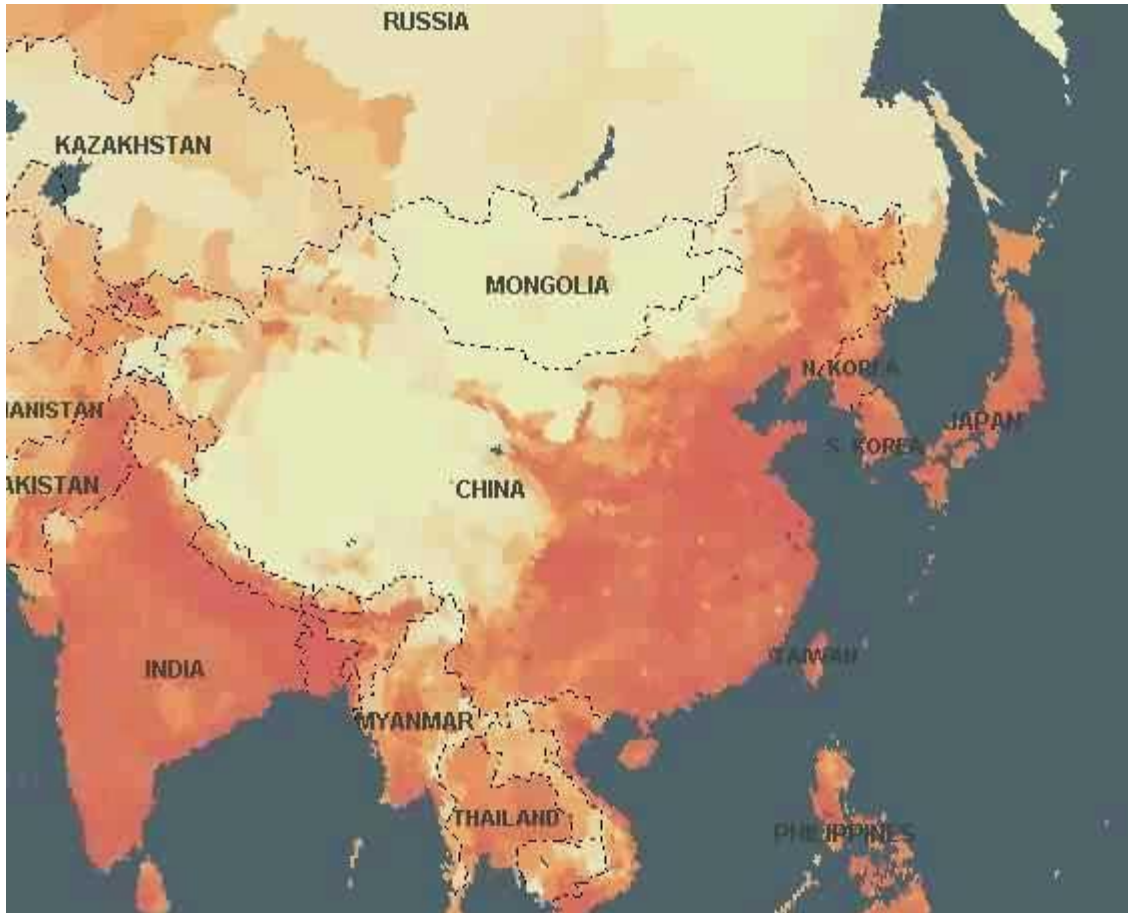


# The Peace and Turmoil in Ancient China and Their Relationship with Population



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Wang Hongsheng  
(Renmin University of China;  
Beijing Society for Philosophy of  
Nature, Science and Technology)

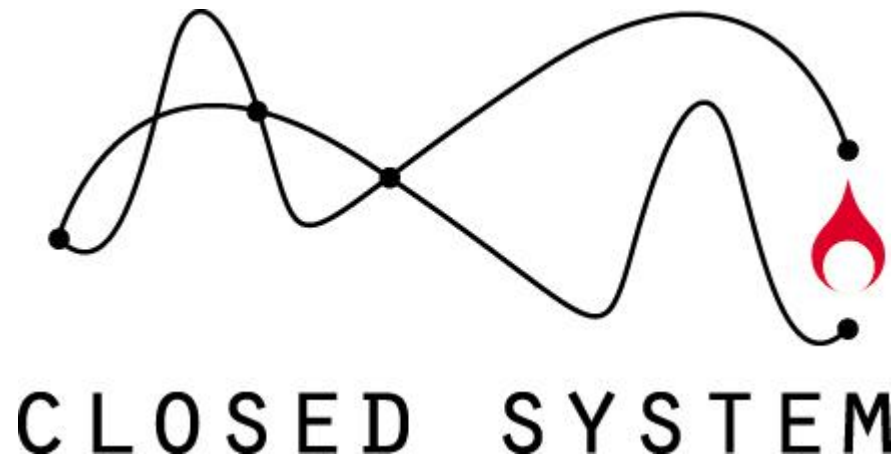


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- **Abstract:** The periodic collapse and rebuilding of ancient Chinese empire system were related with surplus population in limited land resources. The over growth of population had diluted the land resources per capita, aggravated the social conflicts, and then led to an collapse of social system during certain period of time. The ancient Chinese society had never cast off such predicament in history. In view of system theory, the land resources had established a relatively limited boundary of the social system while the numbers of population had always been a kind of variable quantity of coming up and down. The change of dynasties in Chinese history was an oscillation of civilization effected by social elements interweaved with natural elements. Since late Ming dynasty some great thinkers had noticed the social problems bringing about by the great population. Since late Qing dynasty the Chinese population has consistently gone up and never downfall when as the quality of population has been stressed by some scholars. In the 20th century, the problem of population and farmlands had still affected modern China's political trend. The economical successes of China in recent 30 years has related with its birth control policy that contained population increase effectively. Now this policy is being discussed to be maintained or to be trimmed.
- **Key words:** peace and turmoil,
- Chinese history, population

# The ancient Chinese civilization: a evolution of closed system; Its modern transformation: a evolution of open system

- In view of sustainable, the Chinese history from Qin (221 B.C) to late Qing (1840 A.D) is just a kind of continuation and expansion, but not development. During recent 170years, the main part of Chinese society had experienced industry and information periods and come to a new threshold of development. The ancient Chinese society could be looked as a evolution of closed system, while its modernization a transformation of open system. Here the ancient Chinese society would be discussed in details.



# 1. The increased population diluting land resources per capita

- The ancient Chinese civilization is a typical agriculture dominated civilization in East Asia. The expansion of such agriculture civilization had reshaped natural environment. The farming culture relied on a limited ground and the population growth on the ground was of spontaneous tendency. For the speed of population increase was far more than the increase speed of land resources, the new wealth had produced by society in a peaceful period of life always had been diluted by the increased population. So, the general social wealth per capita had not been increased during the period of peaceful social life, but decreased.



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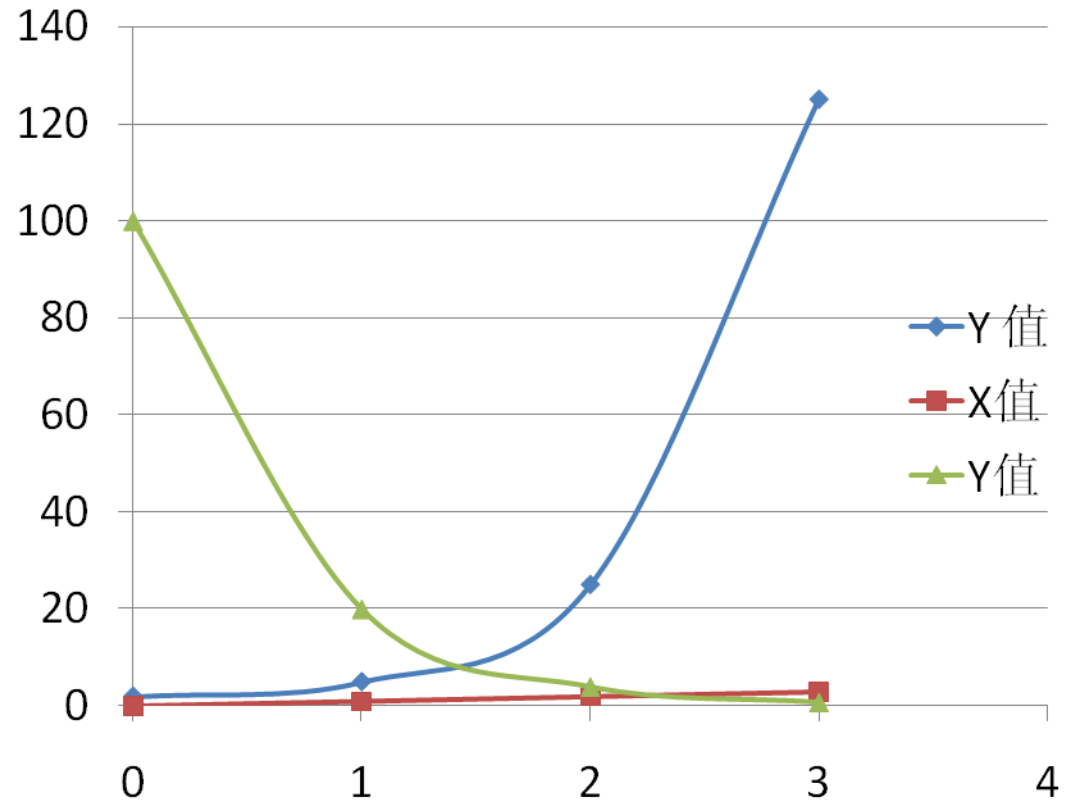
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# The dilution of surplus population of the social wealth, especially the farmlands, could be explained with a typical family population increase model.

- Suppose that the master Zhang be the owner of a hundred mu (a unit of area,=0.0667 hectares,100 mu is about 16.5 acres) of plow, so he is a very rich man in his hometown. Suppose that he has five sons, according the tradition, they would share master Zhang's 100 mu of plow with each of them having 20 mus. In this condition, master Zhang's sons are still the middle peasants among the general farmers. Suppose the third generation of master Zhang has still increased at a ratio of=25,that is to say, each of his son has 5 sons yet, so each of his grandsons just could be allotted with 4 mus and that would be a little hard to feed the family of the third generation. If the fourth generation had also increased in such a ratio, each of them would have plow less than 1 mu, which would be difficult to feed the family even in a time without natural calamity. It is no doubt that the fourth generation be reduced to beggary in a hard time. Here we can see that the increase of population in four generations would transformed a rich landlord into a group of beggars during a period less than 100 years by the way of dilution of farmlands. The supposition could be conveyed by simple mathematical formula language like  $100 \div 5 < 1$ .

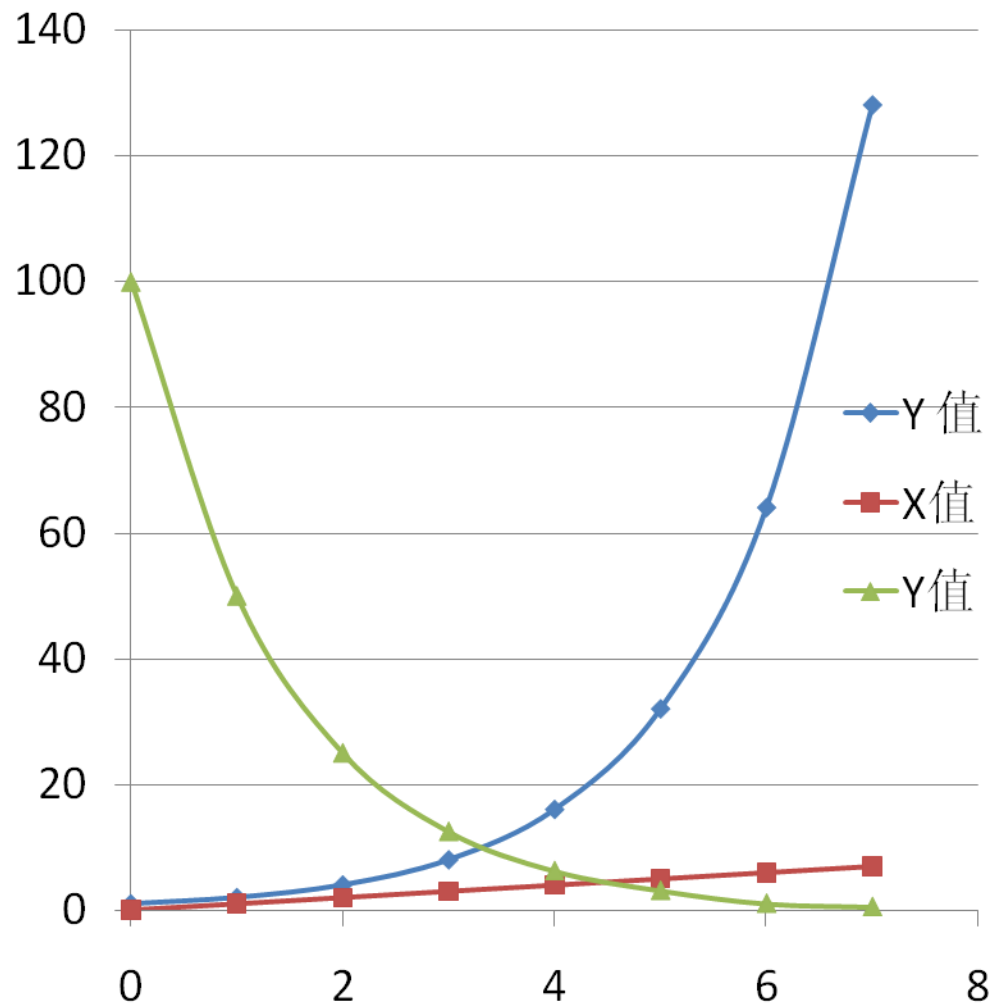
- **X: generation**
- **Y: population increase**
- **Y: Decrease of mus per capita**





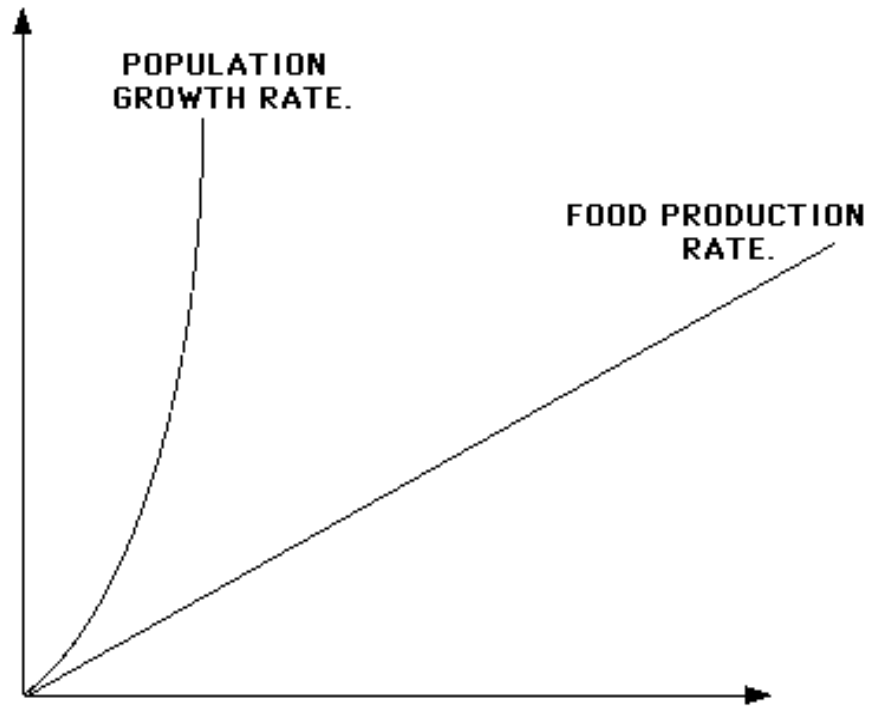
- this model can be fixed. Suppose that the numbers of master Zhang's son is not 5, but 4 or 3, or even 2, the rate of increase in population of the younger generations will become smaller which will delay the process of impoverishment. For example, when the heir of generations of master Zhang is just 2, We get this result:  $100 \div 2^7 < 1$ . So, the absolute poverty of per capita land less than 1 acre occurs in 3 generations now is extended to 7 generations. Anyway, the gradually increase of population is always accompanied by a gradual impoverishment. The result of that a rich man translated into a group of beggars is still the same. Of course, this model assumes that the premise of the land resources remains the same.

- **X: generation**
- **Y: population increase**
- **Y: Decrease of mus per capita**





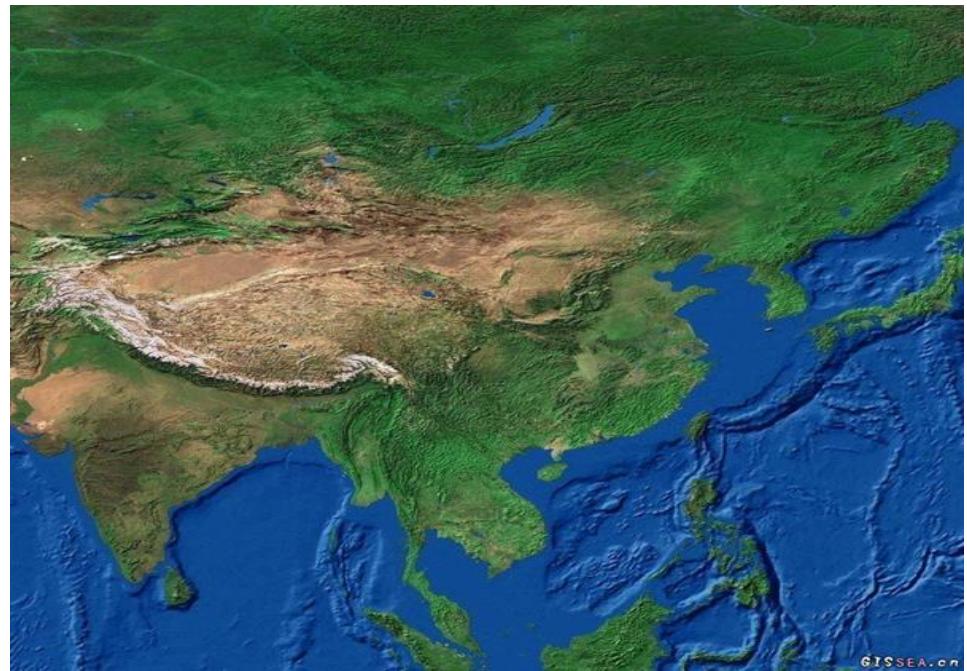
Thomas Malthus (1766-1834)



- Malthus's theory has also given a description about such condition with two disproportional progressions. When the means of livelihood increases in a ratio of arithmetic progression 1, 2, 3, 4, ....., the population increases in a ratio of geometric progression 2, 4, 8, 12, ..... (Thomas R. Malthus, 1798) The description of the theory is not the exact situation of human society, but the disproportion of the two progressions is of the utmost importance to understand issues of human society. In fact, the increase of population in China had also been supported by a sense of ordinary people who appreciated sons than daughters and the more the better of the sons. In traditional society, the one who have no son would be discriminate against. The concept about population and custom was the accelerator of population increases; but the push force of wealth dilution. The Chinese people also had an intuitive recognition of this situation in a saying that *a family wouldn't be rich more than three generations*. In fact, the average increase ratio of population was lower than master Zhang's model. In considering the extending of cultivation land in times, the wealth dilution would have certainly completed in a period of 100-300 years, about 5-10 generations. It is around the life circles of major Chinese ancient dynasties in history.

## 2. The shortage of agriculture resources intensified social conflicts

- During a peacefully period of history, the surplus population caused decrease of social wealth per capita. The shortage of living subsistence resulted in a crucial scramble for the limited social resources. In history, the Chinese civilization had tried to overcome the shortage of living subsistence by two ways. One way is to bring a vaster area of wasteland under cultivation step by step, thus to steadily put the burden on environments and endangered the relations between human being and nature. In this condition, sometimes, the nature may take reprisals against human beings with disasters. The other way could be called social suicide, that means great turmoil of war that reducing the population, thus to wipe off the burden of society and open a way for the establishment of new dynasty on the ruins of the old one. In fact, the social turmoil or war was always mingled with natural disasters, or the natural disasters were always resulted in social turbulence.



<http://kc.njnu.edu.cn/dtx/Upload/image/ditudaguan/dimao/3.jpg>



**The Uprising of Chen Sheng and Wu Guang**

<http://history.cultural-china.com/en/34History1917.html>



## 中国人口规模

Historically, the Chinese civilization had taken shape in the Huanghe River valley. For the settlement and agriculture development, the Chinese ancestors had insured their life and the survival rate of infant had been enhanced. Moreover, the ancient people had a notion of reproduction cult and would raise the population into a level higher than the farmlands can feed. So, the society would receive the natural punishment after a peaceful period of prosperity. In Chinese history, every substitution of a new regime for the old is combined with up and down of population in a large scale. The Chinese population, even being historically in a variable territory, from Qin (221-206 B.C-) to Qing (1644-1911) could give an explanation of this situation. For example, the valley bottom of Chinese population was just about 8 to 30 million after the chaos caused by war. There were also some peaks of population in Chinese history. One was in Tang Tianbao year (755) with 90.45 million, another was in Song(1110) with 120 million; the third was 166.3 million in Ming(1566) . Since the war, the population in early Qing was down to 100 million, but up to 300 million in 1790 and to 432 million to 1851. Afterwards, the Chinese population reached 1321 million to the end of 2007.

Lu Yu, Teng Zezhi. A general history of Chinese population, pp.1216-1238, Jinan, Shandong Renmin Press, 2000.

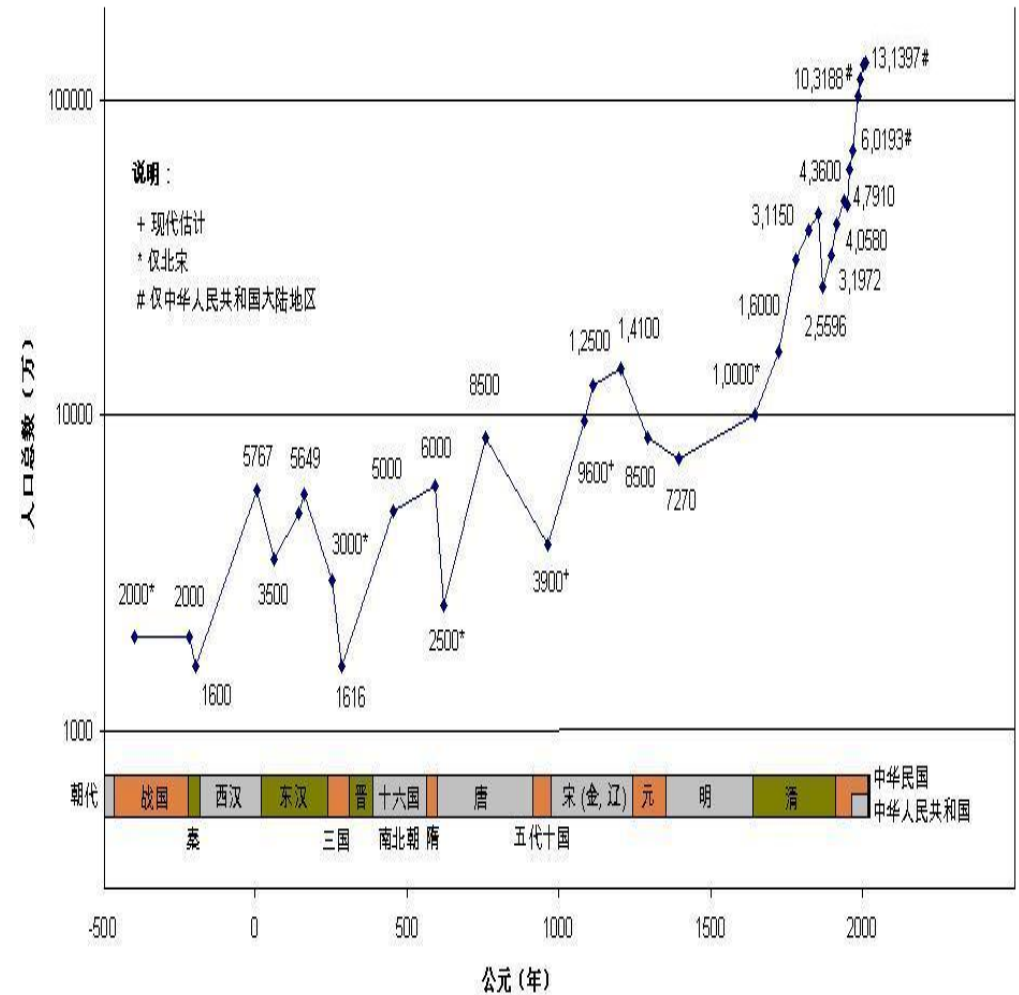


Figure: Chinese population in history

From: <http://upload.wikimedia.org/wikipedia/zh/0/0c/ChinaPopulation.JPG>

# The peace and turmoil in history

- In ancient Chinese history, the relationship between the so called great disorder under heaven and great order across the land was entangled with the relationship between population and farmlands. The entangling is the key to understand why the emperor Taizong Li Shimin (599-649) had opened out the Zhen Guan prosperity in a valley of population and the emperor Xuanzong Li Longji (685-762) had get into a great social turbulence stirred by one of his general called An Lushan (703-757) in a peak of population in Tang dynasty. After each times of the great disorder under heaven, there was also great scale of cultivated farmlands without farmers. In such condition, the new court would like to reconfirm the farmlands to farmers for their land tax. But after several peaceful generations, the population increase had gradually intensified land annexation and a large number of farmers had lost their farmlands. In this time, the court had not surplus farmlands to make a reallocation and the society would get into another situation of chaos.



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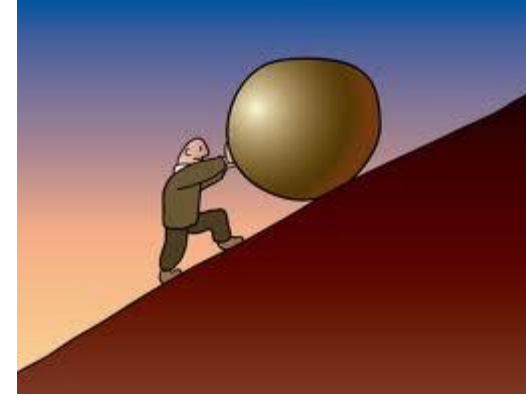
## There had been 12 turbulences in China's history since the beginning of Qin (221 B.C) to the end of Qing(1911).

- 1. 209-206 B.C, turbulence of late Qin and early Han, Marked by Chen Sheng and Wu Guang Uprising
- 2. 17-23, turbulence of late West Han, Marked by Lulin and Chimei Uprisings
- 3. 184-188, turbulence of late East Han,Marked by Huangjin Uprising
- 4. 307-311, Yongjia turbulence, Also called Turbulence of Eight Princes
- 5. 616-626, turbulence of late Sui, Marked by Wagangzai Uprising and Li Yuan Rebel
- 6. 755-763, Rebel of An Lushan and Shi Siming, Bringing about by two generals
- 7. 859-884, turbulence of late Tang,Marked by Uprisings of Qiu Fu and Huang Chao
- 8. 1120-1126, turbulence of late North Song,Marked by Fang La Uprisings and southern moving of the court
- 9. 1206-1271, turbulence of late South Song,Marked by Mongolian expedition and conquering of South Song
- 10. 1351-1367, turbulence of late Yuan,Marked by Hongjin Uprisings
- 11. 1629-1645, turbulence of late Ming, Marked by Li Zicheng Uprising
- 12. 1851-1864 , Taiping Uprising, Leading by Hong Xiuquan.

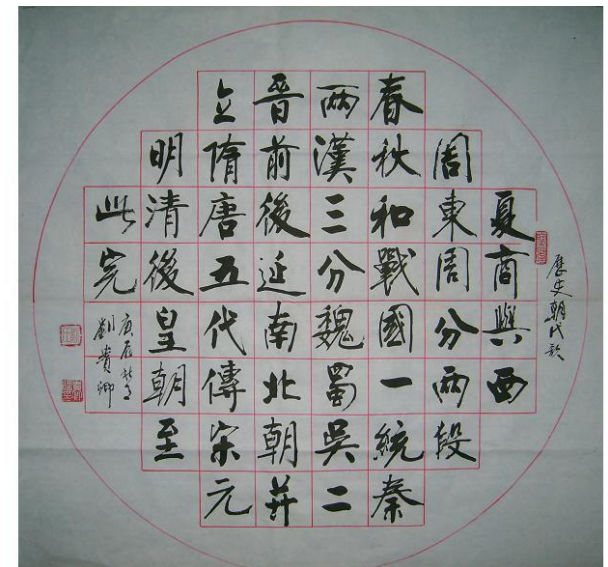




- The interval of the 12 turbulences in China's history is about 100-300 years. The argument is that the incoherence between limitation of land resources and population increase always made ancient Chinese society come back to his original place in a destructive way, then start a repeated process.
- In brief, the key reason of the periodic collapse and reconstruction of ancient Chinese civilization is the population pressure in a relatively limited land resources and unfair distribution and possession of social wealth.
- The periodic collapse and reconstruction of ancient Chinese social system had been caused by interweaved elements of society and nature. It is an oscillation of old civilization without development but a movement of Sisyphus.
- In a scientific view, the ancient Chinese civilization is relatively a closed system that had vibrated repeatedly for thousands years. The boundaries of the closed system had been composed by population, land resources and natural environments.



sporeflections.wordpress.com  
597 × 461 - I am getting in touch with my inner-Sisyphus.

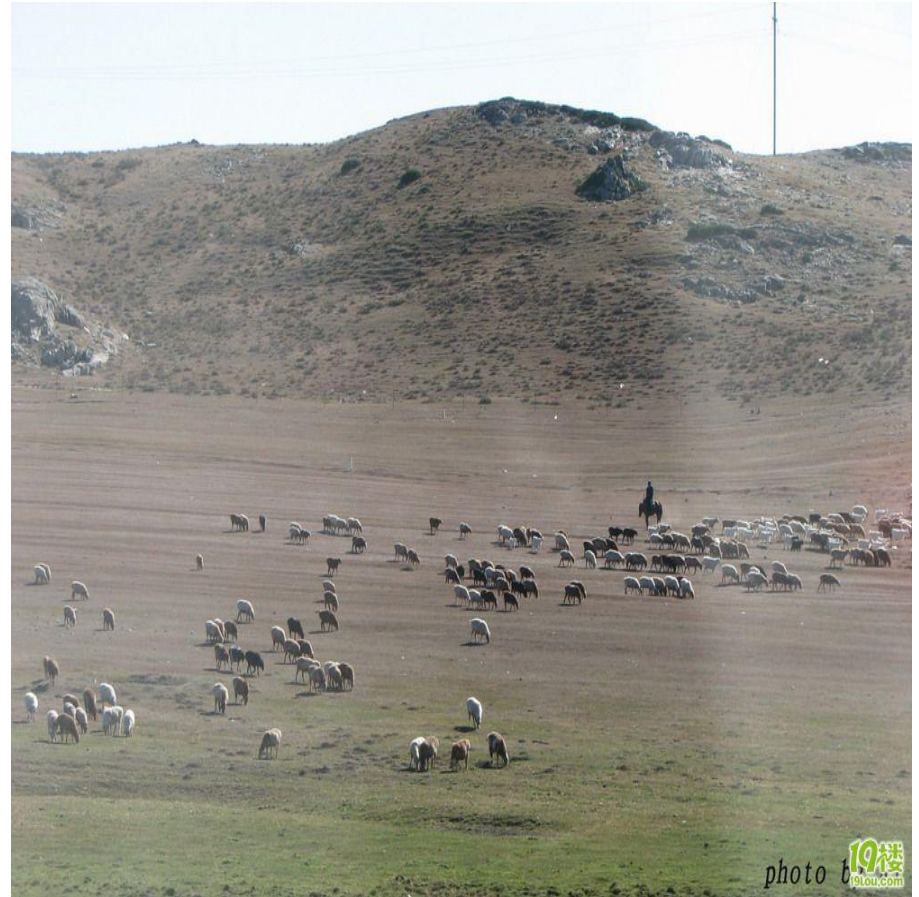


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*Dynasties in China's History*



# 3. Recognizing the predicament and discussing

- Psychologically, the emperors of any dynasties, as well as the common Chinese, regarded the great numbers of people as the sign of strong and prosperity, just like a shepherd who takes the great numbers of sheep and cattle as their family wealth. The effects of the idea had existed until middle 20<sup>th</sup> century and the population level of China had been heightened again during her early stage of industrialization.



<http://image.baidu.com/>

Since the environment and resources are relatively constants and the population is a variable quantity, so the greatest problem of ancient Chinese civilization is population in certain degree. Some far-sighted persons in Ming (1368-1644) and Qing (1644-1911) dynasties, as well as the Republic of China(1911-1949),the People's Republic of China(1949-) had recognized the problem. That was to say, they had recognized the connections between massive social disorder and population.



Xu Guangqi (1562-1633, left) put forward a hypothesis that the population would be doubled after 30 years.



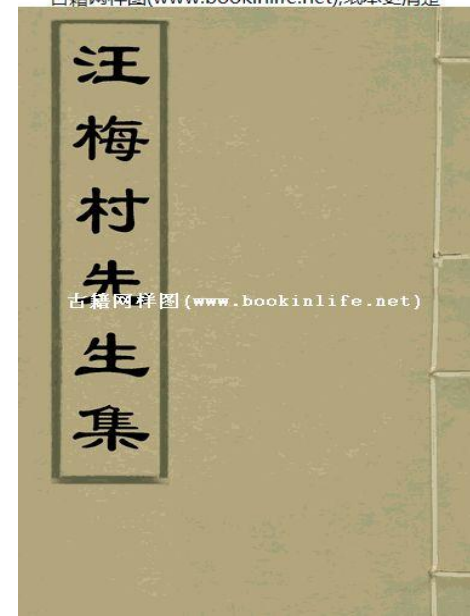
洪亮吉

Hong Liangji (1746-1809, left), also named Hong Bei Jiang, born in Jiangsu, a successful candidate in the highest imperial examinations. He had found the disharmony of human reproduction and food production.

Wang Shiduo (1814-1889, right is picture of his book), also named Wang Meicun, born in Jiangxi. He found that the heavy burden of population of his time had dried up heaven and earth; even the great efforts of people were useless.

( All Referred by Ge Jianxiong, Hou Yangfang and Zhang Genfu. population and Chinese modernization, p.17, Shanghai, Xuelin Press,1999 )

古籍网样图(www.bookinlife.net),纸本更清楚



古籍网样图(www.bookinlife.net)



Especially, in 1920, an important scholar named Gu Mengyu (1888-1972, above) had made a penetrating analysis of the connection between the massive social disorder and population. See Gu Mengyu. Population is the key of social problems, *Neoyouth*, vol.7, No.4, Mar 1, 1920



Afterwards, Ma Yinchu (1882-1982, left, 1980) had an underlining explanation to the control of Chinese population. But the majority of the people, including the policy makers and ordinary people, had not awakened to the real meaning of population to Chinese civilization.

Ma Yinchu put forth a recitation in July 1957 to the fourth session of the First Peoples Congress, delivering his new demographic theory about controlling the increase of population. Three months later, Ma was criticized but he still held his opinion for decades.

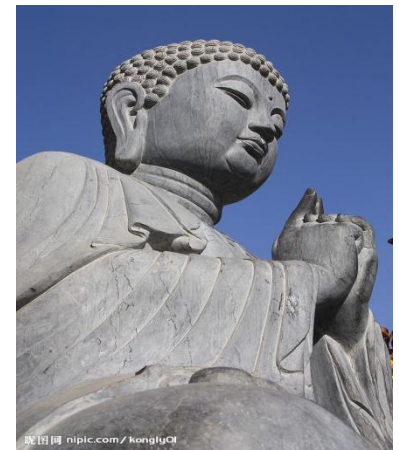
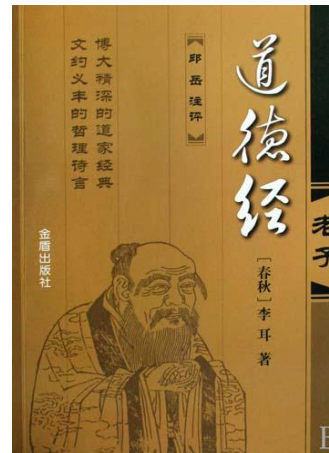




## The attitudes to population of major Chinese schools and religions

The Daoism and Buddhism which stood aloof from worldly affairs had provided some real worth for the Chinese society in history. Daoism and Buddhism are all religion standing beyond the common views of offspring and they insist on dealing with nature and environment in appropriate manners. In Chinese history, the distinctive functions provided by Daoism and Buddhism for the society to evade the crisis caused by overpopulation endowed them indisputable positions in Chinese civilization.

- In fact, all the macroscopic phenomena in Chinese society in history, including the substitution of a new regime for the old, is related with the human beings, especially the numbers of human beings.
- But the Confucianism as the main ideology in ancient Chinese society paid all their attentions to human relations instead of population. The sages and men of virtue had lofty ideals of cultivating one's moral character, handling family issues, managing state affairs and conquering the country, but had no notion of controlling the birth rate. As the common people appreciated more children, the Confucianism propaganda of wiping out the desire was just scratching an itch through one's boot. Confucianism was also encouraging the people to have more children and not held a scientific viewpoint about population. Another ancient Chinese school named Legalists who advocated severe penal codes and the arts of holding political power, trickery and strength, had not paid much attention to population problem too.





# The Emperor and his wives

- In general, the population of ancient society had been adjusted by spontaneous forces. Nevertheless, the population was not just an economic issue, but also a political issue touching upon the rights of reproduction. Under the rule of Chinese empire system, the emperor himself had many wives except the empress for reproduction of the royal offspring. In the royal palace, there were many eunuchs who had been emasculated so as to serve the royal family. Such rules and regulations were stigmata that reveal the uncivilized parts of Chinese civilization.



# The political power and the farmlands



- In fact, many distinguishing features of Chinese civilization could be comprehended by probing the connections of population, land resources and environment. In order that the land resources relied by a rural civilization are limited, the population increase makes the farmlands into a core of living. Thus, the problem of land was the core of traditional Chinese economics. It was a political issue as well as an economical issue. In a peaceful time, there was economical activities of buying and selling of lands by owners meanwhile the empire court also redistributing land resources by political meanings. But in a time of turbulence, the winners who conquering the country could take land resources by military force. For example, when the Mongolians conquered China, they sometime shoot an arrow to a distance, and then designated the grounds of the distance to his own property. As for the Manchu nobles, they had seized most of the land resources around Beijing by a way of a galloping horse running to a point according to the horseman's order.

# The resources for survival influenced the culture of interpersonal relations

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## 二十四孝图

陆绩，

三国时期吴国吴县华亭（今上海市松江）人，科学家。六岁时，随父亲陆康到九江谒见袁术，袁术拿出橘子招待，陆绩往怀里藏了两个橘子。临行时，橘子滚落地上，袁术嘲笑道：“陆郎来我家作客，走的时候还要怀藏主人的橘子吗？”陆绩回答说：“母亲喜欢吃橘子，我想拿回去送给母亲尝尝。”袁术见他小小年纪就懂得孝顺母亲，十分惊奇。陆绩成年后，博学多识，通晓天文、历算，曾作《浑天图》，注《易经》，撰写《太玄经注》。



- In certain degree, traditional Chinese culture had also been shaped by the political-economical pattern of land resources. When the new empire had been established by military force, the court retained the rights to distribute and control the living resources of its subjects. In a family, the elder possessed the rights to deliver properties to offspring, thus helping to form a corresponding subjects and master-servile mentality in society, which had maintained the tradition of respecting the ancestors and elders. In general, Confucianism stood for the authoritativeness of court and elder. Such a stand was in accordance with the economical life in an environment with limited living resources and would be conducive to its position as a main ideology in Chinese society. Besides, since the seizing and possessing of living resources were positively related with political power which was of a pyramid structure, so the majorities had fewer political rights and little social wealth per capita while the emperor and his subsidiary officials had high political position and much social wealth. Such an uneven situation in possessing social wealth and in political position had made many rebels want to *divide wealth evenly and to equal political rights*. For a time, the revolutionaries also called for *the whole world as one community* in catering to the aspirations of inferior social groups.



# The meaning of the substitution of a new regime for the old

- At this point, the change of dynasties was the funeral ceremony of the old one and the ceremony of the new one, combining with magnificent destroy of social order and adjustment of the relations between human and nature. The nature had got rid of the burden put in by society by way of turbulence. The foul wind and blood rain of war eliminated all of the prosperities, corruptions and piled-up grievances of the old sovereign in a disposable manner. Such kind of historical oscillation had provided a suitable explanation to the maxim in *The Book of Lao Zi*:

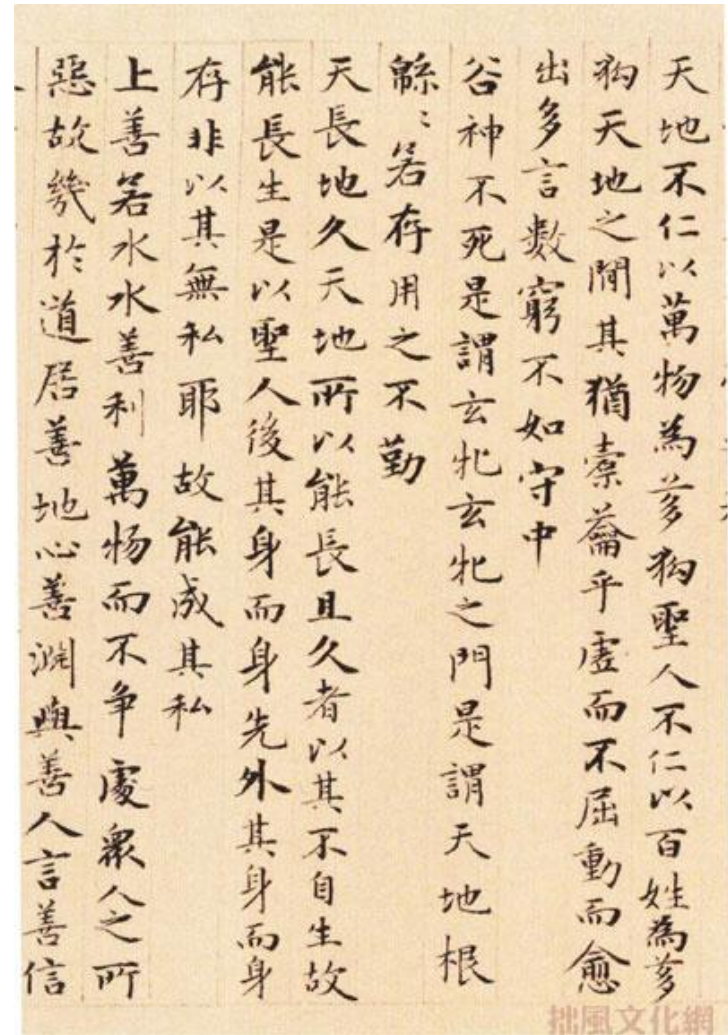
*Heaven and earth do not own their benevolences;*

*To them all things are straw-dogs.*

*The Sage does not own his benevolence;*

*To him the people are straw-dogs.*

- Obviously, the traditional civilization had get a breathing spell by such a historical oscillation like the change of dynasties so as to have lasted its life time. It was just for the periodic destroy and rebirth of dynasties that the traditional Chinese civilization had lasted for a long time.





- All in all, we can grasp the characteristic of the historical continuation of Chinese civilization from broad angles of environment science, ecology, demography, economy and political science. The limitation of land resources and the continual acceleration of population led to a shortage of living substances, and then accelerated social contending, at last, initiated social turbulence. The downfall and upsurge of dynasties were special ways of ancient Chinese civilization to last. The population, especially the up and down of Chinese population in history was obviously related to the collapse and rebirth of dynasties. Anyway, under the circumstances of ancient technology and natural economy, without the shock of the outside, the Chinese agricultural civilization in Asia wouldn't transform into a new civilization that allocates living resources though market. Anyway, it was difficult for the ancient people to know the deep accounts of the changeable life and destiny of their time, but modern people can investigate the history in view of sustainable development. The investigation into the history would be conducive to China to go beyond the old tracks and have a coordinate development of population, economics, society, environment and natural resources.



Right:<http://tupian.hudong.com>  
(Xingyang Peasants Uprising in

# Closed system and Open system

At last, we can find that the modernization of China and United States are totally two kinds of model of systematic evolution. The US model is that the external European culture and new immigrants went into North America. The ancient North America Indian civilizations were comparatively more closed ones than the ancient civilization on Eurasian continent, including ancient Chinese civilization. The US modernization has been a destructive remaking progress that almost has overlapped the old Indian civilizations. It is an evolution of open system, while the population has not been a burden, even not the core problem of it. The modernization of China is just a transition from closed system to open system. During this transition, the old system could not be destroyed by the permeated new elements and it is rather difficult for the new elements to remold the whole system. So, the Chinese modernization is a complicated interaction between the new and the old. The overpopulation had been a social burden accumulated in the continuation of old civilization in its traditional road and is of great influence upon the way of the modernization of China. In the process of modernization, the birth rate in developed countries goes down and the developing countries still have a heavy burden of population. In fact, it is until the recent 30 years that China has eliminated its historical burden of overpopulation by the birth control policy of the government. In a word, population is one of the clues to understand Chinese history and modernization. In certain sense, you can say that the economic successes of China in recent 34 years have related with its birth control policy that contained population increase effectively. But you may note that some scholars begin to call for a trimming or even a suspending of this policy (Ji Baocheng, 2011). They believe that the Chinese society has come to a stage of controlling the population itself by economic factors.

- (the end)

