning after the age of 35 :) and thus came the fertility fall shown in Fig. 3 drawn on the basis of the data from Table 5.

What has been so far enumerated is not intended to negate whatever has thus far been

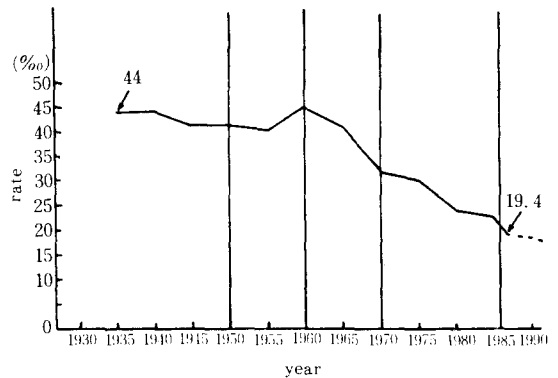


Fig 3. Fertility Transition in Korea(1935~1986)

achieved in the nation's family planning program, but to open up our eyes to the very process and mechanisms whereby Korea's family planning and population quantity control measures have been carried out to produce the much-heralded fertility fall in the recent past.

The nature of the fertility transition in Korea differs from either that of Japan or of mainland China not to speak of that of Western Europe and North America, and therefore it behooves the demographers to reconsider what pattern the future fertility change would take on in the absence of the imported family planning programs we have been accustomed to.

In pure demographic terms, Korea's fertility may have reached the replacement level and heading for the below replacement-level. That is, a below replacement-level fertility may not be a myth in Korea any longer. But what one has to look for is not so much the surface reality of the below replacement-level fertility but the underlying processes and means whereby the surface reality has come into being in order to have a better grasp of the theoretical underpinnings as to whether the much-feared anti-Malthusian depopulation spectre is in fact stalking the streets in Korea.