

New Concepts to the Change of Human Social-economical Formation and the Development of Human Society

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Abstract: Any active thing always needs power. All productive tools, machines or working systems, which are so-called productive force, would need proper driving (motive) power (force)*. The motive power is the heart or core of productive force, which would always want to correspond with a definite relation of production. The different driving powers (or energy resource) with power devices are completely different in quality. Thus, the change of an important or main productive motive power in social economy would always lead to the qualitative change of relation of production, and would finally effect the change of human social-economical formation. The important task of mankind should ceaselessly find out new motive powers (energy) to satisfy the needs of new machines, new technology and new technical revolution. The important peculiarity of this article is: the development of human society was divided into five great stages, which were basically decided by the qualities and types of different motive powers of production. [The Journal of American Science. 2005;1(1):78-86].

Key words: development of human society; relation of production; social-economical formation motive power; driving power; human desire

1. Introduction

How did the human society develop in the past?
What was the motive power of social advancement?

In human history, the great progress and development of society was expressed by the change of social-economical formation. However, a social-economical formation was basically decided by the motive power of main production in the whole society. Only if some technology got a proper motive power in practical application, it could not become a productive force and could not propel the economical development, much less change the social-economical formation. In ancient times, there were no greatest technologies than the application of lever principle and wheels, the former was discovered by Archimedes of old Greece in the second century Before Christ. The lever principle and wheels were unconsciously used to have built Pyramids of old Egypt and the Great Wall of old China. However, technologies of lever and wheel had no other powers except manpower, they could not become the main social productive force. Therefore, the old social-economical formation could not be changed. The social production is a complicated process, and it needs various tools, equipments or machines, which

are almost offered by the same kind of driving power. Thus, the change of motive power in social main production would lead to the qualitative change of social-economical formation.

It will be concretely analyzed below that how the motive powers of production had mainly decided the social mode and relation of production as well as social-economical formation in the past human history.

2. The primitive clan commune or society—no artificial production

In clan communes, people only had the simplest natural things, such as stones or sticks, which people gathered for beating wild beasts and protecting themselves. In the long period of primitive society, people did not know production, but only knew to gather wild fruits, grasses and leaves for daily foods and clothes to sustain the personal most immediate needs. They were all primitive men. There could be no main differences between behaviors of mankind and beasts. The relation between people was equality and mutual help. Mankind had no way to store a large amount of foods for a long time, because natural foods were very easily putrid. Therefore, at the

condition of no articles surplus for other's requirements, robbing and plundering and oppression were almost impossible to occur, because nothing could be robbed or plundered between people. Intimate people composed a clan commune for breeding, for beating the fierce wild beasts and avoiding natural disasters. Mankind had kept the gregarious life in clan communes for over many ten thousands years from the beginning of becoming men of erect walk.

The disintegration of primitive clan communes (society) might be decided by appearance of two greatest events: fire could be used and kept, and animal husbandry had been built up. Fire enlarged the human food range. People could eat animal meat, many plants and some nuts so that they became more intelligent and stronger. Living animals could be fed as a well-stored food for people's needs in any time. Thus, people had articles surplus for other's requirement, and the living animals became the best labored products. The surplus products became the necessary condition of occurring plunder and slavery. Thus, the slave system began appearing and spreading from small to large scope among the primitive clan communes, and finally led to communes disintegrated. No fire used and no animal husbandry appeared, primitive clan communes might exist to present.

3. The slave society—animal husbandry society, manpowers of slaves became the motive power of production, slaves became productive tools and property of slaveholders too

Once many clan communes could feed a great deal of animals as surplus products, the rapacious desire would certainly emerge in some people's hearts, in a clan commune, the leaders and the stronger could plunder and slave the weaker. When a strong clan commune defeated other weak clan communes by fight, people of whole vanquished communes would become captures and would be enslaved, large amount of slaves coming from captures let the slave system to be built up and enlarged ^[1]. Thus, the slaves became the true productive forces and motive powers of production. Slaves became the productive tools and property of slaveholders, and were nothing but the speaking domestic-animals of slaveholders. Owing to the

oppressed strenuous labor of great quantity of slaves, the tremendous treasures were created. All slaveholders, slave-drivers and large numbers of intellectuals could live on the labors of slaves. Some of them mainly created the spirit treasure, the splendid culture and somewhat of science and technology. Governors or rulers safeguarding the interests of slaveholder class became the tool of plundering and oppressing slave class. The insurrections of slaves produced from cruel oppression of slaveholders, might temporarily reduce the oppression of slaveholders to slaves, but it was impossible to alter the slave system. In slave society, the main means of livelihood and the main treasures came from the resources of animal husbandry fed by slaves. So long as that the essence or position of slaves as motive power and tool of production could not be changed and animal husbandry as the main economy in society could not be replaced, the slavish relation of production had no possibility to be altered. Before 1950s, the animal husbandry in Xizang (Tibet) of China was the main productive trade, and agriculture was just in the secondary status, so, Xizang could still maintain the agriculture-slave system to 1960s.

In slave society, with agricultural development from small to large scope, the abundant agricultural products would offer much more living materials and treasures to society than slavish productions. Once agricultural production in slave society became the main resource of livelihood and social treasures, the landlord class would finally seize political power from rulers delegating slave-holder class by the way of peaceful purchase or violent revolution, thus, the old slavish relation of production had to give way gradually to new feudal relation of production.

4. The feudal society—agriculture society, animal-power plus man-power of farmers as motive powers of production, farmers drove farm cattle as animal-power, which was the strong force in agricultural production

Why was feudal relation of production bound to be able to replace slavish relation of production? First, agricultural production had higher productivity than slavish production and could offer much more materials of livelihood for society, the strength of farm cattle (or horse) as a motive power was stronger many times than man-power, consequently, people's

labor was more lightened in agriculture, people became the operator of cattle or horse. Second, agriculture enlarged the places of suitable residence for people and let people set up a fixed home. Third, agricultural products could be well stored in a long period as people needed. Fourth, farmers had much more freedom than slaves. The social development and progress was just that, relation of production of lower productivity was finally replaced by relation of production of higher productivity, labors of less freedom was finally replaced by labors of more freedom, thus, human desires for better life could be more satisfied. However, the rapacity of feudal ruling class and landlord class would inevitably lead to the armed insurrection of farmer class, but over two thousand years in old China, the results of a great deal of such insurrection were just to change the feudal supreme rulers, and to reduce temporarily the oppression of landlord class to farmer class. The feudal relation of production had not be changed or replaced still yet, because the insurrection of farmer class could not offer a new motive power of production and create out a new productive mode of higher productivity, and the agriculture was still the main resource of social production. After insurrection, farmers ploughed fields of landlord with cattle as usual, and the feudal relation of production remained unchanged.

Eight hundred years ago, in Song Dynasty of China, some industry and handicraft industry had been well developed. Some technologies, such as mining industry, iron smelting, copper smelting, had achieved great successes.^[2] Six-hundred years ago, in Ming Dynasty, eunuch Zheng He^[3] cruised southwest ocean of China seven times with enormous fleet, once the fleet was composed by about 300 vessels near 30,000 men. Technologies of papermaking and printing had been invented and better applied already before that time. Powder was only used to old cannons (such as redcoat cannon, a powerful powder weapon in Ming Dynasty) and firecrackers, but not used as a driving power of any technologies. Why had the industrial revolution and capitalism not appeared for many hundreds years in old China? No matter how progressive some industries and technologies had been in old China at that time, they had no other stronger motive powers than manpower or power of domestic animals. The driving powers of Zheng He's vessels were manpowers and wind powers, the air-

blowers of iron-smelting were manpowers, printing was manpower too, etc. Any ancient advanced tool or apparatus or technologies needed stronger power than manpower. No stronger powers was invented and applied, farmers ploughed fields only with farm cattle, the feudal relation of production had no way to be replaced, the sprout of capitalism had no possibility to grow up, no matter how armed insurrections of farmer class were violence and frequent in feudal society.

Many minority nationalities resided on some mountains of southwest China kept the semi-feudal and semi-slave social system to 1960s, because they could only be engaged in labors of semi-agriculture and animal husbandry with man-power, they had no way or did not know how to plough the fields on mountains with farm cattle (or horse).

Steam engine offered very strong power to mankind in feudal society and brought the sprout of industrial revolution and capitalism. After all, the heavy steam engine was only used to a few industries, such as vessels, trains, not used to agriculture. The invention and spread of internal-combustion engine provided the new strong power for many industries, such as transportation, mining industry, at last for agriculture. Thus, social productive forces and productivity rose at high speed. As a result, the productive mode of capitalism greatly developed in feudal society. Once social treasures and materials produced by the relation of production of capitalism became the important or main economical resource in feudal society, capitalists for protecting its vested interests would certainly replace the rulers of the feudal dynasty delegating interests of landlord class by the way of peaceful purchase (England, Japan) or violent revolution (France, China). Contradictions between landlord class and capitalist class expressed mainly in two respects. First, in early capitalism, capitalists needed to wrest a large number of farmers from landlords and let them become workers, it would infringe upon the interests of landlord class and to benefit capitalists. Second, king, feudal nobles and big landlords looked down upon capitalists and did not like to lose their vested rights and interests.

In the old history of Chinese society, the slave society and the feudal society were not divided very obviously, because agriculture was developed not too latter than animal husbandry, so, the slave system was not developed very maturely and had not reached the perfect shape. The Chinese Huanghe River basin and

Yangtze River basin had warmer weather, and were better suitable for agriculture with farm cattle as driving power, but not suitable for animal husbandry. Thus, the feudal relation of production could rapidly develop in the early slave society and could earlier replace the slave relation of production, so, the feudal system could be maintained over two thousand years. However, the great grasslands of Mongolia had colder weather, and were better suitable for animal husbandry, but not agriculture, so, the slave system could keep a longer period.

5. The society of former capitalism—industrial revolution, steam engines, internal-combustion engines, generators and motors as motive powers of production, such excessive strong motive powers had finally led the whole society of capitalism go to industrialization and electrification.

Once government delegating capitalist in a country replaced the feudal dynasty, society would formally walk into capitalism. In the period of former capitalism, the invention and widespread application of steam engine, internal-combustion engines, generators and motors were the great technical revolution. In addition, various energies (heat, light, electricity, chemistry, atom, solar, water, etc) could be successfully transformed each other, it was another great invention and technical achievement. After agriculture in whole country was finally industrialized and electrified, as a result, the society of former capitalism entered into modernization -- entire industrialization and electrification. Especially, electricity and the various motors as driving powers could conveniently enter into every family, office and enterprise of whole society, thus, people's production, working and living became easy, comfort and better. The social labor and work productivity was extreme-speedily raised with the applications of those motive powers to various machines and technologies. The human society of high productivity gave birth to twins: "population explosion" and "knowledge explosion" in 20th century. The productive and social development of capitalism in 20th century had exceeded the development of human society in the past several thousand years. Many high-developed countries, such as U.S.A., Japan, Canada, England, Germany, France, Finland, had entered into the last stage of former capitalism from 1950s to 1990s. In

that period, after nationwide industrialization and electrification, the social-economical formation, social structure, political system, relation of production and moral concepts in above developed countries had been essentially altered.

(1) Populations of workers and farm-workers had been less than 30% of total populations, middle class constituted the majority in society. Various service industries had become the main body of social economy. Under protection by laws, the contradictions between capitalists and workers had become non-antagonistic.

(2) The whole social welfare system had let every people had enjoyed the fundamental equal rights for birth, living conditions, education, health insurance, relief funds of unemployment and social security benefits. Everybody could live a basic honor life from his birth to death. Another good system for all social lower stratum was to have practiced the progressive taxation. Those are just the higher components of so-called socialism born out from a modern developed country of capitalism. The original meaning of socialism was just a mode of distribution to social treasures and materials of livelihood. Nobody had pointed out that what the productive mode of socialism after capitalism will be.

(3) The high-quality democratic systems built up could safeguard the social normal production and the people's normal livelihood, avoid the social massive insurrection and civil strife, and guarantee the extensive personal freedom.

(4) The concepts of class struggle were no more convinced by the most people in the whole society, negotiation or laws could gradually solve the contradictions between people or classes.

(5) Owing to the progress of science and technology, the times and labors spent to produce social needed daily necessities were just a minor part in total social labors and works. People could spend more time and money to enjoy his material and spirit life. A great deal of people could save his surplus money to invest stocks or to create personal business. That social dynamic equilibrium between bosses and employees would let the exploitation of capitalists to workers be unable to go too far. In developed countries, the technical workers had not been in poor stratum, and the greater part of them had belonged to middle class.

(6) The fair competitive mechanisms of market economy under the protect of laws and justice had offered the beneficial conditions for economical growth of whole society as well as development of personal intelligence and ability.

6. The society of latter capitalism—micro and precise miniaturizations of various motive powers become the necessary conditions for entrance to automatization, information society and intelligent-economic era, components of private ownership of socialism have been much more increased

In the last stage of former capitalism, as the results of entire industrialization and electrification in developed countries, the motive powers of production had been powerful and multiplex enough to get rid of human strenuous physical labors. People had become operators of machines and controllers of productive process. In developed countries, mental workers had composed the social main body and played a leading role, nobody did the pure physical labor all the time without the help of power machines. In the next period of capitalism - latter capitalism, people must lighten and reduce miscellaneous mental works (such as to replace and enlarge functions of human feeling organs, to record and handle information and data, to do complicated mathematical calculations, to supervise and record various productive or working processes, etc) under the help of new high intelligent and precision technologies. Thus, everybody will save a great amounts of personal working and thinking time, improve working efficiency and quality, and take more free time to strive for satisfying personal desire or for realizing personal dream. Those new technologies gaining various micro and precise driving powers had brought the whole society of capitalism a qualitative change in past 30 years. Another great technical revolution of mankind--information revolution has come to the developed countries and will lead the whole society to go to automatization, information society and intelligent-economic era—society of latter capitalism.

Mankind had successfully transformed heat energy, chemistry energy, light energy, solar energy, wind and water energies, and atom energy, etc into general electricity (GE) through mechanisms. In addition, GE can be easily altered back to above other

energies. However, electricity has many different specialties, such as high voltages and low voltages, big powers and small powers or micro powers, alternating current and direct current, high frequencies and low frequencies or other frequencies, wired transmission and wireless transmission, etc. All electricity other than GE, which specialties are different from specialties of GE, is called special electricity (SE). All SE could be transformed from GE, but some SE as driving powers might bring a great technical revolution. In computers, the micro and precise motive powers needed by information transference are pulses of high frequency. They are some SE, and produced out from pulse generators and magnifiers of high frequency. Those generators and magnifiers as power devices of computers are new important technologies. In 1960s, a entire device of a computer composed by electronic vacuum tubes as its driving powers might be full of a house, but its functions are much less than the functions of a present personal computer. The big difference between old and new technologies of computers is decided by completely different frequencies of SE and different pulsers (power device). It is said, the power devices of different technologies would have the complete different effects. Any new important technology would often need some new driving powers, with the appearance and widespread application of new driving powers, the formations of human social production, economy and livelihood would finally be changed.

When mankind started to enter into 21st century, developed countries entered into the society of latter capitalism, there have been the important and eternal tasks for scientists and technologists to study and find out various new powers (energies) with its power device needed by new technologies. The modern sciences and technologies are developing to two poles of macro and micro worlds. [5] With that trend, the new motive powers should be found out from two respects: macro-powers and micro-powers. Macro-powers will give enormous strength to mankind, and micro-powers will give great intelligence to mankind. Both are two wings of the further development for mankind. First, to find out new multiplex micro and precise driving powers needed by new working or intelligent system, more advanced computers, and new technologies, should always be the first important task. A computer or an intelligent system is

a very complicated machine, its parts may need pulse signals of different high frequencies (SE), different power device or some special materials of semiconductors. In addition, pulses of different high frequencies as the driving powers (they are all SE transmitted from GE) applied to TV, to wireless communication and to computers would want to have different materials, structures, effects and uses. It has showed that any important new machines or new technologies would always come from the application of some new SE as driving powers (energies). Second; the new enormous energy resources must be found out instead of old natural energy resources, which will not satisfy the needs of developed countries or developing countries for their rapid economical growth, and will be exhausted several decades later. In addition, the space apparatus will need some new enormous powers. Thus, to research and to find out the new enormous energy resources (power) will always be the necessary condition to the development of human society. Energies (power) to human society are just like foods to people.

The information revolution has shortened or eliminated the distance of time and space for people, greatly enlarged the human space of thinking, activities and working, and saved great amounts of time for mental workers. People's relations and their ways of living are extremely changed. A great number of people can work, learn and do personal business at home with computers. People in the world can exchange their knowledge and information, make friends and mutual helps each other on website. Thus, people may change personal mind or living concepts, even may make up and realize personal dreams through website. On the other side, the development of information technology has led to the intense competition between countries, between companies in the intelligent-economic era to scramble for high-qualified scientists and technicians. The competition to intelligent technology between people become a fair and excited competition for personal wealth or position and for success of personal undertaking.

Owing to inflation of people's desire and great improvement of personal livelihood, besides wanting to endeavor for personal wealth and undertaking, people want to endeavor for personal health, enjoyment, lifetime and even for personal beauty. The excessive developments of those developed countries have produced many social, economic and moral

problems, which are the certain results produced out from vicious inflation of human desire. (1) At first, the enormous energy expenditure in the world, especially in developed and some developing countries, all come from the old natural energy resources, such as coal, oil and gas, which will be exhausted in 50~100 years. Will hydrogen fuel become the complete substitution of gasoline? Mankind needs more enormous new energy resources than ever before. The energy produced from nuclear fusion can offer infinite motive power for human utility on the earth, but right now, it has not been better controlled in practice. The other new enormous energy resources have not been found out and applied. It will lead to fight and to control for natural energy resources between many developed countries or other countries. (2) Will mankind have enough ability and intelligence to improve and prevent the environmental pollution endangered mankind? (3) Will mankind have enough abilities to prevent or avoid the occurrence of enormous natural disasters, such as the great volcanic eruption, the collision of small planet to earth? (4) How can the nuclear war be avoided between nuclear countries? (5) How can the plunder and hegemonism of high-developed power country of democratic system to other countries in the world be prevented? How will the international conflicts, which are the real danger factor to ruin the earth civilization, be prevented? (6) The fundamental problem in the world is unbalance of social and economic development between countries, it is the main resource of many wars and conflicts, that unbalance will hardly be removed in near future. (7) The democratic systems of developed countries are built upon the base of personal freedom, which caused the expansion of personal desire and selfishness. As a result, rapacity of the rich and laziness of the poor have become two poles to hamper the social and economic development, and a great number of personal crimes have become the social cancer hardly to be eliminated.

In short, for keeping the social better and sustained development, the stability in any society is very important, the balance of interests between person and society, between the rich and the poor, between employers and employees, between domestic country and foreign countries must be better harmonized by government or democratic and legal systems. In a society of high personal freedom, the

better moral concepts and faiths are more important than legal system, and neither can be neglected. In a developed country, it will be important to maintain proper balance in whole society between economical growth and social welfare, between components of socialism and capitalism, between personal freedom and collective interests, between legal system and moral education. In a word, more components of capitalism and individualism are developed, and more components of socialism and collectivism should be correspondingly increased. The social excessive unbalances in many respects would lead to the instability of whole country, and hamper the social-economic progression.

In reality, the society of private ownership of capitalism in developed countries has become containing more components of private ownership of socialism. Disintegrations of communist system in the former U.S.S.R. and Eastern Europe, and the change of Chinese communist party to capitalism have exactly showed the failure of public ownership of socialism, but not showed the failure of socialism distribution. Under the system of public ownership of former socialism, people would be always distributed and fixed on a given position as a mechanical part and could not be moved according to personal free wishes. That society was full of cruel political struggles, but lack of free and fair competitive mechanisms. Only a few premier leaders would non-stop hanker after political struggle for keeping or seizing their personal power, advantage and influence. They regarded vast common people as their tools of struggle. Thus, most common people had no way to realize and satisfy personal desire to happiness and enjoyment, personal ability and intelligence had no way to be better developed and fully displayed.

There will be an important problem about the future development of human society worth to be deeply considered. How will high-developed countries develop in future? Will the private ownership of capitalism be a long-standing co-existence with the private ownership of socialism in a country? Or, will the latter gradually replace the former?

7. Conclusions

According to above analyses, some new concepts to the development of human society can be

taken out. (1) The qualitative change of relation of production in a society was mainly decided by the qualitative change of motive powers of production, which constituted the main body of social economy. A special motive power of production with its device wanted to correspond with a special relation of production. The change of motive powers of production was a qualitative change, so, the change of relation of production was a corresponding qualitative change too, and the social-economic formation would finally be greatly changed with the appearance and great spread of new motive power. (2) In human history, the change of relation of production was not the result of class struggles between repressing class and repressed class, but the new progressive motive power became a power of social main productive force instead of the old regressive one, as a result, the old relation of production was gradually replaced by new one, the new rulers delegating new relation of production would replace the old rulers delegating the old relation of production, because the new motive power could offer much more treasures for society than the old one. (3) At least, from feudal society to present, just some intellectuals invented the new motive power needed by new technology or tools, which finally led to the qualitative change of the social-economical formation. It was a lopsided view that laboring people had created the human history and the world. (4) The result of class struggle in the past was only to relax temporarily the class conflicts between oppressing class and oppressed class after big insurrections, but was impossible to change the old original relation of production. (5) The sprout and growth of a new relation of production with the appearance of new motive power would always occur in old relation of production and old social system, which could be replaced afterwards. The sprout of socialism components could only be born out in capitalism, just as the sprout of capitalism had been born out in feudalism. (6) In reality, the society of latter capitalism in developed countries is becoming like some society of private ownership of socialism.

What are the necessary conditions for developing countries, such as China, India, turning into developed countries in the near future? While a developing country is completing industrialization and electrification nationwide, it should begin to go to automatization, information society and intelligent-economic era, while it is completing the private

ownership of capitalism nationwide, it should step-by-step import or keep some distributions of socialism as to maintain the balance between social stability and economical growth.

8. The development of human society and the development of human desire

The human desire is a human main spiritual character. Desire has stimulated human actions for its existence and development and for its happiness and enjoyment. Desire is the spirit-power of mankind.

Just the desire for happiness and enjoyment can decide the personal living purpose, and the desire had controlled the activities of mental organ from the beginning of personal life.^[6]

For happiness and enjoyment, everybody would always hope to work least for his needed means of livelihood, and to seek for his imaginative mental and material life as easy and comfort as possible. It is said that nobody would not like to strive for less labor and more enjoyment, because it accords with the human spiritual character. Thus, the main motive force for the development of human society has come from shortening the distance between human desire and its present social-living conditions. However, that distance will hardly be eliminated, even hardly be shortened until human disappearance. They are a pair of eternal contradictions for mankind. In addition, it seems that the distance would have become more enlargement with the advancement of human society, because the improvement of human present living conditions may be much less than the inflation of human desire.

The human desire for exploring the secrets of universe and nature and for seeking the scientific truth has always stimulated some intellectuals to strive for new inventions and applications of science and technology, in which the motive powers (energy) of production had played the main role in the progress of human society. Just the motive powers of main productive force in society would finally decide the social-economical formation and relation of production, and effectively propelled the development of human society forward. Once a new technology with its new driving power was widespread applied to production and played an important or main role in national economy, it would finally lead to change the relation of production, to change the mode of people's

livelihood and social-economic formation. That has been the certain result effected by human virtuous desire. On the other side, human desire is a sword of two side edges, it has gone to vicious development, and led to natural environment to be destroyed and polluted, led to wars or conflicts between countries, between people, classes, social stratum, religions. In addition, the excessive personal freedom has caused a large amount of personal crimes and indulgers. The more and more welfare would prevent society from normal development. Many west famous scholars in the past affirmed that people had become the slaves of progressive technologies.^[7] I felt, a great number of modern people had become the slaves of vicious personal desire, such as power, money, drug, gambling or sex, etc. Science and technology are resources of human strength and intelligence forever and will always propel the advancement of human society. The most disaster of mankind will not be the progressive science and technology, but the inflation of human vicious desire with the enlargement of personal freedom, especially the vicious inflation of power desire of some politicians. Would human desire become an opened Pandora box not to be controlled by mankind-self? Could the vicious personal desire be improved, suppressed, controlled and corrected with the progress of human society and science-technology?

Few words of author: There are many disputed important viewpoints in this article. Criticisms to those viewpoints will be heartily welcomed. Arguments would always promote the advancement of social science.

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***Annotations in this article:**

driving power = driving force = motive power =
motive force.

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