

MCDB 150 Global Problems of Population Growth Lecture 17 Notes

We have been discussing theories of why it is that China became so much more densely populated than Europe.

One theory says the answer lies in the family structure. The very center of Chinese culture is the family and the responsibilities of members to each other.

Families in China are traditionally much more tightly bound than they were in Western Europe.

The family was strictly ordered by Confucian doctrine.

Women had to give absolute deference to men; children had to give absolute deference to parents and elders.

In China: Children did not leave home, but worked on the family land.

Parents chose a spouse for their children.

After marriage the son remained,

living in his parents' compound and the daughter-in-law moved in with them.

There was no separate economic unit for married children.

As long as the father lived he controlled all assets of the family.

In old age it was the children, not the community,

who were responsible for support of the parents.

Mother-in-law effect.

Very conservative. Older generation gets to dictate.

For my son's benefit. Mothers-in-law as the transmitters and enforcers of culture.

Especially in matters of reproduction.

In return for the children giving up autonomy and for giving absolute deference,

It was the family's responsibility to support the children of all ages,

it was the family's responsibility to find spouses,

it was the family's responsibility to ensure resources for the next generation.

Every son would get some land for the next generation.

The Chinese didn't practice primogeniture.

Upon the death of the father, the family land would be divided up among the sons.

With land, the sons could get married.

When possible, no one was forced into a position where it would be impossible to propagate their line of descendants.

This last factor, the division of the family land, had a tremendous impact on the economic situation of China.

Continual dividing of the land guaranteed that, plots would get smaller and smaller right down to the subsistence level. Dietrich p16

A common Chinese saying which summarizes such a phenomenon suggests that "fortunes seldom continue considerable in the same family beyond the third generation." Because, when a family became rich, it would have more children. When it had more children, there would be more sons to subdivide the family property. A kind of family level Malthusian law. In fact Malthus knew about this saying and included it in his treatise 200 years ago. The saying is still current. PDR 12/97 p752

Compare when westerners say the same thing, it is because the children of rich people become spoiled and no longer work hard.

Contrast this system to that of England at the same time 1700s and 1800s: (Schofield p291)

Children leave home early to work in a succession of other households

They choose their own spouses

English marriage registers significantly omit the long lists of relatives witnessing the marriage to be found in other countries

After marriage they live in physically separate households.

After marriage they are economically independent.

In 75% of cases children didn't even live in the same village where their parents lived.

This system of independence can only occur if some provision is made for the support of the elderly.

In England, it was the community, not the children who were responsible for support of adults in old age.

Relief was given to the elderly poor.

From 1598 on, an act of Parliament required 'overseers of the poor' to be appointed each year in every parish in the country.

These overseers had a legal duty to IDENTIFY and relieve those who were in need.

They were empowered to levy sufficient taxes to pay for this.

The law was clear that the primary responsibility for providing relief lay with the parish.

The law recognized no direct obligation between child and parent.

Someone poor had the right to sue the Parish for support,

but had no right to sue his own children for support.

The parish, after paying for the poor, could turn around and demand reimbursement from the children. But that was often difficult to do.

Instead of the mother-in-law effect, In England, young people would start their own household, with no elders to dictate 'proper' behavior.

Hence behavior was much more flexible and could change rapidly.

This meant that economic behavior also could be flexible and respond rapidly to new opportunities.

Most importantly, the English generally practiced primogeniture: the oldest son would inherit the family land and assets. Younger boys would have to go off and fend for themselves. That kept farm plots from being divided and subdivided.

So the English system (in general) forced extra children off the land. English literature is replete with stories of young men wronged, because their older (and useless) brothers inherited everything.

Without land, most, younger sons never accumulated the resources necessary for them to get married. If they married, it took them a long time to accumulate the resources, so they married late.

This had a large effect on keeping population growth to manageable levels.

What did the younger sons do?

1) they joined the armies. These armies caused lots of mayhem and maybe caused the global aggressiveness that one sees in Europe from these centuries..

2) They also were sent off apprenticeships, to the cities ---

In the cities they would have to start a trade or a small hand manufacturing operation.

These small, independent entrepreneurs eventually built the base for the industrial revolution.

So the two systems were diametrically opposite.

The system in China was kinder in a sense.

No one was sacrificed, children were not pushed out to fend for themselves, but kept in the security of the family and its land.

But the population of peasant farmers grew up to the Malthusian limit, where disaster was never very far away.

So the very practices which are the very center of Chinese culture, the tightness of the family, the respect for elders, the lack of adolescent rebellion, etc.

May also be one of the reasons why China suffered Malthusian misery for so long and economically fell so far behind the west.

The population increased up to the Malthusian limit.

China became a vast sea of impoverished rural peasants.

As late as 1900, 94% of Chinese lived in villages. Dietrich p12 In contrast, In England, a century earlier, in 1800, the agricultural population was down to 37%. (Schofield p295)

Eventually, as population grew, there was not enough land for extra sons to survive on, many then became landless laborers. With an enormous surplus of poverty stricken workers begging for jobs, wages fell to the absolute Malthusian minimum. Even as late as the 1930s, the wages paid to a hired laborer per day were the same as the cost of fodder for a single donkey. But per year, the man was much cheaper. Why? Because a man could be laid off when it wasn't planting or harvest

season was over and he didn't have to be paid. But a donkey had to be fed and sheltered all year, even when it was not being worked. (Spence pg 382).

In this state of abject Malthusianism, there was no economic incentive to invest in agriculture. Human labor was cheaper than farm animals, and it certainly didn't make sense to invest in mechanized farming.

Even as late as the 1970s some parts of China were still too poor to have farm animals (Wild Swans p 415,430)

In the cities the same excess of laborers led to an under-investment in mechanized transport. At any hour of the day or night there were hordes of rickshaw pullers available to carry any load for a pittance. These men lived in grim tenements, where they slept in rows, packed side by side, in spaces just vacated by fellow pullers who had returned to the streets. Few such men could ever afford to marry, and most died unnoticed after brief, miserable lives (Spence pg 381).

The weakness of China made it easy prey to European and Japanese Imperial Conquest.

In the 1700s Europe became addicted to the caffeine in tea.

Enormous amounts of silver (mostly extracted from mines in the Andes worked by Indian slave labor) were transferred to China to pay for the tea.

The British balance of trade with China was so bad, that the lack of capital might have stopped the industrial revolution that was just beginning.

The British started exporting opium (grown in northern India) to China around 1800.

The Chinese government tried to oppose it.

The Chinese wrote to Queen Victoria, to appeal to her sense of moral responsibility.

She refused their entreaties.

In 1838 the Emperor put his foot down.

The Chinese cleaned the British opium traders out of Canton and then out of Macao.

Chased out of the mainland, one of the big smuggling groups moved to an almost deserted rocky island: The Island was Hong Kong.

The Americans were delighted – they stepped in as middlemen where the Brits had been kicked out.

The British called the Chinese crackdown a violation of free trade and invaded China (1839-40).

This is called the first Opium War.

Following the Opium Wars, China experienced 115 years of continually tightening imperialist control by Europeans and Japanese and civil wars within the country.

Finally, in 1953, at the end of the Korean War, - China got peace.

China was absolutely devastated. In 1952 the Chinese had a significantly lower per capita income than they had at the end of the Sung Dynasty in the 13th Century. (from Angus Maddison, NYT 8/29/99 p 26)

The new Communist government established stability via a very authoritarian rule combined with a strong policy of exclusion and isolation from the previously imperialist powers. The first order of

business for the new Communist government was cementing popular support and eliminating the worst forms of rural poverty. Spence p 491-2.

This was accomplished by a land reform in 1950-51 which redistributed land to landless peasants and tenant farmers. Bannister, 233:

The new government invested heavily in public health and instituted basic measures of hygiene, disease control and pest control.

Through voluntary means and through endless mass campaigns. Spence p 518; Bannister, 233

By 1957, China's crude death-rate had been halved from pre-revolutionary levels. 1929-1931 birth and death rates both ~41/1,000. By 1970 the death rate was cut by 80% (to 7.6/1,000) Peng HB1064 A3 P46X p2.

This started a huge population explosion.

Was the government worried -

No: Marxist theory

Marx hated Malthus. Marxist theory was resolutely pro-natalist.

Fertility Transition of East Asia, pg 251. Why China opted out of 3d world population programs:

Ren Kou means Man-Mouth; it is Chinese word for Population.

Malthusianism is called the Man-Mouth Theory: Ren Kou lun (Lun suffix is theory).

Every new person needs to eat food.

The Maoists countered this with the Man-Hand Theory. Ren-shou lun.

Ren-Shou is Man-Arms. Every new person has hands to work with.

So, on the basis of Marxist theory, Mao proclaimed in 1949 that

"Revolution plus Production" would enable China to feed and employ the large and growing population.

In 1953 the Chinese took the First National Census

They thought that they had about 426 million people and that the number had not been growing in the century because of all the civil and foreign wars and natural calamities.

Pop Bull 47p4. See Peng HB1064 A3 P46X p17 for influence of '53 census on Mao.

But they counted almost 600 Million People. (Spence p518 583 Meg + 5-15%).

The population was almost 1/3 larger than they expected.

China was larger than they thought by approx the whole population of the US at the time.

Immediately, China passed the Contraceptives and Induced Abortion Act, legalizing the importation and sale of contraceptives and legalizing sterilization and abortion.

(Pop Bull; See also Spence p 649)

Even though importation was legalized, and the cities got some, it did not spread into the countryside. The vast majority of people had no access to Western contraceptives, and if they did, they wouldn't have been able to afford them.

So, in 1956, the Gov't recommended using traditional Chinese Medicine.

The following method was popularized in the press:

On the 3d day following her period, a woman should ingest 14 live tadpoles.

Then 10 the next day. Then the woman is assured sterility for the next five years.

If the woman did this twice, then traditional medicine said that the woman would be permanently sterile.

When people started realizing that this didn't work, the press said that it was better to swallow 100 tadpoles.

There was a great worry that frogs would be swallowed into extinction in China.

Finally the Academy of Sciences looked into it and said definitively: It doesn't work,

So, in 1957-58 they tried acupuncture as a contraceptive.

This didn't work any better. (Des Politiques Demographiques en Chine, HB3654 A3 B63 1997; from Aird 1972)

Politically, the Gov't was still uncertain and divided.

In 1956 the Premier, Zhou En-Lai, urged limitations on childbirth.

He was supported by influential economists.

But, the next year (1957), the economists who had favored birth control were purged in the anti-rightist campaign. (Spence p649).

In the end, the change in law had little effect. There were no methods, no trained family planning personnel and no facilities in rural areas.

In 1958, the party started organizing communes.

These were giant agricultural enterprises w/ ~5,000 families in a single commune. That summer the harvest was excellent.

The leaders decided that communes were the answer.

Cadres reported that rural production, under commune management,

had doubled, or increased 10 fold, or even "scores of times". . Spence p548.

In 1958 Population Policy was reversed.

In Dec 1958 the Communist Party Central Committee said that the communes were so successful that China no longer had to worry about overpopulation. Spence p549.

To the contrary, the forthcoming problem would be "not so much overpopulation as the shortage of manpower." As Jonathan Spence says:

"The vision [of utopia] was altogether intoxicating."

Disaster was not far behind

Mao thought China wasn't industrializing fast enough.

Wanted to come up to the Western level right away.

In 1958 he started the Great Leap Forward

Told everyone to put all their efforts into industrialization.

Forget about your farming - Smelt Iron in your backyard.

People took their pots and pans, and sometimes their agricultural implements, and melted them down to meet quotas.

Agricultural production crashed.

At the same time, communal kitchens were established where everyone could eat together. The purpose of this was to save the time required for every family to prepare its own food. This would especially save women's time.

The result was that consumption soared. Traditionally, the Chinese, like all poor people, were very abstemious. Each grain of rice was precious. People ate just as much as they absolutely needed and saved the rest against the future.

With a communal kitchen, if you skimped, it didn't do you any good.

It was a communal pot. So everyone ate a lot. Consumption soared.

With consumption going up and production going down - disaster was inevitable.

However, by then, China was sufficiently bureaucratic and authoritarian that the cadres were afraid to pass this information up to the leaders.

It seems that Mao received only glowing reports of production in the countryside.

The disaster occurred.

Several 100 million became severely undernourished during this period.

Then people starved. There were massive famines from 1959 to 1961.

20-30-40-50 million people died of starvation. No-one knows the actual number.

(Brown: Who will feed China) Pop Bull 47p4

That's this huge gap out of the pop growth rate

Quant Lec SLIDE 4

So, the Chinese seemed to have eradicated famine -

And, even though their population was growing rapidly, they seemed to be coping with it.

But the underlying problem was that food supplies were barely sufficient to keep these famines at bay.

Walking on the very edge of disaster.

Any screw up and disaster could happen.

And, in accord w/ Murphy's law, screw ups do happen.

In this case a political screw up by Mao and the Chinese leadership -

And, bang, 20-30 million people die of starvation.

That's what I mean when I say that our social and political arrangements are the most fragile thing that humans make.

Well, the great leap forward of the late 50s and early 60s got transformed into the Cultural Revolution of the mid 60s - with more chaos.

After the great famine, in the early 60s, the gov't again tried to institute birth control. Again, the method was largely propaganda:

John S. Aird: Slaughter of the Innocents Coercive Birth Control in China AEI Press. American Enterprise Institute Wash DC 1990 Social Sciences HQ766.5 C6 A48 1990 (LC) Footnote 38 p134: Describing China's 2nd birth control campaign in early 1960s (In Aird.doc):

The effects of sex on men before the age of 25 were described as:

"Excessive dissipation of bodily fluids"

"sexual neurasthenia, low spirits, headaches, discomfort all over the body"

emaciation, dizziness, tension, memory loss, premature old age, mental and physical pain, and impotence.

Sounds like what you all believe to be caused by the opposite: lack of sex.

The admonitions to women were that the growing fetus would "consume" their bodies, that childbearing was a torture, and that too early childbearing would "enfeeble" them at an early age.

Bann 244: Urban fertility dropped steeply during 1964-66 and reached a low of only 3 births/woman in 1966-67.

Urban, non-agricultural women reduced their fertility to below replacement level in 1974. Urban fertility continued to drop to 1.1 in 1980.

But, during the cultural revolution, rural fertility remained high. It was 6.4 in 1970.

Essentially no conscious fertility control was evident among rural women.

But the population kept growing.

By 1969 the Population passed 800 million

Bann 240:

In 1970 21% of births were 1st births

17% were 2nd births

and 62% were third or Higher order.

Almost everyone was having 3 or more children.

When political stability was restored the government introduced a vigorous family planning program.

1971: wan, xi, shao - later - longer - fewer

later marriage, longer birth intervals, fewer children

This was propagandized heavily - but there was little coercion involved.

Age of marriage shot up

Feeney p 125---->5

Between 1970 and 1979 TFR plummeted.

Feeney p 124---->6

It fell to half its prior value: 1970: 34/K to <18/K.

Bann 245TFR of rural women went from 6.4 in 1970 to 3.1 in 1977.

Reduced further to 2.5 in 1980.

!China's fertility transition took one decade!

and this was BEFORE the 1 child policy.

What caused this great drop in fertility?

Until the 1970s there were no family planning services in the vast rural areas and there were only limited facilities in a few large cities. (PDR 12/97 p753 bottom)

What happened in the 1970s was that contraceptives were made available

Zhao PDR 12/97:753-4

and a lot of propaganda was made to counteract any taboos and establish late marriage and the small family as a desirable norm.

This is one of the most amazing examples of what the introduction of a family planning program can do to reduce fertility. The decline of Chinese fertility in the 1970s, even among the huge rural peasant population, was "astonishingly fast" (PDR 12/97 p 732). "It was the most extraordinary reduction in fertility in a large population ever recorded in human history. (PDR 12/97 p753)"

ONE CHILD POLICY

In 1979 the results of the second National Census were released.

It was clear that the population was approaching one Billion.

We are quite used to hearing that China's population is over a Billion.

But in 1979 that was stunning news.

1979 was well before the Chinese economic miracle.

The miracle had not yet started, they were still desperately poor.

As the Chinese saw it, population growth had eaten up their hard won economic gains:

Tyrene White in David Lampton p285 CCL DS 779.16 P65 1987

Grain production had increased at an annual rate of 2.3% between 1957 and 1978. But /capita consumption increased only 0.2% annually in the same time 306 to 318kg/p/yr

Urban housing space: increased by 1/2 Billion sq meters. But p/c housing was down from 4.5 m² to 3.6 m²/cap. A decrease of 20%.

Arable land/cap fell from 1/2 acre in 1949 to 1/4 acre in 1983

0.2 hectares to 0.1 hect. 1 hec = 2.47 acres

The government also realized just how young the population was.

The large # of children born during the boom in births from the middle 60s to the early 70s were now coming into reproductive age. There was going to be a great increase in the # of people in the child-bearing ages.

A baby boom was imminent.

Aird slaughter p65

For instance, in the 1982 census (Spence p648), the population pyramid was

45 Meg women in their 40s

60 Meg women in their 30s

80 Meg women in their 20s

125 Meg women in their teens

The # of women entering reproductive ages would be ~3X the # of women leaving their reproductive ages.

Aird p79: #s of women of childbearing age increased by 5 million/yr between 1989 and 1992.

Even after the major fertility declines that they had achieved,

momentum would keep the population growing for decades.

They realized that the later - longer - fewer policy would lead to almost another doubling of the population.

With the immense famine of the great leap forward still fresh in everyone's mind,

the government decided it had to further tighten its population policy.

Almost 3X as many women were entering reproductive age as were leaving it.

To keep the number of births constant, each woman would have to have 1/3 the number of children that the older generation had.

With a TFR of ~2.5 children/woman in 1980, one third of that number is 0.83 children. [Chinese demographic calculations from this time have not been published, but this simple calculation is so obvious that they must have been aware of it.]

In order to keep the number of births from rising, the government would have to limit births to one per family. The Chinese would now have to pay for the mistaken pro-natalist policies of the recent past.

Thus in 1979-80 the one child policy was introduced.

Remember that the Chinese birthrate had already fallen to its lowest level ever by the time the 1 child policy was promulgated.

The One Child policy had the sole purpose of counteracting momentum.

It was viewed as a temporary policy to be maintained until the end of the century to get over the worst period of momentum.

The short term goal was to try to keep the population in the year 2000 under 1.2 Billion. As you will see, they did not succeed.