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Population Studies and Population Policy in China

John S. Aird

Within the past three years, important changes have taken place in China that have accorded a new importance to statistics of all kinds, including population data. China's leaders have decided that domestic policy should be based on a knowledge of the relevant circumstances, not just on political precepts. The guiding principle is expressed in an old slogan, "Learn truth from facts," into which new meaning has been infused. Among the concrete steps taken thus far are the revival of the State Statistical Bureau (SSB), the restructuring of the national statistical reporting system, the establishment of demographic research and training centers throughout the country, the founding of statistical and demographic societies, the publication of statistical and demographic journals, preparations for the third census of the People's Republic of China (PRC), and the resumption of contacts between Chinese population specialists and those in other countries. To all demographers, and especially to those with a long-standing interest in the population of China, all this is cause for celebration. Surely it is in the best interests of China and of the world at large that China's demographers have full access to the experience and expertise of other countries and that the evidence of China's unique experience be added to the world store of demographic knowledge.

Demographic change in China

Now that the isolation of China from the international demographic community has ended, other demographers are eager for information on the main trends in China's population during the past 32 years and the current situation. For many years the collection of official population data was too incomplete to show the course of China's recent demographic history. During the past three years, the SSB has begun to release national population totals and vital rates annually, a

TABLE 1 China: official population totals and vital rates (absolute figures in thousands; birth and death rates per 1,000 population)

Year	Year-end population totals	Annual average totals	Census totals	Birth rates	Death rates	Rates of natural increase
1949	541,670	536,360		36	20	16
1950	551,960	546,820		37	18	19
1951	563,000	557,480		37	17	20
1952	574,820	568,910		37	17	20
1953	587,960	581,390	582,603	37	14	23
1954	602,660	(595,310)		37.97	13.18	24.79
1955	614,650	(608,655)		32.60	12.28	20.32
1956	628,280	(621,465)		31.9	11.4	20.5
1957	646,530	(637,405)		34.03	10.80	23.23
1958	—	—		—	—	—
1959	—	—		24.78	(14.59)	10.19
1960	—	—		—	25.4	—
1961	—	—		—	—	—
1962	—	—		37	(10)	(27)
1963	—	—	691,220	43.6	10.1	33.5
1964	—	—	694,582	(39.3)	(11.5)	(27.8)
1965	725,380	—		38.06	9.55	28.51
1966	742,060	(733,720)		35.2	8.9	26.3
1967	760,320	(751,190)		34.1	8.4	25.7
1968	781,980	(771,150)		35.8	8.3	27.5
1969	803,350	(792,665)		34.3	8.1	26.2
1970	825,420	(814,385)		33.59	7.64	25.95
1971	847,790	(836,605)		30.74	7.34	23.40
1972	867,270	(857,530)		29.92	7.65	22.27
1973	887,610	(877,440)		28.07	7.08	20.99
1974	904,090	(895,850)		24.95	7.38	17.57
1975	919,700	(911,895)		23.13	7.36	15.77
1976	932,670	(926,185)		20.01	7.29	12.72
1977	945,240	(938,955)		19.03	6.91	12.12
1978	958,090	(951,665)		18.34	6.29	12.05
1979	970,920	(964,505)		17.90	6.24	11.66
1980	982,550	(976,735)		(18.1)	6.2	11.9

NOTE: Figures in parentheses were derived from reported data but were not actually cited in Chinese sources in the form given here.

SOURCES:

Population totals:

1949–53: *Tongji gongzuo* Data Section, cited in note 18, pp. 22–25.

1954–56: Huo Wenruo, "Population policy," in Liu Zheng, Song Jian et al., *China's Population: Problems and Prospects* (Beijing: New World Press, 1981), p. 59.

1957: *Weida de shinian—Zhonghua renmin gongheguo jingji he wenhua jianshe chengjiu de tongji* (Ten Great Years—Statistics on Economic and Cultural Construction Achievements in the People's Republic of China) (Beijing: People's Publishing House, 1 September 1959), p. 9.

1965: *Zhongguo jingji nianjian* (1981), cited in note 4, p. VI-3.

1966–74: Hou Wenruo, cited above, pp. 64 and 68.

1975–78: Song Jian and Li Guangyuan, "Renkou fazhan wenti de dingliang yanjiu" ("A quantitative study of the problem of population growth"), *Jingji yanjiu* (Economic Research), No. 2, February 1980, p. 62.

1979: SSB, *Communique on Fulfillment of China's 1979 National Economic Plan*, cited in note 1.

1980: SSB, *Communique on the Fulfillment of the 1980 National Economic Plan*, cited in note 3.

practice it had not followed even during the First Five-Year Plan years (1953–57). Every few months new figures are added to the collection, making it difficult to complete and publish an article on China's population before it is out of date, a frustrating experience at times but much to be preferred to the data famine of former years.

The national population totals and vital rates available as of the present writing appear in Table 1. The official figures show a net increase of over 440 million between 1949 and 1980, but the rate of natural increase has varied widely over the years. Prior to 1949 it was presumably fairly low, perhaps in the neighborhood of 5 per thousand per year. In the early 1950s it rose rapidly to the low 20s per thousand, then fell abruptly during the food crisis of 1959–61, rebounded sharply to a peak of 33.5 per thousand in 1963, remained in the high 20s for the rest of the 1960s, declined rapidly in the first half of the 1970s, and has been almost steady at about 12 per thousand for the past five years.

Few foreign demographers would dispute the general trends indicated by the official data. Many, in fact, accept them as essentially accurate, as do virtually all of the Chinese population specialists who have written on the subject. However, although it is unlikely that more complete or more accurate information would significantly alter the picture the official data give of China's recent demographic history, some uncertainty attaches to particular aspects of that history as long as the data available are not detailed enough to permit evaluation of their internal consistency and not enough is known about the nature of the investigations that produced the figures. Little by little, more detailed data are being published and more is being learned about the censuses, surveys, and record systems from which they came; but most Chinese articles

SOURCES (continued):

Census totals:

1953: *Communique of Results of Census and Registration of China's Population*, cited in note 6, p. 1.

1964: *Shi jie ditu ce*, cited in note 10; and Li Chengrui, cited in note 12.

Vital rates:

1949–53 and 1966–69: Hou Wenruo, cited above, pp. 57, 59, and 64.

1954–57, 1971, and 1978: Given to Pi-chao Chen in 1979 by an official of the SSB.

1959: Tian Xueyuan, "A survey of population growth," in Liu, Song et al., cited above, p. 41.

1960 death rate: Sun Yefang, cited in note 5, p. L5.

1962 and 1964: Read from graphs given in Lin Fude, cited in note 36, p. 6.

1963: Wang Jianmin, cited in note 5.

1965: Yang Xuetong, "Jihua shengyu shi woguo renkoushi fazhan de biran" ("Birth planning is inevitable in the history of China's population development"), *Renkou yanjiu (Population Research)*, No. 2, July 1980, p. 59.

1970 and 1972–76: Liu Zheng, "The present situation and the development of China's population," October 1980, pp. 2–3.

1977: Chen Muhua, cited in note 81, p. 2.

1979: SSB, *Communique on Fulfillment of China's 1979 National Economic Plan*, cited in note 1.

1980 crude death rate: Xinhua-English, Beijing, 28 September 1981, FBIS, no. 189, 30 September 1981, p. K15.

and monographs dealing with population contain few data and say even less about their origins.

Restrictions on availability of data

Why do the writings of Chinese population specialists contain so few figures? One reason is that the national demographic data compiled by the SSB are extremely limited. China has had only two censuses since 1949, both relatively simple. The questions included age, sex, nationality, and relationship to the head of household. The 1953 census required that census takers indicate whether the community was urban or rural. The 1964 census asked about education and occupation, but these data were never tabulated. A system of population registers was instituted in major cities in the early 1950s and extended to rural areas after 1954 but in January 1956 was placed under the control of the Ministry of Public Security. In most years the data reported to the SSB seem to have been confined to provincial population totals (sometimes by sex) and to vital rates, and the reporting has often been incomplete or has presented other problems so that the SSB has had to supplement reported data with estimates before they could be issued. Several special censuses and surveys in the 1950s and the 1970s provided data on certain categories of employment, age composition, family budgets, and causes of death, but the total accumulation of information from these sources is modest. The paucity of data is one of the reasons for the great importance attached to the prospective population census planned for 1982.

However, very few of the demographic data gathered by the SSB have been made available through public channels for use by Chinese population specialists. The policy on release and publication of data is certainly more open now than at any other time since the late 1950s. National population totals have appeared in the annual SSB communiques on economic plan fulfillment since the 1978 communique issued in June 1979 in which the national rate of natural increase for 1978 was also given; the 1979 communique gave the national population total without Taiwan and added the national birth and death rates.¹ Besides the regular release of current data, a number of population totals, vital rates, and absolute totals of births for earlier years and periods have recently been released for the first time, and others are said to be forthcoming.² But there is still a significant gap in both the population totals and vital rates series during the years of the food crisis, as can be seen in Table 1. Also, the vital rates for 1980 are not yet available; they were not included in the SSB's 1980 plan fulfillment communique, which merely notes that the population increased by 1.2 percent in 1980 over the 1979 figure,³ apparently a small setback for the trend toward fuller disclosure of population data.

One of the problems for both Chinese and foreign students of China's population is that most of the figures appear in scattered sources instead of being brought together in SSB compilations (note the source list for Table 1). Assembling the figures is a major effort and their dispersion increases the

chances of errors in copying, dating, and identifying them. During the 1950s, the SSB sometimes released compilations of data through its own statistical journals and monographs, but after the Leap Forward of 1958 it lost the staff required to sustain an extensive publications program. Limited collections of population data have been appearing in other publications that seem to have a quasi-official status, such as the 1980 encyclopedic yearbook published in Shanghai and the 1981 economic yearbook compiled in Beijing and printed in Hong Kong.⁴ But sometimes important national population figures are first cited in newspaper, journal, or magazine articles that may not be easily accessible to many Chinese scholars. The peak 1963 birth and natural increase rates made their first appearance in a Shanghai newspaper article, the peak death rate of 1960 was quoted for the first time in an economic journal article, and the absolute birth totals for 1949–77 were graphed in an article in an English-language magazine for foreign consumption.⁵ Under these circumstances, it is understandable that articles and papers by China's demographers often fail to cite official data relevant to their purposes that have already been published elsewhere.

The main reason so few national population data appear in Chinese sources, however, is central censorship. No national population figures can be made public without prior authorization by the State Council. Even officials of the SSB cannot use such figures in their articles and speeches until they have been cleared. This policy has been in effect since the earliest years of the PRC. It was applied more stringently between the collapse of the Leap Forward in 1959 and the fall of the "gang of four" in 1976, but it has never been relaxed entirely. To this day, the full results of the 1953 census have not been made public. The very brief census communique issued upon the completion of the work in November 1954 gave only the national total, breakdowns by sex, ethnic group, rural and urban residence, and province, and a few details about age composition and the extent of errors in enumeration.⁶

In May 1957, when the original "hundred flowers" policy was in full bloom, a number of Chinese scholars were invited to join in the "rectification" of the SSB. Among other criticisms, they noted that the statistical data issued by the SSB were insufficient for research, and that scholars knowledgeable about population had been excluded from any significant role in the 1953 census. The then director of the SSB, Xue Muqiao, concurred with most of the criticisms and promised to see what improvement he could make.⁷ Whether the timing was accidental or significant, the mid-June 1957 issue of the SSB's journal *Statistical Work* presented a series of statistical tables giving the most complete set of population totals for China issued up to that time, including year-end and annual average figures subdivided into urban and rural for the years 1949–56, some of which are still cited as the official population data.⁸

For a little while thereafter, more 1953 census data were released. The February 1958 issue of the journal *Statistical Research* advertised a volume said to be on sale in local bookstores under the title *Data from the 1953 Population Census of the People's Republic of China*, and a "prepublication an-

nouncement" appeared in the March 1958 issue of *Statistical Work*,⁹ but no copy of this volume has ever been seen outside China, and no citation to it has ever been found in a Chinese source. A staff member of the SSB's Population Statistical Division, asked about the book in 1979, seemed not to have heard of it before. Yet in September 1959 the SSB published a statistical compendium on the first ten years of the PRC giving year-end 1957 provincial population totals and figures for all cities with populations of 500,000 or more. These were the last national population data to be published for 13 years.

When the 1964 census was taken, no mention of it appeared in press or radio. Provincial figures based on the census results were published in several Chinese atlases beginning in 1972, but the atlases gave no reference date or source for the figures.¹⁰ The first published reference to the census appeared in a November 1974 medical journal article on esophageal cancer in North China in which the authors said they had used the 1964 census age-sex distribution to standardize death rates.¹¹ They gave no figures. Some details about the methods used in carrying out the 1964 census were provided by the SSB's census planning team during its visit to the United States in 1979, and further details were given by a member of the team in a journal article in 1980 and by Deputy Director Li Chengrui in an article in 1981,¹² but only the latter provided any data—a census total 3.4 million higher than the sum of the provincial figures given by the 1972 atlas. Several recent articles have given age data for 1964 in broad age groups,¹³ but the percentage age distributions for both sexes and for each sex separately in 5-year age groups that have been used by foreign demographers since 1980 came not from a Chinese source but from the trip report of a foreign doctor who visited China in 1978.¹⁴ Some foreign demographers have speculated that this disclosure may have been accidental.

Age data have also been compiled in three national surveys during the 1970's: a survey taken in 1975, another carried out in connection with the cancer epidemiology study of 1976–79, and a third conducted in 1978. The results of the cancer study age survey, which covered a 10 percent sample of a population of 842 million, were given to another foreign visitor in the form of a percentage age distribution for both sexes in five-year age groups,¹⁵ but the data from the other two surveys have thus far been cited only for a few age groups.

Some Chinese population research institutes have more detailed age data than are available from published sources. At least one is said to have the 1953 and 1964 census data by single years of age and by sex, and other agencies have prepared population projections to test the implications of different fertility levels that would require at least an age distribution in five-year age groups for the starting population. Apparently these data can be cited only in reports prepared for internal circulation.

Reasons for withholding demographic data

Why are basic population data still being withheld despite the importance for national planning of freer access to and more extensive use of statistical data? One reason is that the SSB has always been reluctant to issue data known to be

inaccurate until its staff have had an opportunity to review and adjust the figures. In May 1957, Xue Muqiao said that some of the data collected by the SSB were considered too unreliable to be published.¹⁶ More recently, Li Chengrui said that some of the population data from the Cultural Revolution years might not be published because they were not up to the standard of other official data.¹⁷ A number of recent sources discussing the problem of falsification of statistics in China assert that inaccurate data have caused harmful errors in administration.¹⁸

The SSB may also withhold figures that are obviously implausible or show other discrepancies that would be difficult to explain, although they have sometimes released data in spite of such anomalies. For a number of years the official vital rates have not been completely consistent with the growth rates implied by the national population totals. In more than half the cases the vital rates indicate a lower growth rate than the population totals. The differences are mostly small but persistent. Officials of the SSB are aware of the problem and attribute it to the fact that the national vital rates are estimates prepared in the SSB on the basis of incomplete data from the provinces. This may be why vital rates were not included in the 1980 plan fulfillment communique.

Sometimes data may have been withheld because they reflected problems the central authorities did not want publicly examined. The gaps in the population totals and vital rates for the crisis period 1958–61 are probably illustrative. Since 1978 several authoritative Chinese spokesmen have been commendably frank in criticizing the misguided policies of the Leap Forward and have referred to the disastrous consequences in general but strongly condemnatory terms. One critic characterized the idea that political enthusiasm can bring about miracles in production, a central tenet of the philosophy that inspired the Leap, as “nothing but idealistic rubbish.”¹⁹ A noted economist pointed to the 1960 peak death rate of 25.4 per thousand as statistical evidence that “a high price was paid in blood” for the mistakes of the Leap Forward, and another source indicated that in at least one of the crisis years the national rate of natural increase was negative.²⁰ Despite these revelations, however, there has been obvious reluctance to provide the detailed official data for these years.

Disadvantages of data restrictions

Although the reasons for restricting the publication of official population data are understandable, the restrictions pose problems not only for China's demographers but also for policymakers and administrators. For demographers, lack of detailed data means that their work is usually confined to interpreting summary figures that cannot be tested for internal consistency and plausibility or otherwise evaluated. Without detailed data they have few opportunities to try out new techniques of demographic analysis and thus raise the level of their technical competence. The data restrictions also limit the kind of debate that elsewhere in the world contributes so much to professional development and the advancement of demographic knowledge. Even defective data would be better than none. As one of the May 1957 critics of the SSB pointed out, if the

nongovernment statisticians were given the "raw" data, they could assist the SSB in their refinement.²¹

For policymakers and administrators, the shortage of data means that they do not develop the habit of using data as a basis of judgment. This does not altogether prevent them from "starting from reality" in making decisions, for they can still study field reports and make tours of inspection, but it increases the danger that they may be unduly influenced by atypical cases or situations, which a statistical perspective might help them to avoid. They are also denied the services of statisticians in identifying the underlying causes of situations that require intervention and thus run a greater risk of taking ineffective or inappropriate corrective measures.

Just as serious are the restrictions on information about the origins of the data. Very rarely do China's population specialists indicate the sources of the data they cite in their articles, let alone describe the investigations themselves. Either they do not recognize the importance of knowing how the data were originally obtained, or they are not encouraged to inquire too closely into such matters. Usually they seem to have no idea whether the data given to them are reported figures, or a combination of reported and estimated figures, or purely estimates. As a result, the sources of China's official population data are something of a mystery.

The best known of the major population investigations is the 1953 census, because there was extensive press coverage during the field work. The census directives, forms, procedures, supplemental instructions, and local and regional progress reports were published. In contrast, very little is known about the 1964 census. The methods used were said to be much like those used in 1953, but the 1953 census field work took over ten months to complete and the 1964 census only two weeks. Something about the second census must have been very different from the first. The preparations for the 1982 census have been described in news dispatches, and it is possible to trace the evolution of the planning over several years; but the census directives issued by the Party Central Committee and the State Council have not yet been published, and the census authorities have not released the census schedule used in the Wuxi pretest, let alone the schedule approved for the full-scale enumeration. Full results of the Wuxi pretest have now been published, and the directives and schedule may be made public when the experimental period is over and both are in final form.

Almost no information is available on how the household registration system has been operating in recent years. The original regulations for the urban registration system issued in July 1951, the initial regulations for the national registration system issued in July 1955, and the revised regulations of January 1958 were all published,²² and during the 1950s many press dispatches discussed the problems encountered in establishing the registration system and in sustaining the voluntary reporting of household changes on which the system depended.²³ Throughout the 1960s and the 1970s little was said in published sources about the condition of the population registers. Chinese scholars and

officials questioned about registration data almost uniformly replied that they were absolutely accurate. But within the past year, since work has begun on checking and updating the registers in preparation for the 1982 census, the authorities have evidently discovered that the registers have not been closely monitoring changes in the population. One source says that household registration was disrupted "during the ten years of catastrophe" (i.e., the Leap Forward and the Cultural Revolution), that the household regulations were not enforced, and that there are serious discrepancies between the records and the actual situation.²⁴ The effects of these deficiencies on the population totals and vital rates derived from the registers undoubtedly vary from one locality to another; but the overall tendency is probably to undercount not only the total population but also the numbers of births and deaths.

Almost nothing has been said in Chinese sources about the age-data surveys of 1975 and 1978, but word-of-mouth information indicates that these were surveys of existing records, and that the records chosen were not selected on a random basis. Only by a highly improbable accident could the results of these surveys accurately reflect the national age structure in 1975 and 1978. Age data from the cancer epidemiology survey might come closer to doing so because the survey, though not random, was national in scope. Whether this survey was able to solve the problem of the traditional Chinese age reckoning that caused trouble during the 1953 census is not known. Unfortunately, the cancer survey age data were not reported from the field in single years of age—only in five-year age groups—which virtually precludes correction for age misreporting and makes them difficult to relate to other national age data.

If Chinese demographers are to make their maximum contribution to the rapid development of demography and to the utilization of population data in planning and administration, they must have access to the detailed results of the national population investigations and full information on the procedures followed in data collection. By analyzing official data and reviewing data collection methods, they may be able to identify problems hitherto unrecognized and to suggest ways of adjusting the data and improving methods of data collection. If they were permitted to carry out their own local censuses and surveys, they might be able to check on the official data for their localities and to add significantly to the store of locally useful demographic data. For example, a recent Shanghai newspaper article describes a field survey conducted by the Shanghai Municipal Family Planning Office and the Public Health Statistical Training and Research Team of the Shanghai No. 1 Medical College that collected data on marital status, age at marriage, contraceptive usage, and sterilization. The survey covered a total of 830,000 persons, 7.2 percent of the population of Shanghai Municipality, no small task. Respondents were chosen by a stratified random sampling method.²⁵ Given the items included, the survey was obviously a new field investigation; hence survey data on age and sex composition could be compared with the corresponding data from the municipal population registers, and one could serve as a check on the other. This would require access to the registration records and the full cooperation of the

Shanghai Public Security Bureau, but there could be significant benefits in both directions. With more and more research being carried out in China using modern survey methods, the possibilities for comparisons between official data and new research data are likely to multiply. If the potential value of these possibilities is recognized on both sides, interagency cooperation may develop.

Of course, constructive interchanges may entail some criticism of the official data, the methods by which they were collected, and, by inference at least, the people responsible. Social scientists from other agencies may hesitate to offer criticisms and suggestions if they are not sure how they will be received. Some of the scholars who in the late 1950s suggested that the methodology of the 1953 census was not entirely scientific and that errors in the census results might be greater than the official "recheck" statistics implied were subjected to vehement attacks during the "anti-rightist" struggle that began in the summer of 1957; in the next few years even SSB directors Xue Muqiao and Wang Sihua were criticized for trying to restore objectivity to the statistical system after it was corrupted by the Leap Forward.²⁶ At present, with the revival of the "hundred flowers" policy of encouraging the public expression of different "schools of thought," the earlier suppression of criticism is recognized as a form of "leftist" extremism that caused severe damage in many spheres of Chinese life. Still, Chinese scholars may need much more explicit assurances from the political leadership before they again venture to criticize official population data.

Problems in the national population data

With more complete data, China's demographers may be able to resolve some of the questions about the official population data that have long perplexed foreign analysts. The following examples are among the more conspicuous:

- 1 The official population totals and growth rates for 1949–52 are not plausible. Obviously, the totals were estimated by reverse projection from the 1953 census total, but the growth rates assumed for 1950–52 were much too high. The rates were said to represent "the trend of natural increase of our population in the past,"²⁷ but given the lack of data and the general confusion about the size of China's population prior to 1953, there could have been no firm knowledge about past growth trends. It appears that the SSB simply posited a growth rate of 2.1 percent for 1952 and assumed that the rate had been rising in the previous two years at 0.1 percent per year. But if fertility was increasing because of the return of normal living conditions after years of war and revolution while mortality was falling sharply because of the stabilization of food supplies, improvements in general health, control of contagious diseases, and better sanitation, then the rate of natural increase must have started at a much lower level in 1949 and risen more rapidly in the next few years than the official data show. A reverse projection with rates that are too high results in population totals for earlier years that are too low, because it implies more growth in the interim than could actually have occurred. More reasonable population growth rates could increase the estimate for 1949 by as much as 15 to 20

million. The continued use of the official estimate of 541,670,000 for 1949 exaggerates population growth in any span of years for which that figure is taken as the starting point. It also exaggerates per capita economic indicators for 1949 and thus minimizes improvements in subsequent years. China's demographers could probably derive more realistic estimates using an adjusted 1953 census age structure and better assumptions about fertility and mortality in the preceding years.

2 The levels of fertility and mortality for the early 1950s indicated by the official vital rates seem much too low. They were apparently based on the results of vital registration in a nonrandom collection of areas that could not have been representative of China as a whole. In a few areas registration work began as early as 1951 under the auspices of the Ministry of Health. By 1954 these experiments covered a population of 7 million in 77 areas, of which 58 were urban. When the official vital rates were announced for the first time in conjunction with the release of the census results in November 1954—a birth rate of 37, death rate of 17, and rate of natural increase of 20 per thousand—it was disclosed that the data were based on a sample containing 30,180,000 people consisting of “29 large and medium cities, the whole province of Ningxia, 10 counties of other provinces, as well as 1 representative municipal district, 2 representative towns, 58 representative villages, and 7 representative hamlets in 35 counties.”²⁸ Because of the many cities included, this sample was more than half urban, and it was by no means regionally representative of China. Moreover, there is evidence that vital reporting in some of the sample units was very incomplete. The sample vital rates were ultimately assigned to 1952. The vital rates for 1949–51 (and the absolute birth totals for those years) must be estimates with little or no empirical foundation. Their close similarity to the 1952 rates is reason enough to question their validity. The rates for 1953 and 1954 must also be estimates, since the extension of vital registration to all of China through the population registers began late in 1954 and was apparently not finished even in 1955. Only the rates for 1956 and 1957 could have been based on reasonably complete national reports, but they also are likely to be too low. Births and deaths of infants who die soon after birth have often gone unreported in China, a problem that apparently persists because births are ordinarily not registered for at least a month after they occur. The vital data and estimates for the 1950s should be carefully reviewed by the better trained Chinese demographers of the 1980s. If the old birth and death rates are, in fact, too low, China's progress in reducing fertility and mortality in subsequent years may actually have been underestimated.

3 The most serious problems with the official data are found in the figures for the food crisis years, 1959–61. It is impossible to relate the 1964 census total to the year-end 1957 registration total without assuming a population loss in the intervening years that is much greater than would be inferred from the official vital data for the period. The high rates of increase claimed for 1962–64 complicate the problem, because a backward projection based on the 1964 census figure and the official rates of natural increase produces a very low total for year-end 1961—under 642 million, or about 5 million less than the

year-end 1957 total. If there was any population growth at all in 1958 and 1959—and there must have been an increase of at least 18 million during those years—the net loss in 1960–61 would have had to be no less than 23 million. However, the extreme rebound in the birth and natural increase rates in 1962 and 1963 needs to be reexamined. If the food shortages caused by the bad harvests of 1961 were still affecting the health and fecundity of women in the first half of 1962, the high 1962 and 1963 birth rates are not plausible. Perhaps a part of the apparent rebound in births in 1962 and 1963 was due to a delay in registering births during the crisis years because the famine had disrupted routine civil activities. If that is the case, the real rebound may not have been as early or as high as the official data show, and the losses during the crisis may not have been as acute as either the foregoing net loss estimates or the official crude death rate of 25.4 for 1960 would imply. The official vital rates of the crisis years must be estimates, but their basis is not known. China's demographers should be permitted to review these estimates; perhaps they could produce a more plausible series. They should also be allowed to investigate the question whether the 1964 census total is too low.²⁹

4 Another serious problem is that the 1964 census age distribution does not show the deficit at ages 0–4 years that would be expected if the birth cohorts of 1959–61 dropped as low as the birth totals graph show and infant mortality reached a level high enough to accord with the official 1960 crude death rate. The 1964 census age distribution has 14.52 percent of the population at ages 0–4, and, given the tendency of Chinese traditional age reporting to exaggerate age by one or two years, the implicit bias of the figures for this age group is probably downward. Models I have constructed using the absolute birth totals and holding to the 1957 and 1964 population totals show less than 12 percent of the population in the 0–4 age group.³⁰ Another model based on the 1953 census total, using a slightly modified version of the 1953 census age distribution, holding as closely as possible to the 1957 year-end population total, and incorporating the birth and death rates for the intercensal years necessary to attain exactly the 1964 census age distribution, shows much higher vital rates for the late 1950s than are found in the official series but does not have as low birth and natural increase rates or as high death rates during the crisis years. Its lowest birth cohort is about 22 million, compared with less than 12 million in the absolute birth totals series, and its lowest rate of natural increase is about 13 per thousand, compared with a negative growth rate in at least one of the crisis years in the official data. But the mid-1964 population generated by this model is more than 37 million larger than the census total. There is no way that the 1957 and 1964 official population totals, the 1964 census age distribution, the official vital rates, and the birth totals for this period can be assimilated into a single, internally consistent demographic model. All of the official data for the 1957–64 period should be studied anew by China's demographers.

5 The deficit cohorts of the food crisis years should now be reaching the ages of marriage permitted under the new marriage law that took effect 1 Janu-

ary 1981—20 for females and 22 for males.³¹ This law was expected to reduce age at marriage because it invalidated the high limits previously imposed by local regulations. Females born in 1959, the first year of marked decline in the birth totals series, are now reaching age 23, and the survivors of the 1961 cohort of supposedly less than 12 million should reach age 21 this year. Yet many reports from different parts of China say that the number of marriage registrations rose sharply in 1981 and will continue high for the next two or three years, not just because of the relaxation of restrictions on marriage age but because of the increasing cohorts of young people reaching the minimum marriage ages. The upsurge in marriages is said to be one of the reasons crude birth rates have risen in many localities during the first half of 1981, that is, before the new marriage law could have had any effect on fertility. But if the official demographic history of the crisis years is correct, age composition should be a favorable, not an unfavorable circumstance for current efforts to reduce birth rates and should remain favorable until 1984 or 1985, when the rebound cohorts of the mid-1960s enter the picture. How can this discrepancy be explained? Have the age surveys of the 1970s produced a profile that is more like the 1964 census view of China's age structure than that implied by the official vital rates? If so, which is correct? Or is there some other cause for the rise in the 1981 birth rate that is unrelated both to age composition and to the new marriage law? If they have not already done so, China's demographers should examine the relationships between the various national age distributions, check them against school enrollment trends and other corroborative data, and decide which age structure comes closest to reality. If the vital rates and age structures from various sources are not consistent with current age data, they must be replaced with more reasonable estimates so that China has a meaningful and coherent set of official population data to work with until the 1982 census results are available.

6 China's urban population figures have always been in some confusion, and never more so than at present, as a number of foreign analysts have noted.³² The statistical problems were complicated by the changes in municipal boundaries since the late 1950s, which allowed many municipalities to engulf whole counties, including substantial rural populations and quite a number of discrete county-level cities and towns. But the most basic problems arise from ambiguities in the definition of an urban area and the uncertainty of its application. Fu and Song note that "in the present population report forms, the methods for computing certain items, such as the method of distinguishing agricultural from nonagricultural population, are not quite rational."³³ In practice this distinction is often made not on the basis of occupation or type of community but on whether the family draws its rations under the urban or the rural distribution system, a distinction of administrative convenience.

The definitional problems began with the 1953 census. The census commune reported an urban population of 77,257,282, 13.36 percent of the national population total,³⁴ but the SSB's June 1957 release of population data

gives an urban total of only 74,650,000 for 1953, 12.84 percent of the annual average total for that year (see Table 2). Apparently the census urban figure had been adjusted in the interim. Probably there were inconsistencies in the decisions made locally during the census, because the census instructions did not

TABLE 2 The urban population of China (absolute figures in thousands)

Year	Year-end totals	Annual average totals	Percent urban		Rate of growth (percent)
			Year-end	Annual average	
1949	57,650	55,640	10.60	10.35	—
1950	61,690	59,670	11.12	10.86	7.00
1951	66,320	64,010	11.78	11.46	7.50
1952	71,630	68,980	12.46	12.12	8.00
1953	77,670	74,650	13.21	12.84	8.43
1954	81,550	79,610	13.55	13.38	4.99
1955	82,850	82,200	13.48	13.52	1.59
1956	89,150	86,000	14.20	13.84	7.80
1957	(99,490)	(94,320)	15.4	—	—
1958	(107,200)	(103,345)	16.2	—	—
1959	—	—	—	—	—
1960	130,730	—	19.8	—	—
1961	—	—	—	—	—
1962	—	—	—	—	—
1963	—	—	—	—	—
1964	—	—	—	—	—
1965	101,700	—	14.0	—	—
1966	—	—	—	—	—
1967	—	—	—	—	—
1968	—	—	—	—	—
1969	—	—	—	—	—
1970	102,300	—	12.4	—	—
1971	—	—	—	—	—
1972	—	—	—	—	—
1973	—	—	—	—	—
1974	—	—	—	—	—
1975	111,700	—	12.1	—	—
1976	(113,400)	—	12.2	—	—
1977	—	—	—	—	—
1978	128,620	—	13.2	—	—
1979	—	—	—	—	—
1980	(136,600)	—	(13.9)	—	—

NOTE: Figures in parentheses are not reported data but are derived from reported data.

SOURCES:

1949–56 figures: *Tongji gongzuo* Data Section, cited in note 8, pp. 23–25.

1957 total: Xue Chengxiu, "Tentative treatise on the relationship between increase of urban population in socialist cities and development of agricultural and industrial population," *GMRB*, 7 October 1963, translated in *SCMP*, No. 3093, 4 November 1963, p. 2.

1980 figure: Zhao Wucheng, "Guanxin qunzhong shenghuo gaohao zhuzhai jianshe" ("Be concerned over the livelihood of the masses; Do well in housing construction"), *Gongren ribao*, Beijing, 27 June 1981, p. 2.

All other figures: Zhang Zehou and Chen Yuguang, cited in note 40, pp. 40–42.

include criteria for defining urban places. Explicit criteria were finally provided in a State Council resolution passed in November 1955. The definition followed Soviet practice in counting as urban any place with a permanent population of 1,000 or more of which 75 percent were nonagricultural, or any place with 2,000 or more inhabitants of which at least 50 percent were nonagricultural, or any place that had a People's Committee of the county or municipal level or above. According to the 1953 census, China had 5,468 urban places, of which 193 had less than 1,000 population, 727 had between 1,000 and 2,000 population, and another 4,228 had between 2,000 and 20,000. However, it is reported that the criteria were changed some time in 1963. The definition adopted at that time set the lower urban limit at a population of 3,000 of which at least 75 percent were nonagricultural.³⁵ Professor Lin Fude gives a third definition that differs from the other two. He states that places with 2,000 or more people at least 50 percent of whom are nonagricultural and some places with less than 2,000 of whom 75 percent or more are nonagricultural are called "towns," while places with 20,000 or more people are classed as "cities." It is unlikely, however, that statistical practice has ever been in complete accord with the technical definition.³⁶

Whatever the *de facto* definition of urban followed in current reporting, it evidently differs from that used during the 1950s. Chinese sources now report fewer urban places than in 1953. The number varies from one source to another, but the largest figure is "more than 3,400," including about 190 municipalities and some 2,000 county towns with 10,000 to 50,000 inhabitants each. These figures do not include the more than 56,000 rural market towns throughout the country, which are not considered urban.³⁷ One source says that the 3,400 urban places had a population of over 30 million in the early 1950s, about half the SSB's totals for those years; the same source says that these urban places now have a population of "over 110 million,"³⁸ also well below the current figures in other sources.

The total of "more than 3,400" implies that at least 2,000 places designated as urban in the 1950s are no longer so regarded. The significance of the definitional change is probably understated by these numbers, for there was undoubtedly a considerable increase in the number of small service centers in the past 28 years that would have qualified as urban places under the 1950s definition. One report says that Jiangsu Province had 419 small cities and towns in 1953 and now has 1,958³⁹ and Jiangsu's case is probably not unique.

Under these circumstances, comparisons between urban population totals for the 1950s and current figures may be somewhat misleading, yet some Chinese sources seem to ignore the problem of comparability.⁴⁰ If the urban population totals reflect major changes in definition in 1963 and again within the past several years, the sharp reduction in the urban total between 1960 and 1965 and the rapid rise in the late 1970s shown in Table 2 may be partly illusory. The stability of the total between 1965 and 1970 and its relatively slow increase between 1970 and 1975 are also questionable. Supposedly the growth of the urban population was almost stopped during these years by the transfer

of large numbers of urban middle school graduates to rural and frontier areas to "settle down" and become peasants. But of the more than 16 million reportedly transferred from 1968 to 1977, less than 10 million were still there in January 1978, and it has recently been revealed that between 1966 and 1976, while over 16 million urban youth were being removed to rural areas, 14 million workers and employees were being recruited by urban enterprises from the rural areas.⁴¹ If these figures are correct, there would have been a net migration of 10 to 11 million into the cities, which, combined with urban natural increase, would have meant a substantial rise in the urban population. Urban population growth has been a serious problem for China since the early 1950s, and enormous efforts have been made to control it. The ambiguities just noted underline the importance for Chinese policymakers of having good urban population data to work with. The current official figures need to be reviewed and revised.

Studying these problems could help China's demographers to sharpen their analytical skills in preparation for the enormous research tasks they will face when the 1982 census data have been processed. If detailed data, new and old, were published where foreign demographers could also have access to them, China would be able to benefit from the analytical resources of the world demographic community, and Chinese demographers could accelerate their technical progress by reviewing, replicating, and criticizing the work of others.

Theory versus empirical research

What Chinese demography needs most urgently is to establish a sound tradition of empirical research. Research has always been a weak feature of Chinese social science, and the lack of data has been only one of the obstacles to its development. Another major impediment has been the persistent tendency to concentrate on what is called "theory" rather than on the analysis of data. Preoccupation with "theory" has resulted in a great diversion of effort into rather fruitless ideological exercises. In the study of population, one of the most wasteful preoccupations has been the prolonged quixotic battle with the ghost of Thomas Robert Malthus. Reams of print have been devoted to showing that China's attempt to control population growth rests on a basis wholly antithetical to Malthusianism. To most of the rest of the world, the argument seems totally irrelevant to China's immediate needs. It sheds no light whatever on the essential question of the actual relationship between population growth and economic development in China's rural and urban areas, a question to which only empirical research can give useful answers.

Theory has, in fact, not only derailed demographic research in China but caused a critical delay in the recognition of China's population problems and the formulation of effective population policies. In 1949, Mao Zedong declared, on theoretical grounds, that China's large population was "a good thing" and that even if it multiplied "many times" China would soon become wealthy and prosperous. "All pessimistic views," he said, "are utterly groundless."⁴² Mao's words were often quoted in the next four years and even after the 1953 census results were announced, but subsequently the prevailing view-

point changed. By 1956, Mao had become convinced that "it is necessary to publicize and promote birth control and planned parenthood in all densely populated areas,"⁴³ and in that same year China's first national birth control drive was officially launched. After the start of the Leap Forward in spring 1958, Mao reaffirmed his earlier views that a large population was an asset for China's national development, adding that poverty was beneficial for China because it made people more revolutionary and inclined toward change.⁴⁴

For the next four years birth control work languished. Other spokesmen echoed Mao's sentiments, and all but one of the Chinese scholars who had stressed the importance of controlling human fertility were silenced. The economist Ma Yinchu, who had argued the urgent need for control of population growth on grounds very similar to those now used to justify the same policy, courageously refused to abandon his convictions, despite some 200 attacks on him in 1958 alone, and continued to defend his position until 1960, when he was obliged to surrender his post as president of Beijing University and was refused further access to the public print.⁴⁵ He has since been vindicated publicly. But the summary rejection of Ma's arguments in the late 1950s was followed by the condemnation of all population studies as inherently Malthusian, making it impossible to develop effective measures for the control of population growth. A more empirical approach to the issue of population might have avoided the ideological extremism of the late 1950s.

Population policy and its implementation

Of the recent demographic changes in China, none has attracted so much attention around the world as the rapid decline in fertility during the 1970s. Most of the decline occurred within the five-year period between 1972 and 1976, when the official crude birth rate dropped from 30 to 20 per thousand population. Elsewhere the reduction of fertility has often required the prior stimulus of accelerating economic development and the prospect of attaining private prosperity to motivate individual families to limit childbearing. Direct government intervention is usually not effective and has sometimes backfired. In this respect the Chinese case is unique, and there is much curiosity worldwide as to how the Chinese government has been able to achieve so much in so short a time.

Foreign observers have speculated that the Chinese accomplishments can be explained by an extremely effective delivery system for contraceptive services, mass education, reliance on group decision-making, "peer pressure," and superior "organization." Although all of these factors may have contributed to the net result, it is unlikely that they would have sufficed to achieve so much so quickly. Indeed, a careful reading of the descriptions of family planning work given by the Chinese media leaves little doubt that the single most important factor is direct administrative pressure on individual Chinese families by family planning cadres and other officials who are themselves under pressure to achieve quick results. The pressures range from strong persuasion to outright coercion.

Coercion

The issue of coercion in Chinese family planning is obviously sensitive. Understandably, Chinese spokesmen seldom mention the use of coercion in presentations for foreign audiences, although considerable attention has been paid to the matter in the Chinese press and radio. Foreign analysts sometimes display a similar reticence, particularly those interested in promoting family planning throughout the world, who have been known to commend the Chinese example for emulation by other countries without mentioning its coercive aspects and have, in a few instances, even gone so far as to claim that the Chinese response is completely voluntary. This is misleading, if not actually dishonest, inasmuch as it disregards cultural, moral, and political impediments to the adoption of the Chinese approach by other countries. In a matter of such importance and delicacy one ought, as the Chinese say, to "start from reality."

There are undoubtedly many people in China who are practicing family planning voluntarily. Undoubtedly others cooperate reluctantly because they are persuaded that in the long run it is best for the country and for themselves. But taken as a whole, the evidence from China strongly suggests that the popular will and public education would not have brought about the spectacular reduction in fertility experienced in China if the family planning campaign were not reinforced by the full administrative power of the state.

Even the use of persuasion in China is often so aggressive that it amounts to administrative harassment. Its methods include repeated visits by the cadres to have "heart-to-heart talks" with reluctant couples, prescribed participation in "discussions" designed to "educate" them about the need to control fertility, and the "mobilization" of women to have intrauterine rings inserted, to be sterilized, or to have unauthorized pregnancies terminated. Instances of outright physical coercion are not often described explicitly in Chinese sources, but coercive practices are often referred to obliquely as relying on "administrative orders," resorting to "commandism," pursuing "indigenous policies," "overdoing things," and so on. Among the more explicit is an account carried in a Beijing newspaper in December 1978: "Some localities popularizing birth control have dispatched 'militia propaganda teams' to those households that did not practice birth control to 'propagandize' [them] and exercise control over their food, drinking water, and workpoints. These local laws have caused great dissatisfaction among the people."⁴⁶

It must be said that the central authorities have repeatedly and emphatically condemned the use of coercion in birth control as in other mass programs and have emphasized that persuasion will work if it is employed properly. In 1978 there was a general campaign against the use of coercion in all spheres of administration, sparked by some flagrant examples in Xunyi County, Shaanxi Province, and the Party Central Committee demanded a "big change" in the "work style" of the cadres.⁴⁷ Birth control work was also affected by the anti-coercion drive. An American reporter was told in January 1979 that officials in Sichuan, China's model province in birth control work, had recently been warned that "coercion in family planning matters must stop immediately," that

in Jilin Province “great popular indignation had been aroused by attempts to dictate what must remain personal decisions,” and that new instructions had been sent to family planning workers nationwide that couples must not be coerced by reducing their food rations or threatening political reprisals.⁴⁸

The 1978 admonitions against coercion were forceful enough to cause cadres in many areas to become timid and irresolute about their work, and some stopped implementing policy altogether.⁴⁹ Immediately the campaign to quell coercion was softened. In August 1978, the *People's Daily* called for more lenient treatment of “those cadres who had accidentally made mistakes of coercion, commandism, and abusing the masses,” and several provincial leaderships assured their cadres that such mistakes are inevitable but “it is all right as long as the mistakes are corrected.”⁵⁰

Remedial measures

With the initiation of the one-child family policy in 1979 and the adoption of provincial family planning regulations, aggressive tactics were once again applied in local family planning work. In Guangdong Province, it was discovered in July 1979 that if the trend in the provincial birth rate during the first six months of the year were to continue, the rate of natural increase would reach 16 per thousand by year's end, higher than the 14.75 in 1978 and the 12.6 in 1976 and 1977.⁵¹ In a telephone conference call, all areas throughout the province were called upon to take “remedial measures”—a euphemism for abortion—to reduce the birth rate, and the provincial Party Committee issued an “urgent notice” demanding that the whole Party and the people take “immediate action to get the population growth rate down to 10 per thousand in 1979,” a target that, the notice insisted, could still be reached.⁵² Later in the year, a less extreme target was substituted, and in the end the 1979 provincial rate of natural increase did exceed 16 per thousand; however, some units attempted to do what was demanded of them and were congratulated for having “taken remedial actions as requested by the province and [having] overfulfilled the task.”⁵³ That many other provinces took stringent measures in 1979, some of which may have been more successful than Guangdong's, is suggested by the fact that many provinces reported a marked further decline in natural increase for 1980. For example, Sichuan, the leader, which had reported natural increase at the rate of 6.70 per thousand in 1979, up slightly from 1978, claimed to have reduced it to 4.45 in 1980.⁵⁴

However, in the second half of 1980 there was another attempt to curb coercion in family planning, prompted by adverse popular reactions to the excesses of 1979. In September 1980, Hua Guofeng noted instances of “compulsion and violations of law and discipline” that he called “impermissible.” Later in the same month, the Party Central Committee issued an “open letter” on population control in which it urged that more emphasis be put on ideological work, that constraints on second births be eased in some cases, and that the use of contraceptives be “the main birth control method,” presumably meaning less reliance on sterilization and abortion.⁵⁵ The new marriage law, which took

effect 1 January 1981, reduced age at marriage by invalidating the high limits previously imposed by local regulations, producing a flood of marriage registrations that was certain to be followed by rising birth rates over the next several years. Natural increase was therefore expected to rise in 1981 and 1982.⁵⁶

Renewed pressures in 1981

Meanwhile, the implementation in spring 1981 of the new "responsibility system" in agriculture, which allowed peasant households to contract for a certain amount of production and retain the rest, working without direct cadre supervision, had weakened the cadres' control over them and rendered the family planning rewards and punishments inoperative in many areas. Peasants reasoned that they could now afford the penalties and that it was up to them to decide how many children they wanted.⁵⁷ Many localities reportedly lost control of population growth altogether, and rural birth rates were again rising.⁵⁸ Some Chinese sources warned that unless constraints could be reimposed a "new baby boom" or a "big national population explosion" would occur, which could negate "all the achievements scored in the 1970s."⁵⁹

Once again concern about coercion has been displaced by concern about loss of control over population growth, and "remedial measures" are recommended as a primary method for regaining control. Some provinces are making such remedial measures their "main assault."⁶⁰ A meeting of family planning workers in Guizhou Province was told to ". . . take women whose pregnancies are outside the plan, especially those expecting a second child or more, as the key targets and resolutely mobilize them to carry out remedial measures."⁶¹ As one family planning worker recently explained to a foreign visitor, "'Mobilization is different from persuasion. We persuade people to do this or that. But we mobilize the people to do this or that when we fail to persuade them in spite of our efforts. Hopefully they will understand later.'" ⁶² A broad campaign is also being waged against people who "illegally" remove IUDs for a fee, a phenomenon evidently quite widespread in China and a clear indication that the retention, if not the insertion, of the IUDs is often without the willing consent of the women. The health clinics and hospitals presumably refuse to remove the IUDs on request; otherwise there would be no black market for this service. In fact, they are sometimes inserted without the strings attached to make self-removal more difficult.⁶³ This obliges the "illegal" operators to invade the uterine cavity, and a number of deaths have been caused by their inept and unsanitary procedures.⁶⁴

Other extreme actions are being reported from various parts of China. A commune in Shandong Province claims to have "solved" the problem of missing IUDs by x-raying the women who have been fitted with them every two months, so that "lost" IUDs can be replaced and pregnancies aborted at once.⁶⁵ In a Jiangsu prefecture, brigade cadres post the names and menstrual periods of women, who must report each month so that the chart can be updated or suffer a penalty of 10 workpoints; and those whose periods are not on schedule must

have a hospital examination.⁶⁶ Many areas impose levies of 10 percent or more of the total family income for each unauthorized child until the child reaches the age of 14 or 16,⁶⁷ and some put the child at a relative disadvantage in seeking education and health care. The punishments sometimes fall as heavily on the child as on the parents, and most of them implicitly threaten the subsistence of those who do not comply with family planning requirements. These examples are described by the Chinese press and radio with the evident intent that other units emulate them.

Instances of coercion were once again being reported in the latter half of 1981. According to a reporter for a Hong Kong newspaper who visited the area, in Huiyang Prefecture, Guangdong Province, trucks were sent into the villages to take women forcibly to hospitals for abortion, some escorted by armed personnel, some bound, and some in cages used to transport hogs. In one of its counties, the public security bureau issued arrest warrants to pregnant women on which the word "pregnant" was entered in the space for the offense charged.⁶⁸ At first the provincial authorities reportedly disapproved these tactics, identifying them with "leftist" tendencies that had been condemned by the central authorities, but the central authorities finally overruled the provincial authorities in favor of the prefecture. The prefecture was held up as a model for emulation throughout the province,⁶⁹ and the Huiyang Party Committee was commended by the provincial authorities for its "great determination," for making "a big show of strength," for observing "the demand and the target," and for "letting the policy play its authoritative part,"⁷⁰ language that is unusually muscular even for a family planning dispatch. Later, the central authorities congratulated Huiyang Prefecture for "speedily lowering its rising population growth [rate] through patient and meticulous ideological work among the masses."⁷¹ Because popular resistance is still strong and widespread and because the cadres are required to show results, coercion persistently recurs in family planning work in China despite the fact that it is ostensibly prohibited. The directives from the central authorities repeatedly demand that the cadres "grasp family planning work firmly" and "strengthen their leadership" over it. Targets and quotas are set at the higher levels and are not based on local situations. The higher level authorities insist that, although the task is difficult, the goals can be attained if the cadres do a good job. During the general anticoercion drive of 1978, some local cadres pointed out that coercion and commandism are often a response to unreasonable demands and unrealistic targets handed down from above,⁷² and to the leaders' insistence that plans be fulfilled without regard to the means used.

In handing down a task, some organs fail to make clear to the lower levels the bounds of the given policy and the work methods and work style required. They do not understand the situation at lower levels and do not concern themselves with the well-being of the masses. They demand that the task be accomplished "at all costs." . . . Such a way of doing things has given rise to empty talk, coercion, and commandism.⁷³

Nevertheless, in October 1981 the Party journal *Red Flag* said that "it is necessary to continue to control population growth by every means."⁷⁴ Provincial target figures for population size and natural increase are still being set, cadres in some areas are evaluated and paid partly on the basis of their success in birth control work, and, in at least one case, the cadres must pay a fine for every unauthorized birth that occurs within their jurisdiction.⁷⁵ It may also be significant that, although the media often warn against coercion, it is not explicitly prohibited or penalized in any of the local planned birth regulations published in the last three years.

The urgency of population control

Few demographers elsewhere in the world would seriously question the conclusion of the Chinese leaders that the country would be better off if it had fewer people and a lower population growth rate. But what is not clear is why, after 20 years of irresolution among the political leaders, they have now decided that complete control of population growth must be attained immediately regardless of other considerations. Why, for a time, do the authorities not employ patient persuasion and propaganda in conjunction with nonpunitive incentives until public opinion catches up with their perceptions of the situation? Is it really necessary to adopt or tolerate measures that alienate many people, threaten the health of women, and imperil the future security of peasant families? The compulsory aspects of the family planning program could be a source of serious political problems within China and are an embarrassment to China's friends in other countries.

The official explanation for the urgency of controlling population growth is the need to improve the per capita availability of food, clothing, housing, health care, education, transportation, and consumer goods, to ease problems in employment, and to speed the pace of overall economic development—an argument with enough self-evident validity to persuade a majority of the people once they understand it. But population growth is not the only cause of China's current economic problems, nor will the solution of the problem, however speedily accomplished, guarantee imminent prosperity for the country or even a steady improvement in living standards. Distinguished Chinese economists have recently been writing about the adverse consequences for China of bad economic planning, misdirected investment, mismanagement, unbalanced economic development, failure to motivate peasants and workers for production, and inconsistent policies and programs during the past 30 years. Many of these problems, although complicated by population pressures, arose primarily out of errors in judgment by the political leadership, which has often been impatient with gradual progress and has tended to go to extremes, sometimes with disastrous consequences.⁷⁶ One wonders whether the present demands for quick results in family planning may not prove to be another case in point.

The authorities evidently expect that, if population growth can be reduced sufficiently and the pace of economic development accelerated so that living standards can rise throughout the country over the next few years, many

people who have complied reluctantly with the demands of family planning will be mollified and won over. But despite Liu Zheng's confidence that once population growth is controlled it will be "easy to make everybody well-off,"⁷⁷ many uncertainties lie ahead. As Liu notes, much will depend on whether an effective social security system can be instituted in rural areas, so that peasant families that have reared only one child will not suffer destitution and neglect in their old age. Even a modest social security system can be expensive, especially when the labor force paying into it is shrinking and the beneficiaries are multiplying. The Chinese peasants are being asked to entrust their future welfare to a social security system not yet economically feasible in most communities and hence in no immediate prospect. They may reasonably prefer to reduce their risks by having two children rather than just one. Can it really be shown that China's economic future would be placed in jeopardy if the one-child requirement were deferred for a while until an effective national social security system could be instituted?

Besides, there are some disadvantages to a too-rapid reduction in fertility. Sudden changes in the size of age cohorts cause similar changes in the demand for age-related goods and services, in the facilities and personnel that provide them, and in the allocation of resources that they require—changes that can result in dislocations and inefficiencies that adversely affect national development.⁷⁸ Both Lin and Liu have indicated that the Chinese family planning authorities do not expect or want to achieve the sudden, universal adoption of the one-child family because they are aware of the problems of a distorted age-sex structure;⁷⁹ but family planning propaganda and some of the provincial family planning regulations⁸⁰ convey a different impression. Perhaps China's demographers could help to moderate present family planning policies by showing policymakers some of the long-range adverse implications of sudden fertility changes. Their analysis of the relationship between age composition and fertility undoubtedly contributed to the abandonment of the wholly unrealistic natural increase rate target of under 10 per thousand by 1980 announced in 1978 by Hua Guofeng and the targets of 5 per thousand in 1985 and zero by the year 2000 announced in 1979 by Chen Muhua,⁸¹ which would have required some Chinese couples to forego childbearing altogether. Allowing the target population total for the year 2000 to increase from the "under 1.2 billion" now advocated to 1.25 or 1.3 billion might further ease the pressures on Chinese families during the 1980s; yet the higher limits would mean barely a 10 percent difference in population size by the end of the century. At least the demographers should be allowed to debate the alternatives. The result would probably be more circumspect policymaking.

Demography and official population policy

A broader application of the "hundred flowers" principle to the relationship between demography and family planning work is badly needed in the best interests of both. It is obvious to anyone who examines closely the writings of China's demographers that they often serve as publicists, rationalizers, and

defenders of the official population policies but never as critics—at least not in their published works.⁸² This seems to be the role they are expected to play. For example, in her speech to the Third National Population Science Conference in Beijing in February 1981, Chen Muhua, vice-premier and head of China's Family Planning Commission, called on China's burgeoning population associations to develop "population science" so that it could supply propaganda materials for family planning cadres, provide a "scientific basis" for population policy, and "solve the ideological problems which arise in our practical work." She did say also that "academic matters" should be subject to debate under the "hundred flowers" principle but added that the purpose of the debate is to support efforts to control population growth.⁸³

If Chen's views prevail, neither the scope of demography in China nor its utility for policymaking and administration will realize their full potential. Science is not propaganda, and to make it subservient to policy is to risk corrupting its integrity and damaging its credibility. Although the majority of demographers throughout the world may share a common conviction that the limitation of population growth is essential to human welfare, most would agree that the scope of demography should not be limited to topics that advance the cause of family planning and that its conclusions should be dictated not by the needs of policy but by the logic of the evidence at hand. If Chinese demographers are not allowed a certain degree of independence in the conduct of their research, they will be at a disadvantage compared with their colleagues in other countries and their professional status will suffer. In the past, China's political leaders have sometimes received bad advice on technical matters because their known ideological commitments limited what their technical advisers could safely tell them. In spite of the principle "learn truth from facts," this situation could happen again if Chinese demographers are required to support family planning but not allowed to evaluate current goals and policies and point out their implications. This would be unfortunate not just for the demographers but for the political leaders as well.

Chinese demography seems to be on the threshold of what could prove to be a golden age. The 1982 census, by far the most carefully planned and sophisticated statistical investigation ever conducted in China, will soon provide a wealth of demographic data, dwarfing the output of the 1953 and 1964 censuses. Sample surveys and other field investigations have already enriched the supply of population data and can be expected to multiply in the next few years. The possibilities for empirical research will be limited mainly by the numbers of trained demographers and the latitude allowed for their initiative. Given the importance of population for China's future, one hopes that Chinese demography will be able to make its maximum contribution to national welfare.

Notes

1 For 1978, see SSB, *Communique on Economic Plan*, Beijing, 27 June 1979, p. 10; and *Fulfillment of China's 1978 National Economic Plan*, Beijing, 27 June 1979, *Communique on Fulfillment of*

China's 1979 National Economic Plan, Xinhua-English, Beijing, 30 April 1980, in Foreign Broadcast Information Service (FBIS), No. 85, 30 April 1980, p. L10.

2 In July 1979 during the visit of the Chinese census planning delegation to Washington, D.C., SSB Deputy Director Li Chengrui said that the SSB was compiling a series of population totals and vital rates for China from 1949 to the present and that most of the figures would probably be released in due course. Since Li made that statement, the official population totals for 1969–77 and vital rates for 1959 and 1962–77 have appeared in various Chinese sources. It is said that vital rates for other years will be published soon.

3 SSB, *Communique on the Fulfillment of the 1980 National Economic Plan*, Xinhua-English, Beijing, 29 April 1981, in FBIS, No. 82, 29 April 1981, p. K16.

4 *Zhongguo baike nianjian* (Encyclopedic Yearbook of China), Zhongguo da baike quanshu chubanshe, Shanghai, August 1980; and *Zhongguo jingji nianjian* (1981) (Economic Yearbook of China: 1981), *Jingji guanli Magazine*, Beijing, 1981.

5 For the 1963 rates, see Wang Jianmin, "Qieshi kongzhi renkou zengzhang" ("Earnestly control the growth of population"), *Wenhui bao*, Shanghai, 12 July 1979, p. 3; for the 1960 rate, see Sun Yefang, "Consolidate statistics work, reform the statistical system," *Jingji guanli* (Economic Management) (JJGL), No. 2, 15 February 1981, translated in FBIS, No. 58, 26 March 1981, p. L5; for the 1949–77 birth totals, see Wang Naizong, "Solving China's population problem," *China Reconstructs*, Vol. 24, No. 4, April 1980, p. 5.

6 *Communique of Results of Census and Registration of China's Population*, Xinhua, Beijing, 1 November 1954, translated in American Consulate General, Hong Kong, *Current Background* (CB), No. 301, 1 November 1954, pp. 1–2.

7 "Weile bangju guojia tongjiju zheng-feng Xue Muqiao juzhang yaoqing Jing Jin bufen jingjixue tongjixue jiaoshou juxing zuotanhui" ("Director of the State Statistical Bureau Xue Muqiao invites university professors of economics and statistics in Beijing and Tianjin to a symposium"), *Tongji gongzuo* (Statistical Work), (TJGZ), No. 12, 29 June 1957, pp. 1–2.

8 *Tongji gongzuo* Data Section, "Data on China's population from 1949 to 1956," *TJGZ*, No. 11, 14 June 1957, translated in American Consulate General, Hong Kong, *Extracts from China Mainland Magazines* (ECMM), No. 91, 22 July 1957, pp. 22–25.

9 The advertisement appears in *Tongji yanjiu* (Statistical Research) (TJYJ), No. 2, 23 February 1958, p. 30, and the announcement in *TJGZ*, No. 11, 14 June 1958, p. 30.

10 The first to cite the figures was *Shijie ditu ce* (World Atlas), Ditu chubanshe, Beijing, 1 February 1972.

11 Coordinating Group for Research on the Etiology of Esophageal Cancer in North China, "Huabei dichu shiguanyuan liu-xingbingxue he bingyinxue te chubu diaocha yanjiu" ("Epidemiology and etiology of esophageal cancer in North China: A preliminary report"), *Zhonghua yixue zazhi* (Chinese Medical Journal), No. 11, November 1974, p. 671.

12 For the 1980 article, see Wang Xinfa, "1953, 1964 nian woguo renkou pucha gongzuo de jingyan" ("Our experiences with the population censuses of 1953 and 1964"), *Renkou yanjiu* (Population Research) (RKYJ), No. 2, 1980, pp. 9–12; for the 1981 article, see Li Chengrui, *Population Censuses in China*, State Statistical Bureau, Beijing, September 1981, pp. 4–5.

13 For example, see Zhu Zhengzhi, "Dangnian woguo renkou wenti ji fazhan qushi" ("China's population problem at present and the direction in which it is developing"), *Jingji kexue* (Economic Science), No. 3, 1980, p. 54; and Liu Zheng, "Hengliang renkou nianling guocheng leixing de jiben zhibiao" ("Basic indicators for measuring types of age structure"), *RKYJ*, No. 2, 1980, p. 30.

14 C. S. Muir, "Duty travel to China: November–December 1978," January 1979, Annex I, mimeo.

15 Frederick P. Li, "Cancer incidence in China, 1975–2000: Implications for cancer control," Clinical Epidemiology Branch, National Cancer Institute, Bethesda, Md., and Sidney Farber Cancer Institute, Boston, Mass., no date, table 1.

16 "Weile bangju guojia tongjiju . . .," cited in note 7.

17 Comments in response to a question during the 1979 visit to Washington, D.C., of the SSB's census planning team (see note 2).

18 For example, see Niu Geng and Tao Sha, "A tentative analysis of telling lies," *Guangming ribao (GMRB)*, Beijing, 7 January 1980, p. 3, translated in Joint Publications Research Service (JPRS), No. 75,074, 5 February 1980, p. 35; Tang Yingzheng, "Nongye tongji bao jiashu te xianxiang bixu jiuzheng" ("The phenomenon of falsifying agricultural statistics must be corrected"), *GMRB*, 20 March 1980, p. 2; and Yue Ping, "Strengthen statistical work," *Renmin ribao (RMRB)*, Beijing, 19 January 1981, translated in JPRS, No. 77,571, 12 March 1981, pp. 1 and 4.

19 Commentator, "Equip agriculture with the most advanced science and technology," *GMRB*, 12 January 1979, translated in FBIS, No. 16, 23 January 1979, p. E8. Others have remarked that the Leap began a period of mismanagement that damaged the economy and brought it finally to the "brink of disaster"; see, for example, Li Chengrui and Zhang Zhuoyuan, "Only proportionate development can ensure high speed," *Beijing Review (BR)*, No. 19, 11 May 1979, p. 15; and Xinhua-English, Beijing, 8 March 1979, FBIS, No. 47, 8 March 1979, p. E4.

20 The two sources are (respectively) Sun Yefang, cited in note 5, and Zhu Zhengzhi, cited in note 13.

21 "Weile bangju guojia tongjiju . . .," cited in note 7.

22 "Ministry of Public Security promulgates regulations governing urban population," Xinhua, Beijing, 16 July 1951, translated in American Consulate General, Hong Kong, *Survey of China Mainland Press (SCMP)*, No. 137, 18 July 1951, pp. 7-9; "State Council's directive concerning establishment of permanent system for registration of persons," Xinhua, Beijing, 2 July 1955, translated in *SCMP*, No. 1082, 5-6 July 1955, pp. 10-13; and "Regulations of the People's Republic of China governing household registration," Xinhua, Beijing, 9 January 1958, translated in *SCMP*, No. 1695, 21 January 1958, pp. 10-12.

23 These materials are discussed in John S. Aird, "Population growth," in *Economic Trends in Communist China*, ed. Alexander

Eckstein, Walter Galenson, and Ta-chung Liu (Chicago: Aldine Publishing Company, 1968), pp. 218-223; and Aird, "Official population data," in *China: A Handbook*, ed. Yuan-Li Wu (New York: Praeger Publishers, 1973), pp. 86-88 and 94-96.

24 Fujian Provincial Population Census Office, "Sheng renkou pucha bangongshi zhuren buiyi yanjiu bushu zhauijing jinxing renkou pucha gongzuo" ("Conference of directors of population census offices in Fujian Province studies and makes arrangements for grasping population census work"), *Fujian ribao (FJRB)*, Fuzhou, 18 May 1981, p. 1.

25 "Shi jihua shengyu bangongshi he yiye lianhe diaocha biao ming benshi dapi shiling qingnian weihun jinnian kongzhi renkou renwu henzhong" ("A joint investigation of the Shanghai Municipal Family Planning Office and the Shanghai No. 1 Medical College shows that the municipality has a large number of unmarried young people of marriage age; the task of controlling population growth will be very heavy in the coming years"), *Jiefang ribao, (JFRB)*, Shanghai, 15 August 1981, p. 1.

26 For examples of attacks, see the denunciation of Chen Da by Bi Shilin, "Woguo 1953—nian de renkou diaocha shi kexuede" ("China's 1953 population census is scientific"), *TJGZ*, No. 24, 29 December 1957, pp. 15-18, and by Li Qinke, "Woguo 1953-nian renkou pucha de weida chengjiu burong mosha" ("The great achievements of China's 1953 population census must not be obscured"), *TJJY*, No. 3, 23 March 1958, pp. 3-4; regarding criticism of Xue Muqiao, see Qui Jian, "An economist's approach to learning—profile of China's noted economist Xue Muqiao," *GMRB*, 12 February 1981, translated in FBIS, No. 42, 4 March 1981, p. L18; and Sun Yefang, cited in note 5.

27 *Tongji gongzuo* Data Section, cited in note 8, p. 22.

28 Bai Jianhua, "600 million people—a great strength for socialist construction of China," *RMRB*, 1 November 1954, translated in *SCMP*, No. 926, 11-12 November 1954, p. 14.

29 Li Chengrui, in his paper prepared for the 1981 International Statistical Institute meetings, gives a 1964 census total 3.4 million

higher than that previously given; see Table 1 in text above and source notes.

30 These models are presented in John S. Aird, *Reconstruction of an Official Data Model of the Population of China*, U.S. Bureau of the Census, Department of Commerce, forthcoming.

31 The full text of China's new marriage law is reprinted in *Population and Development Review* 7, no. 2 (June 1981): 369–372.

32 For the most recent assessment, see Leo A. Orleans, "China's urban population: Concepts, conglomerations, and concerns," in Congress of the United States, Joint Economic Committee, *China Under the Four Modernizations*, forthcoming.

33 Fu Kang and Song Ying, "Some views on doing a good job in present social statistical work," *Tongji (Statistics)*, No. 2, 10 June 1981, translated in JPRS, No. 79,154, 6 October 1981, p. 15.

34 *Communique of Results of Census and Registration*. . . , cited in note 6, p. 2.

35 On the 1955 resolution, see "Guowuyuan guanyu chengxian huafen biaoizhun de guiding" ("State Council resolution on the criteria for demarcation of urban and rural areas"), passed at the 20th meeting of the State Council, 20 November 1955, *Xinhua banyuekan (XHBYK) (New China Semimonthly)*, No. 3, 6 February 1956, p. 7; on the 1953 criteria, see SSB, "Guanyu chengxian huafen biaoizhun rogan juyao wenti de shuoming" ("Explanation of the criteria established for the demarcation of urban and rural areas"), *XHBYK*, No. 3, 6 February 1956, pp. 7–8; for the 1963 definition, see K. C. Tau, "The Four Modernizations and Chinese urban geography," paper presented at the annual meeting of the Canadian Association of Geographers, Corner Brook, Newfoundland, 11 August 1981, p. 15.

36 Lin Fude, "The status-quo and the prospect of China's population," paper prepared for the IUSSP conference, Manila, 14 December 1981.

37 See for example, Contributing Commentator, "Appraise and treat urban collective ownership correctly," *RMRB*, 4 August 1979, translated in FBIS, No. 165, 23 August 1979, p. L14; *Xinhua-English*, Beijing, 14 March

1980, FBIS, No. 52, 14 March 1980, p. L10; *Xinhua-English*, Beijing, 15 October 1980, FBIS, No. 201, 15 October 1980, p. L11; and Jin Daqin, "The urbanization of the population and the building of small towns," *JJGL*, No. 5, 15 May 1981, translated in JPRS, No. 78,562, 21 July 1981, p. 53.

38 *Xinhua-English*, Beijing, 24 June 1979, FBIS, No. 123, 25 June 1979, p. L19.

39 Wu Guobin, "Xiao chengzhen de jianshe dayoukewei" ("There is a great future in the construction of small cities and towns"), *JJGL*, No. 29, 15 May 1981, pp. 36–38.

40 For example, see Zhang Zehou and Chen Yuguang, "Shilun woguo renkou jiegou yu guomin jingji fazhan de guanxi" ("The relationship between population structure and economic development in China"), *Zhongguo shehui kexue (Social Sciences in China)*, No. 4, 10 July 1981, pp. 40–42; and *Zhongguo jingji nianjian (1981)*, cited in note 4.

41 On urban-to-rural transfers, see *Xinhua*, Beijing, 24 January 1978, translated in FBIS, No. 18, 26 January 1978, p. E2; on rural-to-urban recruiting, see Feng Lanrui and Zhao Lukuan, "Dangqian woguo chengzhen laodongshe de jiuye wenti" ("Current problems in the employment of China's urban workers"), *Zhongguo shehui kexue (Social Sciences in China)*, No. 6, November 1981, p. 189. These recruits are now complicating urban employment problems, which are expected to worsen through 1985, according to this article.

42 "The bankruptcy of the idealist conception of history," 16 September 1949, in *Selected Works of Mao Zedong*, vol. 4 (Beijing: Foreign Languages Press, 1961), p. 6.

43 The statement appears in his "National program on agricultural development," quoted in Liu Rejing, "Planned control of population growth," *Hongqi (Red Flag)*, No. 6, 3 June 1978, translated in JPRS, No. 71,627, 7 August 1978, p. 106.

44 "Chairman Mao Zedong's article for *Red Flag*," *Xinhua-English*, Beijing, 31 May 1958, *SCMP*, No. 1784, 4 June 1958, p. 9.

45 Ma's views were published under the title "A new theory of population," *RMRB*, 3 July 1957, translated in *CB*, No. 469, 25 July 1957. Ma referred to his ideas as his "theory,"

but unlike his attackers, he made extensive use of statistics and called for further data collection and research, including the open publication of registration statistics on population and another census in 1958 or 1963. In November 1959, with Leap Forward theories already thoroughly discredited and the country on the verge of famine, Ma, still under attack, was apparently advised by his long-time friend Premier Zhou Enlai to modify his position, but he felt as a matter of principle that he could not do so. "This time," he said, "I did not accept his sincere advice. I am exceedingly unhappy. As I have confidence in my theory, I cannot but adhere to it and uphold [my] intellectual integrity. I have refused to submit myself to criticism. It is hoped that my friend will have an open mind and will not regard this refusal to make self-criticism as an act of resistance." Ma Yinchu, "My philosophical thinking and economic theory," *Xin jianshe* (*New Construction*), No. 11, 7 November 1959, translated in *ECMM*, No. 195, 11 January 1960, p. 46.

46 "Some current problems in drafting laws," *GMRB*, 22 December 1978, translated in FBIS, No. 3, 4 January 1979, p. E7. A Changsha radio broadcast of September 1979 told of women "comrades" in rural Hunan who fled to the urban units where their husbands worked to escape a sterilization drive. The broadcast urged that they be "mobilized" to return home for sterilization, or, if possible, that they be sterilized "on the spot." Changsha radio, Hunan Provincial Service, 23 September 1979, translated in FBIS, No. 188, 26 September 1979, pp. P2-3. A commune in Fujian Province forced women to undergo sterilization regardless of parity level and in spite of successful practice of family planning. "Yin-ren-zhi-yi luoshi jieyu zuoshi" ("Apply the birth control measures that fit the person"), *FJRB*, 5 September 1981, p. 2. In Fujian Province the coercive practices were subsequently condemned; in the Changsha case they were encouraged.

47 Regarding the Xunyi County case, see Xinhua-English, Beijing, 2 August 1978, FBIS, No. 151, 4 August 1978, p. M5; on the Central Committee, see "A big change in cadres' work style is demanded," *RMRB*, 2 August 1978, translated in FBIS, No. 151, 4 August 1978, pp. E2-5.

48 Michael Parks, "Sex is high on list of new Chinese freedoms," *The Baltimore Sun*, 25 January 1979.

49 For example, see Guiyang radio, Guizhou Provincial Service, 22 May 1978, translated in FBIS, No. 102, 25 May 1978, p. J1.

50 "A big change in Cadres' Work Style Is Demanded," cited in note 47, p. E2; Sian radio, Shaanxi Provincial Service, 6 August 1978, translated in FBIS, No. 155, 10 August 1978, p. M1; and "All-out effort, policy, and work style," *Sichuan ribao* (*SCRB*) Chengdu, 27 September 1978, translated in FBIS, No. 190, 29 September 1978, p. J1.

51 Guangzhou radio, Guangdong Provincial Service, 3 July 1979, translated in JPRS, No. 73,903, 25 July 1979, pp. 135-136.

52 "Entire party mobilizes all people to start to develop planned parenthood work—Provincial Revolutionary Committee calls telephone conference; an immediate new high tide of planned parenthood activities throughout Guangdong Province demanded; strive to lower this year's natural population growth rate to 10 per 1,000," *Nanfang ribao* (*NFRB*), Guangzhou, 4 July 1979, translated in JPRS, No. 74,174, 7 September 1979, pp. 33-34; and "Zhonggong Guangdong sheng wei fachu jinji tongji liji xintong zhua hao jihua shengyu gongzuo" ("The Chinese Communist Party Guangdong Provincial Committee issues an urgent notice for immediate action to carry out family planning work well"), *NFRB*, 22 July 1979, p. 1.

53 "Shenggeweihui zhaokai jihua sheng-yu gongzuo dianhua huiyi" ("Guangdong Provincial Revolutionary Committee holds telephone conference on family planning work"), *NFRB*, 11 November 1979, p. 1.

54 "Sichuan natural population growth rate down to 4.45 percent in 1980," *SCRB*, 13 March 1981, p. 1, translated in JPRS, No. 78,012, 6 May 1981, p. 65.

55 On Hua Guofeng, see Xinhua-English, Beijing, 7 September 1980, FBIS, No. 175, 8 September 1980, p. L10; on the Central Committee, see Xinhua, Beijing, 25 September 1980, translated in FBIS, No. 189, 26 September 1980, p. L4.

56 The new marriage law set the minimum ages at 20 for women and 22 for men, two years higher than the ages specified in the marriage law of 1950. But local regulations had generally set the limits at 23 and 25 in rural and 25 and 27 in urban areas. Rolling back the minimum ages allowed several additional age cohorts to register for marriage at the same time. Beijing Municipality expected an increase of 300 percent over the numbers in previous years and gloomily predicted that the municipal rate of natural increase would rise to 12 per thousand in 1981, 16 in 1982, and 20 in 1983. See Beijing radio, Beijing City Service, 11 January 1981, translated in FBIS, No. 23, 4 February 1981, pp. R2-3; and Beijing radio, Beijing City Service, 22 July 1981, translated in FBIS, No. 149, 4 August 1981, p. R1. Vice-chairman Deng Xiaoping discussed with Vice-Premier Chen Muhua "the anticipated rise in the population growth rate in 1981 and 1982." See Beijing radio, Beijing Domestic Service, 14 January 1981, translated in FBIS, No. 10, 1 January 1981, p. L4.

57 "Jiejue hao nongcun shixing shengchan zerenzhi hou jihua shengyu gongzuo zhong chuxian de xin wenti" ("Solve well the new problems in planned birth work since the implementation of the responsibility system in rural areas"), *Dazhong ribao* (DZRB), Jinan, 16 August 1981, p. 3; "Sheng renkou xuehui zhengshi chengli" ("The Fujian Provincial Population Association formally established"), *FJRB*, 5 September 1981, p. 2; Gao Xin, "Jihua shengyu wanwan buke fangsong" ("Absolutely no relaxation in family planning"), *Banyuetan* (Semimonthly Gazette), No. 17, 10 September 1981, p. 26; and "Sichuansheng jiaqiang dui jihua shengyu gongzuo de lingdao" ("Sichuan Province strengthens leadership over family planning"), *RMRB*, 29 September 1981, p. 3.

58 "We must seriously study the new situation in family planning," *RMRB*, 18 August 1981, translated in FBIS, No. 163, 24 August 1981, p. K12; "Sheng renkou xuehui zhengshi chengli," cited in note 57; Gao Xin, cited in note 57; Jinan radio, Shandong Provincial Service, 24 September 1981, translated in FBIS, No. 188, 29 September 1981, p. O4; and Xian radio, Shaanxi Provincial Service, 26 September 1981, translated in FBIS, No. 192, 5 October 1981, p. K7.

59 "We must seriously study the new situation in family planning, cited in note 58; Xining radio, Guizhou Provincial Service, 1 July 1981, translated in FBIS, No. 127, 2 July 1981, p. T1; Jinan radio, 24 September 1981, cited in note 58; Gao Xin, cited in note 57; and Guiyang radio, Guizhou Provincial Service, 19 November 1981, translated in FBIS, No. 225, 23 November 1981, p. Q3.

60 See, for example, Wei Nong, "Cuoshi juti luoshi kongzhi renkou zengzhang Songchixian qunian shao sheng yiqianlingjiushi ren" ("Concrete measures were implemented to control population growth: 1,090 fewer babies were born in Songchi County," *FJRB*, 10 May 1981, p. 2; Investigation Team, State Family Planning Commission, "Gongzuo zuo xi nongmin huanying" ("Meticulous work is welcomed by the peasants"), *RMRB*, 19 July 1981, p. 3; "Huizexian ba jihua shengyu yu zerenzhi gua qu guo lai" ("Huize County links family planning with the responsibility system"), *Yunnan ribao*, Kunming, 27 August 1981, p. 1; and Guangzhou radio, Guangdong Provincial Service, 5 September 1981, translated in FBIS, No. 174, 9 September 1981, p. P2.

61 Guiyang radio, Guizhou Provincial Service, 14 May 1981, translated in FBIS, No. 94, 20 May 1981, p. Q1.

62 Quoted in Pi-chao Chen, *Rural Health and Birth Planning in China* (Research Triangle Park, N.C.: International Fertility Research Program, 1981), p. 44.

63 This is reported from Guangdong Province. See "Report on the population research delegation visit to the People's Republic of China, 9-25 April 1981," p. 47.

64 In one Yunnan Province prefecture there were over 9,600 cases of IUD removal in 1980, seven of which were fatal. See Kunming radio, Yunnan Provincial Service, 14 August 1981, translated in FBIS, No. 158, 17 August 1981, p. Q2. In a district in Guizhou Province an investigation disclosed more than 600 cases in five communes in 1980, constituting over 30 percent of those previously fitted with IUDs. Of the women involved, 508 promptly became pregnant. The nonpregnant women were refitted with IUDs and the pregnant ones were aborted "if possible." See "Renzhen caiqu cuoshi shazhu feifa qu huan feng" ("Seriously

adopt measures to put a stop to the fad of illegal removal of IUDs"), *GMRB*, 22 July 1981, p. 2.

65 "Dingqi toushi jieyuhuan" ("Periodical IUD X-rays"), *DZRB*, 12 September 1981, p. 3.

66 Jin Weigang, "Xin xingshi xia jihua shengyu gongzuo de zerenzhi" ("The responsibility system in family planning work under new circumstances"), *Jiankangbao* (*Health Gazette*), Beijing, 4 October 1981, p. 2.

67 For example, the new Shanghai regulations stipulate that families that have a third or higher order birth will forfeit 10 percent of their income from the month in which the child is born until he or she reaches age 16. See "Shanghai stipulates a number of planned parenthood regulations," *JFRB*, 10 August 1981, translated in FBIS, No. 170, 2 September 1981, p. O5.

68 "Cong jihua shengyu kan zuozai" ("A view of the calamity from the left as shown in planned births"), *Zhengming ribao* (*ZMRB*), Hong Kong, 27 July 1981, p. 1; Lo Ming, "'Zuo' weigai huaiyun youzui" ("Left has not been changed; it is a crime to be pregnant"), *ZMRB*, 27 July 1981, p. 1; Lo Ming, "Xiaohua guaishi wuqibuyou" ("Laughable and queer events; nothing is too strange"), *ZMRB*, 28 July 1981, p. 1; and Lo Ming, "Why is there still lawlessness? The ultra-leftist practices of 10 counties and municipalities in East Guangdong in planned parenthood work"), *ZMRB*, 29 July 1981, p. 1, translated in JPRS, No. 78,901, 3 September 1981, pp. 68-70.

69 Guangzhou radio, Guangdong Provincial Service, 28 August 1981, translated in FBIS, No. 169, 1 September 1981, pp. P5-6.

70 "Jianchi ba jihua shengyu he gong-nongye shengchan zhe liangjian da shi yiqi zhuhao" ("Persistent in simultaneously grasping well family planning and agricultural and industrial production"), *NFRB*, 29 August 1981, p. 1.

71 Xinhua, Beijing, 11 September 1981, translated in FBIS, No. 179, 16 September 1981, pp. P1-2.

72 For example, see Nanning radio, Guangxi Zhuang Regional Service, 17 August 1978, translated in FBIS, No. 159, 16 August

1978, p. H3; and "Forget not the relationship that is as close as fish to water," *RMRB*, 19 August 1978, translated in FBIS, No. 164, 24 August 1978, p. E2.

73 "Forget not the relationship that is as close as fish to water," cited in note 72.

74 Quoted by Zhongguo xinwen she, Beijing, 19 October 1981, translated in FBIS, No. 203, 21 October 1981, p. K8.

75 A Liaoning brigade charges cadres a 10 Yuan penalty for "every birth not covered by the plan." See Shenyang radio, Liaoning Provincial Service, 28 October 1981, translated in FBIS, No. 213, 4 November 1981, p. S4.

76 The precipitous collectivization of agriculture in 1955-56, which forced the peasants (many of whom had just recently acquired land under the reform) to surrender the land to the collective, and the Big Leap Forward are prime examples of impatience in earlier years. The rush to import foreign technology and equipment in 1978 without regard to China's limited access to foreign exchange and the rush to mechanize agriculture in 1980 without regard to the existence of rural surplus labor are more recent examples.

77 Liu Zheng, "Targets and policy of population control in China," paper prepared for the IUSSP conference in Manila, 14 December 1981.

78 A recent study has shown that the sudden adoption of the one-child family throughout China could seriously distort China's age-sex structure by the year 2000 and even more so by 2050 and cause wide swings in dependency ratios. See Charles H. C. Chen and Carl W. Tyler, "Demographic implications of family size alternatives in the People's Republic of China," Centers for Disease Control, Public Health Service, U.S. Department of Health and Human Services, Atlanta, Georgia (paper presented at the annual meeting of the Population Association of America, Washington, D.C., 27 March 1981); and Ansley J. Coale, "Population trends, population policy, and population studies in China," *Population and Development Review* 7, No. 1 (March 1981): 85-97.

79 Lin, cited in note 36; and Liu, cited in note 77.

80 Notably those for Shanghai, Heilongjiang, and Gansu. See Shanghai radio, Shanghai City Service, 28 August 1979, translated in JPRS, No. 74,196, 18 September 1979, p. 60; Harbin radio, Heilongjiang Provincial Service, 4 September 1979, translated in FBIS, No. 177, 11 September 1979, p. S3; and Lanzhou radio, Gansu Provincial Service, 11 August 1979, translated in FBIS, No. 164, 22 August 1979, p. T7.

81 Hua Guofeng, "Unite and strive to build a modern, powerful socialist country!" report delivered at the first session of the Fifth National People's Congress, 26 February 1978, Xinhua-English, Beijing, 6 March 1978, FBIS, No. 45, 7 March 1978, p. D25; and Chen Muhua, "Shixian sige xiandaihua bixu you jihuade kongzhi renkou zengzhang" ("For the realization of the Four Modernizations, there must be planned control of population

growth"), *RMRB*, 11 August 1979, p. 2, and excerpted in *Population and Development Review* 5, no. 4 (December 1979): 723-730.

82 There are indications of an extensive debate behind the scenes over population policies, involving many professions. The debate found a public outlet in the sessions of the National People's Congress in 1980. For example, the internationally known scholar Fei Xiaotang mentioned coercion as one of the unresolved problems in family planning work. See "Yao jie jue renkou de zhiliang wenti" ("The question of the quality of the population must be resolved"), *GMRB*, 21 September 1980, p. 3.

83 Chen Muhua, "Fazhan renkou kexue weikongzhi renkou zengzhang mubiao fuwu" ("Develop population science in the service of controlling population growth"), *RKYJ*, No. 3, July 1981, pp. 1-7.