

## 2.2 THE ECONOMY OF EARLY CHINA *THE TREATISE ON FOOD AND MONEY*

Our focus on Classical China has thus far been primarily on the areas of political and intellectual history, and we have relied very heavily on narrative sources. However, the *Shiji*, which was written a century after the close of the Classical age, and subsequent early Imperial histories give us a considerable amount of information concerning issues of economics: tax and landholding patterns, infrastructure development, and so forth. This section and the one that follows explore some of the information that these early sources provide concerning the basic structures of the social history of early China. What follows here is a translation and commentary on the relevant portions of an early economic text; the next section surveys very briefly issues of technological change in agriculture, metallurgy, and water conservancy.

The “Treatise on Food and Money” is a long and detailed examination of economic history as it was understood at the time of its compilation in the first century A.D. It forms a section of a history of the Han Dynasty by Ban Gu, but in the course of its discussions it incorporates much material on the Zhou period, largely derived from the *Shiji*. It is divided in two parts. The first deals principally with issues of agricultural production and the second with issues of currency and commerce. The portions translated here are only those that pertain to the period before the founding of the Qin empire in 221 B.C. They constitute the most sophisticated understanding of the ancient Chinese economy available at the time of their composition. Significant portions of the account simply repeat legend, but it is a good vehicle for introducing many issues of interest to critical analysis of ancient Chinese economy.

Before embarking on the text, scan the subtitled sections to get an idea of how the narrative moves (the subtitles are added), and look at the types of issues raised in the notes, as indicated by the underscored note titles.

Sidebar topics covered in this reading include the following:

- Standard measures
- The well-field system
- City dwellers, farmers, and peasants
- Bureaucratic office and rank
- The scarcity of fuel for fire
- Education in ancient China
- Population and the health of the state
- Tax systems and large-scale public works
- Measures of weight and volume

## **Introduction**

Of the eight facets of government discussed in the “Great Plan,” the first is food and the second is goods of exchange. The former refers to the blessed grains and other edible things that are produced through agriculture. The latter refers to cloths of fibers and silk from which clothes may be fashioned, and metals, knife-shaped coinage, turtle shells and cowries. These are all media by means of which wealth may be divided and benefits distributed; they are the conduit between those who have and those who lack. These are the roots of sustaining the people. (*Han shu* 24a.1117)

The “Great Plan” is a text found in the *Book of Documents*, highly revered as the Dao of government revealed to King Wu by the Shang Prince Ji, but probably a concoction of the fourth or third centuries B.C. Turtle shells were valued by the Shang for their spirit powers in divination; strings of cowries were the major form of currency during the early Zhou.

## **The legendary origins of exchange**

In the era of The Spirit Farmer, wood was first cut into plowshares and bent into plough handles. The advantages of ploughing and weeding were taught throughout the empire and there was sufficient food for all. Markets were set up at mid-day and all the people of the empire would come, bringing with them all the goods of the empire. They would exchange goods there and then return to their homes. Thus circulating, goods flowed to their appropriate places. With food adequate and goods circulating, the state was prosperous, the people wealthy, and the transforming instruction of the people was complete.

The Yellow Emperor and his successors made adjustments according to the needs of their times to ensure that the people would never be wearied. The Emperor Yao ordered the four sons of Xi and He respectfully to impart to the people their calendar of the seasons. The Emperor Shun appointed Prince Millet to office because the people were then for the first time in want of food, and so confirmed that agriculture was the most important task of government.

The Emperor Yu settled the great flood and demarcated the Nine Provinces. He established regulations recording field locations and qualities, and adjusting, according to their productivity and distance from the capital, rates of taxation in kind and of tribute. He encouraged the exchange of goods between those who possessed them and those who were lacking, and in this way the myriad states were well ruled. (*Han shu* 24a.1117)

## **The ethical principles of political economy**

The books of *Poetry* and *Documents* tell of the flourishing days of the Shang and Zhou. The pivot of government lay in comforting the people with prosperity and then instructing them. The *Yi jing* calls the great beneficence of heaven and earth “life”; it calls the great jewel of the sages “office”; it calls the means of guarding one’s office “humaneness”; it calls the means of gathering the people “goods.” Goods are the root that the sage emperors relied on to gather the people and so guard their

office, to nurture the living things to completion and receive the beneficence of heaven with compliance, to rule the state and comfort the people.

It is said that one should not be anxious about scarcity of people, but rather about even distribution; one should not be anxious about poverty, but rather about tranquility. In general, if distribution is equal there will be no poverty; if there is harmony there will be no scarcity of people; if there is tranquility the government will not fall.

Note that distributive equality here is probably conceived in terms of the non-patrician classes, where static egalitarianism would be a natural ideal from the standpoint of the patrician class (minimizing the effects of lean years, ensuring general contentment, and militating against the rise of any sub-group that might challenge patrician supremacy – though this is a Han Dynasty text, the conservative nature of Han Confucianism would continue to recommend such Zhou patrician views).

Thus the sage kings encircled the people by building double walled towns within which they could reside; they established settlements of huts and wells in order that the people could share equitably. They opened marketplaces for the circulation of goods and set up village schools for the instruction of the people.

There are appropriate enterprises for each of the four classes of people: the *shi* class, the farmers, the artisans, and the merchants. Those who study in order to attain their offices are called *shi*. Those who reclaim land and plant grain are called farmers. Those who create objects by means of their skills are called artisans. Those who circulate wealth and sell goods are called merchants.

This is a precise statement of the classical model of social classes.

The sage kings entrusted officers with tasks according to their capacities; the four classes of people accepted their duties according to their strength. Hence at court there were no unfilled offices; in the towns there were no vagrant people; in the lands there were no uncultivated fields.

(*Han shu* 24a.1117-18)

### **A late picture of the economic organization of Western Zhou agriculture**

The root of the Dao of bringing order to the people is to settle them on the land. For this reason, the length of a standard pace must be fixed, the size of a standard *mu* of land must be set, and then the boundaries of the fields may be determined.

Six *chi* (one *chi* = about nine inches) were constituted as one pace. One hundred paces square constituted a *mu* of land. One hundred *mu* constituted a *fu* (the land allocated to support the household of one farm laborer); three *fu* constituted a *wu*; three *wu* constituted a “well-field.” The well-field was thus



composed of nine *fu*, and was held conjointly by eight families. It was, in area, one *li* square. Each household received one hundred *mu* of land as a private field and also cultivated ten *mu* of the remaining land, which was a public field. This accounted for 880 *mu*; the remaining twenty *mu* of the public lands were set aside for cottage huts (where the farmers set up residence during the spring and summer).

Standard measures. This text was written well after the standardization of weights and measures imposed by the government of the Qin Dynasty (221-208). During the period of classical China, different regions used widely different sets of measures, and as the economy became more complex during the last centuries of the Eastern Zhou, non-standardization became a major problem, and standardization an important element of modernist political programs such as Legalism. This passage projects the urge to standardize back into the distant past; it is not at all clear that measures were fixed for the entire Zhou empire in this way.

Of the measures referred to here, there are two which we will encounter repeatedly: the *mu* (sometimes called an “acre”: it was actually about one-twentieth of an acre – the size of a large garden plot today) and the *li* (or Chinese mile – actually about one-third of a mile).

The well-field system. This portrait of state regulated in the early Zhou has been the subject of long debate. The term “well-field” is derived from the Chinese character for “well,” which was written like a tic-tac-toe board, composed of nine equal squares. In theory, the central field was the property of the king: every group of eight families, whose fields were arrayed around the royal parcel, devoted a proportionate amount of their time to the central field, in addition to the time they devoted to their own.

The tradition of the well-field system is a very old one. The *Book of Poetry* refers to a division between public and private fields in a poem dating earlier than the seventh century, but it does not mention the “well-field” configuration. Many scholars think that the well-field system was an image of a lost utopia, concocted by idealistic political thinkers of the Warring States era; these scholars do not believe that such a system ever existed. Others have suggested that this was, at least, an early Zhou political model, which may have been implemented to some degree. If the system was ever actually implemented, the central field would most likely have been viewed as “the lord’s,” rather than “the king’s.” That is, its produce would have been conveyed not directly to the Zhou ruler, but rather to the patrimonial estate holder who held title to the region on which the lands were located.

The well-field system, if it ever existed, would have established the limits of royal claims on full ownership of the land, and would have made the principal tax of ancient China a labor tax: the one-eighth of each family’s farm labor devoted to working the king’s field.

Under this arrangement, farming families befriended one another in their activities, cooperated in guarding the crops and watching for dangers, and came to the rescue of one another in times of illness. In this way, the people were in harmony and friendship, and the transforming power of instruction extended among them uniformly. The burdens of *corvée* service (labor time due to a ruler or state as a tax) and taxes of grain were evenly distributed.

In granting the people lands, those who received the best lands were allocated 100 *mu*; those who received mid-quality lands were allocated 200 *mu*; those who received the lowest quality land were allocated 300 *mu*. Lands which could be ploughed and sown every year were non-rotating fields; these were the highest quality. Lands which needed to lie fallow every other year were rotating fields; these were of middle quality. Lands which needed to lie fallow two years of every three were double-rotating fields; these were the lowest quality, and their owners moved among them over a three-year cycle. In addition, farming families with many mature unmarried sons who constituted surplus laborers were also allocated fields on a per capita basis.

Families of *shi*, artisans, and merchants also received land, with every five family members being calculated as the equivalent of a single farm householder.

This passage could be read as evidence that day labor was available for hire (who else would cultivate these fields of non-farmers) or that land could be rented. It also implies higher status for all these classes, as their land allotment would have been equivalent to that of farming families despite the fact that their primary incomes would have been derived from other sources. (We must bear in mind, however, that this is a late reconstruction and may have very little relevance to practices before the Han.)

City dwellers, farmers, and peasants. There are some very basic questions about Zhou society that we are not able to answer clearly, and one of them is the way in which distinctions of social class correlated to the division between urban and rural populations. This text, among others, encourages us to believe that virtually the *entire* population of ancient China lived within walled towns, the farming population simply moving to temporary field shelters during the spring and summer months. This seems highly unlikely. Apart from being far more tidy than real life ever is, it also requires an astonishingly high degree of both social control and of increased labor, necessary for the transport of goods to these populous urban centers. Moreover, if the countryside were so thoroughly abandoned during the winter months, it would make it quite difficult to defend broad territories from incursions by non-Chinese nomadic peoples, who inhabited geographic pockets throughout the territories under Zhou control. Although the reports of the texts would surely not have come to be had not some patterns resembling this existed to some significant degree in regions of the Chinese cultural sphere, both the degree of uniformity of such structures and their intensity is very suspect.

It seems more likely that the texts we have conflate into one category two very distinct types of farming classes: urban based farmers

connected to patrician lineages, whose fortunes required them to cultivate their own lands but whose clan associations required them to live “upscale” within the city, and peasant-farmers, families of no social standing settled on patrician lands to farm for the local lord, whose “title” to their lands was less than free, and who probably had permanent residence in small hamlets, located at some distance from the nearest city. The former class, *shi* who farmed, would have occupied no single slot in the four-class model of society. Their clan connections would have allowed them to participate in the political life of the city – something peasants clearly could not do – yet their living style would have made them appear more peasant than patrician.

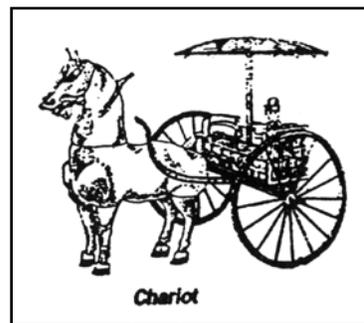
These sorts of complexities in actual society probably lie behind many inconsistencies in relatively neat textual accounts of systematic norms, such as this one. The relationships between cities and patrician clans, and between farmers who owned their lands, in some sense, and other types of farmers or peasants, are unresolved issues that could occupy our attention at length, and the fact that virtually every early source discusses the peasants as if they were a single homogenous class may be the single greatest distortion in their portrait of ancient China.

These issues have been at the core of a long-running scholarly-political battle. Mainland Chinese scholars have, over the past five decades, made great efforts to show that the evidence supports the contention that peasants were actually “slaves” (a necessary feature of a Marxist presentation of China’s historical evolution), while Chinese scholars from Taiwan have used the same evidence to argue precisely the opposite conclusion.

This system of distribution took level land as its standard. Less arable lands, such as mountains and forests, swamps and marshes, plains and hills, barren and brackish lands, all were graded and allotted accordingly.



There were two kinds of tax: the military levy and the production tax. The production tax concerned the one-tenth of total family grain production which was the product of its share of the public field, and also taxes on the crafted goods sold by artisans, merchant profits, and any fishing or



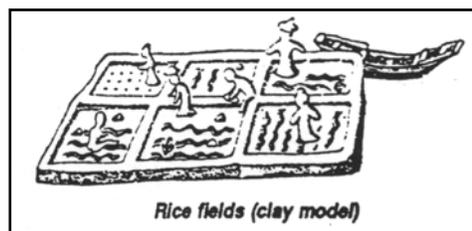
forestry incomes of lands managed by wardens. The military levy was used to supply the armies with carts and carriages, horses, armor, and arms, as well as including quotas for infantry service. These taxes fully provided for the expenses of the state treasury and

arsenals, and for the gifts and grants that were bestowed by the state. The production tax was used to provide for the sacrifices to heaven and to earth, for the royal clan sacrifices, and for service to all the many spirits. It supplied the needs of the household of the Son of Heaven, for the salaries and sustenance of the state officials, and for miscellaneous state expenses.

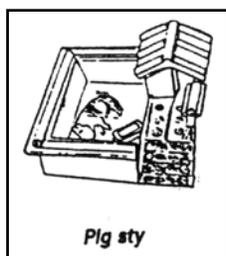
When farming men reached the age of twenty, they were granted fields; at sixty they returned them. “Seventy and higher, take the ruler as provider; ten years and lower, take the ruler as grower; eleven and older, the ruler makes bolder.”

This pictures the state as deeply engaged in public welfare. It also makes it clear that the historian believed that in the early Zhou, agricultural lands could not be treated as private property but continued to belong to the ruler even after being “granted” to individual farmers. (It would be hard to know whether the author of the text was thinking of the “ruler” as the Zhou king or as the patrimonial lord of an estate.) Regulation of the constant reassignment of agricultural lands would thus become the primary tool of public policy.

In sowing crops, there was always a mix of the five major grains in order to guard against calamities (blights affecting one crop). It was not permitted to plant trees in cultivated fields as they would hinder the growth of grains. Ploughing was done with energy and the fields were frequently weeded; the harvest was reaped as though bandits were about to appear. Encircling the cottages, mulberry trees were planted.



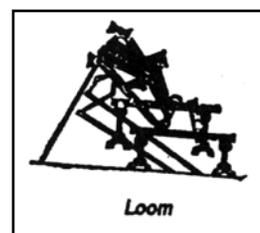
Rice fields (clay model)



Pig sty

Vegetables were planted in garden plots, and at the borders of living and working areas were planted melons and gourds, fruit trees and cucumber. Chickens, pigs, dogs, and swine were raised for food with close attention to their timely needs. Women tended silkworms and wove the silken cloth. In this way, persons above the age of fifty could be clothed in silk, and those above seventy always had meat to eat.

When referring to dwelling places in the fields, we speak of huts; when referring to dwellings in the city we speak of precincts. There, five family dwellings constituted a neighborhood and five neighborhoods constituted a precinct. Four precincts constituted a district and five districts constituted a borough. Five boroughs made up a region and five regions constituted a township. A township thus contained 12,500 households.



Loom

The Neighborhood Headman held a rank of “lower *shi*,” and the supervisors for each successively larger unit held a rank one step higher, up to the office of Township Supervisor, who held a ministerial rank.

Bureaucratic office and rank. The texts that we possess for the classical and early imperial periods in China are deeply concerned with issues of official rank. By the time of the mid-Han Dynasty, about the beginning of the Christian Era in the West, the entire empire was ruled by a complex and diversified bureaucracy carefully sorted into about two dozen levels of ranks, each with a corresponding salary level and set of rules concerning variances from the basic norms. From the Warring States period on, authors of texts concerning the distant past seem always to have assumed that the concepts of office, rank, and salary had been preoccupations since the beginnings of civilization and governance (much as, perhaps, most children today might find it hard to imagine the concept of schools without grades). For these writers, offices and ranks were as basic to the grammar of social life as were lineage associations and the regularities of the calendar. “Recovering” the bureaucratic system of the Western Zhou, that time of utopian rule, was an obsession among many thinkers from this era, who, perhaps on the basis of a limited set of genuine clues, fashioned increasingly complex blueprints of what this system had looked like. The ultimate model, “unearthed” during the mid-Han and identified as the administrative hierarchy devised for the Zhou by the Duke of Zhou, is a text known today as the “Institutes of the Zhou” (*Zhou li*). Its bureaucratic map embraces a working government of tens of thousands, immaculately organized in bureaus and sub-bureaus. The text we are reading here, composed within decades of the popularization of the “Institutes of Zhou,” is not unusual in assuming that even a thousand years earlier, there was no form of public service that was not codified as a ranked and salaried office within a centralized hierarchy. Later in the course, when we explore early Zhou inscriptional texts unknown to late Zhou and Han writers, we will be able to better assess the degree to which official hierarchies had become coherently articulated during the pre-Classical period.

In each precinct there was a lower school and in each township there was an upper school. The lower schools enlightened children in basic teachings; in the upper schools, ritual comportment was practiced and its transforming effects were illustrated.

In the spring, the people were all ordered to move to the fields to live, and in the winter they returned to live within the city. The *Book of Poetry* says:

In the fourth month we stir our feet –  
with wife and children all together,  
bearing hampers of meals to the southern fields,  
where the hands greet us, glad as can be.

And it also says:

In the tenth month the cricket creeps under my bed. . . .  
I sigh to my wife and my children,  
“Now the turn of the year is at hand;  
we must go in to dwell in our rooms.”

In this way, the people accord with the forces of *yin* and *yang*, guard against thieves and bandits, and practice the patterns of ritual.

In the spring, when the time comes to send the people back to the fields, the officers of the neighborhoods sit at dawn in the station at the right of the city gates and the officers of the precincts sit in the station at the left of the city gates. Only after all have been sent out do they return home. In the evening the same pattern is followed. Those who enter the city must carry with them straw and wood for burning, each carrying a load appropriate to him, except for those whose hair was gray or white, who did not carry loads.

It is unclear whether the text here speaks of a regimen practiced every morning and evening during the growing season, or if simply envisions a single dawn exodus in spring and a single return one autumn evening. Chinese and Japanese historians have tended to think in terms of the latter (and they do tend to take this as an accurate picture of Zhou practice).

The scarcity of fuel for fire. Many of the regions of eastern China were substantially deforested at an early date. Acquiring fuel for cooking and warmth was a major preoccupation of villages and cities. The most commonly available fuel was fast-burning dried grasses and other forms of straw, but collecting these and transporting them was time consuming. It appears that fuel was not generally viewed as a proper item for commerce, so communities relied on cooperative labor, as this passage states. Penalties for unauthorized cutting of trees on hillsides or on patrimonial hunting preserves were often heavy, and the *Zuo zhuan* records a sixth century agreement between neighboring states which called for stripping patricians of their noble status and commoners of their freedom of person if they were found collecting straw from the fields or pastures of their neighbor state.

In the winter, once the people were resettled in the towns, the women of each lane would gather together each evening to do their spinning. Since women's work extended into the night, one month's work was calculated as worth forty-five days. Women were required to work in groups in order to reduce expenditures on fuel, and also in order to bring the skilled and unskilled together, and thus bring customary practices into common accord. Those men and women who had not yet found their proper places would rely on these group settings to sing to one another, each expressing in this way his or her sorrows.

There have been a number of scholars who have written persuasively arguing that much of the poetry in the *Book of Songs* originated in group courtship customs such as this.

In these months, those young boys who could be spared from labor would go to the lower school rooms. Those eight years of age (seven, Western style) would begin with elementary studies, such as the calendar and the directions, writing and arithmetic. At this age, they would begin to learn the rules of family manners and how to act towards elders. At the age of fifteen they would begin higher

level studies, learning the rituals and music of the former kings and the etiquette of the court for rulers and ministers. Those who showed exceptional abilities would be transferred to the lower or upper schools of the township, and the best of the township students would be transferred to the youth academy of their patrician state.

Each year, the patrician lords would present to the Son of Heaven exceptional young men from their academies. These would then study at the Grand Academy, and would be called “rising *shi*.” Those whose comportment and abilities were equal in quality would be distinguished through a competition of archery, after which all graduates would be awarded an official grade of rank.

Education in ancient China. This highly idealized portrait of a centralized state system of education is unlikely to have had any close relationship to pre-Classical practice. However, it is likely to be composed of elements from far less systematized local practices, which did reflect principles of promotion according to abilities. Just when this criterion, as opposed to the criterion of high birth, began to play a significant role in the social training of individuals is unclear.

By the time of the Han Dynasty, the role of state education had become so overwhelming in China (beyond anything comparable in the West) that many very elaborate portraits of the “system of the Zhou sages” were fabricated. Apart from certain elements very obviously derived from late Confucianism, these models share certain features in common. They all picture formal education as being offered solely to males beginning about the age of seven (Western style), involving intense training in the ritual forms of etiquette and the “gentlemanly” martial arts, particularly archery (which came to be seen as a measure of a person’s inner moral compass), and in writing and arithmetic. The texts also agree in dividing the curriculum into elementary and advanced levels, and in assuming a hierarchy of schools.

A striking feature of this text is that it implies that no criterion for birth was involved in early schooling, and that commoner children of exceptional talent could emerge as “rising *shi*,” a patrician designation. It is very likely that the history of education during the Classical period moved in a direction away from a system based on birth towards one based on talent, but unlikely that the early Zhou system provided training to non-patrician children. Note that the basic criterion for schooling was that children “could be spared from labor,” implying at least a minimum of economic surplus on the part of the family. (In the later centuries of the post-Classical era, the principle of merit in educational promotion led many poor families to live on the edge of starvation in order to invest in sending a son who could have contributed field labor to a tutor or a school instead. In a small percentage of cases, the son’s educational success and subsequent official appointment did transform the social and financial class of his family.)

In the first of the spring months, when the people who were dwelling communally were about to disperse to their field huts, constables would walk the roads ringing wood clattered bells in

order to record the songs of the people. These were sent up to the Grand Music Master at court. He would order them on the basis of pitch and modal scale and have them performed for the Son of Heaven. Thus it is said, “The king knows all the empire without looking out of his window.”

This was certainly a Han practice, and some believe that portions of the *Book of Songs* were collected during the early Zhou in a manner similar to this.

This is the outline of the system whereby the former kings controlled the land and settled the people upon it, enriching and instructing them. As Confucius said, “In guiding a state of a thousand war chariots, be attentive to affairs and faithful in them; be regular in expenditures and caring of the people; employ the people according to the seasons.”

The quote from Confucius is found in the *Analects*.

Population and the health of the state. The phrase “caring of the people” has a special sense. During the late Zhou, when the patrician states were politically independent, the two basic resources available to rulers were land and population. Defending one’s territorial boundaries was a straightforward notion, but if the land one defended possessed inadequate population, it could not be as easily defended or as fully cultivated; thus state revenues would fall as the costs of military defense increased. Agriculture was a labor-intensive form of production, and although ancient China’s population was high relative to other areas of the world, increased labor capacity more than compensated for increased consumption. Thus possession of a flourishing population was essential.

Despite various devices meant to ensure that people would remain on the land designated for them, it was not possible to prevent unauthorized emigration, and those most likely to emigrate were the able-bodied. One of the key constraints on the behavior of rulers during the late Zhou was the fact that an alienated population could desert the state. Rulers inclined to arbitrary tyranny would increase surveillance and coercive measures against emigration, but these would in turn act as disincentives to stay. The more practical political advisors of the Classical period attempted to devise systems that would optimally balance legal constraints and other forms of institutionalized coercion with well advertised welfare policies – or at least the rhetoric of “caring.”

In this way, the people were all encouraged towards achievement and delighted in their occupations, placing the public interest before the private. As the *Book of Poetry* says:

The mists come rolling together,  
The clouds rise upwards slowly;  
May it rain first on the public fields  
And then reach to my private one.

This passage is famous because some interpret it as early evidence of the well-field system. The word “public” is, in the Chinese, identical with a word meaning “lord,” or “duke,” and the phrase could just as easily be rendered here as “the lord’s fields.” It is likely that during the Classical period, the term’s meaning gradually came to point less to the patrician lord and more towards the state in general.

For every three years during which the people ploughed the soil, surplus sufficient for one year was put in storage. There was a sufficiency of food and clothing, and hence the people were concerned with issues of high standing and disgrace. Honesty and deference appeared in conduct and contention and litigation ceased. For this reason there was, every three years, an examination of individual achievement. Confucius said, “If there were a ruler who would employ me, within one year the situation would have become acceptable, and in three years it would be perfected.” Thus was the principle of perfecting one’s accomplishments applied herein.

This is simply a reverse extrapolation of administrative evaluation practices gradually developed during the Han. The quote from Confucius is found in the *Analects*.

After three triennial examinations, promotions and demotions were determined. When a store of three years surplus had been accumulated, the preceding nine years labor was called a “Rising Period.” Two consecutive Rising Periods were called an “Era of Peace,” which indicated stores adequate for six years. Three consecutive Rising Periods were called an “Era of Grand Peace,” indicating that over the prior twenty-seven years, store for nine years had been saved. Thereafter, the highest grace was spread throughout the land and ritual and music were perfected everywhere. Thus it was said, “If there were one who ruled as a True King, in one generation the land would surely become humane.” Such was the outcome of this Dao. (*Han shu* 24a.1118-23)

The quote is from Confucius in the *Analects*. Note the linkage between the personal virtue of the ruler, the perfection of a state guided social system, the generation of massive economic surplus, and the perfection and universalization of cultural forms. These are the basic features of the Confucian political vision.

### **A portrait of later Zhou economic practices as symptoms of moral decline**

Once the Zhou royal house had declined, tyrants and corrupt officials neglected the field boundaries and corvée requirements became unreasonable. Government ordinances ceased to be obeyed and those in superior and inferior roles deceived one another. The public fields were no longer maintained. Thus Duke Xuan of Lu came to institute for the first time a production tax on private fields, a measure which the *Spring and Autumn Annals* reviled.

Tax systems and large-scale public works. This tax regulation of 594 B.C. is widely discussed in various texts as a symptom of social decline. According to the traditional view, prior to this act, production taxes for the farming population were covered by the labor contributed to the public field (the well-field system). This may have been the case, or, if the well-field system did not, in fact, exist, the record may indicate a shift from taxing a harvest output to taxing land owned. This would have been an advantage to patrimonial estate holders as their incomes would have been guaranteed (at great cost to the security of the farming population). It may also indicate a shift in the concept of land ownership, regarding the peasants like land owners, rather than as serf-like subjects settled on the lord's land.

This new method of taxation levied on acreage may be linked to the rise of large-scale public works, such as the building of dams, canals, and state walls (the greatest of these ultimately being linked as the Great Wall of China). During the centuries of the late Spring and Autumn and early Warring States periods, iron technology was first applied to agriculture; along with new developments in irrigation and planting techniques, this greatly increased productivity. Under these conditions, estate holders would have found that the principal traditional form of tax, labor due on patrician fields, was not so efficient as a tax on personal crop yields plus labor time, directed no longer to the lord's crops, but instead to public works. The economic and military benefits of these works became increasingly critical during the Warring States period, when competition among states drove governments towards increased size, aggressiveness, and public control.

Thereupon, rulers became increasingly avaricious and the people were bitter, natural disasters and social chaos appeared. The situation deteriorated into the period of the Warring States, during which crafty deception was esteemed and humanity and righteousness held cheap, riches were given foremost place and rituals and courtesy left behind. (*Han shu* 24a.1124)

### **Li Kui's blueprint for government intervention in the grain market**

At this time, Li Kui devised for his lord Marquis Wen of Wei a policy for exploiting to the utmost the strength of the land.

Li Kui's approximate dates are c.455 - c.395. Wei was one of three states formed when the huge central state of Chin was divided through civil wars among its most powerful clans, an outcome confirmed by the official recognition of the figurehead ruler of the Zhou house in 403. Marquis Wen's de facto rule of the region of Wei predated this official division, and his reign is usually given as 446-396.

Li Kui calculated that a region one hundred *li* square enclosed 90,000 *qing* (one *qing* = 100 *mu*). Calculating that one-third of this area would be occupied by mountains, marshes, cities, and areas devoted to field huts, he deducted this portion, leaving a total of six million *mu* of arable land. If the land were diligently maintained, each *mu* could yield an increase of three pecks of grain over the

customary norm. If it were cultivated in a lax manner, the decrease would be equivalent. Figuring along these lines, the amount of variable production on 100 square *li* would amount to 1,800,000 piculs of unhusked grain.

Measures of weight and volume. It is impossible to give accurate equivalents for measures of weight and volume in ancient China – not only were the systems complex, but prior to the Qin they varied widely among the patrician states. “Peck” is a conventional translation that refers to a Chinese volume measure far smaller than a U.S. peck; “picul” translates a Chinese weight measure which became in the Han the basic unit in which bureaucratic salaries (payable in grain) were measured. A peck of grain would have weighed about three pounds; a picul weighed about 65 lbs. Only a deranged optimist would expect to hold people’s attention by discussing this in further detail.

Li Kui also said that if grain were to be sold at too high a price it would hurt the non-farming people, while if it were sold too cheaply it would hurt the farmers. If the people were hurt their families would separate and become scattered; if the farmers were hurt the state would become poor. Thus prices that were too high or too low would be equally damaging. Good policy required both that the people not be hurt and that farming be encouraged. (*Han shu* 24a.1124-25)

Note that the issue here concerns the relation of prices to the economic health of the state and its social consequences. Clearly the rulers of large states in this era had gone beyond the basic goal of maximizing their own revenues through taxation.

### **Calculations of a farming family budget in Wei, c. 400 B.C.**

Now at that time a man supporting a family of five cultivated one hundred *mu* of land, and if he harvested one and a half piculs per *mu*, his total yield would be 150 piculs of unhusked grain. Out of this, one-tenth, or fifteen piculs, would be deducted for production taxes and 135 would remain. Each person in his family required one and a half piculs of grain to eat each month, that is, ninety piculs per year for the family, leaving a surplus of forty-five piculs. If the price of a picul of grain was then thirty coins, the surplus would be worth 1,350 coins. Deducting 300 coins in expenses for sacrificial grains offered at the local shrine to earth, and for the spring and autumn sacrifices at the village altars, there would remain 1,050 coins. Clothing generally required 300 coins per person each year, and five persons would thus require 1,500, leaving an annual deficit of 450 coins. Unfortunate occurrences, such as illnesses and the expenses associated with funerals if a death should occur, and also military levies and other miscellaneous government taxes are not included in this figure. This is why farming families were constantly in difficulties and could not devote themselves wholeheartedly to their field work, and instead raised the price of grain towards excessive levels.

It is important to bear in mind that in a subsistence economy, the calorie intake of farm workers is a key concern. Without enough “fuel” to burn, the farmer simply cannot apply the effort needed to maximize the yields that weather conditions permit. Li Kui’s calculation

appears to allow a bit over three pounds of grain per person each day. Even allowing that women and children may require smaller shares, and that winter needs will be less, this is not a generous allotment, given the caloric demands of farm work.

Li Kui therefore concluded that any effective policy for leveling prices must involve a careful measurement of the quality of each year's harvest. He set three grades of good harvest: best, very good, good. In the best years, the harvest could be four times as good as the average year, and a family's surplus crop would amount to 400 piculs.

This must be a round figure. Such a harvest would yield 600 rather than the norm of 150 piculs; after taxes (60) and food needs (90), the remainder would be 450. The following numbers seem equally approximate, and not particularly accurate.

In very good years, the harvest would be three times the average, and a family's surplus would be 300 piculs. In good years, the crop would be twice the average, and a family's surplus would come to 100 piculs. If there were, on the other hand, a minor famine, then only 100 piculs of crops would be harvested; for a moderate famine, only 70 piculs would be gathered; for a severe famine, only 30 piculs.

Note the very wide range of the harvests. With early technology there were few means of compensating for unfavorable weather and the yields, normally not very large, were extremely volatile.

Given this situation, Li Kui advocated that when a bumper crop was harvested, the government should purchase three-fourths of it, leaving one-fourth to the people; in a very good year, the government should purchase two-thirds, and in a good year it should purchase half. This would just allow sufficient resources for the people. When the prices returned to normal, the government purchases would cease.

Apparently, Li's policy is triggered both by yields and by price fluctuations. This assumes that government purchases will begin only after prices have fallen, and that the purchasing program will itself raise prices back to target levels.

In the event of a minor famine, stores proportionate to those purchased in a good year would be put up for sale; in a moderate famine, stores proportionate to those purchased in a very good year would be sold; in a severe famine, stores proportionate to those purchased in a bumper harvest would be sold.

In this way, though there might occur crop failures, floods, and droughts, the price of grain would not become too high and the people would not scatter to other states. This was because the government bought up surpluses to provide for famine years.

When this policy was implemented in Wei, the state became prosperous and strong.

*(Han shu 24a.1125)*

### The reforms of Shang Yang in Qin, 350 B.C.

When Duke Xiao of Qin (r. 361-338) adopted the policies of Shang Yang, he abolished the well-field system and initiated a system dividing arable lands by means of crossroads running north to south and east to west.

This reform was part of more comprehensive reforms initiated during the period when Shang Yang was Prime Minister of Qin. Shang Yang, who is often regarded as the founder of Legalism (with good reason), was an émigré patrician from the state of Wey. Qin, whose population and ruling house were latecomers to the Chinese cultural sphere, were accustomed to finding their best political talent among émigrés and giving them relatively free rein. In the case of Shang Yang, he was permitted to thoroughly transform the nature of Qin government and society, introducing the ideas and systems that led to the Qin conquest of the patrician states a century later, and the ultimate establishment of the Qin Dynasty.

Duke Xiao was concerned that successful farming and warfare be rewarded. Though this was not in accord with the ancient Dao, nevertheless because his policies concentrated on the fundamental (that is, agriculture) Qin was able to topple the neighboring patrician states and become leader of the patrician lords. However, the kingly institutions were thus destroyed while usurpations and discrepancies of rank proceeded without restraint. The rich among the common people (that is, merchants) were able to accumulate hundreds of millions in cash, while the poor ate mash and grain husks. Those who ruled strong states seized neighboring territories, while the weaker ruling houses lost the altars of their states.

*(Han shu 24a.1126)*

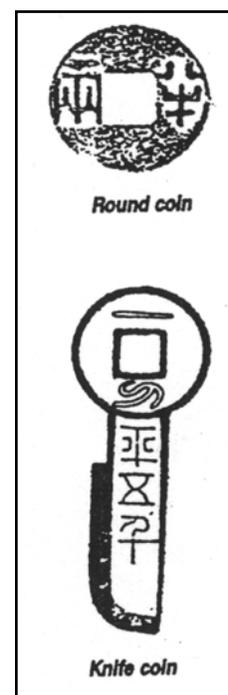
[The treatise continues its account of the history of agriculture through the Former Han Dynasty, and because the later portions are not relevant to the Classical period, they are not included here. We resume with the beginning of the second portion of the treatise, which focuses on commerce. The portions of the discussion which pertain to Classical China appear below.]

### Early systems of currency

As far as media of exchange are concerned, gold, copper coins, silks, and cloths, no details are recorded concerning the periods of the Xia and the Shang. When Grand Duke Wang served the Zhou, he established the nine economic ministries and the system of round coinage.

As this concerns the founding days of the Zhou, relevant information must be considered the stuff of later prescriptive legend (imagined accounts of the past meant to guide future practice). The nine ministries are variously identified; they are said to have had control over supervision of natural resources, regulation of commerce, minting of currency, state finances, and management of the royal treasuries.

Yellow gold was minted in squares one inch (about 0.9 English inches) square and weighed one catty (about 8 oz.). Copper coins were round with a square hole in the



center and they were weighted by the gram. The standard width of silks and textiles was two feet two inches and the length of a bolt of fabric was forty feet.

The precious nature of wealth was found in gold coinage; its sharp profitability was found in knife-shaped cooper coins; its flowing nature was expressed in strings of coins; its widespread nature was expressed in textile cloths; its worth when gathered in bolts of silk.

A series of typical Classical puns. The word “profit” means “sharp” as well, and there was indeed coinage minted in the shape of a knife; the term used for coins strung together as a cash unit was a homophone for a “spring” of water; the word for “cloth” also means “to spread over.”

After the retirement of the Grand Duke, he set up this system throughout his patrimonial estate in Qi. (*Han shu* 24b.1149-50)

### **The economic innovations in Qi, c. 650 B.C.**

When Guan Zhong (d. 645) became Prime Minister to Duke Huan of Qi (r. 685-643), he understood the variables of supply and demand. “Harvests are rich or poor,” he said, “and grain is accordingly cheap or expensive. As government orders for grain are slow or pressing, goods are accordingly in greater or lesser demand. If the ruler does not attend to these matters, traders will roam the markets with stores of goods taking advantage of shortages among the people, and in this way they can increase their capital a hundredfold. Hence in a state of ten thousand war chariots, there will always be merchants with ten thousand in gold, and in a state of one thousand war chariots, there will always be merchants with one thousand in gold. It is because profits tend to become concentrated. Calculating total capital and stores, such states should have sufficient resources, yet the people are hungry nevertheless. This is because the grains are monopolized in storage.

“When the people have a surplus they do not value grain; the ruler should purchase grain when the price falls low. When the people do not have enough they value grain highly; the ruler should sell grain when the price climbs high. If purchases and disbursements are adjusted according to supply and demand, then prices will be stabilized. If prices are stabilized, then it will ensure that a city of ten thousand households will possess stores of ten thousand *zhong* (a quantity equivalent to about 30,000 piculs – about a two-week store of grain for such a city) and ten million strings of cash coinage in its treasury. A city of one thousand households would possess stores of one thousand *zhong* and a treasury of one million cash.

“In order for the people to plant in the spring and weed in the summer, they must also have the means to provide plough handles and shares, vessels and implements, seeds for planting and food for the luncheon hampers and family meals.

“For these reasons, great merchants and hoarders must not be allowed to bully and rob our people.”

Guan Zhong's policies predate those of Li Kui described earlier by over two centuries. It is interesting to compare them and ask in what respects they differ (of course, the descriptions here may not be fully accurate).

Following these policies, Duke Huan was able to employ the small state of Qi to bring together all the patrician lords and become renowned as hegemon over them. *(Han shu 24b.1150)*

The state of Qi was by no means small, except in comparison to the other patrician states taken as a whole.

### **The royal coinage reforms of 524 B.C.**

Over a hundred years later, King Jing of Zhou was distressed at the debasement of coinage (through admixed alloys or short weight). The king wished to issue a new form of larger coin. His advisor, Duke Mu of Shan objected. "This would be unacceptable. In ancient times, when heaven sent down natural disasters and calamities, the rulers would adjust the measurements of cloth currency and the weight of metal coins in order to relieve the people. If the people were distressed because coinage was too light, the ruler would mint a heavier currency and circulate it.

In times of famine, peasants presumably might panic if the little grain they could sell were paid for in coinage that had, over time, been debased through admixture of base metals. Early coinage was much more freely minted than today's regulated currencies, and some licensed coiners profited by selling impure coinage at face value.

"Thus there came into circulation heavy coins that balanced light coins and the people all benefited.

This probably indicates that existing small coins were weighed against the newly issued large coins, the quality of which would not yet be in question.

"If, on the other hand, the market could not absorb large coinage (because prices had dropped and finer denominations were needed) then greater quantities of smaller coins would be minted and circulated. The heavy coins would not be eliminated, but they would be balanced against the smaller coins. Both types of coins were of benefit to the people.

"Now your majesty intends to abolish light coins and mint heavy ones. People will in this way lose their capital; can it be that they will not be bankrupted?

It would appear either that the king intended to declare existing currency non-negotiable or to fix too high a price for the new coins.

"If the people go bankrupt, your majesty's revenues will become inadequate. If this happens, you will be forced to extract more from the people. Unable to support their needs, the people will set their minds on moving to distant places and in this way you will scatter your own people.

“Moreover, to cut off the income of the people to fill the royal treasury is like blocking up the spring of a river to make a stagnant pool. The flow being cut off, it will not be many days before the water in the pool has evaporated away. May your majesty ponder this.”

The king did not heed this advice, and ultimately did cast the large coins. They were stamped with the words “Precious Goods,” and were round with a central hole, both the inner and outer rim possessing raised edges. The king used the coins to encourage agriculture and provide for insufficiency, and this greatly profited the common people. *(Han shu 24b.1151)*

Commentators are divided as to whether the duke’s arguments were, in fact, wrong, or whether the king followed them to the extent of preserving the small coinage. It is unusual for a text such as this to fail to make its “moral” clear. For our purposes, the importance of the text is its testimony concerning the attention given to the economics of currency at this early date.

## KEY NAMES AND TERMS

well-field system  
corvée labor tax

Li Kui  
the four social classes

## STUDY QUESTIONS

1. *How does this selection indicate changes in the ownership relation between farmers and the land they till during the Warring States Period?*
2. *What picture of the relation between farming and town life emerges from this text?*
3. *What sort of education system do we see here?*
4. *Why does the author criticize the tax reform of 594 in the state of Lu?*
5. *What were the main goals of Li Kui's policies, as reported here? How would you evaluate the quality of his ideas?*
6. *How does this text picture the proper relationship between government and the state economy?*

## Sources and Further Readings

Ban Gu's first century A.D. history of the former Han Dynasty, the *Han shu*, is the source of the text for this reading. It, in turn, built on Sima Qian's *Shiji*. This text is the basis of a monograph by Nancy Swann, *Food and Money in Ancient China* (Princeton: 1950). Swann's book is outstanding and has remained important for sixty years – the translation here was repeatedly guided by her choices and interpretations.

Images in this reading are selected from Sun Ji, *Handai wuzhi wenhua ziliao tushuo* [Illustrated materials of Han period material culture] (Beijing: 1991). The sketches depict rubbings of incised stones and tiles, and terra cotta figures dating from the Han Dynasty (202 B.C. – A.D. 220).