Liao Yuqun

Traditional Chinese Medicine

Understanding Its Principles and Practices

Translated by Li Zhaoguo etc.



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Executive Editor *Su Qian*
Art Designer *Yang Jingfei*

Liao Yuqun, born in 1953, graduated from Beijing Second Medical College in 1981, and now a researcher and director of the Institute for the History of Natural Science, Chinese Academy of Sciences, as well as vice-president of the Chinese Society of History of Science and Technology. His academic works include *The Qihuang Medical Science*, *The Translation of Yellow Emperor's Canon of Difficulties in Modern Chinese*, *Ayurveda: Traditional Indian Medicine*, *Imagery Thinking of Traditional Chinese Medicine*, etc.

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Cultural China Series

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Understanding Its Principles and Practices

Translated by Li Zhaoguo, Wang Laping & Liu Xiru



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Translator: Li Zhaoguo, Wang Laping, Xu Qilong & Liu Xiru

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Art Designer: Yang Jingfei

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Foreword

In ancient China, four well-developed areas in the civilization were astronomy, arithmetic, agronomy and traditional Chinese medicine (TCM). They were generally accepted as systems of knowledge and techniques with Chinese traditional colors, despite the fact that some people denied they were "sciences." In modern China, TCM is the only surviving subject among those four that hasn't been replaced by Western science, and it still plays a significant role in most Chinese people's life.

Since it was established at a time without the support of advanced science, how can TCM survive in today's society when modern health care is almost able to cover all the medical needs? Is TCM a science or cumulative experiences? Is it able to go further along its own path of development, or is it meant to be replaced by mainstream Western medicine? Questions like these concern many people.

In most people's eyes, TCM is a medicinal system that dates back several thousand years, and its theories, experiences and techniques are all derived from the same origin—"tradition." However, when Western medicine is spreading across the country, its new system, which is greatly contradictory to that of TCM, takes turns to dominate the academy. It was known as a "revolution" in Chinese medical community. If fact, if we pay close attention, we will find a revolution in the history of TCM itself. After many big and small revolutions, today's Chinese medicine has become "contemporary TCM," which greatly differs from TCM in ancient times. So sharing a same region does not exclude changes.

Traditional medicine in China did not go through big setbacks compared to traditional medicine in other countries. It has always

continued in social life and in the career of health care. Some say TCM is right alongside Western medicine, and many scholars from both home and abroad believe the reason is that Western medicine has still not become fully popular. So TCM is needed as a complimentary part of medicine, especially in rural areas. However, the most popular places for TCM are not in the most developed big cities. Correspondingly, many people in the countryside hope to get modern treatments when they are sick. In big cities, people are afraid of infections from medical examinations, as well as the potentially toxic side effects from chemicals and drugs, and many do not accept surgeries easily. They prefer to seek alternatives in TCM, in hopes of a more "natural" treatment. Such concern is growing day by day. This phenomenon might be seen as the "renaissance" of the traditional medicine in China in our contemporary age. Out of such needs, we can foresee that TCM will not die against the threat of Western medicine, but will continue to exist in its own special role.



Approach to Traditional Chinese Medicine



Recognition of TCM

Among the Chinese people, few have never visited any traditional Chinese doctors or tried any traditional remedies in their life. Even those who are healthy and have no chance to try medicine know traditional Chinese medicine. Though having no experience themselves, they would advise their relatives and friends to use traditional Chinese medicine to solve their health problems. There are some people who believe that traditional Chinese medicine is not scientific. But when they are ill and cannot be helped by modern medicine, they would change their mind and turn to traditional Chinese medicine.

These phenomena are quite normal. Think about the films of *Beijing People in New York* and *Scraping*. It will be helpful for you to understand these phenomena. In *Beijing People in New York,* A-chun was accused of maltreating child by her ex-husband when she asked traditional Chinese doctor to treat her child who suffered from arthralgia. The similar case was also shown in *Scraping* in which the father was deprived of the guardianship of his son because he used scraping therapy to treat his son.



The medicinal herbs used in TCM.



Scraping therapy

Scraping therapy is a folk healing technique. By placing a pre-oiled instrument (water buffalo horn, jade, copper coin, smooth-edged ceramic, etc.) against the skin surface and scraping repeatedly until the skin turns crimson, scraping therapy helps to dredge meridians, remove blood stagnation, strengthen body resistance, eliminate evil, and prevent and cure disease. Modern science has proved that scraping therapy is able to expand capillary vessels, enhance secretions of sweat glands, and speed blood circulation. It is valuable in treating heatstroke, muscle ache, etc.

Now Western medicine is the basic method used to deal with medical problems. But why Chinese people still believe traditional Chinese medicine and take Chinese herbal preparations? Why Chinese people could not understand the attitude of the Westerners toward Chinese medicine shown in these films? The reason is that in the mind of Chinese people, traditional Chinese medicine is a system of medicine and can cure diseases. The value of such recognition is significant. Without such recognition, traditional Chinese medicine cannot continue to exist under the condition that modern sciences dominate over all the fields of knowledge and the thinking of common people. Then there pops up a question deserving further consideration. That is why



Traditional herbal medicine shop.



Treatment with acupuncture therapy.

Chinese people can recognize traditional Chinese medicine when all the people take modern sciences as the foundation of knowledge structure and worship "science" in their heart.

The common explanation about why Chinese recognize TCM is that China is large both in territory and population. When Western medicine was introduced into China, it, for a long time, could not meet the need of healthcare vast in rural areas and remote places. That is why TCM is always resorted to as a supplementary remedy. Another reason about such a phenomenon commonly accepted is that Chinese people are conservative and are accustomed to traditional practice.

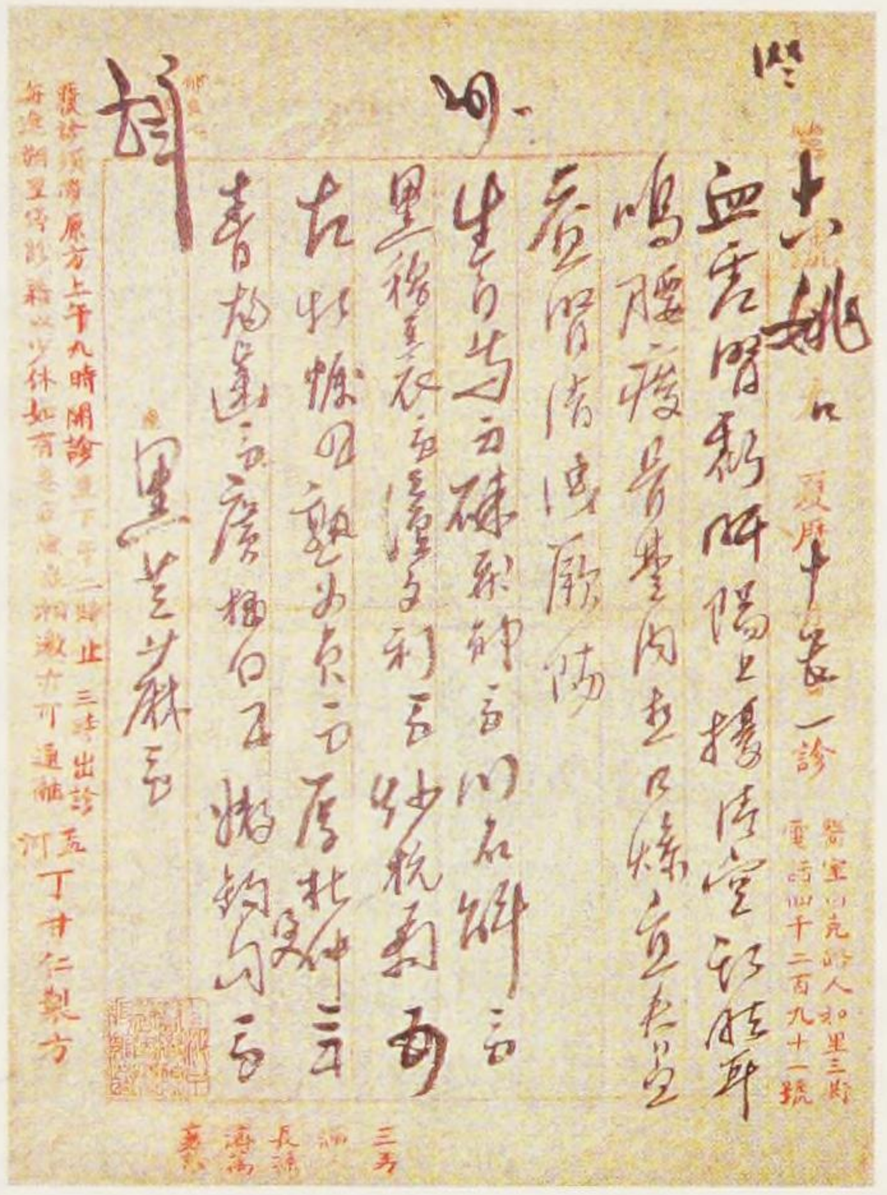
However the reality facing us today is that the price of Chinese medicine is in no way lower than that of Western medicine. Obviously economy cannot fully explain such a tendency. One important point has to be noted. That is people usually turn to TCM at any cost when modern medicine has failed to solve their sufferings.

Undoubtedly the secret based on which TCM continues its progress is not "backwardness." Because the more advanced diagnostic instruments the modern medicine use, the fewer diseases it can cure. The methods of physics, chemistry and operation are efficient enough to change the natural state of the human body, however, the diseases caused by them are becoming more and more complicated. Such shortcomings of modern medicine have further enlarged the space for TCM to demonstrate its effect in restoring the natural state and functions of the human body.



The Thinking Style of TCM

Early in the antiquity, there was definite division of labor and specialized knowledge and skills for different fields. However, in terms of the knowledge related to human beings themselves, the situation was different. Under the influence of the idea that things could be understood by means of "making comparison according to their structures if they are near and according to their shapes if they are far away," the sages in ancients believed that the heaven and the heart have formed a big universe while the human body itself has constructed a small universe. The big universe and the small universe communicate and interact with each other. The idea in the Daoism that "all things must accord with the natural world" was also based on the comparison between all things on the earth and the big universe in terms of their origination, development and death. In *Huang Di Nei Jing* (*Yellow Emperor's Canon on Medicine*), the idea of cultivating health in the four seasons was undoubtedly influenced by the theory of Daoism. According to the idea of cultivating health in



Prescription written by a TCM doctor in the early 20th century.



Gold needles unearthed from the tomb of the Han Dynasty.

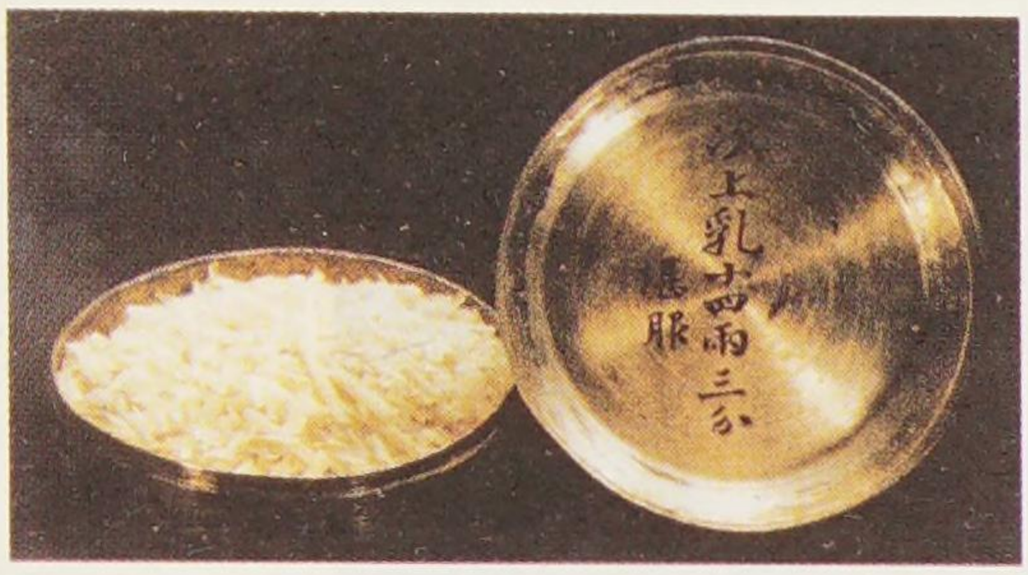
the four seasons, all things begin to sprout in spring, grow in summer, ripen in autumn and store up in winter.

Such an analogy was used quite often in the medical books compiled in different dynasties in Chinese history, especially in establishing the theory and developing the therapeutic methods of TCM. Awareness of analogy used in TCM is the key to understand TCM.

In the theory of *zang xiang* (visceral and their manifestations, i.e. the heart is a monarch-like organ, the spleen is an granary-like organ, the liver is a general-like organ, the gallbladder is a judge-like organ), for example, the functions of the viscera are compared to the system of court. In the composition of a formula, the herbs used are categorized into four groups, monarch, minister, assistant and guide. In the theory of Channels and Collaterals, the circulation of the blood and *qi* is compared to the flow of water in the rivers and lakes in the natural world. In pathology and diagnostics, it is believed that there must be an extra space inside the body when pathogenic factors invade the body. The way to remove pathogenic factors out of the body is to take measures to fill up this extra space. The therapeutic method for "strengthening the healthy-*qi* and cultivating the primordial-*qi*" and the therapeutic method for expelling pathogenic factors were just developed on the basis on such an idea. Diseases troubling human beings were compared to the flooding due to blockage of the rivers with silt. That was how the theory and methods for relieving stagnation and promoting digestion were developed. In pathology, *chen xiang* (ligmum aquilariae resinatum) was believed to be able to guide the blood and *qi*



Typical dress of a folk doctor of TCM in the Qing Dynasty.



Medicine box unearthed from a cellar dug in the Tang Dynasty with bolus in it.

to flow downwards because it would not float when put into water. However flowers were thought to be able to direct the blood and *qi* to flow upwards because they grew on the top of the plants. In fact, many ideas in TCM concerning the cause and effect can be explained by analogy.

In ancient times, doctors summarized their way to analogize different things in thinking in such a way that doctors perceived by intuition and sense. The mystery of TCM theory, the flexibility of therapeutic methods and the perception of doctors all can be explained by analogy. In other words, the charm in TCM is just conceived in such a perceivable but inexpressible sense. Liang Qichao, a great scholar in the period of modern times (1873–1929) said: "The mystery of perceivable but inexpressible sense can be found in all fields of Chinese studies. Such a mysterious sense



Picture painted in the Qing Dynasty about how TCM doctor diagnosed patient.



Sculpture of Sun Simiao, a great doctor in the Tang Dynasty who was worshiped as the God of Medicine.

obviously hinders the enlargement of knowledge." The example taken by Liang was TCM. Compared with other studies and technology in ancient Chinese science (such as astronomy and mathematics), TCM, undoubtedly, demonstrates many more features of traditional Chinese culture.

Today, the concept of conceivable but inexpressible sense permeating through the theory of TCM, which, incompatible with modern science, is naturally questioned again and again by those who tend to evaluate traditional Chinese science, including TCM, according to the criteria and value of Western science.

Analogical thinking was frequently described in classic Chinese philosophy as interaction in the idea of "integration of the heavens and human beings." It is generally accepted in the academic fields as one of the basic ways of Chinese people's thinking, especially the idea of interaction between the heavens and human beings which is an important part in the framework of Chinese people's thinking. In the book entitled *Lü Shi Chun Qiu* (*Lü's Analects of History*) compiled in the Qin and Han dynasties, it says: "Things of the same group contract each other, *qi* of the same kind merges into each other and sounds of the same category respond to each other." In the Northern Song Dynasty, Zan Ning (919–1001), by reviewing the studies made by people before him, compiled a book entitled *Wu Lei Xiang Gan Zhi* (*Compendium of Interaction Between Different Things*), listing 500 kinds of response between different things. Cheng Yi (1033–1107), an important philosopher in the Northern Song Dynasty, deduced these phenomena into a basic principle. That is "there is just one sense and one response in the universe." These analyses show that, a part from recognition of the empirical knowledge of TCM, one has to be aware of the great importance of interaction (or analogical thinking) in TCM.

The thinking way based on interaction and response is of dual nature, leading to either sorcery or science. Take harelip for example. The idea that harelip is caused by seeing a hare or eating hare meat

during pregnancy was obviously generalized from witch taboo. However, the knowledge about fetal education accumulated in ancient times based on such a sort of thinking is now found to contain much scientific content. Li Shizhen (1518–1593), a great doctor in the Ming Dynasty, also made use of such empirical knowledge of using herbs in his great book *Ben Cao Gang Mu* (*Great Compendium of Materia Medica*). For example, the weapon called *tong qi*, a firearm in ancient times, was used to deal with dystocia because it could shoot. Comb was used to deal with agalactia because it could comb hair. The former practice is certainly useless. But the latter one is certainly effective because "to comb the breast around for hundreds of times" means to massage the breast, quite similar to physical treatment.

The Formation and Variation of Tradition

It is true that for quite a long time in history Chinese people regarded their country as the greatest land in the center of the world and taken their culture as the most excellent one in the universe. However, China has never stopped absorbing nutrients from cultures developed in other countries. In the medical field, the influence of foreign cultures on Chinese medicine appeared quite differently at the end of the Ming Dynasty (1368–1644) and in the early period of Qing Dynasty (1616–1911).



Porcelain sculpture of Tie Guaili, one of the eight immortals in legendary stories. According to the legends, he often doctored the common people.

Before the period between the Late Ming Dynasty and the early stage of the



Tools used to prepare medicines in the Imperial Hospital of the Qing Dynasty.

Qing Dynasty, medicines from India, Arabian world and the middle southern Asian and western southern Asian regions were already introduced into China. However, such an introduction did not lead to any conflict because these medical systems were not totally different from Chinese medicine in nature. That was why most of the therapeutic methods and medical knowledge from these medical systems were adopted by the Chinese medicine. The adoption of the technique for removal of cataract was a typical example. Even in 1805 when smallpox vaccination was introduced into China, Chinese doctors still maintained their traditional way of thinking and believed that smallpox vaccination would be safer than variolization because cows were meeker than men.

Later one when Western medicine, which was based on anatomy and substantial evidence, was introduced into China, Chinese doctors still rigidly stuck to the ideas that "the Western medicine can be incorporated in the Chinese medicine" and "Western studies were originated from that of the Chinese." Only when some



The first Ophthalmology Hospital in China, set up in 1827 by Eastern Indian Company run by Britain.

people appealed to abolish TCM as was done in Japan during its reform did Chinese doctors realized the unprecedented crises facing them.

Things have changed with the lapse of time. Now when we are studying TCM as a system of knowledge, it is unnecessary to mention the efforts made by TCM doctors in the past to struggle for the existence of TCM. The important thing is to see what has changed in TCM under the influence and pressure of foreign medicine.

Firstly, there would be no such a term as TCM if Western medicine had not been introduced into China. And there would be no such a concept of traditional medicine if the Western medicine developed in the West had not dominated over the whole world. Only when the Western system of medicine was introduced into China did Chinese people begin to think about the difference between the Chinese medicine and Western medicine. Only when the existence of Chinese medicine was threatened did Chinese medical doctors

start to defend for themselves, expounding the advantages and value of Chinese medicine and making use of the advantages of the Western medicine. If one looks at the medical journals and books published in the early 20th century, he will find how doctors of TCM imitated those of the Western medicine to establish the theoretical system of TCM from the aspects of etiology, pathology, therapeutics and pharmacy. By carefully analyzing the compiling styles of these journals and books, one can easily find that doctors of TCM then unconsciously imitated the thinking of Western medicine and tried to learn how to analyze problems and think rationally.

Secondly, the introduction of Western medicine into China had brought much basic scientific knowledge about biology to TCM. According to *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), the region beneath which the heart beats was considered as "the major Collateral of the stomach" because human beings depended on food to exist and perform physiological activities; urine was infused into the bladder from the small intestine. Such ideas in TCM were gradually replaced by modern scientific knowledge of biology. Similarly, only when the Western medicine had been introduced into China were practitioners of TCM able to understand that the so-called *jing luo* (Channels or meridians) were not blood vessels. And that made them to think carefully about the nature of *jing luo* and *zang fu* (viscera). It was just based on such a new understanding that the theory of *jing luo* and the theory of *zang xiang* (viscera and their manifestations) were established.

Thirdly, under the pressure of Western medicine, doctors of TCM actively took measures to defend, promote and invigorate TCM by means of setting up schools, starting training programs, publishing journals, organizing societies, translating TCM books from Japanese into Chinese and developing traditional Chinese drugs. All these changes show that the introduction of Western medicine into China, to some extent, has promoted the development of TCM.

Historically, the introduction of any culture into a country will

inevitably enrich and sublimate the culture of that country. Modern Western science is also a sort of culture and will not bring any harm to TCM. Instead, it will provide TCM with more chances to develop.

As a continuity of the collision between TCM and Western medicine in a special period in history, the compilation of textbooks of TCM in 1958 by several colleges of TCM under the supervision of Health Ministry had epoch-making significance. Ever since then, there appeared a course known as Essentials of TCM and the concept of Basic Theory of TCM. To compile a new-styled textbook of TCM is of cause a systematic study of TCM. But it is more like a re-establishment of the traditional ideas about medicine, selecting the essential parts as the basic foundation of TCM through carefully differentiating the false from the truth. Several decades later, the basic structure and content of TCM textbooks have almost remained unchanged, though the textbooks have been re-compiled and revised for several times.



An advertisement about aspirin in 1930s.

In this re-constructed "tradition," the theory of Channels no longer includes the ideas that "the visible ones in the body surface are Collaterals while the ones running deep in the viscera are Channels" and that "the bluish color of the vessels indicates cold while the reddish color of the vessels indicates heat." According to the revised theory of TCM, *wu zang* (five *zang*-organs) and *liu fu* (six *fu*-organs) are defined as a "physiological unit," not equivalent to the anatomic organs and no longer relating them to the hierarchy

of imperial court. The theory of acupuncture and moxibustion is no longer a collective term for "external therapeutic methods" including incising ulcers and carbuncles, but defined as "the therapeutic methods for adjusting the flow of *qi* and blood and regulating the functions of viscera through physical stimulation." It has been worked out that the basic feature of TCM, which is also its major difference from Western medicine, is treatment based on syndrome differentiation, which means to differentiate the clinical manifestations of various diseases, with the consideration of the constitution of the patients, into different syndromes (such as deficiency, excess, cold or heat syndromes). Many TCM doctors believe that this therapeutic principle was established by Zhang Zhongjing (150–219), a great doctor in the Eastern Han Dynasty (25–220). However, such an idea could not be so sophisticated if Western medicine had not been introduced into China. Because in Chinese language, the original Chinese characters for syndrome and symptom mean the same thing though their morphological structure is a little different. And actually doctors in the past had never thought about differentiation between the two characters and the two concepts. In the old books, no matter deficiency, excess, cold and heat or abdominal pain and dizziness, they were all used as the names of diseases.

Understanding TCM

To understand TCM, one has to have a good command of knowledge about Chinese culture, especially the knowledge about philosophy, because the theory of TCM was established in ancient times with the combination of the development in many other fields.

Another access to understanding TCM is to learn anthropology because anthropology focuses on the basic mode of thinking concerning the system of various different kinds of culture.

To be aware of the basic philosophic thinking of TCM is prerequisite

to the understanding of TCM theory and practice. Treatment based on syndrome differentiation is a typical example. The relationship between human body and diseases is complicated and thus there exists certain contraindication between modern medicine and "science." In *Introduction to Experimental Medicine,* Claude Bernard (1813–1878) said that he believed that medicine should not be special since it was a science, though doctors often told him that there existed many peculiarities in medicine. TCM believes that no person is exactly the same as any others. Thus there will be no disease that is exactly the same as any others and there will be no treatment that is unchangeable and can be used repeatedly without any modification. In TCM there also exist some decided prescriptions. However in clinical treatment, doctors have to



In many people's eyes, old TCM doctors are often more experienced and more skilful.

frequently modify these prescriptions to make them suitable to the treatment of different patients. Such phenomena seem to be contradictory to the so-called "repeatability" emphasized by "science." Such a contraindication is actually easy to understand.

According to TCM, the factor responsible for non-repeatability is that the treatment in TCM focuses on patients, not on diseases. Since no person is exactly the same as any others, the treatment of patients is of cause different. Theoretically speaking, TCM is superior to Western medicine.

Though there is no absolutely identical treatment, in many cases the difference is only reflected in quantity. That is the reason why TCM has developed some basic therapeutic principles and effective prescriptions. In fact the treatment in TCM is not absolutely non-repeatable.





Early in the Qin and Han dynasties, TCM was already introduced into Korea and Japan.

Whether it is repeatable or not depends on what criteria one uses in analyzing it. In TCM, "similarity" does not always include the same symptoms and "difference" may be explained as disease by modern medicine. If we take clinical manifestations or the

"similarity" and "difference" in modern medicine as the criteria, there will be no non-repeatability in TCM.

In the 20th century witnessed twice occurrence of epidemic encephalitis. Western medical doctors used exactly the same therapeutic methods applied in the first time to deal with the second attack, but there was no effect. Doctors from TCM advised them to change the methods and it was proved effective. In the eyes of Western medical doctors, epidemic encephalitis occurred twice was exactly the same, all caused by microorganisms. But in the eyes of TCM doctors, it was different because of the change of seasons and fluctuation of "dampness" and "heat." Another example is *bu zhong yi qi wan* (pill for tonifying the middle and invigorating *qi*) developed by Li Gao (1180–1251) and used to treat stomach disease. But doctors now frequently use it to deal with anemia, neurasthenia and proctoptosis. Though the manifestations of these diseases are different, their cause and nature are the same.

The Classics of TCM





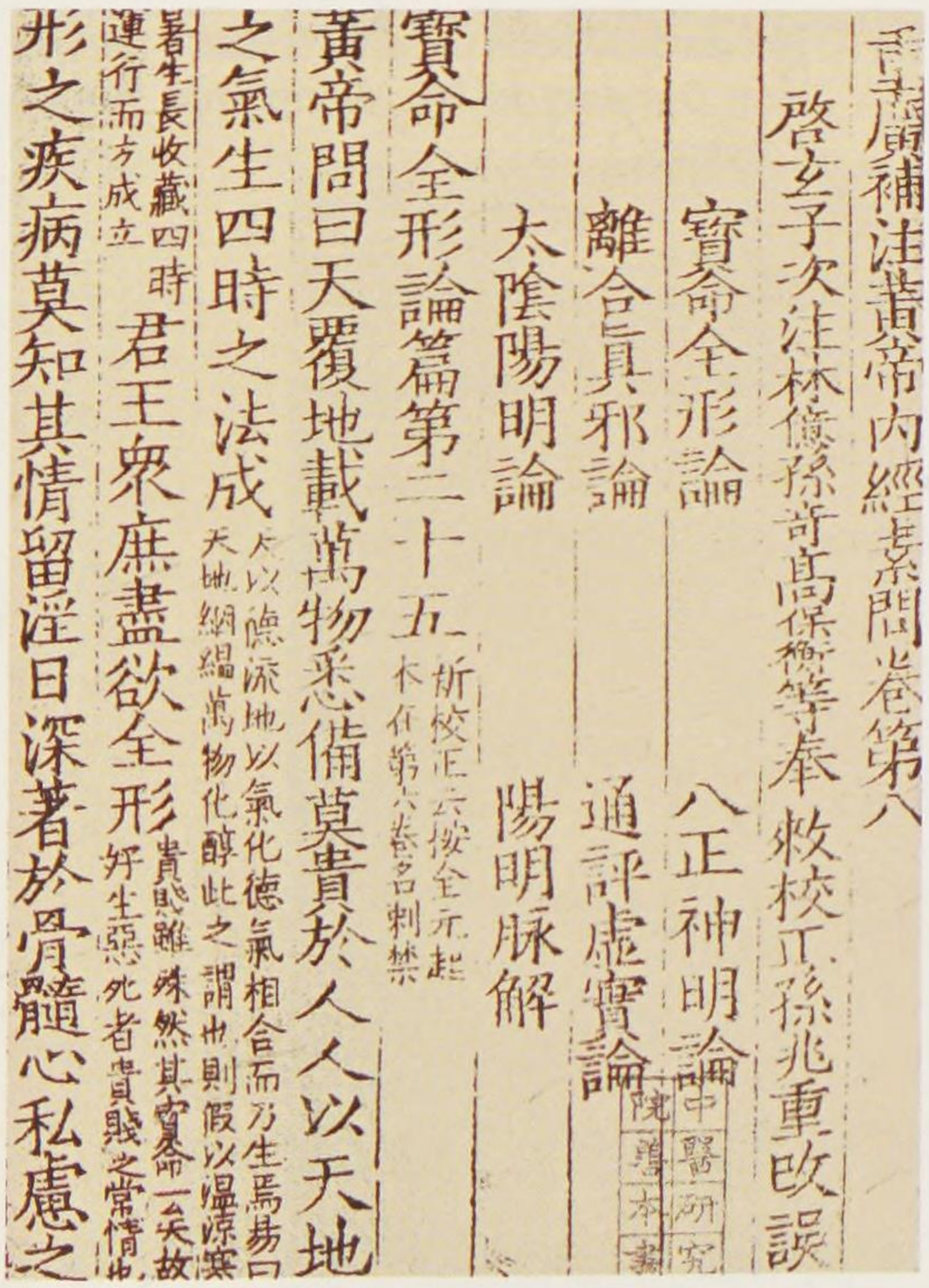
Shen Nong (God of Agriculture) collecting medicinal herbs.



Huang Di Nei Jing (*Yellow Emperor's Canon of Medicine*)

Huang Di Nei Jing (*Yellow Emperor's Canon of Medicine*), the earliest extant canon of TCM, is composed of two parts, *Su Wen* (*Plain Conversation*) and *Ling Shu* (*Spiritual Pivot*), each containing 81 chapters. *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) is generally believed to be compiled in the period between Warring States Period and Qin and Han dynasties. It is a collection of the theories and experiences of doctors from different schools.

Early in the book entitled *Qi Lue* (*Records of Books*) compiled by Liu Xiang (about 77–6 BC) and his son Liu Xin (?–AD 23), *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) was mentioned. No there is still dispute over whether *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) mentioned in *Qi Lue* (*Records of Books*) was the one composed of *Su Wen* (*Plain Conversation*) and *Ling Shu* (*Spiritual Pivot*) and handed down to now.



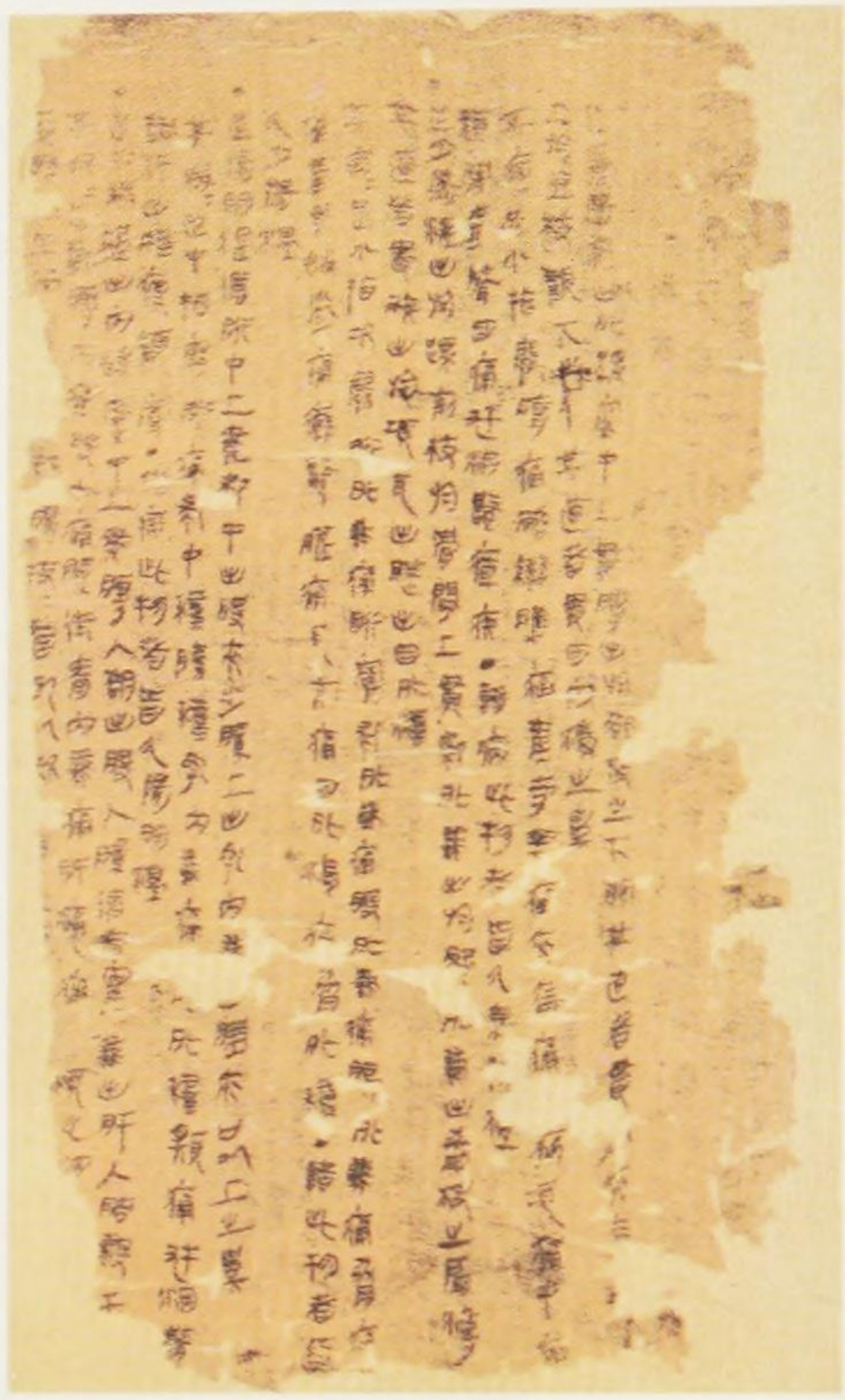
Photomechanical printing of *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*).

Su Wen (*Plain Conversation*) and *Ling Shu* (*Spiritual Pivot*) contain the following contents:

1. Theoretically, *Su Wen* (*Plain Conversation*) discusses the principles of *yin-yang*, cultivation of health in different seasons as well as the physiology and pathology of viscera and Channels. While *Ling Shu* (*Spiritual Pivot*) mainly deals with acupuncture and moxibustion. Both fascicles seldom mention specific treatment with drugs, just discussing viscera, diet and the

compatibility between drugs based on the theory of *wu xing* (five elements).

2. Most parts of the two fascicles were written in conversation between Huang Di (a great legendary king in ancient China) and his ministers like Qi Bo, Lei Gong and Bo Gao. The questions and answers asked and replied by different people reflect different ideas in medicine. These ideas were either based on the theory of *wu xing* (five elements) to divide people into five categories known as Metal, Wood, Water, Fire and Earth, or based on the theory of *yin-yang* to classify people into five groups known as *tai yang, shao yang, tai yin, shao yin* and balanced *yin* and *yang*.



Silk medical book unearthed from a tomb of Han Dynasty in Ma Wang Dui, Hunan Province.

3. It is generally recognized that *Ling Shu* (*Spiritual Pivot*) is easy to read and must be compiled after *Su Wen* (*Plain Conversation*). But in *Su Wen* (*Plain Conversation*) quotations of *Ling Shu* (*Spiritual Pivot*) also can be found. This shows that both fascicles were influenced each other. The theories in *Su Wen* (*Plain Conversation*) and *Ling Shu* (*Spiritual Pivot*) had greatly influenced the development of TCM in different dynasties.

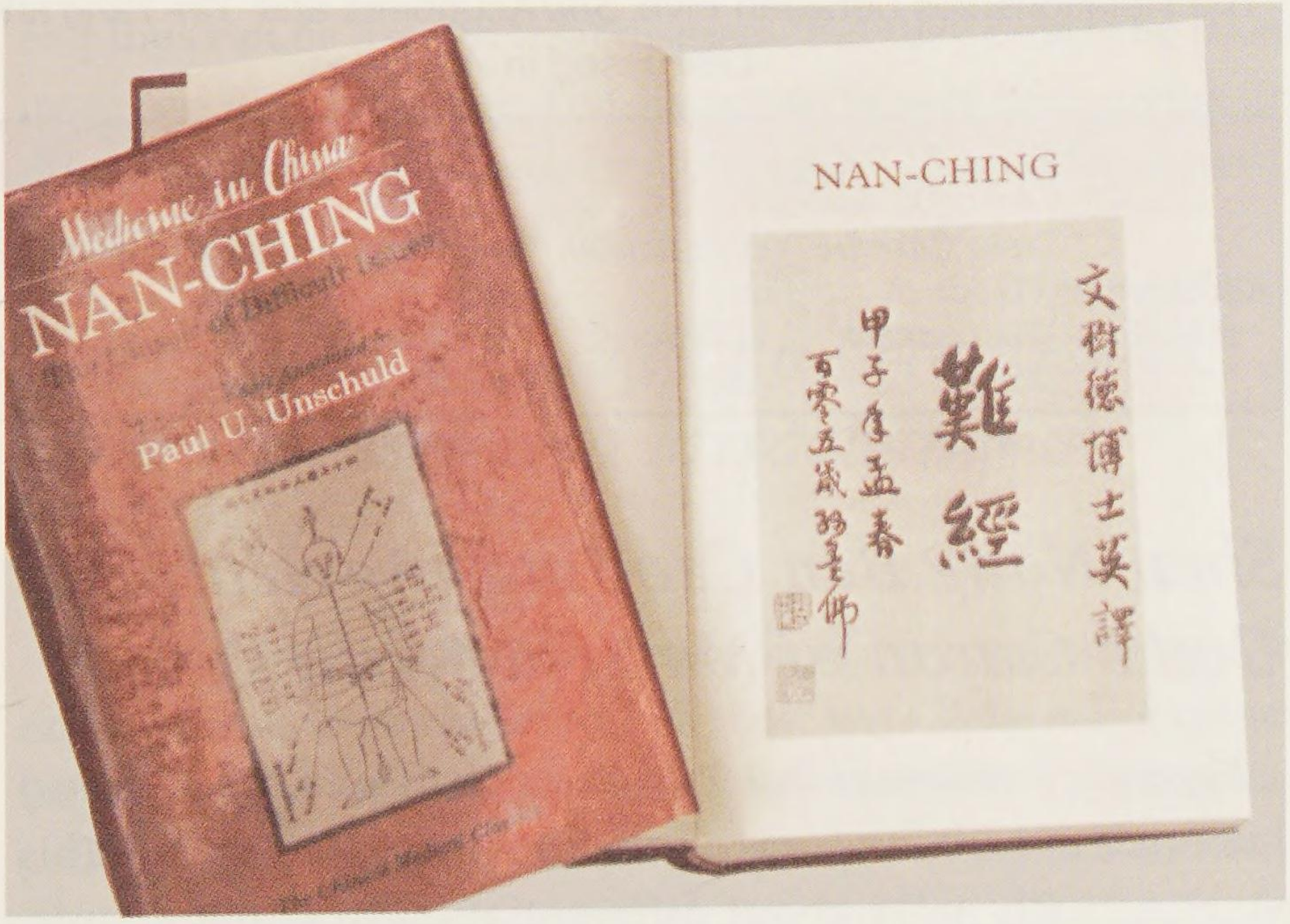
Huang Di Ba Shi Yi Nan Jing (*Yellow Emperor's Canon On Eighty-One Difficult Issues*)

The title of this book is often shortened as *Nan Jing* (*Canon On Eighty-One Difficult Issues*) which was written in conversation. Traditionally it was believed that this book was compiled by Qin Yueren (also known as Bian Que), a great doctor in the Warring

States Period. Now it is generally agreed that this book was compiled in the late Western Han Dynasty. The main proof is that it was not mentioned in *Qi Lue* (*Records of Books*). The first time it was mentioned was in the preface to *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*) written by Zhang Zhongjing in the Eastern Han Dynasty.

The 81 questions asked in *Nan Jing* (*Canon On Eighty-One Difficult Issues*) concern with pulses, Channels, *zangfu*-organs, diseases, Acupoints, acupuncture and moxibustion.

The main difference between *Nan Jing* (*Canon On Eighty-One Difficult Issues*) and *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) is that *Nan Jing* (*Canon On Eighty-One Difficult Issues*), unlike *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) that discussed *yin-yang* and *wu xing* (five elements) separately, studied medicine by combining the theories of *yuan qi* (primordial-*qi*), *yin-yang* and *wu xing* (five elements) and, by applying pulse diagnosis, Channels, *zangfu*-organs, manifestations of diseases, Acupoints,



English version of *Nan Jing* (*Canon On Eighty-One Difficult Issues*).

acupuncture and moxibustion, establishing a system of theory without making direct use of empirical knowledge. For example, the ten kinds of pulse changes were resulted from the variations of sturdiness and softness (*yin* and *yang*) of the *wu xing* (five elements). As to the Acupoints, each Channel possesses five special Acupoints known as *Jing*-Well, *Xing*-Spring, *Shu*-Stream, *Jing*-River and *He*-Sea respectively. These five Acupoints share the attributes of Metal, Wood, Water, Fire and Earth respectively. There exists a promoting order among these five Acupoints according to the theory of *wu xing* (five elements). The order of the restricting relationships between the Acupoints with the same names located on the *yin* and *yang* Channels is described in the following table. In treating diseases, doctors select Acupoints according to the promoting and restricting attributes of the *wu xing* (five elements). These attributes were first mentioned and discussed in *Nan Jing* (*Canon On Eighty-One Difficult Issues*), playing an important role in modern science of acupuncture and moxibustion.

The Relationships between Five *Shu* Acupoints and *Yin-Yang* and *Wu Xing* Discussed in *Nan Jing*

Five *Shu* Acupoints	*Jing*-Well	*Xing*-Spring	*Shu*-Stream	*Jing*-River	*He*-Sea
Attributes of *Wu Xing*	*Yang Channel*: Wood *Yin Channel*: Metal	*Yang Channel*: Fire *Yin Channel*: Water	*Yang Channel*: Earth *Yin Channel*: Wood	*Yang Channel*: Metal *Yin Channel*: Fire	*Yang Channel*: Water *Yin Channel*: Earth

Shen Nong Ben Cao Jing (*Agriculture God's Canon of Materia Medica*)

Legendary story says that Shen Nong (Agriculture God) tasted hundreds of herbs and was poisoned seventy times a day. This story actually talks about differentiation of edible plants. However in the book entitled *Huai Nan Zi* (*Book of the Master of*



Huainan) compiled in the Han Dynasty, it was taken as the first trial of studying materia medica. That is why the God of Agriculture was also worshiped as the father of medicine.

Shen Nong Ben Cao Jing (*Agriculture God's Canon of Materia Medica*) is the earliest extant classics about material medica compiled in the Eastern Han Dynasty.

Shen Nong Ben Cao Jing (*Agriculture God's Canon of Materia Medica*) was lost in history. It was recompiled by scholars in modern times by collecting the original materials of it from many other books. *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*) was regarded as the authentic canon of materia medica in all dynasties. So the quotations from it can be found in many books written after it. According to these quotations, we can know that about 365 kinds of herbs were studied in *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*). These herbs were classified into three grades, first grade, second grade and third grade. The first grade of herbs can be used to invigorate the body and prolong life; the second and the third grades of herbs are toxic and thus can be used to treat diseases. But they cannot be taken more and for a long time. The discussion of each herb covers the aspects of name, taste, property, indication, place of production and alternate names.

Shang Han Za Bing Lun (*Treatise on Cold Diseases and Miscellaneous Diseases*)

In a broad sense, cold disease refers to all exogenous diseases. In ancient times, it was believed that there were three major causes responsible for various diseases, namely external causes (such as pathogenic wind, cold, summer-heat, dampness, dryness and fire), internal causes (such as improper diet, physical exhaustion and emotional changes) and non-internal and non-external causes (such

as wound due to fighting and bite by insects and animals). *Nan Jing* (*Canon On Eighty-One Difficult Issues*) says that there are five kinds of cold diseases, namely *zhong feng* (wind stroke), *shang han* (cold attack), *shi wen* (dampness warmth), *re bing* (febrile disease) and *wen bing* (warm disease).

Shang Han Za Bing Lun (*Treatise on Cold Diseases and Miscellaneous Diseases*) was compiled by Zhang Zhongjing (about 150–219) in the late Eastern Han Dynasty. These book deals with two kinds of diseases. In dealing with exogenous disease (cold disease), it differentiates the duration and nature of the disease according to three *yang* and three *yin* (*tai yang, yang ming, shao yang, tai yin, shao yin* and *jue yin*). It has developed specific therapeutic principle and prescriptions for each type of disease. Take *tai yang* disease with symptoms of fever, aversion to cold and headache for example. If there is no sweating, it can be treated by *ma huang tang* (herba ephedrae decoction); if there is sweating, it should be treated by *gui zhi tang* (ramulus cinnamomi decoction). In some cases both prescriptions can be used together. If the patient is weak, *ren shen* (Radix Ginseng) can be added. If the disease is exogenous, but there is no fever, the pulse is weak and the patient is sleepy, it is *shao yin* disease, it can only be treated by *ren shen* (Radix Ginseng) and *fu zi* (Radix Aconiti Lateralis Preparata) to restore *yang* and stop collapse.



A portrait of Zhang Zhongjing in ancient medical book.

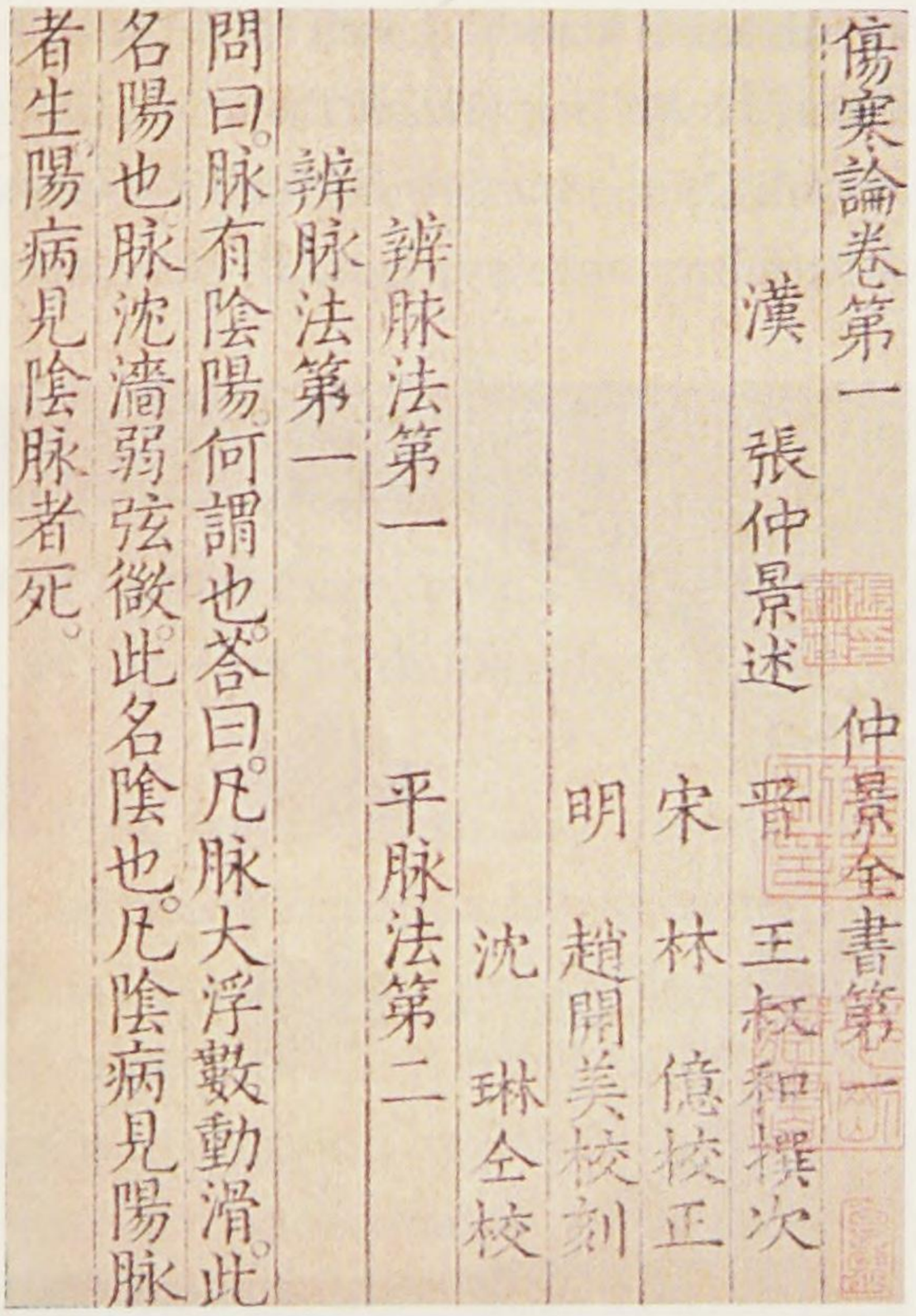
Shang Han Za Bing Lun (*Treatise on Cold Diseases and Miscellaneous Diseases*) was lost in history due to war. The part about cold disease was collected by Wang Shuhe, an imperial doctor in the Western Jin Dynasty, and known as *Shang Han Lun* (*Treatise on Cold*

Diseases). Since it covers the theory, therapeutic principles and prescriptions for the treatment of exogenous diseases, it was and is still of great importance in medicine. The part about miscellaneous diseases in the original book was later on compiled into another book known as *Jin Kui Yao Lue* (*Synopsis of Golden Cabinet*).

Compilation of Book and Development into Canon

The books mentioned about later on developed into important cannons. There must be many other books about medicine compiled in ancient times. But why just these few one became canons?

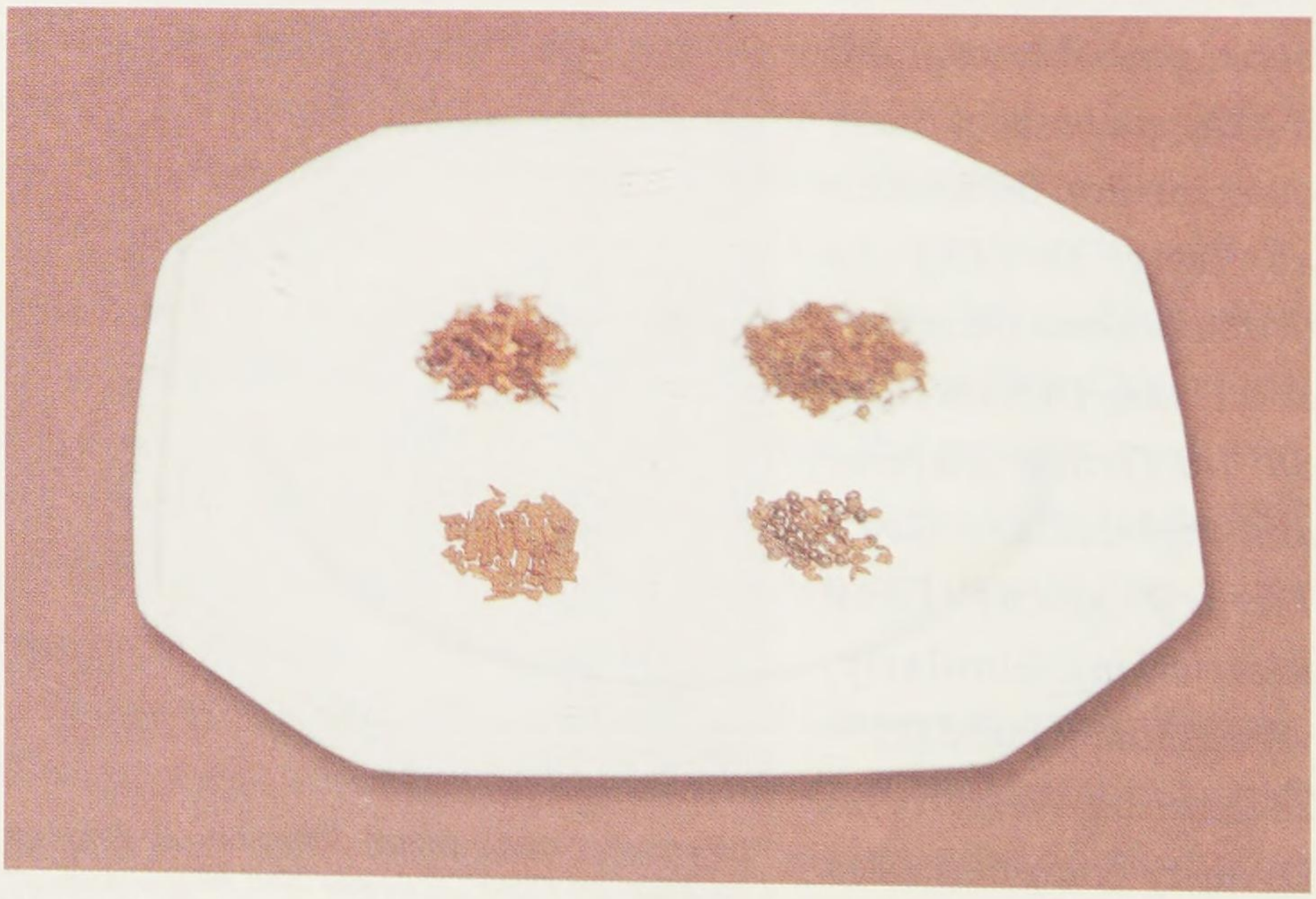
Firstly, these few books were comprehensive in contents and contained knowledge concerning many other fields. For instance, *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) was a large book, probably containing the contents of many other medical books such as *Tang Ye Jing Fa* (*Methods about Decoction*) and *Huang Di Shen Nong Shi Jin* (*Yellow Emperor and Agriculture God's Theory about Food Restriction*). Similarly, when Huang Fumi (215–282) in the Western Jin Dynasty compiled *Zhen Jiu Jia Yi Jing* (*A-B Clas-*


傷寒論卷第一　仲景全書第一
漢　張仲景述　晉　王叔和撰次
宋　林　億校正
明　趙開美校刻
沈　琳全校
辨脉法第一
平脉法第二
辨脉法第一
問曰。脉有陰陽。何謂也。荅曰。凡脉大浮數動滑。此名陽也。凡陰病見陽脉者生。陽病見陰脉者死。

Photomechanical printing of *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*).

sics on Acupuncture and Moxibustion) by combining the part from *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) about Channels with the book entitled *Huang Di Ming Tang Jing* (*Yellow Emperor's Bright Palace Canon*) which studied the location and indication of Acupoints as well as the depth of needling. After this large book was compiled, *Huang Di Ming Tang Jing* (*Yellow Emperor's Bright Palace Canon*) was no longer emphasized.

Secondly, canons are usually theoretically important and systematic in content. Though *Nan Jing* (*Canon On Eighty-One Difficult Issues*) is a small book, it is systematic in content because it has discussed many important concepts. *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) talks about *yin* and *yang* regarding it as the law of the universe, the factor responsible for changes, growth and decline. While in *Nan Jing* (*Canon On Eighty-One Difficult Issues*), it maintains that *ming men* (Life Gate) is the source of life. Though *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) and *Nan Jing* (*Canon On Eighty-One Difficult Issues*) were not compiled so early as some people suggested, they are still very important and



Medicinal herbs unearthed in a tomb of the Western Han Dynasty.



valuable as canons. In recent two thousands of years, doctors studied them to learn the flow of *qi* and blood as well as the essentials about viscera and their functions, to understand how to apply the philosophical ideas like *wu xing* (five elements) in studying life, to analyze the causes and pathogenesis of diseases and to develop new theoretical ideas about medicine.

Shang Han Za Bing Lun (*Treatise on Cold Diseases and Miscellaneous Diseases*) was compiled in the Eastern Han Dynasty, but it was unpopular even in the Tang Dynasty. For instance, it was even not mentioned in the book entitled *Wai Tai Mi Yao* (*Arcane Essentials from the Imperial Library*) compiled by Wang Tao (about 670–755) in the Tang Dynasty. In the book entitled *Qian Jin Yi Fang* (*Supplement to Golden Prescriptions*) compiled by Sun Simiao (581–682), it was included in the list of books about prescriptions, but was not regarded as a canon. It was not until the Song Dynasty that the value of *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*) was finally recognized and studied thoroughly and intensively. Ever since then Zhang Zhongjing was worshiped as the god of medicine.

Part of the reason that these medical books gradually became cannons was the literature factor involved in it. For instance, 162 chapters in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) were obviously written by doctors with excellent literature education.

During the period following the Western and Eastern Han dynasties, the study of medicine was characterized by re-compilation of literature and re-collection of books about prescriptions. In the Song Dynasty, scholars became more and more interested in administrative tasks. There was a saying appreciated by many people then. That was "If you cannot become an excellent prime minister, then you should become an excellent doctor."

Some people thought that the reason that these books compiled in ancient times became cannons was due to the fact that they were

compiled in the names of Huang Di (Yellow Emperor), Bian Quan and Shen Nong (Agriculture God). This is actually not the case. There were many other books that were also compiled in the names of these great figures, but they were already lost in history. It is true that in the medical field many people worship canons and tradition, believing that the theory of medicine established in the antiquity was perfect. In this field, new knowledge was constantly accumulated, but it was just regarded as the explanation of the old, not the criticism of the old.



Basic Theory of TCM



The Theories of *Yin-Yang* and *Wu Xing*

Yin-yang and *wu xing* (five elements) are familiar to all Chinese people. However there are just a few people in China can truly understand these complicated theories.

Originally *yin-yang* and *wu xing* (five elements) are two independent theories. Academically, the theory of *yin-yang* was the most significant concept that reflected the philosophic thinking of people in ancient China. In his great book *History of Chinese Science and Technology*, Joseph Needham (1900–1995) said that the theory of *yin-yang* was the greatest theory established by Chinese people in ancient China. In medicine, the theory of *yin-yang* was adopted earlier than *wu xing* (five elements). In the literature collected before the Qin Dynasty, there was no record of *wu xing* (five elements). But the theory of *yin-yang* was used to explain the cause of diseases and the activity of human body. Theoretically, the permeation of the theory of *yin-yang* made it possible for TCM to develop from ancient times to the modern times. That is also the reason why it will never be replaced by Western medicine.



Bottles of herbal medicine with the paintings of *yin-yang* and *ba gua*.

Philosophers in ancient



Picture about alchemy.

China believed that the universe was made of *yin* and *yang*, and the constant movement of which was responsible for the existence of the world. *Yin* and *yang* originally were used to explain the state of being opposed to or facing the sunshine. The place that was opposed to the sunshine was *yin* (shadow) while the place facing the sunshine was *yang* (sun). Later on people used these concepts to analyze various things. Those that were static, internal, descending, cold and gray were regarded as being *yin*; while those that were dynamic, external, rising, warm and bright were regarded as being *yang*. The classification of *yin* and *yang* had nothing to do with their nature as being good or bad. The alternation of *yin* and *yang* was taken as the law of everything. The balance between *yin* and *yang* was thought as the ideal state. In ancient China, the theory of *yin-yang* was not only used to explain the universe, but also explain social phenomena. For instance, man was regarded as *yang* while woman as *yin;* happiness was taken as *yang* while disasters as *yin*.

The application of the theory of *yin-yang* in TCM can be explained by a number line. If we use 0 to signify health, the numerous numbers listed at both sides represent various diseases and their manifestations. Take 5 that stands for common cold as an example. TCM understands every disease by analyzing the related positive or negative number. In *Shang Han Lun* (*Treatise on Cold Diseases*), diseases were analyzed according to three *yin* and three *yang*. For instance, if Excess Syndrome pertains to *tai yang* (extreme *yang*),

then Deficiency Syndrome pertains to *shao yin* (mild *yin*). If Excess Syndrome pertains to *yang ming*, then Deficiency Syndrome pertains to *tai yin* (extreme *yin*). For this reason the therapeutic methods in TCM can never be the same. However, the purposes of these different therapeutic methods are the same, which is to adjust the state of *yin* and *yang* to the ideal harmonious level. For example, when dealing with insomnia, the method for clearing away heat and reducing fire may be used to treat Excess Syndrome (+) while the method for supplementing *qi* and blood may be used to treat Deficiency Syndrome (-). However Western medicine just uses hypnotic to deal with insomnia under any condition. For Western medicine, one drug just corresponds to one disease. However such a practice sometimes is not quite reasonable. For example to use hypnotic to deal with the patient who is excited is reasonable, but to use it to deal with those who are troubled by neurasthenia is ineffective.

School of *Yin-yang*

School of *Yin-yang*, or School of *Yin-yang* and *Wu Xing* (five elements) was an influential school during the Warring States Period. Its principles are that everything in the universe has its nature, which corresponds to one of the five elements—Wood, Fire, Earth, Metal and Water. Movements of the celestial bodies, social change, and the rise and fall of empires are all the results of "transformation of five elements."

Originally the theory of *yin-yang* was simply used to analyze the climatic changes in the four seasons. The origin of the heaven, the earth and everything in the universe was thought of as *qi* which was composed of two parts, *yin* and *yang*. *Yin* and *yang* was further divided into *shao yang* (mild *yang*), *tai yang* (extreme *yang*), *shao yin* (mild *yin*) and *tai yin* (extreme *yin*) which actually signified the properties of the four seasons. Before the Qin Dynasty, School of *yin* and *yang* used this theory to analyze human society and advised the kings to govern their kingdoms by following the natural changes of the seasons. Such an idea was later



Diagram of *yin* and *yang*.



Calabash sculpture with the diagram of y*in* and *yang*.

on adopted by doctors. That is why in *Su Wen* (*Plain Conversation*) we can find such concepts as sprouting in spring, flourishing in summer, astringing in autumn and storing in winter in health cultivation.

In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), the theory of *yin-yang* was already used to describe the concepts of opposition and balance. The concept of *yin-yang* explains both the formation of the universe and the nature of *yin* and *yang*. The former is demonstrated as explanation of life, constitution and physical-emotional characteristics, while the latter guides the diagnosis and treatment of diseases. In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), there is a classical description about the core of *yin* and *yang*:

Yin and *yang* represent the law of the universe, the principle of everything, the cause of changes, the origin of growth and decline, and the source of life activities. So diseases must be treated

according to *yin* and *yang*.

One more point should be noted in decoding the relationship between medicine and the theory of *yin-yang*. Zhang Jingyue in the Ming Dynasty said that it was important to know *Yi Jing* (*Canon of Changes*) if one wanted to be a doctor. His claim made many people believe that medicine originated from *Yi Jing* (*Canon of Changes*). In fact this is not true. In the medical books compiled before the Ming Dynasty, we cannot find any clues about such a close relationship.

Comparatively speaking, the theory of *wu xing* (five elements) is not so important as that of *yin-yang*. In fact the theory of *wu xing* (five elements) is just used to classify different things into five specific categories. Under the guidance of analogy, the relationship among similar things is revealed. Take the liver for example. It pertains to wood and related to blue in colors and sourness in tastes. So bluish complexion indicates that the disease is located in the liver and can be treated by herbs sour in taste. Based on analogy, the promoting and restricting relationships among the five different kinds of things are demonstrated as shown in the following table. In medicine, doctors make use of such relationships to understand the connections between the *zang*-organs and the *fu*-organs. Such a way of thinking is helpful for diagnosing and treating diseases, but it should not be absolute. Such an absolute analysis can be found in *Nan Jing* (*Canon On Eighty-One Difficult Issues*) when it tries to establish the relationships among the five *Shu* Acupoints.

TCM has adopted the theories of *yin-yang* and *wu xing* (five elements) to establish its own theoretical system. However such an adoption has also greatly developed these two theories. *Zhong Yi Xue Gai Lun* (*Essentials of TCM*) says, "In TCM, the understanding of nature and human physiology and pathology, the diagnosis, treatment and use of drugs all can be explained according to the theories of *yin-yang* and *wu xing* (five elements)."

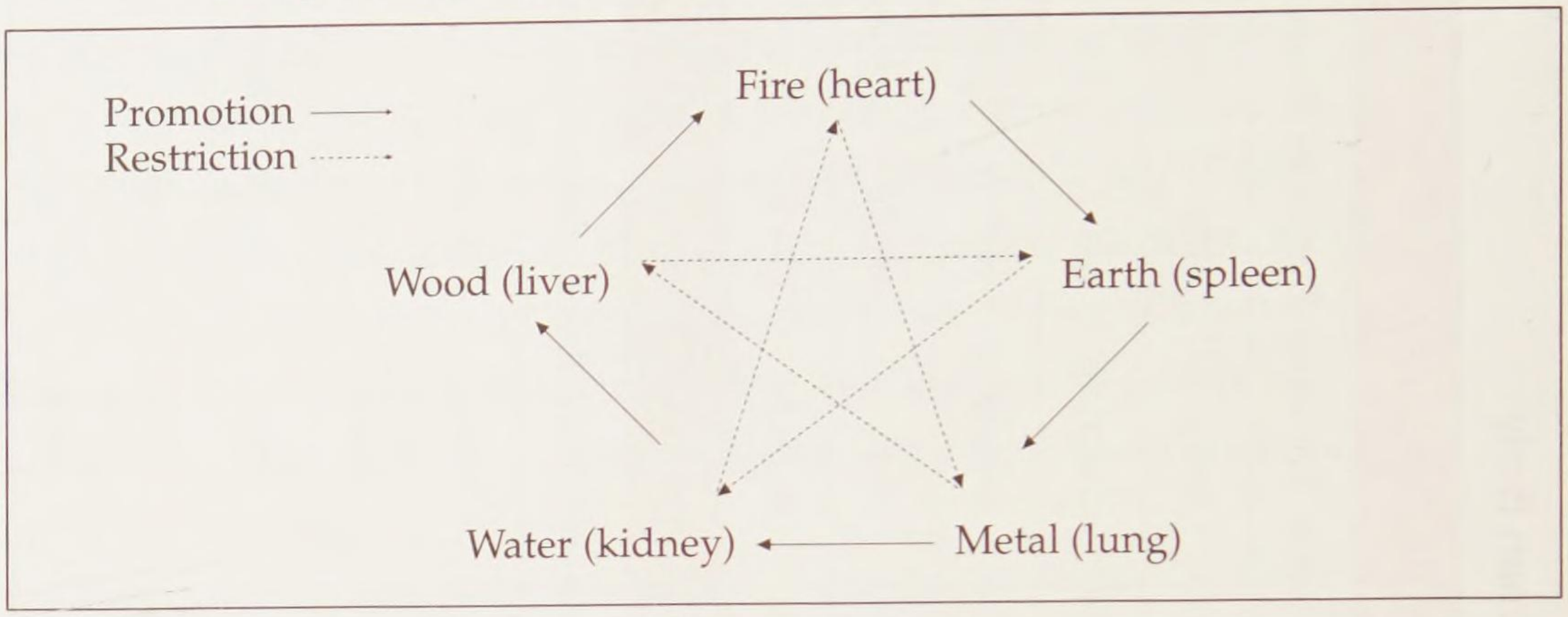


Correspondence between *Wu Xing* and Nature and Human Body

Five elements	Natural world							
	orientations	seasons	five climatic changes	growth and transformation	five tastes	five odors	five colors	five notes
Wood	east	spring	wind	sprouting	sour	foul smell	blue	*jiao*
Fire	south	summer	summer-heat	growing	bitter	charring	red	*zhi*
Earth	middle	late summer	dampness	transforming	sweet	delicious	yellow	*gong*
Metal	west	autumn	dryness	ripening	acrid	stink	white	*shang*
Water	north	winter	cold	storage	salty	putrid	black	*yu*

Five elements	Human body						
	five *zang*-organs	five *fu*-organs	physical constituents	opening orifices	manifestations of luster	reflection in fluids	reflection in emotions
Wood	liver	gallbladder	tendon	eye	nail	tears	anger
Fire	heart	small intestine	vessel	tongue	face	sweat	joy
Earth	spleen	stomach	muscle	mouth	lip	drool	contemplation
Metal	lung	large intestine	skin	nose	body hair	snivel	anxiety
Water	kidney	bladder	bone	ear	hair	saliva	terror

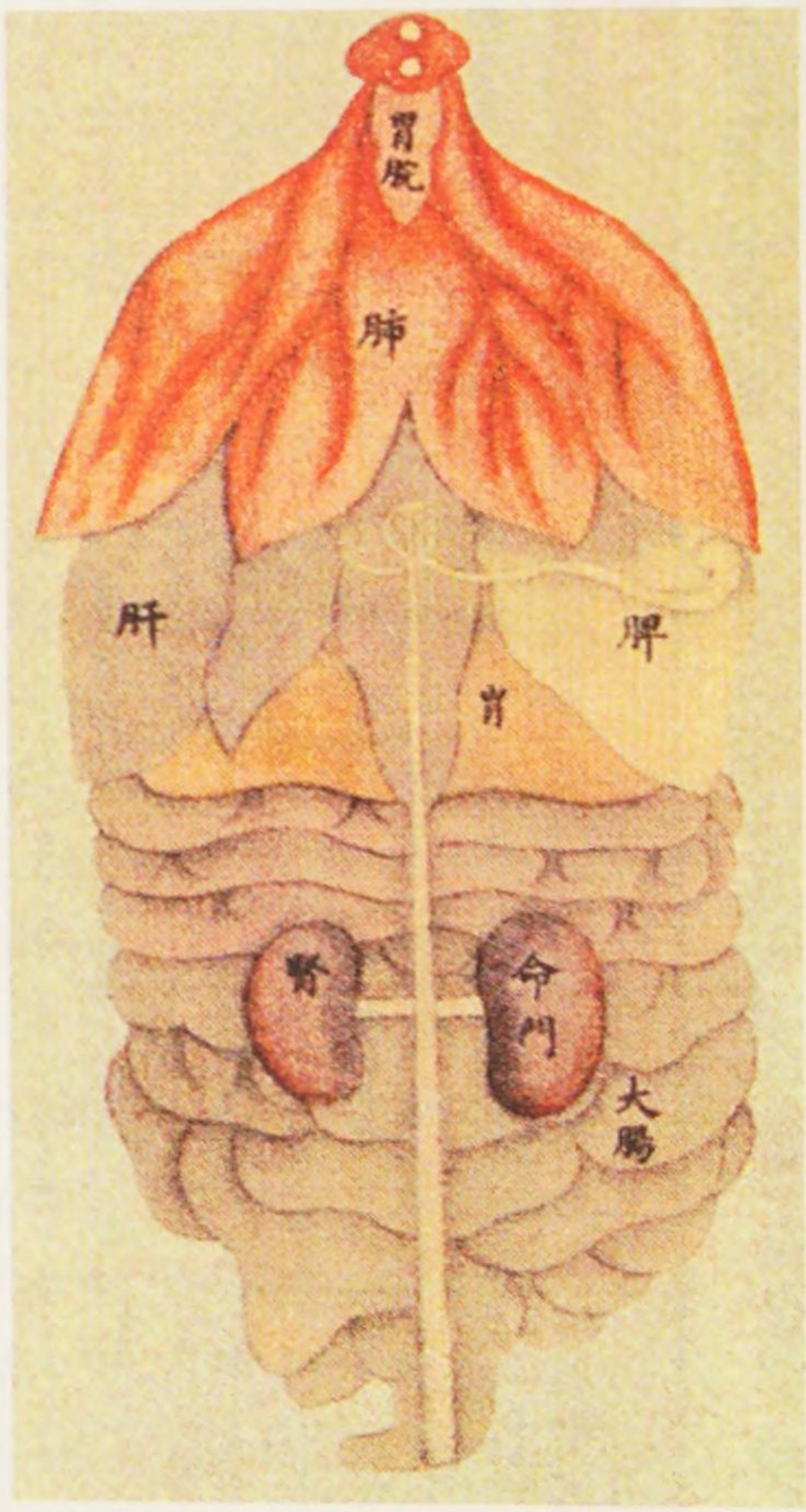
A Cyclical Mesh of Enhancing and Suppressing Effects



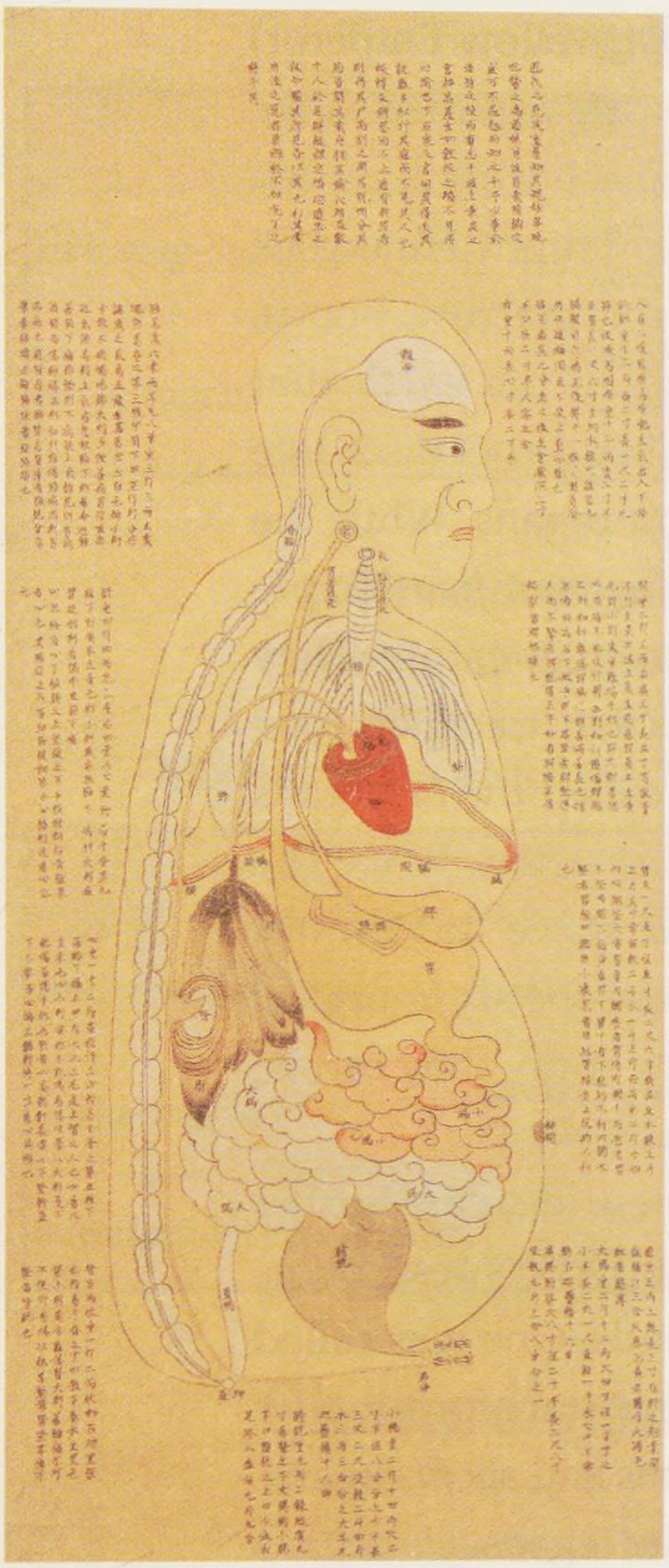
Viscera and Their Manifestations

Viscera, or *zang*-organs and *fu*-organs, is a collective term for internal organs in TCM. From *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) to *Zhong Yi Xue Gai Lun* (*Essentials of TCM*), the *zang*-organs and *fu*-organs are the vital parts in the theoretical system of TCM. The compositions of these two kinds of internal organs have been basically remained unchanged. They include three separate categories, five *zang*-organs (heart, liver, spleen, lung and kidney), six *fu*-organs (stomach, large intestine, small intestine, bladder, gallbladder and *san jiao* (Triple Energizer) and extraordinary *fu*-organs (brain, marrow, bones, vessels, gallbladder and uterus).

The names of these different organs have remained unchanged except *san jiao* (Triple Energizer). The substantial organs described by these names are the same as



Picture about viscera painted in the Qing Dynasty.



Picture of viscera painted in the 19th century.

those used in modern anatomy. However, the explanation about their functions is different. Because in ancient times, the relationships between certain terms and the related substantial organs were made according to intuitive observation. However due to insufficient knowledge of physiology and pathology, people in ancient times could not fully understand the functions of these organs. For instance, without the knowledge about microstructure and air exchange of the lung, people could not correctly understand the process of respiration.

The concept of viscera and their manifestations in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) has now developed into a theory. The following is a brief explanation of this theory:

Viscera refer to the internal organs while manifestations refer to various signs observed externally. In TCM, the names of the internal organs frequently refer to the external manifestations of these organs, not just the substantial organs themselves. In other words, different physiological and pathological phenomena are assigned to different internal organs. So we cannot understand the concepts of internal organs in TCM according to modern anatomy.

Careful readers may find that gallbladder is included in both the six *fu*-organs and the extraordinary *fu*-organs. The following is the analysis.

In the chapter about the five *zang*-organs in *Huang Di Nei Jing*

(*Yellow Emperor's Canon of Medicine*), Huang Di (Yellow Emperor) asked why sometimes the brain and marrow were regarded as the *zang*-organs, sometimes the intestines and stomach were regarded as the *zang*-organs or *fu*-organs. Qi Bo, who taught Huang Di (Yellow Emperor) medicine, said, "The brain, marrow, bones, vessels, gallbladder and uterus are similar to the earth that contains everything. They just contain essence but do not discharge it. That is why they are called extraordinary *fu*-organs. While the stomach, the large intestine, small intestine, *san jiao* (Triple Energizer) and bladder are similar to the heaven in nature. They receive food but do not store it up. That means they transport food but do not store it up. That is why they are called the *fu*-organs responsible for transportation and transformation. Since the so-called the five *zang*-organs just store Essence but do not discharge it, they can be full but not solid. Since the six *fu*-organs transport and transform food without storing it up, they can be solid but cannot be full."

To make it easy for readers to understand, these ideas are further analyzed in the following two tables. According to Qi Bo's description, the internal organs were divided into two kinds. One was called extraordinary *fu*-organs and transporting and transforming *fu*-organs; the other was known as five *zang*-organs and six *fu*-organs. However both systems contain two kinds of the organs, *yin* organs and *yang* organs. In the following two tables, 5 and 6 stand for *yin* and *yang* respectively and signify the heaven and the earth.

Extraordinary *Fu*-Organs and Transporting and Transforming *Fu*-Organs

Classification	Number	Organs	Analogy	Functions
extraordinary *fu*-organs	6	brain, marrow, bones, vessels, gallbladder and uterus	earth	storing without discharge
transporting and transforming *fu*-organs	5	stomach, large intestine, small intestine, *san jiao* (Triple Energizer) and bladder	heaven	discharge without storing



The Five *Zang*-Organs and the Six *Fu*-Organs

Classification	Number	Organs	Analogy	Functions
five *zang*-organs	5	heart, liver, spleen, lung and kidney	earth	storing without discharge
six *fu*-organs	6	stomach, large intestine, small intestine, *san jiao* (Triple Energizer), bladder and gallbladder	heaven	discharge without storing

Later on doctors combined the two groups into one system as shown in the following table.

Modern Ideas about the Theory of *Zang*-Organs and *Fu*-Organs

Classification	Organs	Functions
five *zang*-organs	heart, liver, spleen, lung and kidney	storage without discharge
six *fu*-organs	stomach, large intestine, small intestine, *san jiao* (Triple Energizer), bladder and gallbladder	discharge without storage
extraordinary *fu*-organs	brain, marrow, bone, vessels, gallbladder and uterus	storage without discharge

Channels and Collaterals

Channels in TCM refer to the pathways of *qi* and blood. These pathways are interconnected with each other, forming a network to unite the body into an integrated whole. The system of Channels includes the following aspects.

1. Channels: the longitudinal pathways, like the trunk of trees, are called *jing* (Channels). Mainly there are twelve regular Channels which are connected with each other to form a circle. The name of each Channel is composed of three parts, organ, hand or foot, *yin* or *yang*. For instance, the Channel of the lung is called the Lung Channel of Hand-*Taiyin*.

2. Branches of Channels: to strengthen the connection between

Channels and the related organs as well the relationship between one Channel and another.

3. Collaterals: the sub-division of Channels, to transversely connect one Channel with another. There are altogether 15 major Collaterals. In the body, there are distributed numerous small Collaterals known as floating Collaterals or minute Collaterals.

4. Eight extraordinary Channels: based on the twelve regular Channels mentioned in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), *Nan Jing* (*Canon On Eighty-One Difficult Issues*) has added some more Channels recorded in some literature to TCM. Among these extra Channels, more importance later on was attached to the *du mai* (Governor Channel) and *ren mai* (Conception Channel) by doctors and *qigong* practitioners.



Lung Channel of Hand- *Tai Yin.*

5. Musculature and skin divisions: in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), tendons, muscles and joints were attributed to the twelve regular Channels and called tendons of the twelve regular Channels. The regions of the body surface over which the twelve regular Channels run were attributed to were divided into twelve skin regions. These tendons and skin regions are not Channels, but they are the places in which *qi* and blood retain, accumulate, disperse and converge.

6. Acupoints: Acupoints are the places where *qi* and blood flow

through and Channels converge with each other. However there are some special Acupoints that are not located on the Channels. Some of these special Acupoints are just tenderness known as *A-shi* Acupoint (Oh Yes Acupoint).

To those who are not specialized in TCM study, to understand the nature of Channels is difficult. Anatomically one cannot find such points on human body, but they bear great theoretical and clinical significance.

Firstly, the theory of Channels has been studied for quite a long time. Such studies were recorded in the silk book and bamboo slips unearthed in the 1970s, even earlier that the record in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*). In these ancient records, there were altogether 11 Channels and the running routes of them were short. They were neither connected with each other nor related to the internal organs. There were also no records of Acupoints. The theory of Channels and Collaterals developed in

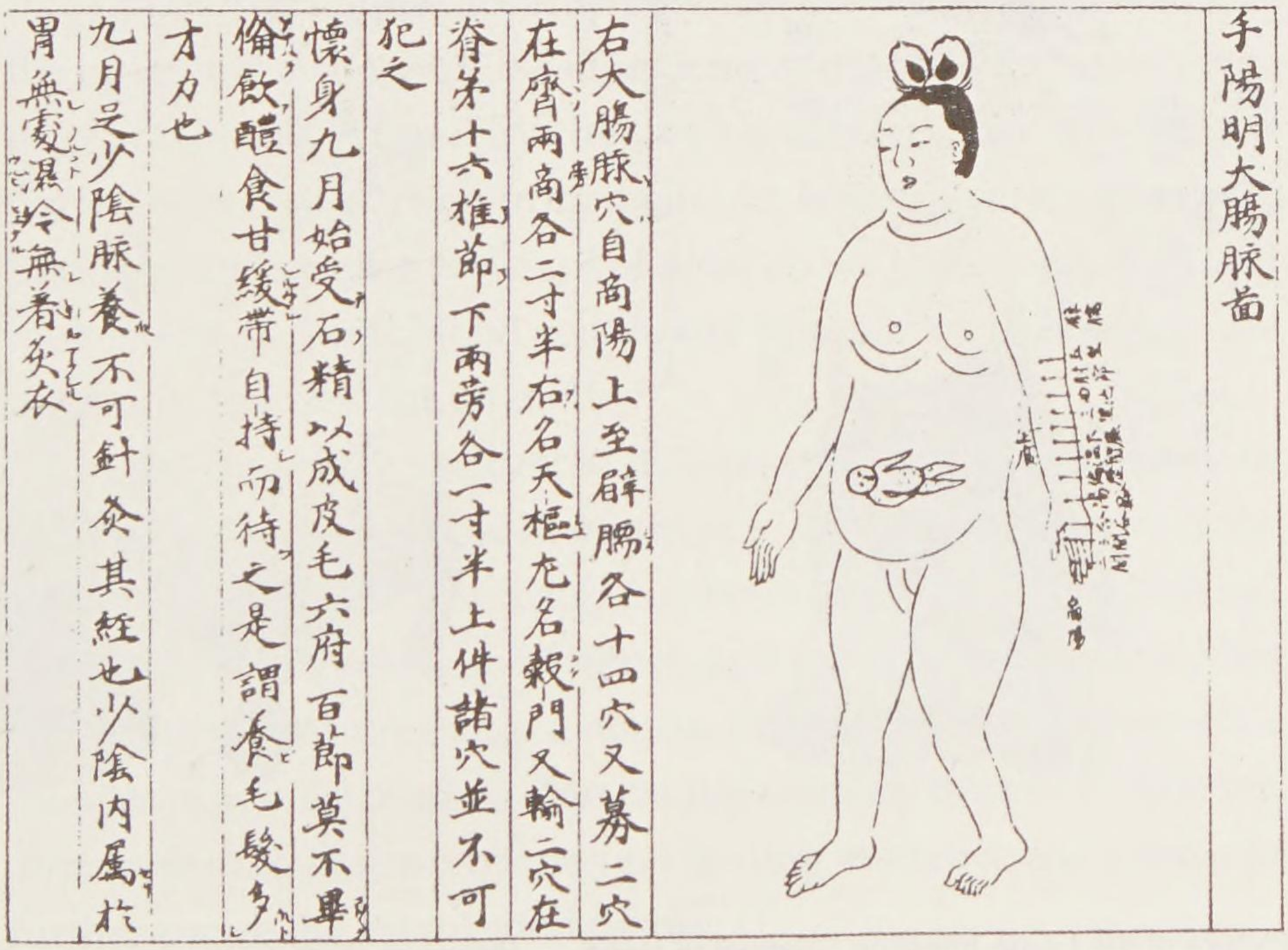


Illustration in ancient books about how to use acupuncture to treat pregnant women.

the Han Dynasty was mainly based on the descriptions in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*). During the early period of the Northern Song Dynasty (about 987–1067), Wang Weiyi cast a bronze figure of a normal human size labeled with the 14 Channels and 657 Acupoints.

Secondly, it is generally believed that TCM only concentrates on Channels. In fact in various systems of traditional medicine, there are similar descriptions about the flow of *qi* and blood. In traditional Indian medicine, the heart is described as a turnip connected with ten vessels and there are 24 more vessels starting from the navel. this is due to the fact that in ancient times people in different places accumulated their knowledge about medicine simply through observation.

Thirdly, before the communication with the Western medicine,



Picture of the Large Intestine Channel of Hand-*Yang Ming*.



Picture of *du mai* (Governor Vessel).

Chinese doctors were unclear about the difference between Channels and vessels and nerve system. So in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) the superficial small vessels are called minute Collaterals. It believes that the reason why large Channels were invisible is due to the fact that they run deep inside the muscles. According to such an explanation, bluish complexion indicates cold which might be dealt with by pricking the small veins while reddish complexion indicates heat which can be removed by pricking the capillaries or small arteries.

Fourthly, the theory of Channels is a synthetic system. For instance, during the time when *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) came into existence, doctors found that the tenderness beside the spine was related to the disease of certain organ and thus decided the Back *Shu* Acupoints related to the five *zang*-organs respectively. However in the theory of Channels, these Acupoints located beside the spine all belong to the Bladder Channel of Foot-*Taiyang*. To know this fact is very important in understanding the relationship between the bladder Channel and the other internal organs. Another example is the circulation circle of *qi* and blood formed by the twelve regular Channels. Such a circle, instead of starting from the heart, begins with the stomach. Because at that time the explanation about the production and movement of *qi* and blood could only be made on the basis of the digestion and absorption of food.

Fifthly, there is a noticeable difference between the theory of Channels and pharmacy. In pharmacy, the knowledge about the action and indication of drugs has been constantly accumulated and renewed. However in Channels and Collaterals, the theory has been maintained unchanged almost for two thousand years after the system was established. The studies made by doctors in different dynasties mainly concentrated on finding evidence and proofs to further prove the established theory.



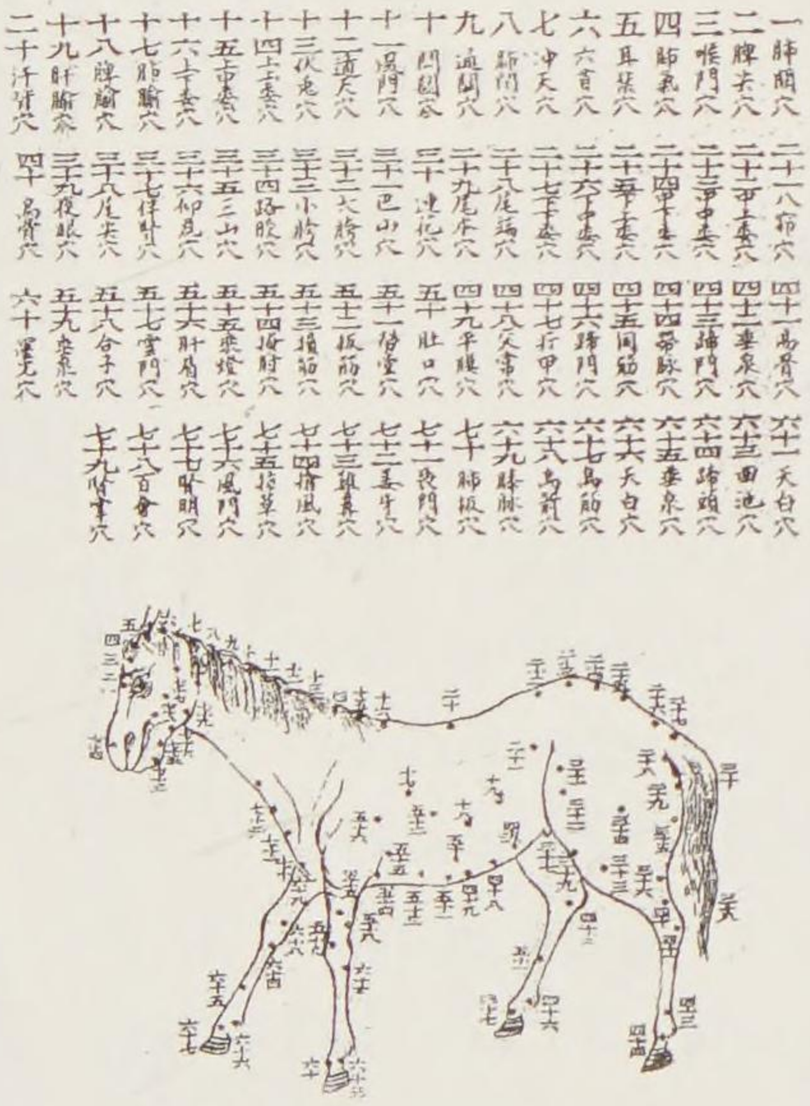
Colored pictures of Channels painted in the Qing Dynasty.

Etiology

Etiology in TCM is comparatively simple, including three aspects, internal causes, external causes, and non-external and non-internal causes.

External causes include abnormal changes of weather, such as excessive cold, summer-heat, dampness, dryness and fire. When these abnormal changes of weather attack human body, exogenous diseases will be caused. For instance, common cold occurring in summer is believed to be caused by pathogenic cold that has invaded the body during winter and high fever running in winter is due to the attack of pathogenic heat that may has invaded the body in summer. That is why such pathogenic factors manifested in opposite seasons are called latent pathogenic factors.

In TCM, exogenous diseases are called cold attack (or exogenous febrile disease), often taken as a separate branch of study in TCM and listed as number disease in many large medical books. Such a phenomenon has something to do with the simple classification of etiological factors and determination of the causes of many different diseases in TCM.



Painting of horse Acupoints painted in the Ming Dynasty.

For example, TCM believes that beriberi (flaccidity of feet due to deficiency of vitamin B1) is caused by water and dampness because they come from the earth. So TCM understands myocarditis due to deficiency of vitamin B1 as invasion of beriberi into the heart. According to TCM, patients with beriberi should avoid rice and just take food made of flour because it grows in water and beriberi is caused by invasion of water and dampness into the body. Fortunately, such an analogy quite accords with

modern science. According to modern science, refined rice lacks vitamin B1, but flour is rich in vitamin B1.

The analysis made above shows that the names of many diseases in ancient times had something to do with etiological diagnosis. However such diagnosis in many cases was just symptom diagnosis. That was to decide the cause and name of a disease according to the symptoms. Due to the difference between the ancient and modern understandings of etiology, it is difficult to decide whether a disease named in ancient times is similar to a diseases named in the modern times.

There was a breakthrough made during the Ming and Qing dynasties. Wu Youke, a doctor living in the 1660s, made careful observation about epidemic diseases and found that these exogenous diseases were not necessarily caused by invasion of abnormal changes of weather, but by a sort of virulent factors that invaded the body through mouth and nose. Such a sort virulent factors were different from any other factors. They may attack human beings but did not affect domestic animals. If the nature of such virulent factors was revealed, there would be certainly possible to develop a drug to control such factors.

With the development of history, the population in the south of China increased fast and infectious diseases increased. Then the school of warm diseases appeared. Ye Tianshi (1667–1746) was one of the important figure in this school. In dealing with infectious diseases, doctors of this school replaced the practice of syndrome differentiation according to the six Channels with the ideas of *wei* (defensive-phase), *qi* (*qi*-phase), y*ing* (nutrient-phase) and *xue* (blood-phase) as well as the upper, middle and lower *san jiao* (Triple Energizer). They used herbs acrid in taste and cold in nature, such as *sang ye* (Folium Mori), *ju hua* (Flos Chrysanthemi) and *lian qiao* (Fructus Forsythiae), to replace herbs acrid in taste and heat in nature, such as *ma huang* (Herba Ephedrae) and *gui zhi* (Ramulus Cinnamomi), further developing the theory of *Shang Han Lun*



Mural painting about treatment of eye diseases in the Yuan Dynasty.

(*Treatise on Cold Diseases*).

The internal causes include emotional changes, improper diet, physical exhaustion and excessive sexual activity. Though TCM emphasizes the importance of physical movement and restriction of sexual activity, it never advocates asceticism. It points out that lonely life is an important factor responsible for many physical and mental diseases. Guided by the theory of *wu xing* (five elements), TCM has established a close relationship between mental state and the five *zang*-organs. It is just due to such a physical-mental relationship TCM takes mental problems as part of the physical diseases and regards physical diseases as part of the mental problems. For example, excess of heart-*qi* leads to excessive laughter and deficiency of heart-*qi* causes grief and sorrow. However in the West, people with mental problems were regarded as criminals and evils even in the 18th century and were punished physically.



Painting about poisoning in the Yuan Dynasty.

Li Gao, one of the four great doctors in the Jin and Yuan dynasties, was one who first made theoretical study on improper food and overstrain in causing diseases. He wrote a book entitled *Nei Wai Shang Bian Huo Lun* (*Clarifying Doubts about Damage from Internal and External Causes*) to discuss diseases that appeared to be caused by external factors but actually caused by internal factors. Such diseases should be treated by regulating the spleen and the stomach. He wrote another book entitled *Pi Wei Lun* (*Treatise on the Spleen and Stomach*) to discuss spleen and stomach, suggesting that stomach-*qi* was *yuan qi* (primordial-*qi*) and developed a series of important prescriptions still popular now.

The so-called non-internal and non-external causes refer to

wound, injury due to insect bite and animal attack, poisoning and hereditary factors.

Diagnostics

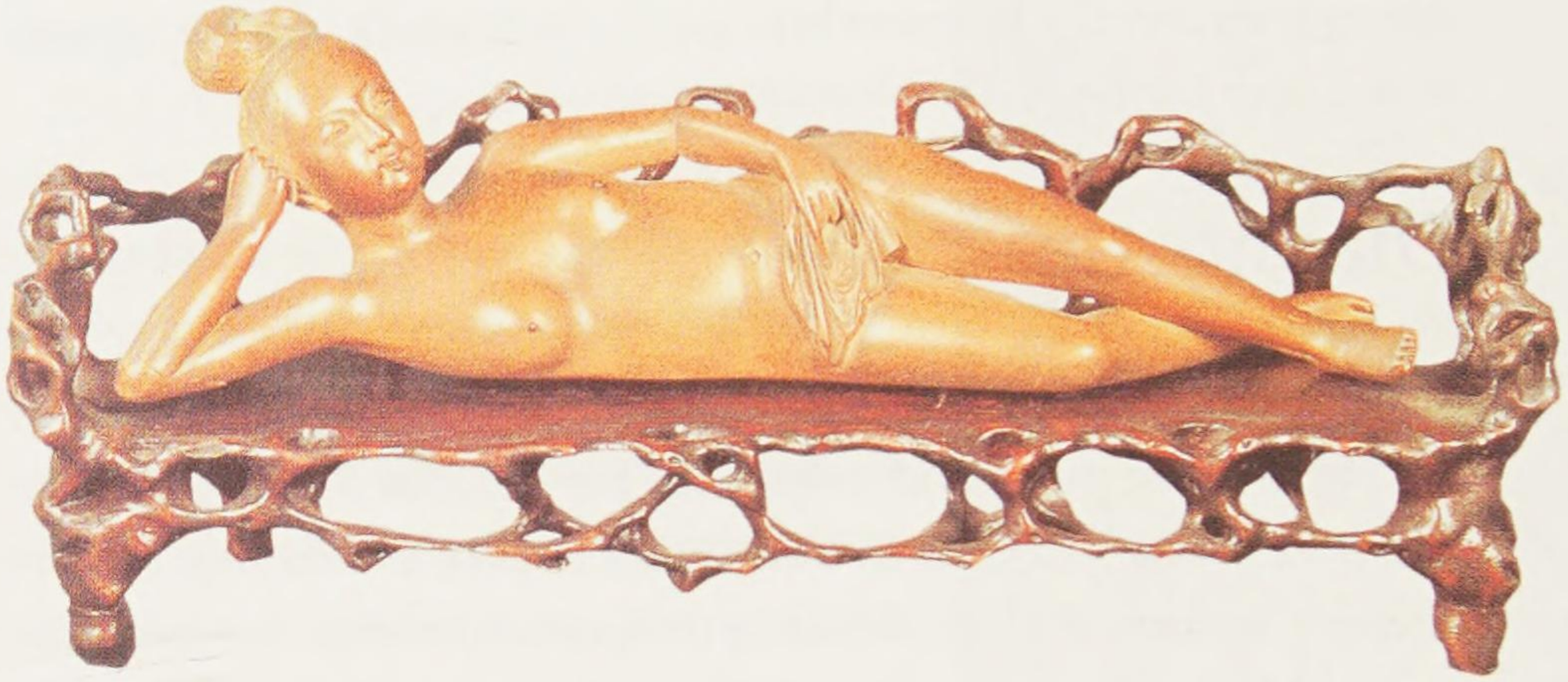
Wang (inspection), *wen* (listening and smelling), *wen* (inquiry) and *qie* (taking pulse and palpation) are the four basic diagnostic methods used in TCM. In books like *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), *wang* (inspection) and *qie* (taking pulse and palpation) were discussed theoretically in details.

Wang (inspection)

Inspection means to collect information about diseases through observing the patient. Inspection mainly refers to observation of the mental state, physical condition, facial expressions and tongue manifestations. To understand the internal through observing the external is an important method used to understand the physiological functions and pathological changes of the human body. Diagnosis made through observation is mainly based on the theory of *wu xing* (five elements). In the theory of *wu xing* (five elements), fire matches with red and metal matches with white. So red complexion indicates heat while white complexion indicates cold. In terms of the internal organs, yellow color is related to the spleen and black color is related to the kidney. In terms of the orientations, the center corresponds to the spleen, the east corresponds to the liver and the west corresponds to the lung. So color over the left side of the cheekbone demonstrates the condition of the



Sculpture about Arhat taking pulse.



Model of the body of woman for doctors to inspect in diagnosis in ancient times.

liver while color over the right side of the cheekbone demonstrates the condition of the lung. In inspection, luster is more important than color because luster indicates health while lusterlessness is a morbid state.

Inspection of the tongue is now a relatively independent diagnostic method. This method is mainly used to understand the condition of *qi* and blood. For instance, light-colored tongue means deficiency of blood while bulgy tongue indicates deficiency of *qi*. Through inspecting the tongue, one can understand the nature of pathogenic factors. For example, yellow tongue coating indicates heat, thick tongue coating shows severity of pathogenic factors and thick coating over the root of the tongue shows deep location of pathogenic factors.

The application of inspection is related to the theory of Channels. For instance, since *ren mai* (Conception Channel) runs along the front midline, beardless or even philtrum indicates insufficiency of *qi* in *ren mai* (Conception Channel) and problems in reproduction. According to experience, people have gradually reached the conclusion that those with long brows and large ears can enjoy a long life. Such empirical experience is also reflected in the theory of TCM. For instance in TCM it believes that the brows reveal the condition of marrow while the ears demonstrate the condition of the kidney.

Qie (taking pulse or palpation)

This method is used to examine dislocation and fracture of bones, abdominal mass and skin condition. However it is most commonly used to examine the pulse conditions. The development of such a diagnostic method was based on the understanding of the pulsation of vessels in the body. That was why in ancient times this method was used to examine the pulsating points over several regions of the body. When the theory of Channels was established, such an examination was made over separated Channels.

To combine the pulse states with the diagnosis of diseases, doctors in the previous dynasties established various theories to guide the use of this method. TCM believes that the variation of the pulses is closely related to the fluctuation of *yin* and *yang* in the four seasons. That is why this method is also called pulse examination method in the four seasons. In the past pulse examination was used to examine the pulsations in the three regions of the body, namely the head, foot and hand (corresponding to the heaven, earth and human beings respectively). This way of pulse examination is known as three regions and nine divisions.



Pillow used by doctors to take the pulse of patients.

The method that is related to the commonly used pulse diagnosis method now is *ren ying* and *cun kou* examination. *ren ying* is located in the cervical artery and pertains to *yang* while *cun kou* is located in the radial artery and pertains to *yin*. Now doctors just choose *cun kou* as the region to examine pulse. The pulse in *cun kou* is also divided into two parts, *yin* and *yang*, from the middle finger. The region one *cun* from

the middle finger to the crease of wrist was known as *cun* while the region from the middle finger to the cubit was known as *chi*.

The changes of pulse examination, according to the present extant literature, can be traced back to the times of *Nan Jing* (*Canon On Eighty-One Difficult Issues*). *Nan Jing* (*Canon On Eighty-One Difficult Issues*) begins with a question: Why pulse examination is only done over the *cun kou* since all the twelve Channels have their own pulsations. *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) has mentioned examination of cubit, but it just means to examine the skin over the forearm. The changes of pulse examination in TCM were actually made on the basis of theory of *yin-yang*.



Traditional examination of the pulse in the *cun*, *guan* and *chi* regions.

In the book entitled *Mai Jing* (*Canon of Pulse*) compiled by Wang Shuhe, an imperial doctor in the Western Jin Dynasty, another important change of pulse examination method took place. *Guan*, the point where the middle finger was put on in pulse examination, became another region for taking pulse. Then the pulse in *cun kou* was divided into three parts, *cun*, *guan* and *chi*, corresponding to the five *zang*-organs and six *fu*-organs. The division of *chi* and *cun* then no longer correspond to *yin* and *yang*, but to the upper and lower portions of the human body. As to the correspondence of the pulses to the viscera, the *cun*, *guan* and *chi* on the left hand correspond to the heart, liver and kidney respectively; while the *cun*, *guan* and *chi* on the right hand correspond to the lung, spleen

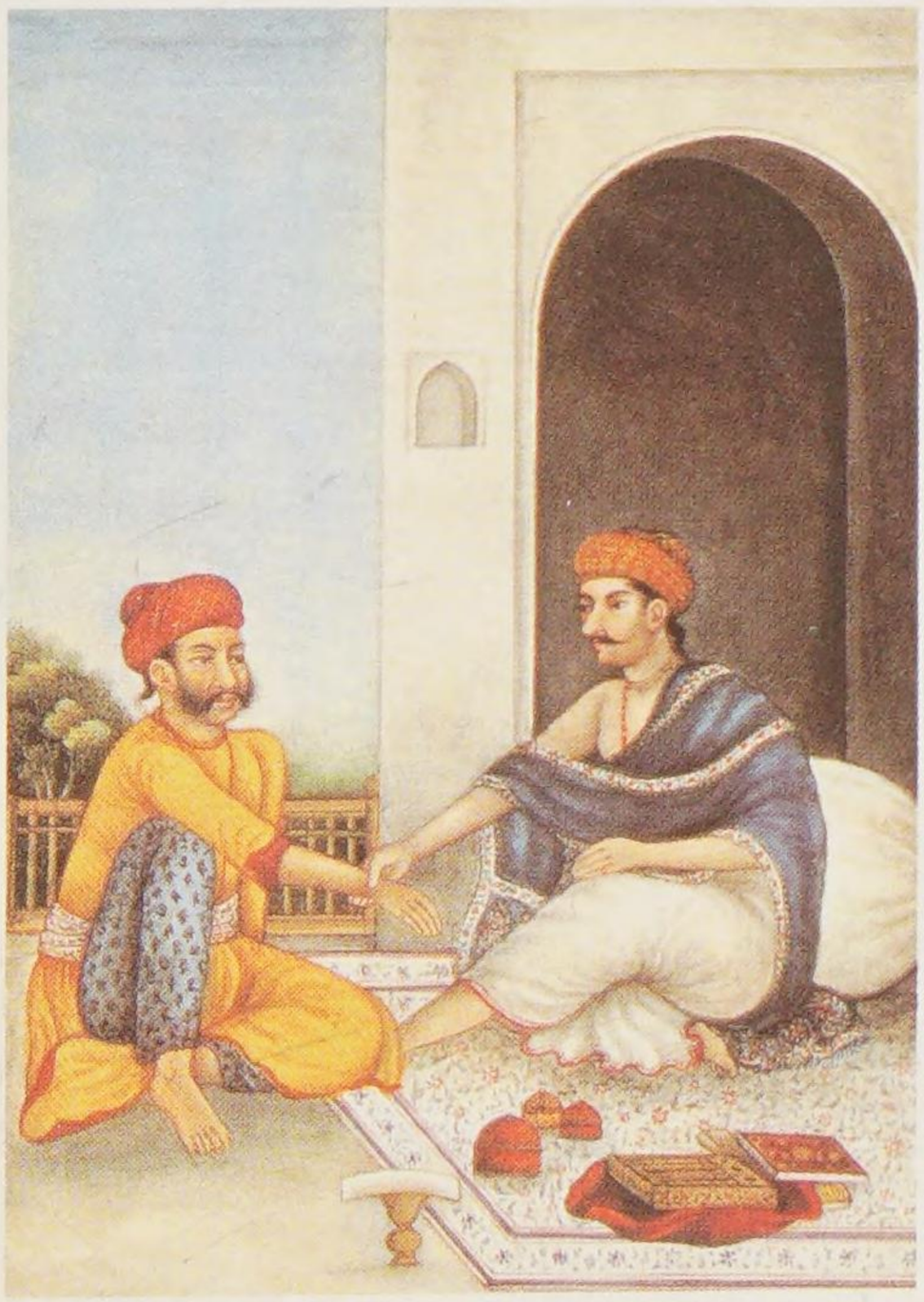
and *ming men* (gate of life). Such an adjusted correspondence between pulses and viscera shows that *yin* and *yang* were replaced by left (*yin*, blood) and right (*yang*, *qi*). This method has been used till now. *Mai Jing* (*Canon of Pulses*) has mentioned 24 kinds of pulses. However in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), the pulses discussed are no more than ten kinds.

Wen (listening and smelling) and *Wen* (inquiry)

Wen means to listen to the voices and breath as well as to smell the odors of the patient. This method is used to collect information for diagnosis and use of drugs. For instance, the sound of cough can help doctors understand the disease in question is due to dryness or wind invasion or phlegm or lung injury.

Inquiry is used by doctors both in TCM and Western medicine. Through inquiry, doctors can know the subjective feeling, living habit and anamnesis of the patient as well as the duration of disease.

In the Ming Dynasty, Zhang Jingyue compiled *A Song of Ten Questions*, summarizing the experience of previous doctors in inquiring patients in their clinical practice. These ten questions were improved and enriched by doctors of the later generations and eventually became the formula of inquiry.



The technique of pulse taking was introduced into the Arabian world in the 11th century.

Now various advanced modern technology and instruments for diagnosis have been developed. So modern TCM doctors, a part from mastering the traditional techniques for diagnosis, have to be familiar with these new technology and instruments and try to make use of them in their clinical diagnosis and treatment.

Only when synthetic analysis is made

of the information collected with the four diagnostic methods can correct diagnosis be made. Such a synthetic analysis is known as differentiation of syndromes made according to the eight principles, namely *yin*, *yang*, interior, exterior, cold, heat, deficiency and excess. Among these eight principles, *yin* and *yang* are the most important ones.



Illustration in classical Chinese novels about how doctors diagnosed women of the imperial family by touching a thread linked with the finger of the patient.

Pathological conditions are often complicated. Thus to make an accurate diagnosis is not always easy. Sometimes clinical manifestations may be false. So doctors have to be carefully analyze the information collected with these four traditional diagnostic methods. Take pulmonary disorder in circulation due to right heart failure and leading to pneumonia for example. The methods of clearing away heat and removing toxin for dealing with common cold and pneumonia will be infective because the manifestation of heat is false. Only when large dosage of cardiac stimulant is used can inflammation be subdued and fever be relieved.



Internal and External Therapies of TCM



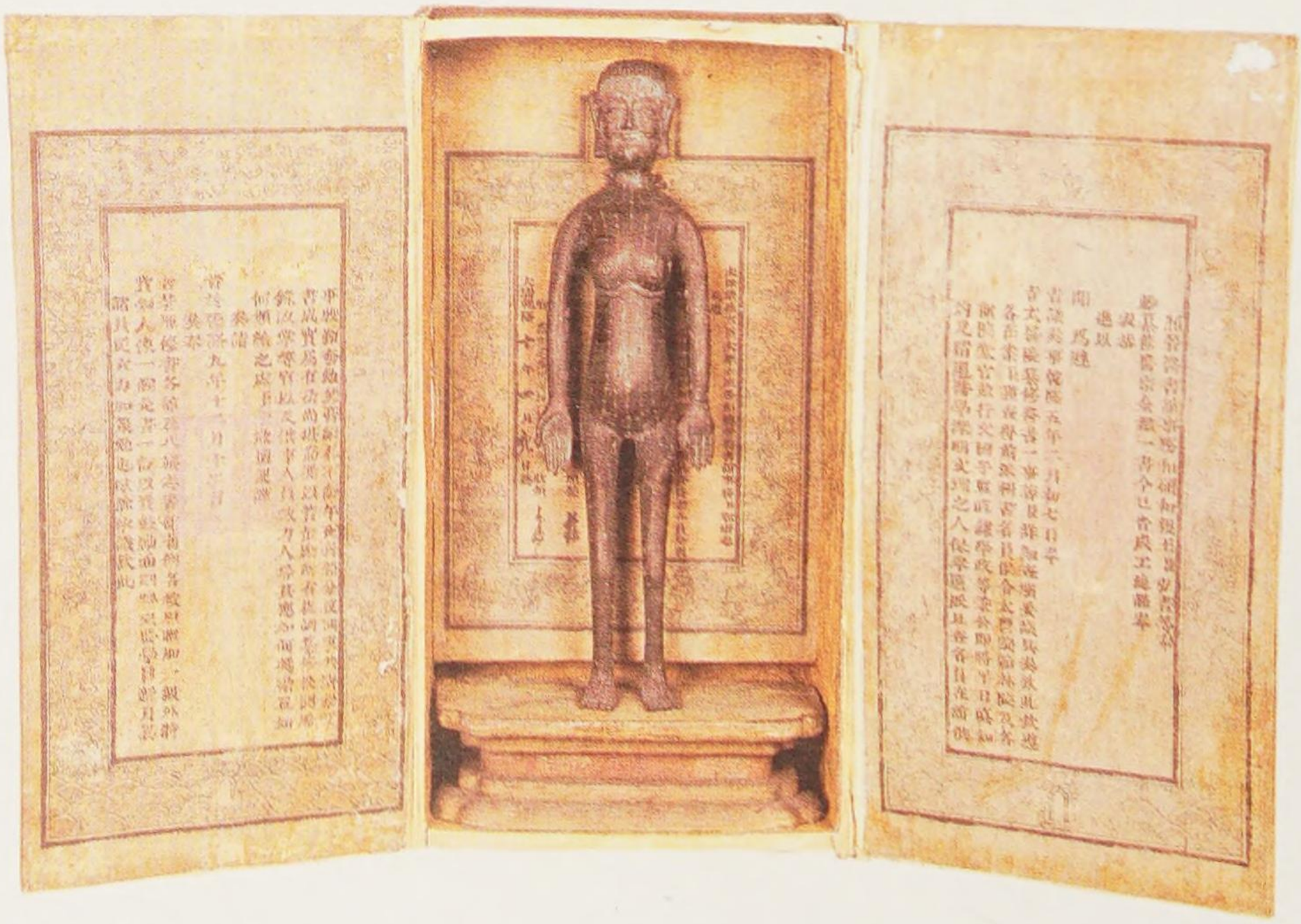
Acupuncture and Moxibustion

Acupuncture and moxibustion are the therapeutic methods developed in China thousands of years ago. It is generally believed that these methods were originated from bloodletting and hot compress in the primitive society. However the book entitled *Zhou Li* (*Rituals Practiced in the Zhou Dynasty*) compiled in the Western Zhou Dynasty, there were detailed records about medicine administration and therapeutic methods, but there were no records about the practice of these acupuncture and moxibustion. The early information about these two methods can only be found in the silk book unearthed from a tomb of the Western Han Dynasty in Ma Wang Dui, Hunan Province.

Today when people talk about acupuncture and

Moxibustion

Moxibustion is a traditional Chinese medicine therapy using moxa, or mugwort herb as an emmenagogue. Moxa is usually processed further into a fluff or sticks, which can be used indirectly, with acupuncture needles, or sometimes burned on a patient's skin. Practitioners use moxa to warm regions and acupuncture points with the intention of stimulating circulation through the points, to treat diseases and maintain health. It is similar to and complementary to needle treatment. Together the two of them form the Chinese word "*Zhenjiu*" that often gets translated as "acupuncture." However, most people nowadays only refer to acupuncture as needle treatment.



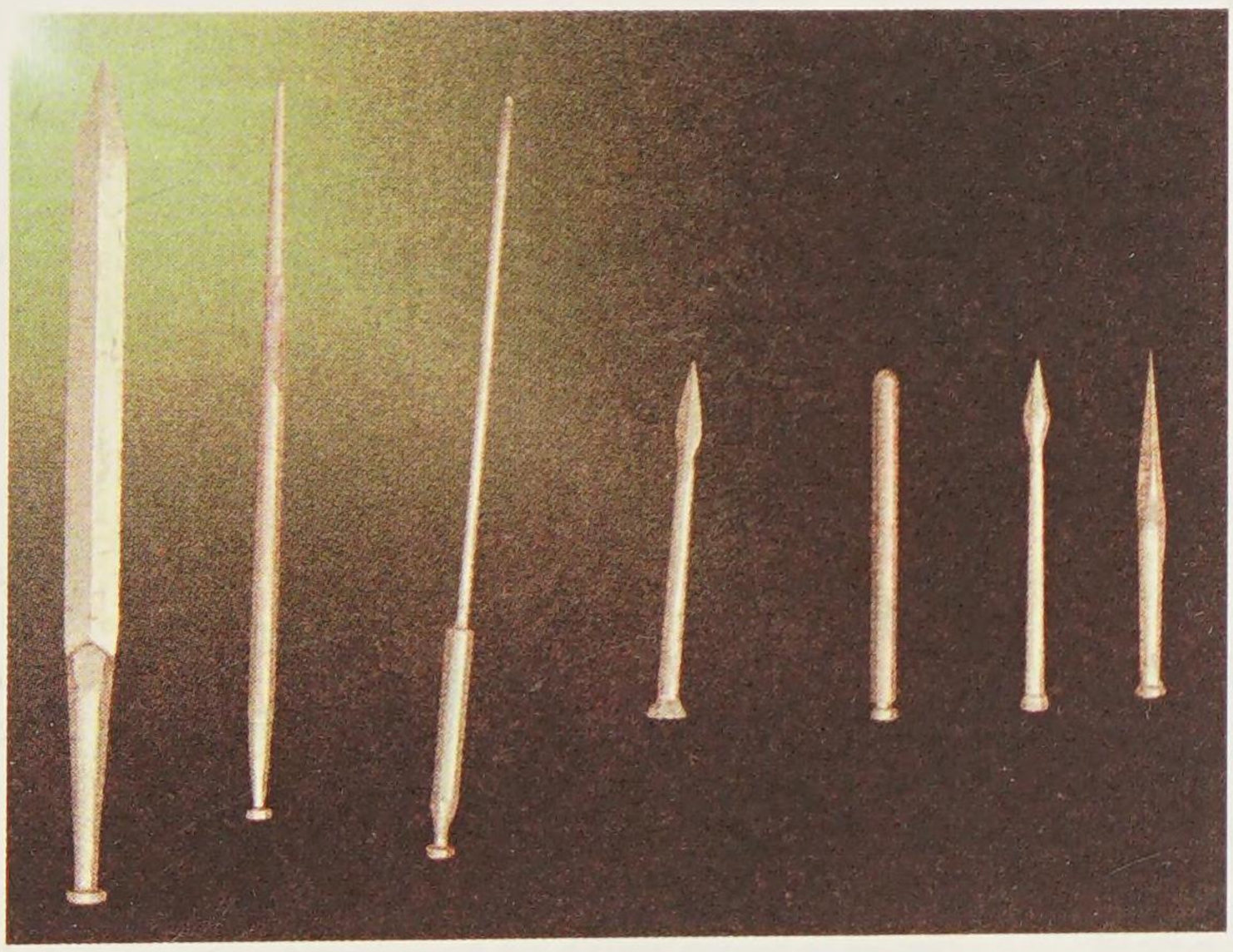
Bronze figure labeled with Acupoints modeled during the Qing Dynasty.



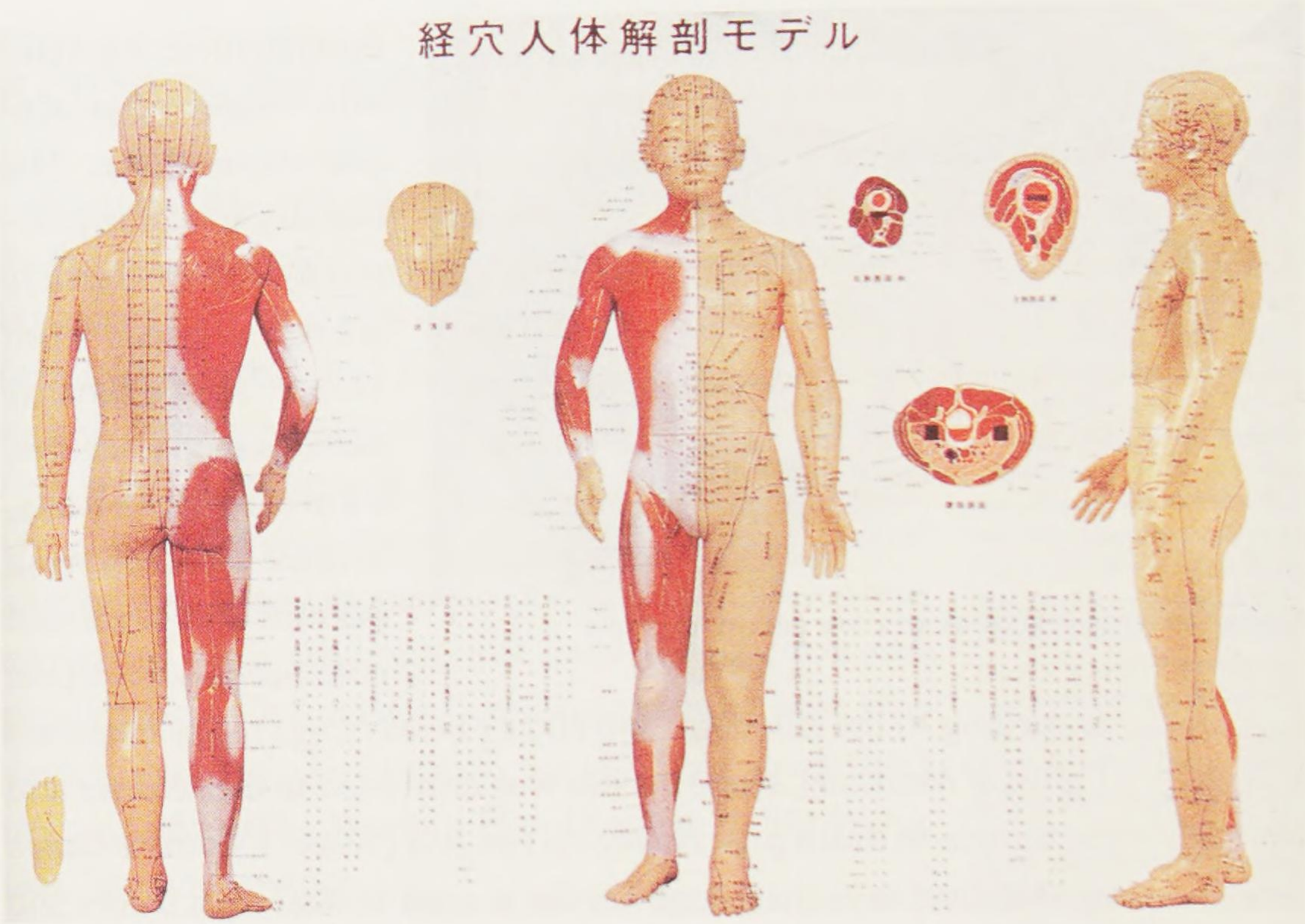
Moxibustion means to burn moxa over certain Acupoints.

moxibustion, we actually simply refer acupuncture alone. The needles used for practicing acupuncture were evolved from sharp stone, stone needles, bone needles, bamboo needles, bronze needles, iron needles and silver and gold needles. However according to the silk book and *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), stone needle was only used to incise ulcer and carbuncle to drain pus. *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) says that stone needle is used to deal with ulcers and sores while small needles are used to deal with spasm of limbs, pain and difficulty in movement.

In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), nine kinds of needles are mentioned. The first one is called *chanzhen* (sagittate needle), 1.6 *cun* in length; the second one is called *yuanzhen* (round-pointed needle), 1.6 *cun* in length; the third one is called *dizhen* (arrow-shaped needle), 3.5 *cun* in length; the fourth one is called *fengzhen* (sharp needle), 1.6 *cun* in



The nine kinds of needles described in the ancient books.



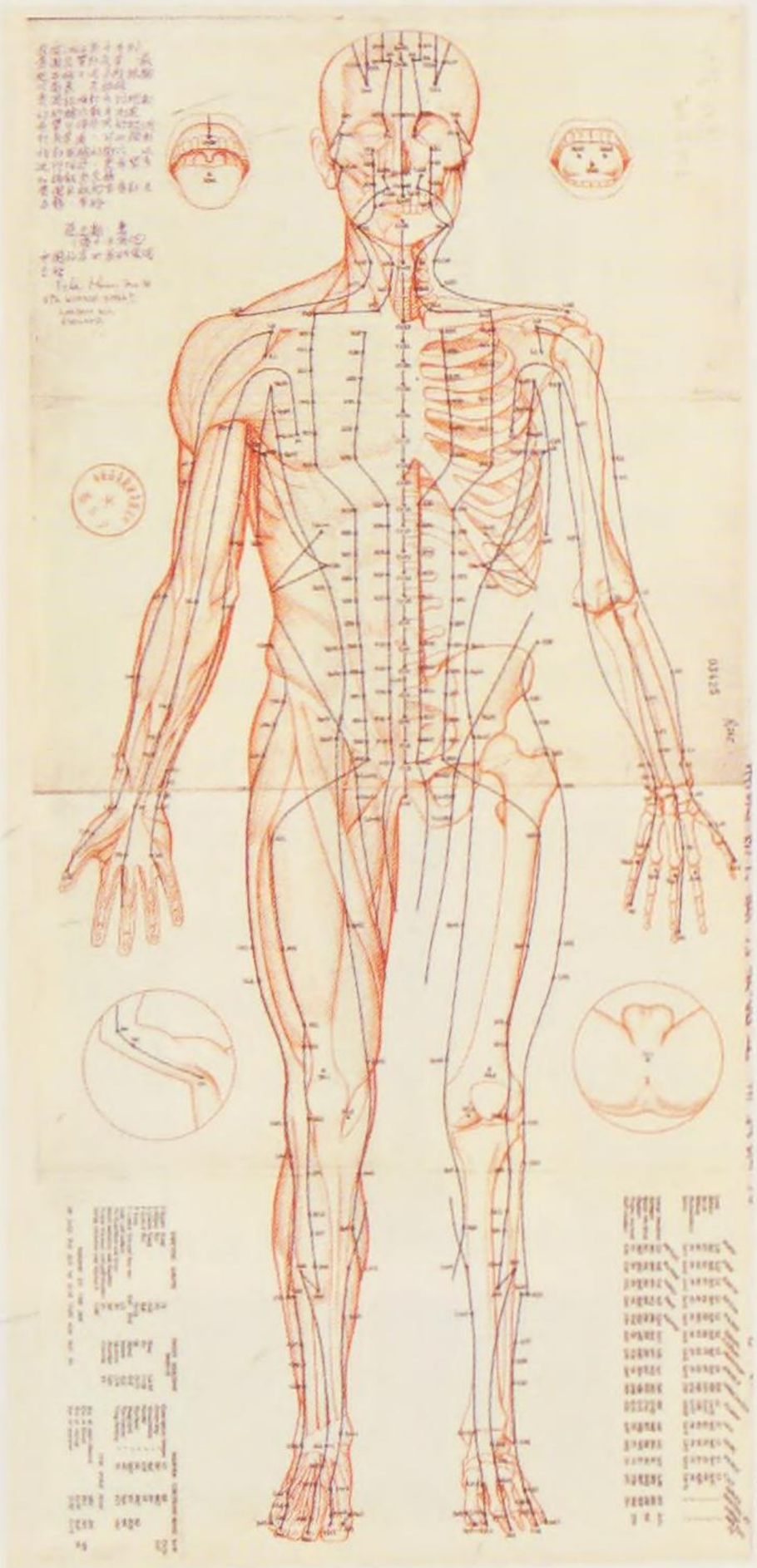
Illustrations of Acupoints in the book published in Japan.

length; the fifth one is called *pizhen* (sword-shaped needle), 4 *cun* in length and 0.2 *cun* in width; the sixth one is called *yuanlizhen* (round-sharp needle), 1.6 *cun* in length; the seventh one is called *haozhen* (filiform needle), 3.6 *cun* in length; the eighth one is called *changzhen* (long needle), 7 *cun* in length; and the ninth one is called *dazhen* (large needle), 4 *cun* in length. Among these nine kinds of needles, some are used for surgical purpose and others are used for needling purpose.

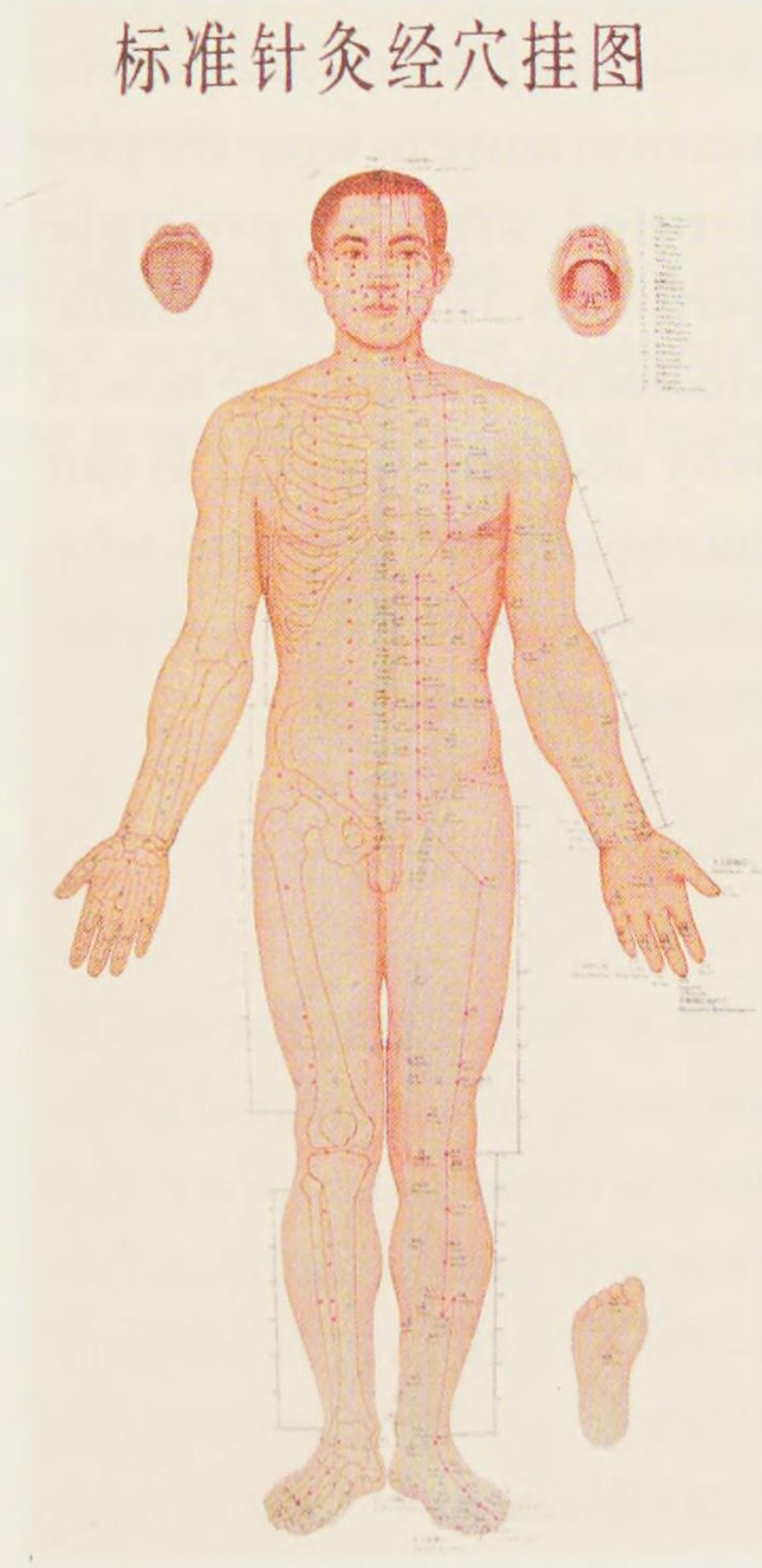
The early external therapeutic methods gradually evolved into specialized systems due to independent development of knives for surgical purpose and study on Channel diseases. Channels are the pathways for *qi* and blood to flow and also have various pathological changes. Since the Channels are interconnected with the internal organs, small needles, also known as filiform needles, are used to regulate *qi* and blood.

All the Acupoints are located on the Channels. So the studies of Channels are closely related to acupuncture treatment. Besides, the function of one single Acupoint is usually a sort of independent empirical knowledge. Clinically the empirical knowledge about Acupoints is more important because special Acupoints are usually extraordinarily effective in dealing with certain diseases.

For example, at the side of the cheek runs the large intestine Channel of Hand-*Yangming*. So distorted face can be treated by needling the Acupoints located on this Channel. However only *hegu* (LI 4) located on it is effective in treating this problem, not all the



Location of Acupoints drawn in Britain.



Illustrations of Acupoints in modern Chinese books.

Acupoints on this Channel. Another typical example is *zusanli* (ST 36) to be used to treat gastrointestinal problems. Modern scientific experiments have proved that needling *hegu* (LI 4) can increase blood flow and temperature of the face. Surgical research has proved that, in dealing with gastric perforation and intestinal obstruction, needling *zusanli* (ST 36) can promote the abdominal peritoneum to move to wrap the perforated area or promote peristalsis. However scientific studies have found the reason why needling *hegu* (LI 4) can increase blood flow and why needling *zusanli* (ST 36) can promote peristalsis.

Prescriptions

In ancient China, the way to use drugs was compared to the way to command an army. The reason is that to command an army to fight needs military strategy and to use drugs to treat diseases follow certain principles.

The combined use of drugs



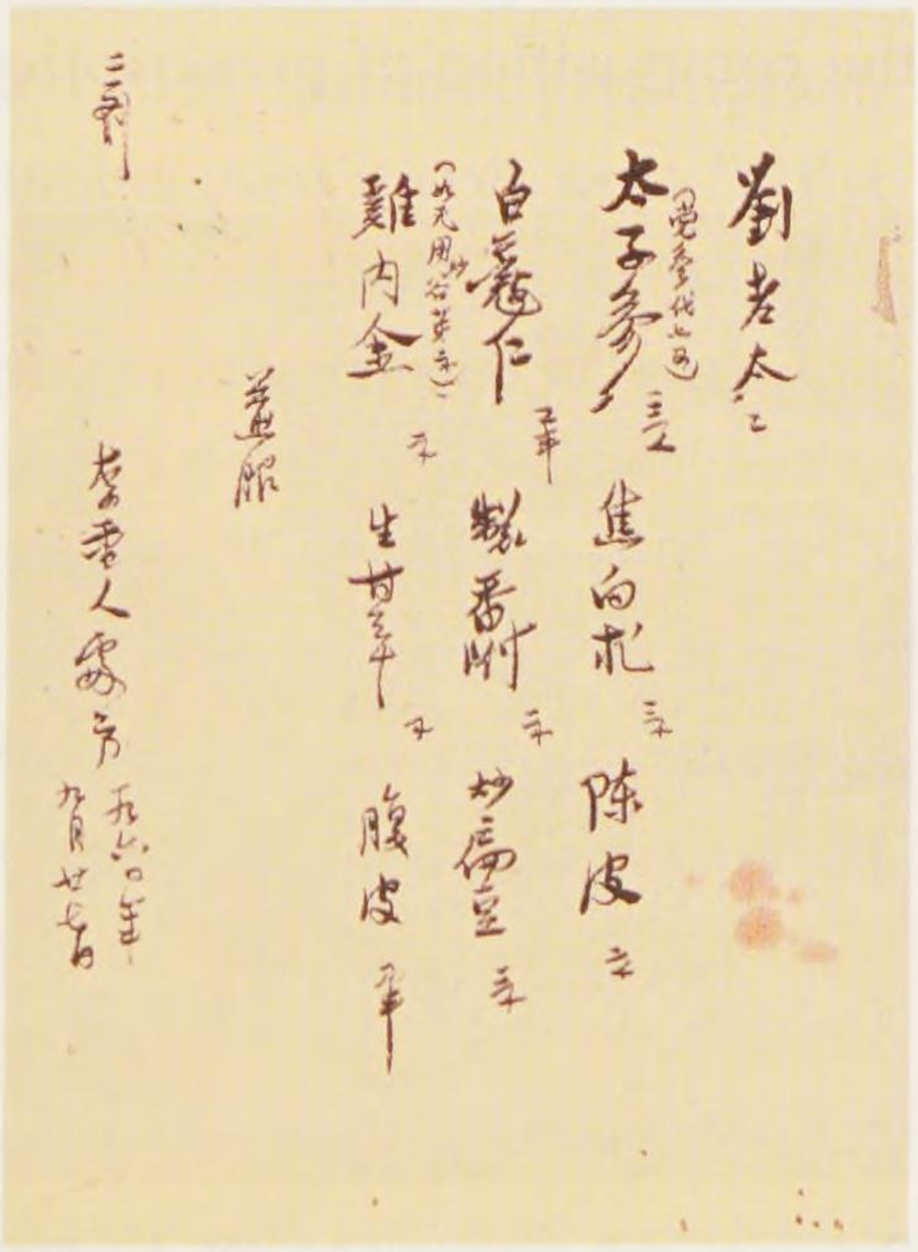
Bronze figure labeled with Acupoints modeled in the Ming Dynasty, the body is 213 cm high and with 666 Acupoints.



Various kinds of stools used for acupuncture treatment.

based on experience or theory is called prescription. There are different forms of prescription, such as pills, powder, paste and bolus etc. The knowledge about how to use certain medicinal herbs together, what principles to follow, what dosage should be decided and how to modify in clinical application is the theoretical foundation of prescription studies.

In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), there are over ten simple prescriptions which are now studied as three theories of prescriptions, namely "monarch, minister, assistant and guide," "seven prescriptions" and "compatibility be-



TCM prescription.



To fill a TCM prescription.

tween *qi* and odors."

"Monarch, minister, assistant and guide" are used to describe the composition of prescriptions. "Monarch drug" is the key ingredient in the prescription, "minister drug" promotes the "monarch drug" to exert curative effect, "assistant drug" strengthens the effect of the prescription or restrict toxin, and "guide drug" directs other ingredients to work on the affected part.



Picture of herb processing painted in the Ming Dynasty.

A prescription can be classified into different categories, small prescriptions are characterized by fewer ingredients



Bottles of medicine.

and small dosage, large prescriptions are characterized by more ingredient and large dosage. Odd prescription means that the ingredients contained in the prescription are odd in number and even prescription means that the ingredients contained in the prescription are even in number. Other categories of prescriptions include drastic prescription, mild prescription and compound prescription.

To some people, these theories may not be developed from empirical practice. For example, *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) says that "purgation does not use even prescriptions." But in *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*), *da cheng qi tang* (major *qi*-supporting decoction), a drastic prescription, is just composed of herbs odd in number. And it even says, "If the odd prescription does not help, even prescription can be used." If this is the case, it seems that difference between odd prescription and even prescription is meaningless. But we must know that the theory of TCM is quite flexible, not rigid.

The idea of "monarch, minister, assistant and guide" is thought by many modern scholars as the principles for composing prescriptions in *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*). To analyze any prescriptions, no matter how many ingredients they contain, the principles of "monarch, minister, assistant and guide" have to be used and are always practical.

Those who objectively study the history of prescriptions also pay



Herbs exported from China to Japan in the Qing Dynasty.

attention to the idea of "monarch, minister, assistant and guide" mentioned in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), but they believe that the theory of prescriptions was developed and put into practice just from the Song Dynasty. Objectively speaking the idea of "monarch, minister, assistant and guide" in analyzing prescription is quite significant, making it clear for people to understand the order and compatibility of the ingredients contained in a prescription.

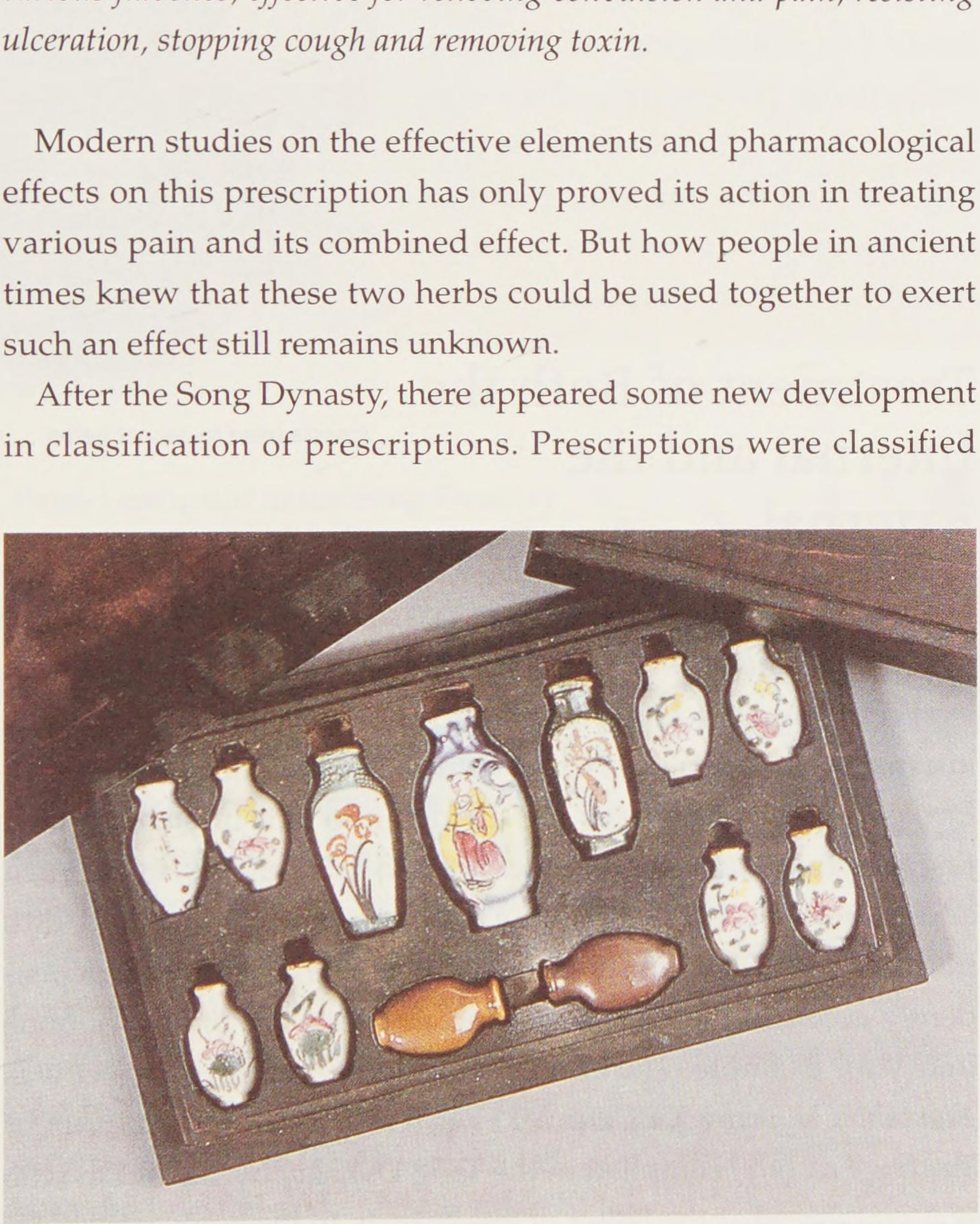
The idea of "harmony of the seven interactions among herbs" mentioned in *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*), the earliest book on Chinese materia medica, is also an important theory for prescriptions, namely mutual promotion, mutual assistance, mutual restriction, mutual inhibition, mutual antagonism and mutual detoxification. This shows that the composition of a prescription is not simply a combination of several ingredients. In fact it is developed according to the principles mentioned above. In history there were monographs studying the compatibility of herbs. In the modern times, some important projects have been undertaken to study the rules of herbal compatibility according to modern pharmacology. For instance, *shao yao gan cao tang* (Flos Moutan and Radix Glycyrrhizae decoction), a prescription mentioned in *Shang Han Lun* (*Treatise on Cold Diseases*), was already scientifically studied. The following is the conclusion:

Paeoniflorin contained in Chinese herbaceous peony is effective for relieving spasm by directly exerting effect on the smooth muscles. It also can be used to tranquilize the mind, relieve pain and stop convulsion. It has been proved that it inhibits different parts of the central nerve system with different effect.

Radix Glycyrrhizae mainly contains glycyrrhizin, liquiritin and various flavones, effective for relieving convulsion and pain, resisting ulceration, stopping cough and removing toxin.

Modern studies on the effective elements and pharmacological effects on this prescription has only proved its action in treating various pain and its combined effect. But how people in ancient times knew that these two herbs could be used together to exert such an effect still remains unknown.

After the Song Dynasty, there appeared some new development in classification of prescriptions. Prescriptions were classified



Bottles used to contain medicinal powder.

according to their actions into eight categories, namely sweating, vomiting, purgation, regulation, warming, clearing, nourishing and resolving. These eight categories of prescriptions also reflect the eight major therapeutic methods. Clinically these eight methods are used singularly or multiply according to pathological conditions of the patients. For example, the warming and clearing methods can be used together and the nourishing and resolving methods may be simultaneously for certain purposes.



Vessels used to decoct herbs.

Treatment of Both the Internal and the External

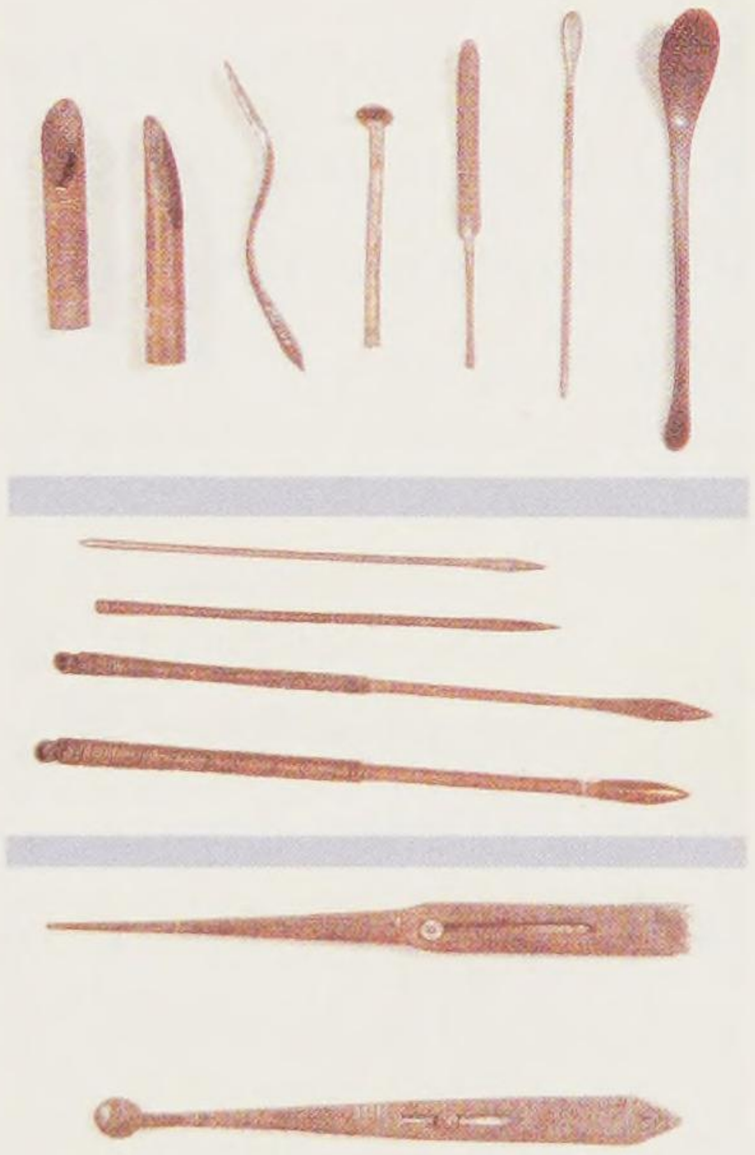
According to historical records, classification of medicine into different branches started from Zhou Dynasty during which medicine was divided into four branches, namely dietetic medicine, internal medicine, surgery and veterinary medicine. In the Song Dynasty, medicine was further divided into nine branches. In the Jin Dynasty, this division was extended to ten branches. In the Yuan and Ming dynasties, medicine was eventually classified into thirteen branches. These branches of medicine developed independently according to their own specialty. Take the branch of bone injury for example. The earliest monograph on this subject was *Xian Shou Li Shang Xu Duan Mi Fang* (*God's Secret Prescriptions for Treating Fracture*) compiled in the Tang Dynasty by Taoist Lin who was worshiped as the father of this branch. In the book entitled *Tai Ping Sheng Hui Fang* (*Prescriptions for the Peace and Happiness of all*



Performing cupping therapy.

People) compiled in the Song Dynasty by Wang Huiyi, branch was a separate chapter. In the Imperial Administration of Medicine, surgery was changed into sores-swelling-fracture specialty. In the Yuan Dynasty, those who were not familiar with one of the thirteen specialties were forbidden to practice medicine.

However, the concept to take the body as an organic whole in TCM made such a strict division of medicine relative. In fact under many conditions doctors in TCM had to use both the internal and external methods at the same time in order to



Instruments used for surgery in the Qing Dynasty.



Hanging reduction developed by Wei Yilin in the 14th century for treating spinal injury.

effectively treat diseases.

The so-called surgery in TCM just concentrates on the treatment of sores, carbuncles and other skin diseases, quite different from surgery in modern medicine. Since the Jin and Yuan dynasties, the idea of using both the external and internal therapeutic methods at the same to treat diseases was widely accepted. Osteology is a typical example. Simultaneous use of both the internal and external therapeutic methods has greatly promoted the healing of wounds.

In TCM, gynecology, pediatrics, stomatology and laryngopharyngology, though possessing their own characteristics, are in fact interrelated to each other. Objectively speaking, modern medicine is superior in diagnosing and removing tumors in the reproductive system, while TCM is superior in adjusting vegetarian nerve and endocrine disturbance with traditional therapeutic methods like acupuncture and combined use of herbs.



Knowledge of Materia Medica

Medicine or drugs are used to treat diseases. However not all things can be used as medicine. For instance Chinese people often wear jade as a sort of decoration for healthcare purpose, but it is not a sort of medicine. To wear clothes, to take bath and to use umbrella are good for health, so we can find contents about these aspects in the classic books of traditional Indian medicine. In *Shan Hai Jing* (*Canon about Mountains and Seas*), a book about geography compiled in ancient times, there were records about taking the feather of a kind of bird to protect one from thunder.

Establishment of the Theory of Materia Medica

Traditionally Chinese materia medica contains three kinds of materials, herbs, minerals and animal parts. But the dominant part is herb. That is why herbs are traditionally used to name Chinese materia medica. So the study on herbs in ancient times led to the establishment of Chinese pharmacy. Such study covered the aspects of the name, property, action, indication and production place of a herb as well as its collection, processing and storage. In the monographs about herbs compiled in the Wei and Jin dynasties, models of prescriptions were also included. In the Western Han dynasty, there were officials who were familiar with five Confucian canons, mathematics and herbology ordered to work in the central government to study herbs and write books on herbs.



Bronze sculpture of Sun Simiao, King of Medicine, modeled in the Ming Dynasty.





Collecting herbs painted in the Qing Dynasty.

Important Books on Materia Medica

Shen Nong Ben Cao Jing (Agriculture God's Canon of Materia Medica)

Shen Nong Ben Cao Jing (*Agriculture God's Canon of Materia Medica*) was the earliest extant book on herbs. It was compiled in the Eastern Han Dynasty. Another important book about herbs known as *Ben Cao* (*Materia Medica*) was compiled in the period of Three Kingdoms by Wu Jin, a disciple of Hua Tuo. This book was already lost in history. Comparison between *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*) and the extant quotations from Wu Jin's *Ben Cao* (*Materia Medica*) in others shows that *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*) was a complete works about herbs while Wu Jin's *Ben Cao* (*Materia Medica*) contained ideas of various schools.

Ben Cao Jing Ji Zhu (Explanation of Canon of Materia Medica)

The science of materia medica developed fast after its establishment and various books about it were compiled and published. The current extant ones include *Ben Cao Jing Ji Zhu* (*Explanation of Canon of Materia Medica*) compiled by Tao Hongjing (about 452–536) based on various editions of *Shen Nong Ben Cao Jing* (*Agriculture God's*

Canon of Materia Medica). This book contained 730 kinds of herbs. It labeled the content of *Shen Nong Ben Cao Jing* (*Agriculture God's Canon of Materia Medica*) with red color and the content of explanation and supplementation with black color. The number of herbs was doubled in Tao Hanging's book. Furthermore it changed the so-called upper, middle and lower grades of herb classification and used the method frequently adopted by other doctors to classify herbs according to their natural property or source of production. The trials made in this book exerted great influence on the books compiled by the later generations.

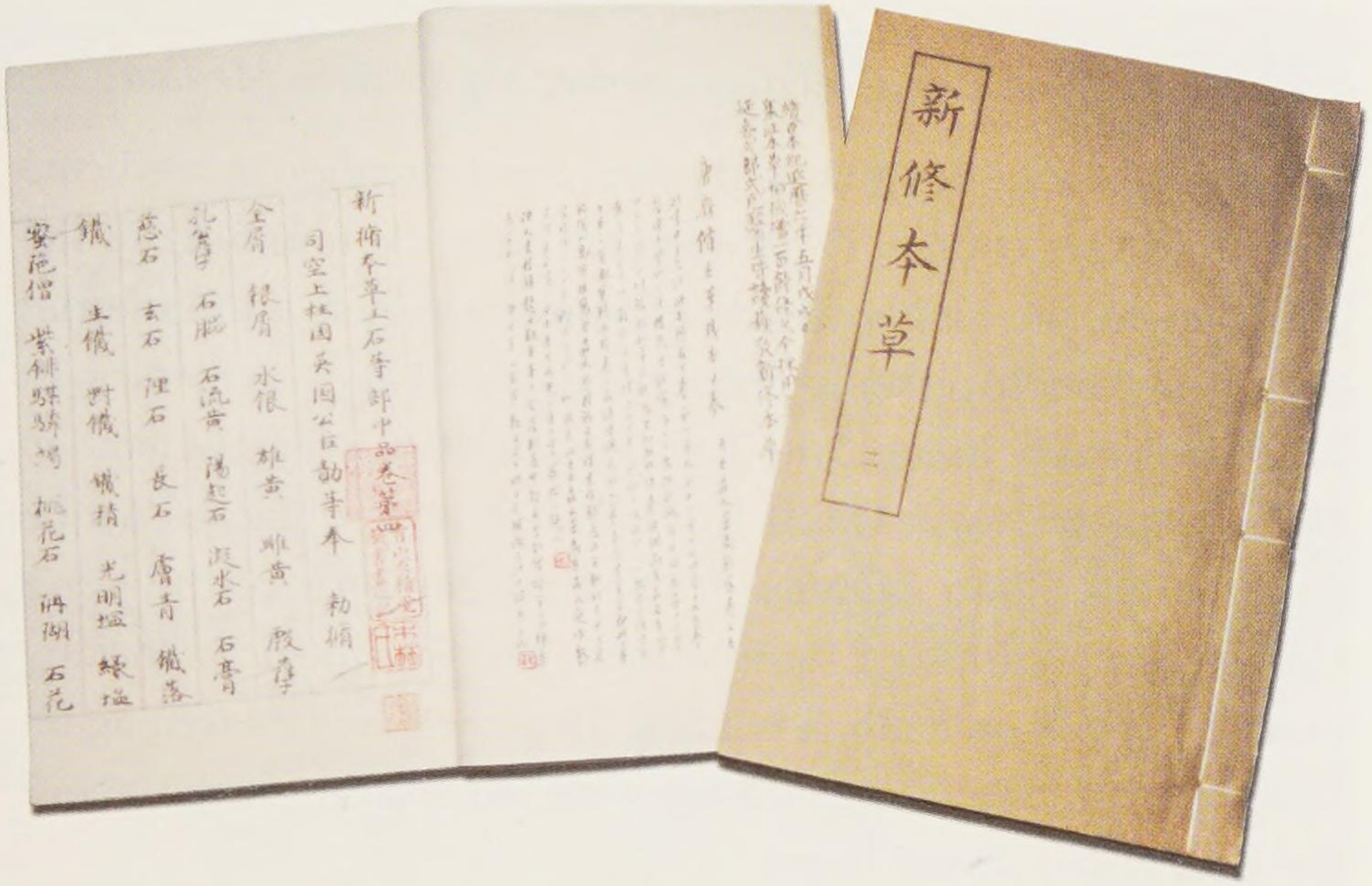


A portrait of Tao Hongjing.

Xin Xiu Ben Cao (*Newly-Compiled Canon of Materia Medica*)

In *Ben Cao Jing Ji Zhu* (*Explanation of Canon of Materia Medica*), Tao Hongjing mentioned that separation of China hindered the studies of pharmacy while unification of China promoted the development of pharmacy. In 657 in the Tang Dynasty, Su Jing reported to the Emperor to recompile materia medica to solve the problems of confusion in names and incomplete description of herbs. The Emperor ordered over twenty scholars, including Su Jing to recompile materia medica. In 659, the government publicized *Xin Xiu Ben Cao* (*Newly-Compiled Canon of Materia Medica*). It was the first officially compiled pharmacopeia in the world, 883 years earlier than *Newlonbourge Pharmacopeia* (1542) in Europe.

Compared with *Ben Cao Jing Ji Zhu* (*Explanation of Canon of Materia Medica*), the number of herbs in *Xin Xiu Ben Cao* (*Newly-*



Photomechanical painting of *Xin Xiu Ben Cao* (*Newly-Compiled Canon of Materia Medica*).

Compiled Canon of Materia Medica) was further enlarged and 114 new herbs were added to the list of herbs. Unfortunately the colored drawn pictures about these herbs were lost in history. In *Xin Xiu Ben Cao* (*Newly-Compiled Canon of Materia Medica*), some of the foreign materia medica were recorded. It shows that communication between China and other countries in the field of medicine was intensified in the Tang Dynasty.

Examples about Hers from Other Countries

Sanskrit names	Latin names	Chinese names
eranda	Ricinus communis	*bi ma*
hingu	Ferula asafetida	*a wei*
aguru	Aquilaria agallocha	*chen xiang*
marica	Piper nigrum	*hu jiao*
haridra	Curcuma longa	*jiang huang*
dadima	Punica granatum	*shi liu*
turuska	Liquidambar orientalis	*su he xiang*
kramuka	Areca catechu	*bin lang*
sirisa	Albizzia lebbeck	*he huan*
haritaki	Terminalia chebula	*ke li le*

Zheng Lei Ben Cao (*Detailed Studies on Materia Medica*)

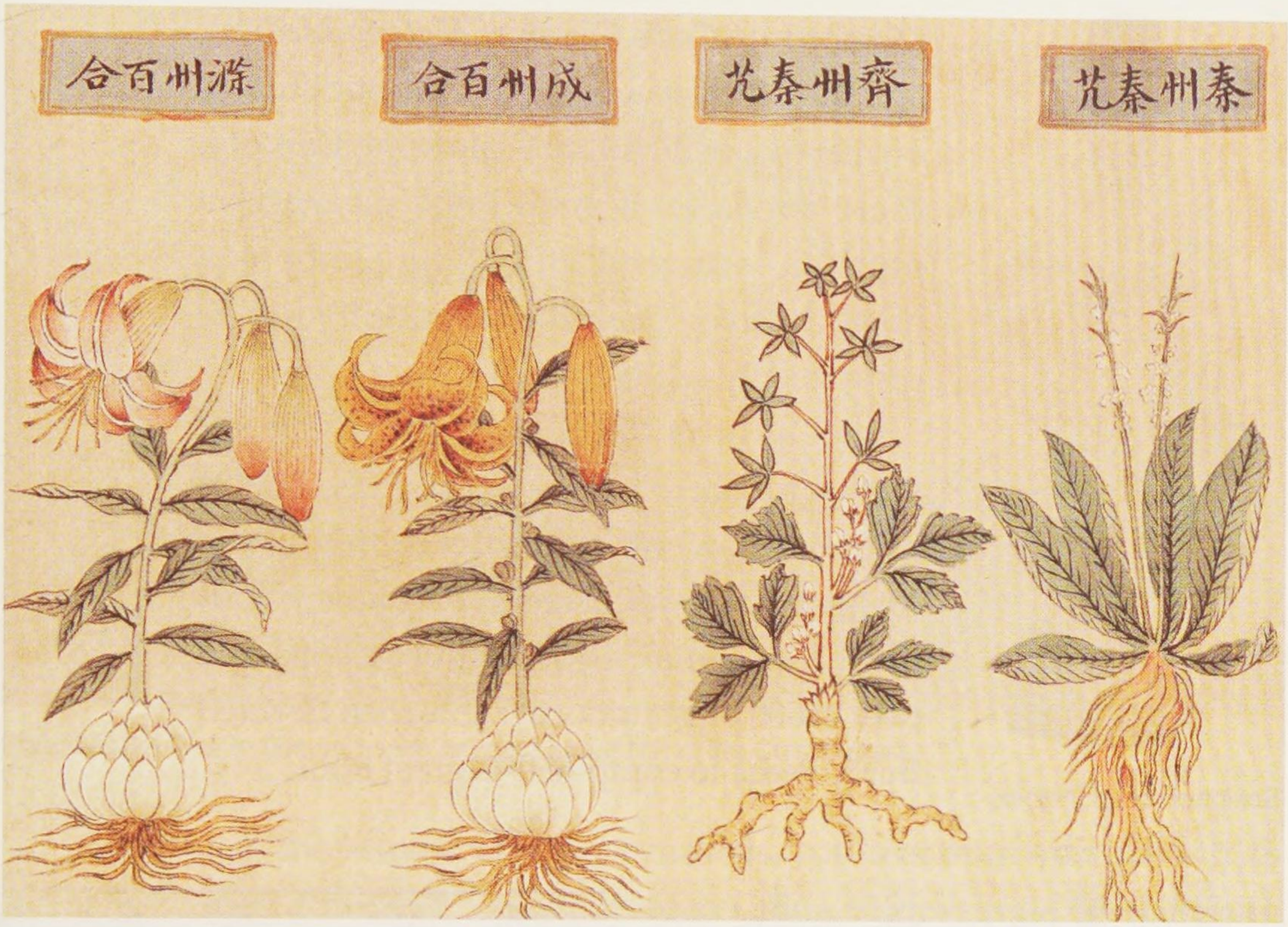
Emperors in the Song Dynasty paid great attention to medicine and healthcare course. Thirteen years after the founding of the government, the Emperor ordered some ministers and imperial doctors to work together to revise books about materia medica. In 973, *Kai Bao Xin Xiang Ding Ben Cao* (*Detailed Revised Canon of Materia Medica Compiled in the Kaibao Period*) was publicized by the government. Zhao Kuangyin, the first emperor of the Song Dynasty wrote a forward for the canon. This was the first officially published book on materia medica. This book was revised again one year after publication and recorded 983 kinds of herbs, about 139 were newly added herbs.

In 1057, the imperial court set up a bureau responsible for proofreading and revision of medical books. The book entitled *Jia You Bu Zhu Shen Nong Ben Cao* (*Supplement to Shen Nong's Canon on Materia Medica Compiled in Jia You Period*), compiled by doctors and some ministers, contained 1083 kinds of herbs. In 1061, the book entitled *Ben Cao Tu Jing* (*Illustrated Canon On Materia Medica*) compiled by Su Jing was accomplished. This book contained 780 herbs and 933 illustrations about 634 herbs. It was the first book of the kind published by carved characters. Later on Chen Cheng combined these two books into one and named it *Chong Guang Bu Zhu Shen Nong Ben Cao Bing Tu Jing* (*Supplement to Illustrated Canon On Materia Medica*) in 1092.

During the Song Dynasty, folk doctors also compiled some books about materia medica. *Zheng Lei Ben Cao* (*Detailed Studies on Materia Medica*) compiled by Tang Shenwei who practiced medicine in Sichuan Province. This book



Edible plants used as medicinal herbs recorded in various books of materia medica.



Colored illustrations of herbs in the book entitled *Ben Cao Pin Hui Jing Yao* (*Selected Collection of Materia Medica*) in the Ming Dynasty.

was accomplished in 1082 and contained 1558 kinds of herbs. Each herb was analysis with the following items, drawing, discussion, indication, action, processing method and related prescription. Later on this book was officially revised several times and publicized as the pharmacopeia of the state. This book summarized the studies made by doctors in the previous dynasties and exerted great influence on the later generations. *Ben Cao Gang Mu* (*Compendium of Chinese Materia Medica*) compiled by Li Shizhen in the Ming Dynasty was also based on *Zheng Lei Ben Cao* (*Detailed Studies on Materia Medica*).

***Ben Cao Gang Mu* (*Compendium of Chinese Materia Medica*)**

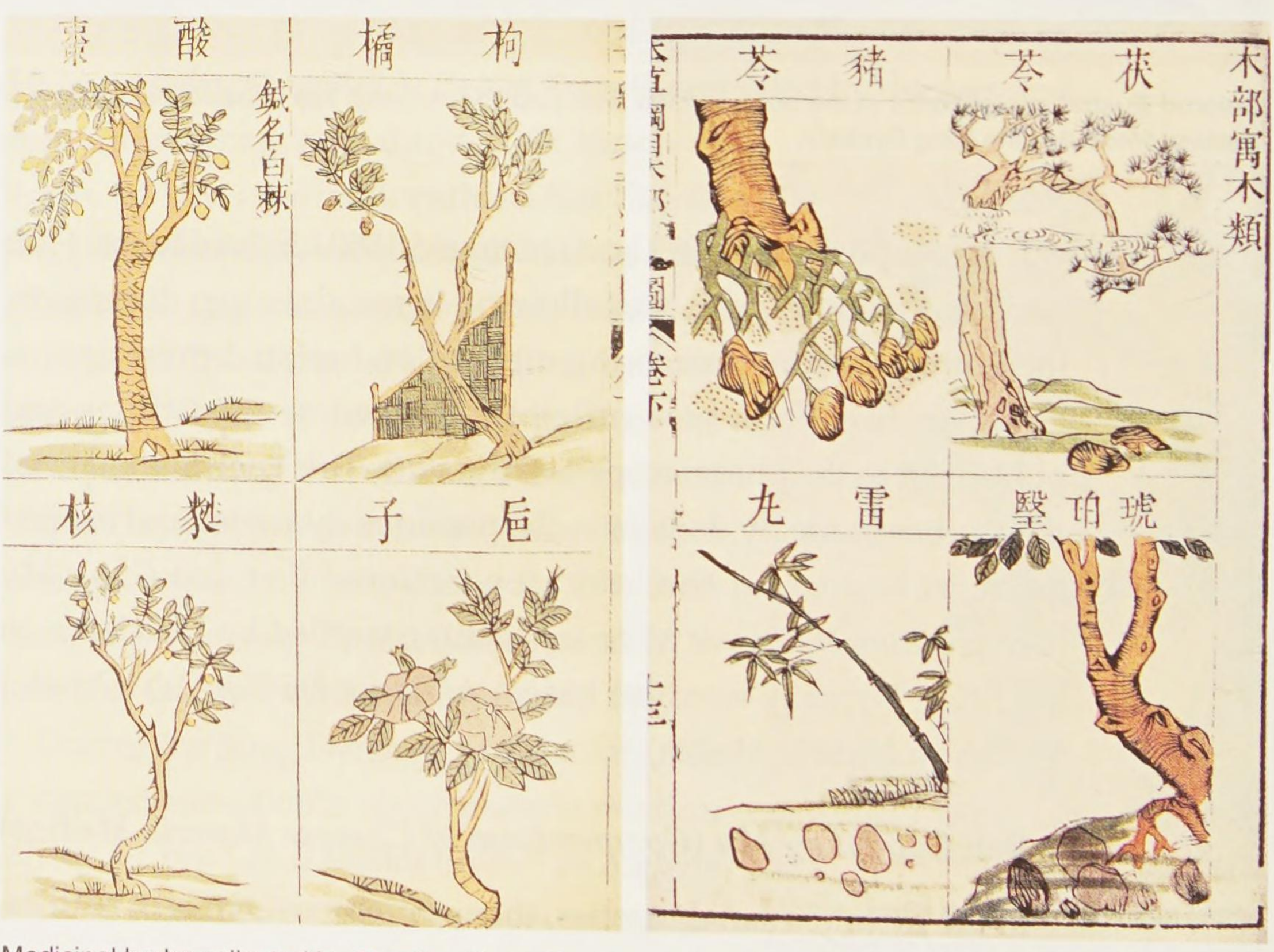
In the Jin and Yuan dynasties, there were two schools of studies, one was to supplement and revise *Shen Nong Ben Cao Jing*



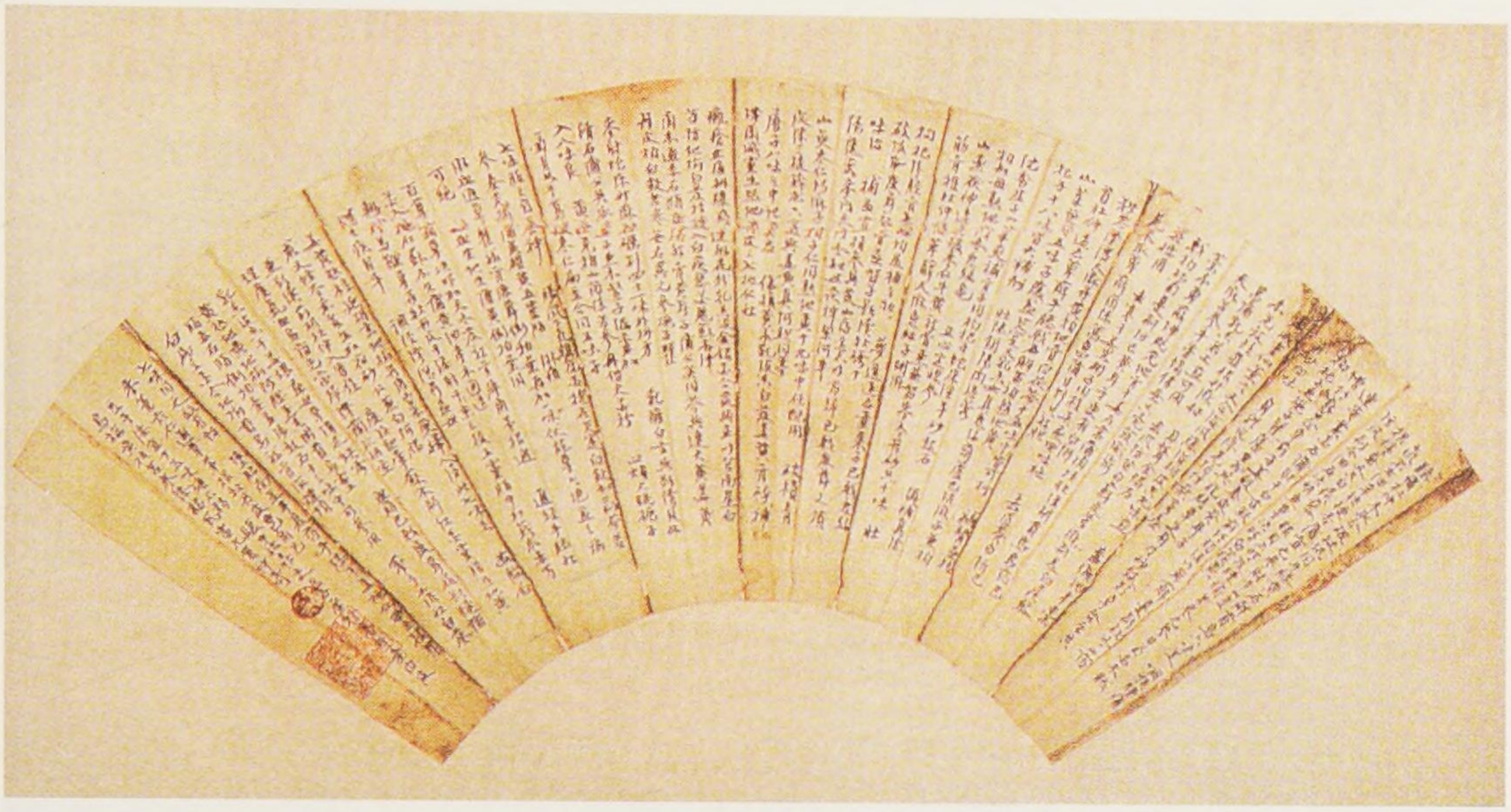
Sculpture of Li Shizhen.

(*Agriculture God's Canon of Materia Medica*), and the other was to make theoretic studies on materia medica. In the late Ming Dynasty, there appeared a great book on materia medica entitled *Ben Cao Gang Mu* (*Compendium of Chinese Materia Medica*)(1578) compiled by Li Shizhen.

Ben Cao Gang Mu (*Compendium of Chinese Materia Medica*) contained 1892 kinds of herbs (374 were new) which were classified into 60 categories and discussed in 16 chapters. This great also contained 1109 illustrations and over 10000 prescriptions. Li Shizhen devoted thirty years to compile this great book.



Medicinal herbs collected in *Ben Cao Gang Mu* (*Great Compendium of Materia Medica*).



Songs about how to use herbs written on a paper fan in the Qing Dynasty.

In the Ming and Qing dynasties, cultures from other countries were gradually introduced into China. For example, peanut from American continent appeared in the book entitled *Shi Wu Ben Cao* (*Edible Herbs*) compiled in the middle period of the Ming Dynasty. In *Ben Cao Gang Mu Shi Yi* (*Supplement to Compendium of Materia Medica*) compiled in the Qing Dynasty by Zhao Xueming (about 1719–1805) described some drugs of Western medicine, such as quinine.

Pharmacological Studies

Medical examination in the Song Dynasty covered the aspects of cause of diseases; the production place, action, property, taste, compatibility and processing of herbs according to canons of medicine and materia medica; as well as the composition and dosage of prescriptions. The combination of medical theory and knowledge of materia medica promoted the development of both under the influence of Neo-Confucianism.

Ben Cao Yan Yi (*Elucidation of Materia Medica*), compiled by Kou



Record in ancient books about medical materials from other countries.



Record in ancient medical books about musk.

Zongshi, introduced the ideas about property and taste into the study of herbs to explain their curative effects. After the Jin and Yuan dynasties, doctors made further studies on the property and taste of herbs and summarized the properties into four categories, namely ascending, descending, sinking and floating. Furthermore, doctors discovered the fact that certain herbs may work on certain Channels. Then the theory of Channel attribution of herbs was developed.

Such changes, to some extent, indicated that the studies of herbs developed gradually from empirical level to the theoretical level.

Drug Administration and Market

In 1076, the Northern Song Dynasty organized an institution called *Taiyi Ju Shuyao Suo* (Imperial pharmaceutical institute) in the Capital, the first official administration for manufacturing and



Painting of herbal medicine shop in the Qing Dynasty.

selling drug. In 1103, the six more institutes were set up, five were still called *Shuyao Suo* (pharmaceutical institute) and two were called *Xiuhe Yaosuo* (modification and processing institute of drugs). Later on they were changed into *Huimin Ju* (drugstore for people's benefit) and *Heji Ju* (pharmaceutical institute).

The Pharmaceutical Institute in the Northern Song Dynasty was run by the State and served the whole society. The Institute was responsible for collecting, examining, manufacturing and selling medicines. The Institute collected prescriptions first and, after experiment, manufactured into patent drugs. Its prescriptions, 788 in all, were collected into the book entitled *He Ji Ju Fang* (*Prescriptions Collected by the Pharmaceutical Institute*). Some of the prescriptions are still used now, such as *niu huang qing xin wan* (bezoar



The board of a hospital in ancient times.



A clinic and herbal medicine shop in the painting *Qing Ming Shang He Tu* (*Along the River During the Qingming Festival*) painted in the Song Dynasty.

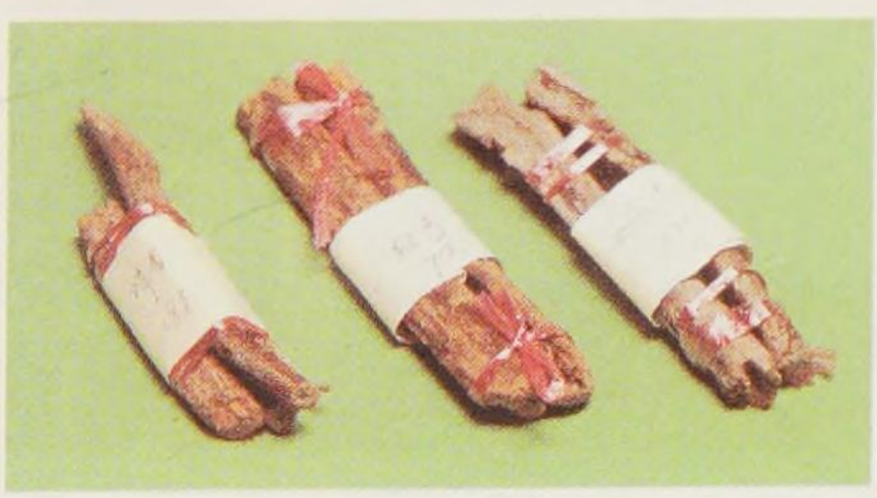


Tong Ren Tang, a herbal medicine shop with a history over one hundred years.

pill for clearing away heat from the heart) and *huo xiang zheng qis san* (Agastache Rugosa powder for invigorating healthy-*qi*).

In the Song Dynasty, private pharmaceutical business was also prosperous and there appeared various drug markets. Some of the drugs were even exported to other countries. The cultivation and production of authentic herbs also started in this period.





Herbs discovered in a boat foundered in the Song Dynasty.

In the Ming and Qing dynasties, pharmaceutical business was even more prosperous and there appeared some well-known drug market in Hebei Province and Jiangxi Province. During this period in history, there also appeared some important drugstores, such as Tong Ren Tang in Beijing and Hu Qingyu Tang in Hangzhou. The drugs sold in these drugstores were excellent in quality and curative effect. Even now they are still very popular in China.

Processing of Herbs

Before the Eastern Han Dynasty, herbs were taken directly by the patients to cure disease. In the late Eastern Han Dynasty, doctors began to decoct the ingredients of a prescription for patients to cure. The form of decoction came into existence.

Before being used clinically, herbs must be processed with certain techniques. The commonly used techniques include baking, roasting, washing, soaking, purifying, steaming and stewing. Sometimes wine, honey, vinegar and salt are also used to process herbs.

The important thing is that all the methods used to process herbs play an important role in deciding the



Picture painted in the Qing Dynasty about how to fill prescriptions.



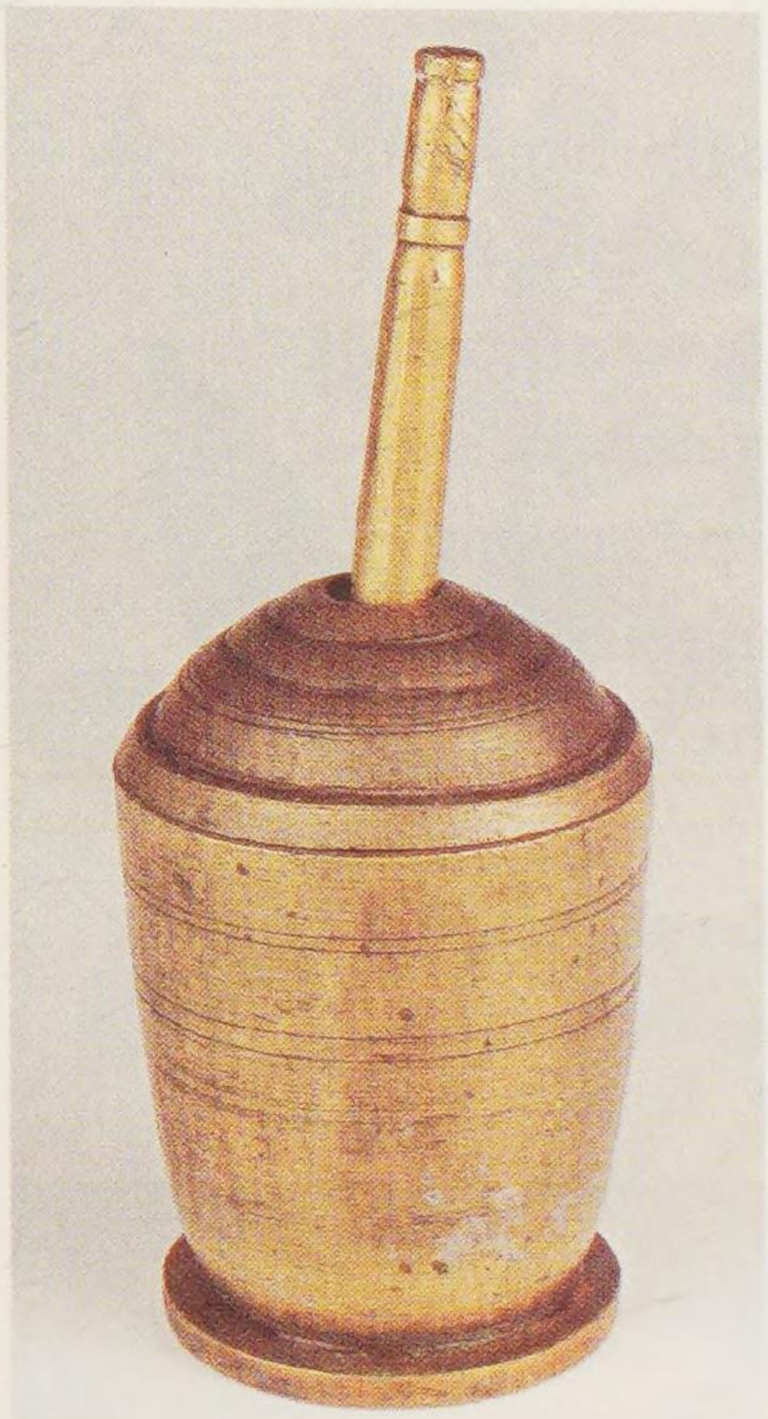
Picture painted in the Qing Dynasty about how to process herbs.



A medicine jar used in Hu Qingyu Tang, a famous herbal medicine shop in Hangzhou City.



Picture painted in the Qing Dynasty about how to ground herbs.



Bronze mortar used to pound herbs.

curative effect of the herbs. For example, *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) mentioned a prescription used to treat insomnia due to stagnation of Channels and disorder of *yin* and *yang*. The ingredients in this prescription should be decocted in water that has run for one thousand miles with reed (hollow) fire for the purpose of dredging Channels. The purposes of processing herbs are to make it easy to store and use, to remove toxic elements, to strengthen curative effect, to change the nature of herbs and to remove impurity.

The current extant monograph on herb processing is *Lei Gong Pao Zhi Lun* (*Lei Gong's Discussion on Processing Herbs*). *Ben Cao Jing Ji Zhu* (*Explanation of Canon of Materia Medica*) compiled by Tao Hongjing (about 452–536) also discussed this aspect in the introduction part. Actually almost all books on materia medica would devote part of their contents to herb



Porcelain instrument used to ground herbs.

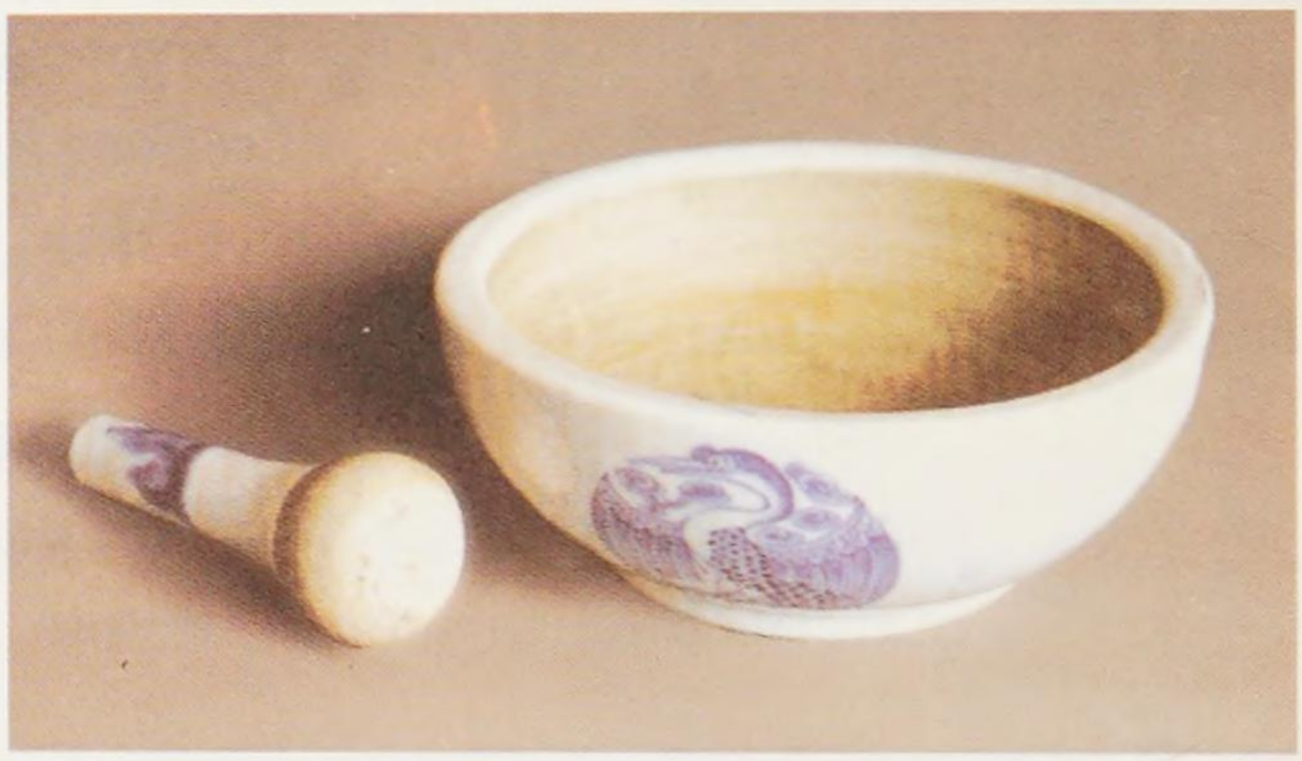


Pot used in the Imperial Court to decoct herbs.

processing.

The methods for processing herbs can be used flexibly. Since 1949, official criteria were gradually decided by provinces for standard and scientific processing of herbs. These criteria are recognized by in the Chinese Pharmacopeia.

Historically, the development of studies on materia medica was based on empirical knowledge accumulated in medical practice. In such studies, analogy played an important role in analyzing the nature and curative effect of herbs. Through trials and errors, the studies of materia medica gradually accomplished the establishment of the theory and methodology of Chinese pharmacy.



Porcelain bowl used in the Qing Dynasty to pound herbs.

Story about Ginseng

Ginseng is a special herb in TCM. It appears in the shape of human beings and thus was regarded as people in ancient China as a magic herb. It was thought to be the crystallization of earth essence and significantly effective for treating serious diseases. Besides, ginseng was also regarded as an auspicious sign that could bring people safety and happiness.

The concepts of tonifying deficiency and purging excess

Originally deficiency meant emptiness and tonifying meant to



Picture of ginseng.

fill in the emptiness. Because only when Essence in the body was lost could pathogenic factors invade the body to fill in the empty region due to lack of Essence. The causes of diseases in the book entitled *Zhu Bing Yuan Hou Lun* (*Etiological Studies on Various Diseases*) compiled in the Sui Dynasty were just explained according to such a theory. Since ginseng was thought to be the crystallization of the essence from both the heaven and the earth, it was naturally used to deal with deficiency problems. Such an application can be found in *Shang Han Lun* (*Treatise on Cold Diseases*) written in the Eastern Han Dynasty by Zhang Zhongjing, the sage of medicine in China. Modern studies have revealed the pharmacological functions and actions of saponin contained in ginseng.

Excess and purgation are another examples reflect the application of the theory of *yin-yang* in TCM. Early in the book entitled *Lü Shi Chun Qiu* (*Lü's Analects of History*) compiled in the Qin Dynasty, it was concluded that the cause of all diseases was stagnation due to attack of pathogenic factors. The authors of this book, by adopting concepts of medicine, tried to explain social problems. However such a way of social analysis also greatly influenced the thinking of doctors.

Under the influence of monism about the universe based on *tai ji* (supreme ultimate which was the absolute in ancient Chinese cosmology, presented as the primary source of all created things), *yuan qi* (primordial-*qi*), *yin* and *yang*, doctors in dynasties developed various etiologies and therapeutics based on monism. That was why there appeared such phenomena as "four great schools of



Ginseng baby.

medicine in the Jin and Yuan dynasties." Among these schools, Zhang Congzheng (about 1156–1228) put forward the suggestion that all diseases were caused by invasion of pathogenic factors into the body and the only way to deal with diseases was to attack pathogenic factors. When such an idea was introduced to Japan, it was further developed and evolved into the theories that "all diseases are caused by stagnation" suggested by Gotoukonzan (1659–1733) and "all diseases are caused one kind of toxin" suggested by Yoshimasutoudou (1702–1773).

Popular use of ginseng

Ginseng is a precious herb, very expensive. To ordinary people, it is impossible to take ginseng to treat diseases. Very often *dang shen* (Radix Codonopsis) and *taizi shen* (Radix Pseudostellariae) are used as substitutes for ginseng.

Now with the development of economy and improvement of living standards, the products of ginseng become more and more popular in China. Besides, artificial cultivation of ginseng has greatly promoted the production of this valuable herb. Now ginseng is no longer as precious as it used to be.

To take ginseng to treat disease or to cultivate health is in fact a cultural phenomenon in China. If one is asked about which herb is the most precious and effective one, the answer is undoubtedly

ginseng. If you make such a survey in Korea, Singapore and Indonesia, the result will be the same.

The story about ginseng can explain the concept of "deficiency" in Chinese culture. To the Westerners, exhaustion and weakness are not disease. However to Chinese people, they are all concepts of diseases. The so-called Deficiency Syndrome in TCM includes quite a number of pathological conditions, such as *qi* deficiency, blood deficiency, spleen deficiency, kidney deficiency, *yin* deficiency and *yang* deficiency etc. Patients may not be clear about these concepts, but they are quite satisfied with doctors' ambiguous diagnosis because they understand what deficiency means. Anxiety about "deficiency" can well explain why Chinese people like to buy various tonic foods or healthcare products "to treat deficiency syndromes" and "to strengthen their body." Such an attitude quite accords with the popular saying of "buying health with money." The idea of "buying health with money" is also shared by Westerners. However the way that the Westerners to do it is to travel or do physical exercise with their money.

Now with the increasing popularization of Western culture in China, Chinese people become more and more interested in travel and physical exercise. The tonic medicines, the content of vitamin and trace elements in which are modified according to the criteria of the Westerners, covers quite a great share in China.



Pilose antler, a medicinal material as precious as ginseng.

Cultural communication is bi-directional. It was said that the Westerners did not take ginseng before and the ginseng growing in the northern Americas was mainly exported to China and other Asian countries. Now the Westerners also take ginseng



Cabinet of herbal medicine used in the Imperial Hospital in the Ming Dynasty.

and import tonic medicines like royal jelly from China. Though the Westerners still do not regard weakness and exhaustion as diseases, they begin to take it as sub-health or the third state of health. With the development of immunity, many diseases are thought to be caused by low immunity. Then tonic medicines like ginseng can be used to strengthen immunity. Maybe there will appear such a phenomenon as ginseng culture in China. Such a ginseng culture may exert certain influence on the thinking of the Westerns about health.

One point should be borne in mind. Though ginseng is a symbol of tonic medicine, it can never enable people to live as immortals. Besides, ginseng also bears some side toxic effects. In China there is an old saying, "Ginseng kills people without being accused of while rhubarb saves life without being recognized." This says warns people that ginseng can also lead to death. On the whole TCM deals with diseases by differentiating syndromes as well as *yin* and *yang*. If syndromes are wrongly differentiated, disasters will be caused even if ginseng is used.



Stories about Famous Doctors in History

Bian Que



A portrait of Bian Que.

Before the Qin Dynasty, only one doctor was recorded in history. This doctor was known as Bian Que. In the great history book entitled *Shi Ji* (*Analects of History*) written in the Han Dynasty by Sima Qian (about 145 BC–?), there was a biography of Bian Que. It said that Bian Que was also called Qin Yueren. When he was young, he was taught by sages to see through a wall and diagnose diseases by looking into the body of the patient. Later on he traveled to many places to practice medicine. When he was staying in Han Dan, a city in Hebei Province, he worked as a gynecologist because women were respected there; in Luoyang, a city in Henan Province, he treated deafness and blurred vision because old people were respected there; in Xianyang, he worked as a pediatrician because children were well cared there. Li Xi, the imperial doctor in the Imperial Court of the Qin Dynasty, was jealous of him and assassinated him.

The biography of Bian Que records three cases treated by him. Once Zhao Jianzi, the prime minister of the Jin Kingdom, suddenly became unconscious. Bian Que predicted that he would come round after three days after diagnosis. It eventually turned out true. Once Bian Que traveled into Guo Kingdom and witnessed the funeral of the prince. He said that he could revive the prince with acupuncture, moxibustion and decoction. People scorned him on hearing his suggestion. However after being treated by him, the prince was really revived. The third case was his diagnosis of Duke Huan in the Qi Kingdom. Simply by observation Bian Que discovered that Duke Huan was serious ill. He offered to treat the Duke, but the

Duke refused. When the Duke realized that he was really ill, it was too late to take measures to cure him.

Since these three cases ranging from the Spring and Autumn Period to the Warring States Period, about several hundred years, historians were confused. How could Bian Que live for several hundred years? The reasonable explanation is that Bian Que and Qing Yueren were two people, not one.

The diagnosis made by Bian Que about the three cases mentioned above was all made simply by observation. Observation, or inspection, was always emphasized and used in diagnosing diseases. In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), it says that "to make diagnosis through observation is magic" and that the diagnosis made by taking pulse "is just a skill."

Zhang Zhongjing and Hua Tuo

The Han Dynasty lasted for four hundred years. During such a long period, only three doctors were recorded in the historical book entitled *Shi Ji* (*Analects of History*). One was Chun Yuyi (about 205 BC–?). The records about twenty-five cases treated by Chun Yuyi were the earliest extant literature about medical cases. The other two doctors were Zhang Zhongjing and Hua Tuo who lived in the late Eastern Han Dynasty and were regarded as the representative figures of internal medicine and surgery. In fact there were many things in common between them. In medical field, Zhang Zhongjing was worshiped as the God of Medicine while Hua Tuo was regarded as one who departed from the right way of medicine. However among the common people, the reputation of Hua Tuo was much more greater than that of Zhang Zhongjing.

Zhang Zhongjing was born in Henan Province in about the second or the third century in China. In the literature before the Tang Dynasty, we can only find the name of Zhang Zhongjing. In *Shang Han Lun* (*Treatise on Cold Diseases*) proofread by Lin Yi in the

Song Dynasty, Zhang Zhongjing was said to be the mayor of Changsha City in Hunan Province. The records about him made later on said that before he became the mayor he was a famous doctor in the Capital. It is difficult to judge whether these records about Zhang Zhongjing made by the later generations were correct or incorrect.



A portrait of Zhang Zhongjing.

In the preface to *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*), Zhang Zhongjing said that his family used to be a large one. However in AD 196, about two third of his family members died of cold disease. That was why Zhang Zhongjing devoted his life to the study of medicine in order to treat diseases for people. After careful study of classics like *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) and *Nan Jing* (*Canon On Eighty-One Difficult Issues*), he wrote a famous book entitled *Shang Han Za Bing Lun* (*Treatise on Cold Diseases and Miscellaneous Diseases*). This book was later on worshiped as the first canon with full discussion on the theory, methods, prescriptions and materia medica.

The later generations believed that the major contribution made by Zhang Zhongjing was the establishment of the theory to differentiate syndromes according to the six Channels. Such a theory guided the development of TCM for over one thousand years. Based on the discussion made in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), Zhang Zhongjing divided the symptoms of diseases due to exogenous factors into six types, namely *taiyang* disease, *yangming* disease, *shaoyang* disease, *taiyin* disease, *shaoyin* disease and *jueyin* disease. The six Channels included the six Channels of the hand and the six Channels of the foot. The idea of differentiating syndromes according to the six Channels was believed to analyze

the occurrence, progress and transmission of diseases with the viscera and Channels.

Hua Tuo lived in the second to the third century in Anhui Province. According to the description in the book entitled *San Guo Yan Yi* (*Stories about the Three Kingdoms*), Hua Tuo was familiar with the practice of life cultivation and medicine. He looked still quite strong when he was nearly on hundred years old. When he treated patients, he just used several herbs. When he used acupuncture therapy to treat patients, he just selected one or two Acupoints. If the disease was located inside of the body and could not be treated by needles and herbs, he used a sort of anesthetic medicine known as *ma fei san* to make the patient unconscious and then did operation on the patient.

The prescription of *ma fei san* was already lost. According to the records in *Hou Han Shu* (*Book About the Late Han Dynasty*), Hua Tuo used *ma fei san* to do abdominal operation. Such an operation is still not easy to do even today. But Hua Tuo already did it one thousand years ago. Such an operation not only needed necessary anesthetic medicine, but also knowledge of anatomy, effective medicine for stopping bleeding and sterilization. Maybe the operation performed by Hua Tuo was exaggerated.

Hua Tuo was worshiped as the God of Surgery. In the book entitled *San Guo Yan Yi* (*Stories about the Three Kingdoms*), there were vivid descriptions about how Hua Tuo treated the wound of Guan Yu (?–220 AD), a great general in the period of Three Kingdoms, and migraine of Cao Cao (155–220), the founder of the Wei Kingdom. Hua Tuo mainly treated



A portrait of Hua Tuo.



Hua Tuo was operating on Guan Yu, a famous general in the Three Kingdoms Period.

diseases with medicines and acupuncture. In dealing with diseases due to attack of exogenous pathogenic factors, the theory followed by Hua Tuo was different from the theory of differentiating syndromes according to the six Channels established by Zhang Zhongjing.

Wang Shuhe and Huang Fumi

Wang Shuhe and Huang Fumi were the two most famous doctors in the Wei and Jin dynasties. The former compiled the book entitled *Mai Jing* (*Canon of Pulses*) and the latter compiled the book entitled *Zhen Jiu Jia Yi Jing* (*A-B Classics on Acupuncture and Moxibustion*). Both books were important classics and are still very popular now.

It was said that Wang Shuhe was born in Gaoping in the Western Jin Dynasty (either Gaoping in the Shanxi Province or Gaoping in the Shandong Province). He used to be the minister in charge of medicine. His contributions to medicine were to have compiled

Mai Jing (*Canon of Pulses*) based on the canons and books from the times of Qi Bo to the times of Hua Tuo and to have thoroughly studied the discussions made by Zhang Zhongjing and compiled them into the book entitled *Shang Han Lun* (*Treatise on Cold Diseases*).



A portrait of Wang Shuhe.

Huang Fumi was born in Ningxia Autonomous Region. He was physically weak all his life. That was why he later on devoted himself to the study of medicine. When he was about 34 years old, he began to suffer from paralysis. When he was 42 or 46 years old, he was attacked by wind and became deaf for several months. Then he started to take *wu shi san* (powder composed of five kinds of minerals). This therapy, instead of curing his disease, led to other problems like fever in the chest and abdomen, dysphoria, oppression and cough. However he never felt dubious of *wu shi san*. Such a tragedy was commonly seen among scholar-officials in the Wei and Jin dynasties.



A portrait of Huang Fumi.

Actually there were no historical records about Huang Fumi's clinical practice to treat patients. What brought him great reputation in medicine is that he compiled a large book entitled *Zhen Jiu Jia Yi Jing* (*A-B Classics on Acupuncture and Moxibustion*) by editing the content in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) about acupuncture and moxibustion.

Sun Simiao

Sun Simiao (581–682) was the greatest doctor in the Tang Dynasty. When he was young, Sun Simiao was very intelligent but frequently suffered from diseases. He was well educated and red books of various schools, including medicine. Two Emperors of the Tang Dynasty invited him to work in the Imperial Court or grant him titles, but he refused to accept. All through his life, he lived in the mountains, practiced and studied medicine. He lived for over one hundred years and was worshiped as King of Medicine.

Sun Simiao wrote two books, *Qian Jin Yao Fang* (*Golden Prescriptions*) and *Qian Jin Yi Fang* (*Supplement to Golden Prescriptions*), thirty volumes each. These two books contained 6500 prescriptions and covered the aspects of life cultivation, acupuncture, moxibustion, medicines and other related fields. So *Qian Jin Yao Fang* (*Golden Prescriptions*) was both a comprehensive book of medicine and also an encyclopedia of medicine.

Qian Jin Yao Fang (*Golden Prescriptions*) was different from other medical books in content arrangement. For instance, he put the part after prevention and treatment of women diseases during pregnancy and nursing of the newborn at the beginning of the first volume. Such an arrangement may indicate that Sun Simiao respected women or advocated the concept of

Wu shi san

Wu shi san (powder composed of five kinds of minerals) was formulated in the Han Dynasty. Five minerals were said to be cinnabar, realgar, white vitriol, azurite ore and loadstone, or stalactite, brimstone, crystobalite, amethyst and red halloysite. It can induce fever all over the body and short-term hallucination, which in fact is chronic intoxication. A man named He Yan (?–249) who was addicted to eroticism happened to take the drug and felt refreshed and physically strong afterwards. *Wu shi san* was then widely spread. However, many longtime addicts lost their lives to toxicosis.



A portrait of Sun Simiao.



protecting and caring life from birth.

Besides, Sun Simiao also discussed extensively about doctors should cultivate their mind. He said a doctor should be well learnt, hard working, responsible for sympathetic with the patients; regard patients as his relatives, avoid being self-proud and never slander other doctors. He wrote a article about the morality for doctors known as *Da Yi Jing Cheng* (*Sincerity and Devotion of Great Doctors*) which was as great and important as the oath took by Hippocrates of Cos (about 460–377).

Wai Tai Mi Yao (*Secret Prescriptions Formulated by An Official*) compiled by Wang Tao (about 670–755), composed of 40 volumes, divided into 1104 chapters and containing 6000 prescriptions, was another great book of medicine in the Tang Dynasty.

The Four Great Schools in the Jin and Yuan Dynasties

It was said that the schools of Confucianism started from the Song Dynasty while the schools in medicine began to appear in the Jin and Yuan dynasties. These four schools were represented by Liu Wansu (about 1120–1200), Zhang Congzheng (about 1156–1228), Li Gao (1180–1251) and Zhu Zhenheng (1281–1358). The four schools all abode by the theories of *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) but were different in understanding and application. Their academic ideas, clinical practice and theoretical works greatly influenced the later generations.

Liu Wansu began to study *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) when he was twenty years old. Forty years later, he wrote the book entitled *Su Wen Xuan Ji Yuan Bing Shi* (*Abstruseness and Understanding of Diseases in Su Wen*). He believed that all diseases were caused by fire and heat and should be treated by herbs cold and cool in nature. That was why the school represented by him was known as "the school of cool and cold." In



Mural painting about child delivery drawn in the Yuan Dynasty.

dealing with diseases due to exogenous pathogenic factors, instead of following the principle of "relieving superficial cold first and then clearing away internal heat" suggested in *Shang Han Lun* (*Treatise on Cold Diseases*), he advocated the therapeutic principle of "treating both the internal and external" and "relieving pathogenic factors from the external and internal simultaneously." The prescription *fang feng tong sheng san* (Radix Saposhnikoviae powder) developed by him is still widely used now.

Zhang Congzheng thoroughly studied the medical canons and made great achievements. He believed that diseases were not something that intrinsically existed in the body and therefore they could be driven out of the body. That was why he advocated sweating, vomiting and purging therapeutic methods in dealing with diseases. Thus the school represented by him was called the school of attack. His representative works was *Ru Men Shi Qin* (*Piety to Parents Required by Confucianism*) compiled by his disciples. This book recorded his clinical experience in treating diseases with flexible methods. His treatment of diseases often differed from that of other doctors. For instance, he often used psychological therapeutic methods to treat mental diseases.

Li Gao was born in a rich family. His mother died of illness. That was why he took to studying medicine. He was as famous as Liu Wansu and Zhang Congzheng in medicine in the Jin and Yuan dynasties. But his theory was quite different from that of Liu and Zhang due to social and environmental factors. Among them, Liu Wansu was the eldest one who lived in a time of turmoil, though the Jin Dynasty was still flourishing. Zhang Congzheng lived in the central region of China, far away from wars in the Northwest regions governed by the Jin and Yuan dynasties. Li Gao lived in the time when the Jin dynasty was about to collapse. Li saw how people suffered from social turmoil, diseases and starvation. That was why he suggested that impairment of the spleen and stomach causes various diseases. Since the spleen and stomach matched with

the earth in the *wu xing* (five elements), the school represented by Li Gao was called school of supplementing the earth by the later generations.

Zhu Zhenheng lived in the Yuan Dynasty. He studied Confucianism from Xu Qian, a disciple of the fourth generation of Zhu Xi (1130–1200), one of the founders of the Neo-Confucianism in the Song Dynasty. When he traveled to Northern China, he got the opportunity to read books compiled by Liu Wansu and Li Gao. Later on he became a student of Luo Zhiti, a famous doctor in Hang Zhou, Zhejiang Province. He returned home one year later and was already well known for his medicine. Zhu Zhenheng's theory was that "*yang* is always in excess while *yin* is often in deficiency." So his treatment of diseases mainly concentrated on nourishing and supplementing *yin* and blood. That was why the school represented by him was called the school of nourishing *yin*. His representative works was *Ju Fang Fa Hui* (*Elucidation of the Presc iptions Developed in the Imperial Pharmaceutical Institute*).

Zhang Jingyue

Zhang Jingyue (1563–1640) lived in the Ming Dynasty. He studied medicine from the point of view of *Zhou Yi* (*Canon of Changes*).

Before Zhang Jingyue, Xue Ji (1487–1559), a doctor in the Ming Dynasty, paid much attention to the simultaneous supplementation of the spleen and kidney based on Li Gao's theory about the spleen and stomach. He often used *liu wei di huang wan* (rhubarb pill composed of six ingredients) and b*a wei di huang wan* (rhubarb pill composed of eight ingredients) to treat diseases. He especially liked to use *bu zhong yi qi tang* (decoction for supplementing middle and invigorating *qi*) and *di huang wan* (rhubarb pill) together, showing is emphasis on both the innate and acquired aspects. Zhao Xianke who lived between the 16th century and the 17th century also frequently used *liu wei di huang wan* (rhubarb pill composed of six





A portrait of Zhang Jingyue.

ingredients) and *ba wei di huang wan* (rhubarb pill composed of eight ingredients) to treat diseases. Though still worshiping Xue Ji, he only paid attention to the kidney (innate base of life) instead of the spleen and stomach (the postnatal base of life).

Theoretically Zhang Jingyue held that medicine and *Zhou Yi* (*Canon of Changes*) shared the same origin, stressing on *yuan yin* (primordial-*yin*) and *yuan yang* (primordial-*yang*), opposing to the use of medicines cold and cool in nature to attack *shen yang* (kidney-*yang*). He suggested that "*yang* in the body is never excessive" and "the human body is marked by frequent deficiency and infrequent excess." He advocated the theory of warming and supplementing *shen yang* (kidney-*yang*). It was just based on such understanding he developed the prescriptions known as *zuo gui wan* (pill for supplementing the left kidney-*yin*) and *you gui wan* (pill for supplementing the right kidney-*yang*).

Ye Tianshi

Wen Yi Lun (*Discussion on Pestilence*) written by Wu Youxing in 1642 appeared different from *Shang Han Lun* (*Treatise on Cold Diseases*) in analyzing the characteristics of epidemics and therapeutic methods. After the publication of *Wen Yi Lun* (*Discussion on Pestilence*), a number of new theories and therapeutic methods were developed, suggesting that warm diseases and epidemic diseases are not cold diseases. That was why such a different understanding of epidemic diseases was called school of warm disease by the later generations. Ye Tianshi (1667–1746) was the



Li Shizhen was collecting herbs.

representative figure of this school.

In view of the clinical manifestations of epidemic disease marked by fever, Ye Tianshi divided the course of this disease into four stages, namely *wei* (defensive phase), *qi* (*qi*-phase), *ying* (nutrient-phase) and *xue* (blood-phase), differing from syndrome differentiation according to the six Channels discussed in *Shang Han Lun* (*Treatise on Cold Diseases*). The herbs he used to treat epidemic diseases were cold and cool in nature. In dealing with the clinical manifestations of high fever and convulsion, he used *xi jiao* (Cornu Rhinocerotis Asiatici) and *ling yang jiao* (Cornu Saigae Tataricae) which were not mentioned in *Shang Han Lun* (*Treatise on Cold Diseases*). Ye Tianshi said, "Differentiation of *wei* (defensive phase), *qi* (*qi*-Phase), *ying* (nutrient-phase) and *xue* (blood-phase) is similar to that of cold disease, but the therapeutic methods are quite different."

Wu Jutong (1758–1836) who did not belong to any schools thoroughly studied medical books from *Su Wen* (*Plain Conversation*) in *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) to the theories developed by Zhang Zhongjing, Wu Youxing and Ye Tianshi. Based on synthetic analysis of the transmission and changes of warm disease and pathogenesis of visceral diseases, he divided the course of warm disease into three stages, namely *shang jiao* (Upper Energizer including the lung and the heart), *zhong jiao* (Middle Energizer including the stomach and spleen) and *xia jiao* (Lower Energizer including the liver and the kidney). The theory developed by Wu Jutong was known as syndrome differentiation based on *san jiao* (Triple Energizer).

In the Ming and Qing dynasties, a great breakthrough was made by TCM in preventing and treating infectious diseases. That was prevention of smallpox through variolization. Smallpox was spread to China in the first century. For thousands of years there were no effective methods to prevent and treat smallpox. It was recorded in literature that variolization was developed in the period of Jia

Qing (1567–1572) in the Ming Dynasty and was gradually used in the whole country. Later on this method to prevent smallpox was introduced into Russia, Britain, Japan, Korea and Turkey. In 1798 Edward Jeanne (1749–1823), a British doctor, introduced this method to Europe. Before the invention of vaccination, variolization was the only effective method to prevent smallpox.



A child affected by smallpox.

Wang Qingren

Wang Qingren (1768–1831), a famous doctor in the Qing Dynasty, made thorough studies about the medical books written and compiled by doctors in different dynasties and found that there were certain errors in these canons, classics and monographs. He wanted to correct the errors he found. So he frequent went to tombs and execution grounds to anatomize corpse to observe the location of the internal organs. After 42 years of study, he drew pictures of human internal organs and described the physiological structure of human internal organs. Based on such careful studies and his own clinical experience, he compiled a book entitled *Yi Lin Gai Cuo* (*Correction of Errors in Medical Field*) in 1830.

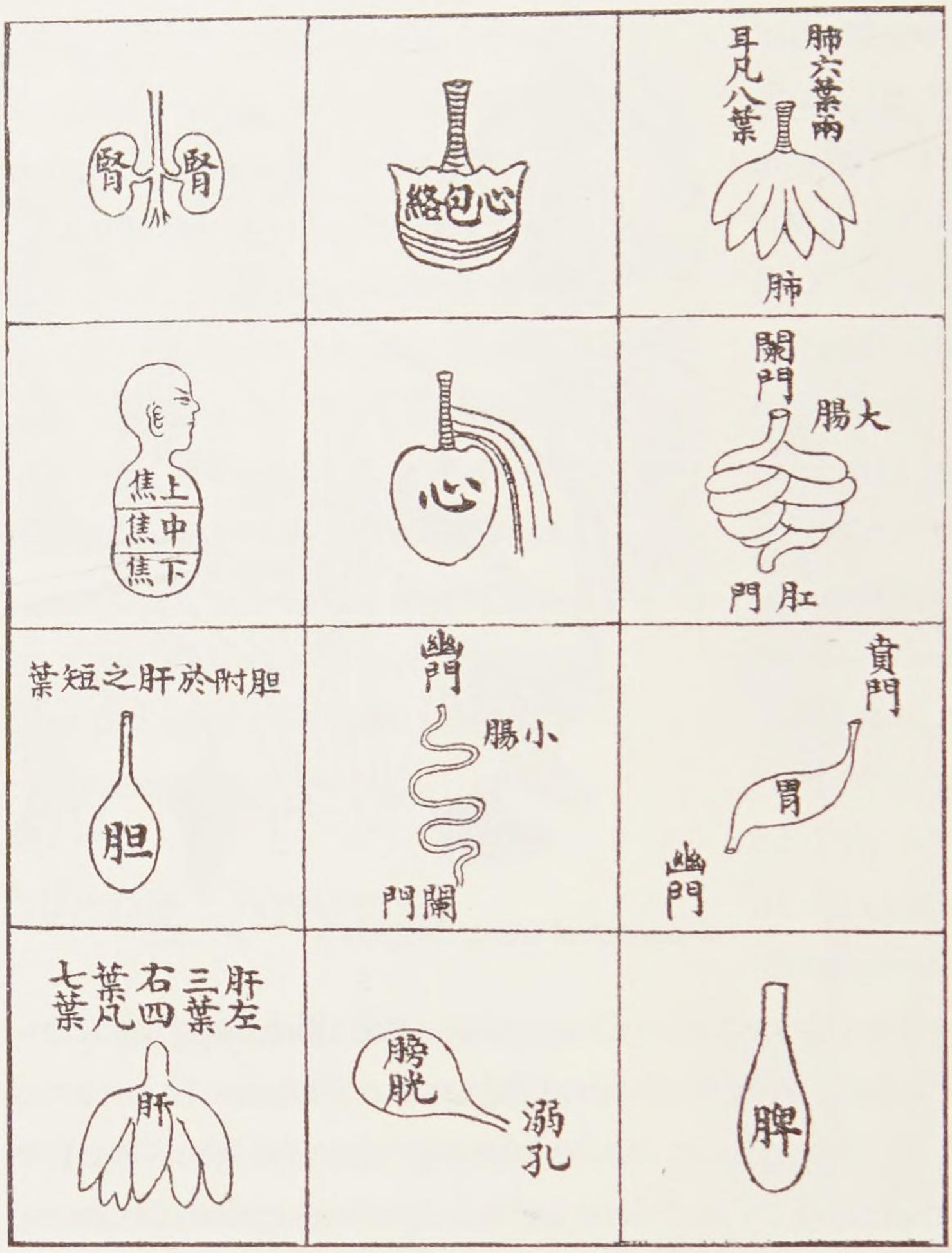
Some people believed that Wang Qingren tried to correct mistakes in TCM books because he was influenced by Western medicine. But when we read *Yi Lin Gai Cuo* (*Correction of Errors in*

Medical Field), we cannot find any hint of such influence. Other people suggested that his trials to correct errors in TCM were simply due to his industriousness in learning. Wang Qingren was a spontaneous reformer. Now it is difficult to know the real motive of his trials. A reasonable explanation is that Wang Qingren got to know the mistakes in TCM from Western medicine which was introduced into China since the middle of 19th century after the Opium War between China and Britain. In history, the examples of invention made simply due to hearing the existence of something by accident in history were quite common. For example, a Japanese doctor in 19th century was told that Hua Tuo used *ma fei san* (anesthetic powder) to do operation. Inspired by Hua Tuo's experience, he began to study anesthesia and eventually succeeded.



A portrait of Wang Qingren.

To prove metabolism of water, Wang Qingren designed an animal experiment. He chose two domestic animals, one was fed with normal forage and the other was not fed with anything. After several days, the two animals were anatomized to compare. When he found that the greater omentum of the one that was not fed appeared dry and crumpled, he believed it was the pathway of water. In a time when correct understanding of the physiological functions of renal circulation and urine production was impossible, it was naturally believed that urine permeated through the

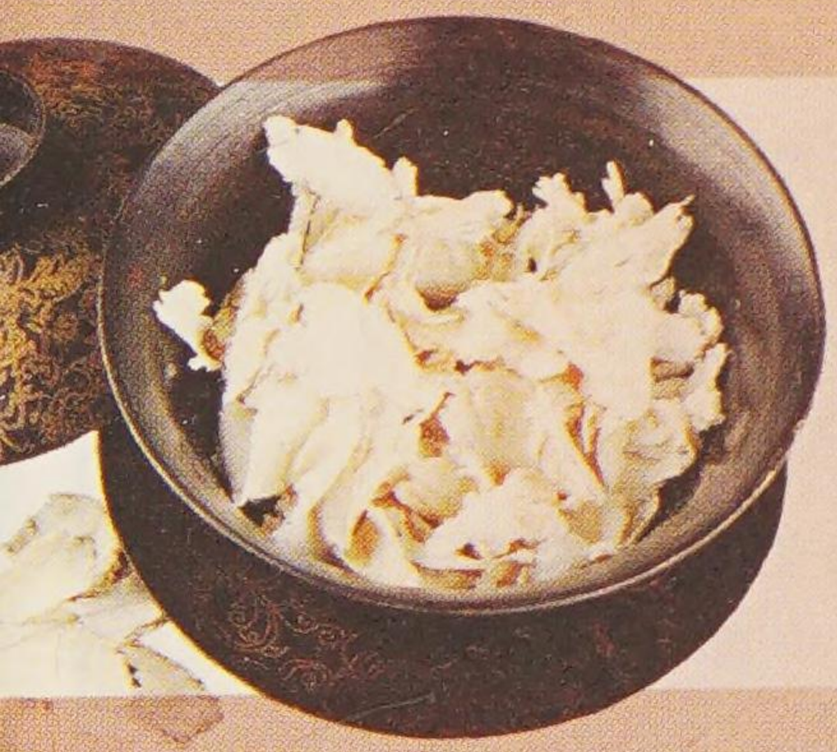


Corrections made in the book written by Wang Qingren.

stomach and intestines into the bladder. Due to historical limitations, Wang Qingren's experimental studies were quite preliminary.



TCM and Life Cultivation



The aim of medicine is to keep health and it is also the aim of life cultivation. Though science of life cultivation is closely related to medicine, it is not included in the system of medicine. For instance, *qigong* is a sort of exercise for life cultivation, but most TCM practitioners are unfamiliar with such a therapy or do not use such a therapy to treat patients. It seems that *qigong* is a separate system of therapeutics.

Chinese jujube and haw are traditionally used by women after delivery of child for nourishing and activating blood. However most TCM doctors do know the decoction composed of jujube and haw known as *er hong tang* (Double Red Decoction). The authentic way to treat women just after delivery of child is to use *sheng hua tang* (Production and Transformation Decoction), composed of *dang gui* (Radix Angelicae Sinensis), *chuan xiong* (Rhizoma Chuanxiong), *tao ren* (Semen Persicae) and *pao jiang* (Rhizoma Zingiberis Preparata), for activating blood to resolve stagnation.

Life Cultivation in the Four Seasons

To cultivate life in the four seasons is an important principle in TCM. In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), it says "sages cultivate their life by following the climatic changes in the four seasons and that is why they can avoid attack by pathogenic factors and live a long life."

The reason that TCM emphasizes the importance to cultivate life in accordance with the four seasons is that it advocates the theory of maintaining a unity between the heaven and human beings. TCM believes that the natural world is a big universe while the human body is a small universe. In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), it says that the changes of *yin* and *yang* in the four seasons are key to the growth of all things. So cultivation of health or life has to abide by the principle of invigorating *yin* in the



spring and summer while nourishing *yin* in autumn and winter.

The following are the quotations from *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) about how to cultivate life in the four seasons.

In the three months of spring, all things on the earth begin to grow. The natural world is resuscitating and all things are flourishing. People may sleep late in the night and get up early in the morning, taking a walk in the courtyard with hair running free to relax the body and enliven the mind. Such a natural resuscitating process should be activated instead of being depressed, promoted instead of being deprived and encouraged instead of being destroyed. This is what adaptation to *chun qi* (spring-*qi*) means and this is the *dao* (principle) for cultivation of health. Any violation of this rule may impair the liver and result in cold diseases in summer due to insufficient supply for growth in summer.

The three months of summer is the period of prosperity. The t*ian qi* (heaven-*qi*) and the *di qi* (earth-*qi*) have converged and all things



Illustrations about massage and *dao yin* for cultivating life compiled in the Qing Dynasty.



Massage instruments used in the Imperial Hospital in the Qing Dynasty.

are in blossom. People should sleep late in the night and get up early in the morning, avoiding any detestation with longer hot daytime and anxiety in life, trying to delight themselves and enabling *qi* to flow smoothly. Such an attitude toward life in summer is just like the outward manifestation of a cheerful state of mind. This is what adaptation to x*ia qi* (summer-*qi*) means and this is the *dao* (principle) for *yang sheng* (cultivation of health). Violation of this rule may impair the heart and result in *jie nue* (malaria) in autumn and severe disease in winter due to insufficient supply for astringency in autumn.

The three months of autumn is the season of *rong ping* (ripening). In autumn it is cool, the wind blows fast and the atmosphere appears clear. People should sleep early in the night and get up early in the morning just like *ji* (hens and roosters). They should keep their mind in peace to alleviate the soughing effect of autumn, moderating mental activity to balance q*iu qi* (autumn-*qi*) and preventing outward manifestation of sentiments to harmonize f*ei qi* (lung-*qi*). This is what adaptation to *qiu qi* (autumn-*qi*) means and this is the *dao* (principle) for *yang shou* (cultivation of health and regulation of daily life). Any violation of this rule will impair the lung and leads to *sun xie* (diarrhea with undigested food in it) in winter due to insufficient supply for storage in winter.

The three months of winter is the season for storage. The water freezes and the earth cracks. Cares must be taken not to disturb *yang*. People should sleep early in the night and get up late in the morning when the sun is shining, physically maintaining quiet just like keeping private affairs or as if having obtained what one has

desired. They should guard themselves against cold and try to keep warm, avoiding sweating so as to prevent loss of *yang qi*. This is what adaptation to *dong qi* (winter-*qi*) means and this is the *dao* (principle) for *yang cang* (cultivating health and promoting the storing functions of the body). Any violation will impair s*hen qi* (kidney-*qi*) and reduce the energy for the following season, leads to *wei jue* (dysfunction, weakness and coldness of the limbs) in spring due to insufficient supply for growth in spring.

Integration of Food and Medicines

There was a story. One day, a teacher told his student, "You can graduate immediately if you can bring a herb that is not medicinal to me." The student went away and secretly felt very fortunate. However after several days he returned with an empty hand and said sadly to his teacher, "Inevitably I cannot graduate." The teacher asked why. The student replied, "I have observed many grasses and trees. I cannot recognize some of them, but all of them are medicinal." The teacher laughed, "You have already accomplished your studies. You can leave now."

Since both foods and medicines come from natural plants, there is no definite difference between them. That is why there is the so-called dietetic therapy in TCM. Among the 365 kinds of herbs recorded in *Shen Nong Ben Cao Jing* (*Agriculture God's Canon on Materia Medica*), quite a number of them are edible, such as jujube, lotus and honey. In the book entitled *Bei Ji Qian Jin Yao Fang* (*Prescriptions for Emergency*) compiled in the Tang Dynasty by Sun Simiao, there is a special chapter devoted to dietetic therapy. In the book entitled *Ben Cao Gang Mu* (*Compendium of Materia Medica*) compiled in the Ming Dynasty by Li Shizhen, over 200 kinds of edible herbs are used for medical purpose and there are several hundred prescriptions developed for healthcare and dietetic purposes.



Ginseng is frequently used for medicated diet.

In *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*), it says that "the five kinds of crops are used for nourishment, the five kinds of fruits are used for supplementation, the five kinds of animals are used for tonification, and the five kinds of vegetables are used for enrichment." It emphasizes the importance of taking various kinds of foods and reasonable combination of property and taste of foods. According to TCM, each plant or herb must possess the properties of being cold, heat, warm or cool. Foods cold and cool in nature, such as chrysanthemum and green gram, can clear away heat and reduce fire. Foods hot and warm in nature, such as ginger, garlic and mutton, can strengthen *yang* and eliminate cold. Some foods are mild in nature, such as beans and grains. Besides, foods still bear special taste and different tastes may indicate different effects. For



Jar of medicated wine.



Traditionally it is believed that food is better than medicines in tonifying body.

example, foods of sour taste, such as dark plum and hawthorn, can stop sweating and diarrhea and astringing urine. Foods bitter in taste, such as tangerine peel and balsam pear, can clear away heat, reduce fire, dry dampness and remove toxin. Foods of sweet taste, such as brown sugar and honey, can nourish and relax the body. Foods of salty taste, such as kelp and laver, can soften hardness and disperse nodules. Foods of acrid taste, such as hot pepper and pepper, can promote movement of *qi* and blood flow.

Dietetic therapy may mean to take food as medicine or to combine food with medicine. The latter is now known as medicated food which is developed by taking the advantages of the medicinal property and dietetic taste of certain herbs, plants or crops. The variety and dosage for dietetic therapy are strictly restricted. The effects of dietetic therapy are recognized by more and more people. Now in China the restaurants running medicated foods are increasing rapidly in many cities. The traditional

medicated foods are now also influenced by modern scientific ideas. For instance, it is generally known now that olive oil can lower blood fat, vegetables are rich in vitamin and fibrin, wine can soften vessels and seafood can improve mentality.

Sports and Health

"Life is cultivated by sports." This is a popular saying in modern China. In fact this idea was appreciated by doctors in all the previous dynasties. Hua Tuo said, "Human beings must do



Paintings about *dao yin* unearthed from a tomb of the Western Han Dynasty in Ma Wang Dui, Hunan Province.

physical work. Necessary physical work promotes digestion, smoothes blood flow and prevents diseases." Sun Simiao said, "the key to health cultivation is to do some physical work regularly," and "physical work prevents the onset of various diseases."

Such an idea about work and health can be traced far to the antiquity. In a picture about *dao yin* (a sort of physical exercise practiced in ancient times) unearthed from a tomb of Western Han Dynasty in Ma Wang Dui, Hunan Province, shows that different ways of exercise could cure different diseases. In another book entitled *Yin Shu* (*Pulling Book*) unearthed from a tomb of Han Dynasty in Hubei Province, the procedure for reduction of lower jawbone was thoroughly described. This shows that the definition of *dao yin* in ancient times was to cure diseases through exercise. During the period of Three Kingdoms, Hua Tuo formulated a sort of exercise called *wu qin xi* (frolics of five animals). Ever since then, the concept of *dao yin* changed from curing diseases to cultivation of health.

Frolics of five animals is an exercise developed by imitating the movement of tiger, deer, bear, ape and crane under the influence of the theory of *wu xing* (five elements). It was said that Wu Pu, the student of Hua Tuo, practiced this frolics every day and still enjoyed good haring and vision after 90 years.

Another method for health cultivation recognized and adopted into its system by TCM is *qigong*. According to some researchers, some schools of *qigong* have been practiced for over one thousand years. Classical literature shows that *qigong* is closely related to

The Relationship between Five Animals and Five Elements and Five *Zang*-Organs

Five elements	Wood	Fire	Earth	Metal	Water
Frolics of five animals	deer	ape	bear	crane	tiger
Five *zang*-organs	liver	heart	spleen	lung	kidney

Buddhism and Daoism (or Taoism as known to some people in the West). However in the books compiled by doctors in the previous dynasties, no record of *qigong* can be found. This shows that the relationship between *qigong* and TCM was not quite close.

In the 1950s, *qigong* began to be practiced in some sanatoriums and gradually popularized all through China. Some academic institutes and organizations were set up to study the theory and practice of *qigong*.



Pictures about frolics of five animals.

Emotions and Diseases

Among the three major causes of diseases mentioned above, disorder of seven emotions is one of them. The so-called seven emotions include joy, anger, contemplation, grief, terror and fright. These are the normal emotions of human beings. But when they are suddenly and greatly changed, such as sudden great joy or terror or prolonged grief, they will cause diseases.

According to TCM, extreme changes of emotions may damage the viscera. Excessive anger damages the liver, excessive joy damages the heart, excessive contemplation damages the lung and excessive terror damages the kidney. Extreme changes of emotions may disturb *qi* movement. *qi* is a philosophic concept in traditional

Chinese culture and is thought to be the essence of the heaven and earth. It is invisible but vital for life. *Huang Di Nei Jing* (*Yellow Emperor's Canon of Medicine*) says, "All kinds of diseases are caused by disorder of *qi*. Excessive anger drives *qi* to flow upwards, excessive joy slows the movement of *qi*, excessive grief exhausts *qi*, excessive terror drives *qi* to movement downwards, excessive fright disturbs the flow of QI and excessive contemplation stagnates *qi*." Extreme changes of emotions also lead to disharmony between *yin* and *yang*. TCM believes that balance between *yin* and *yang* is prerequisite to the normal physiological activities. However extreme changes of emotions will inevitably affect such activities. For example, sudden excessive joy damages *yang* and sudden rage damages *yin*. Vomiting blood after a flare of rage is a typical example of such consequences.

The four points summarized by the later generations are interrelated to each other. In TCM, the concepts of *yin-yang*, viscera, *qi* and blood are not isolated, but interrelated to each other.

In cultivation of health, the emphasis on regulation of emotions



Practicing Tai Chi Chuan.



Colored painting about *dao yin* in the Qing Dynasty.

is to recommend people to maintain a normal mental state. Tao Hongjing said in his book entitled *Yang Sheng Yan Shou Lu* (*Records about Cultivating Health and Prolonging Life*) that "the key to health cultivation is to avoid excessive grief and anxiety, which is known as harmonization. Those who can maintain a harmonized state of mind and body can enjoy a long life."

Inheritance and Development of Modern TCM



Traditional Chinese medicine (TCM), known as "the only surviving traditional Chinese science and technology system," which still serves the needs of public health, has always caught the attention of the government, scholars and the public. As a precious cultural heritage with a long history and practical value, TCM's theoretical system, ways of thinking and treatment skills are worthy of in-depth study.

Under the protection and support of state policies, such as "union of Western medicine and TCM" and "paying equal attention to both," the survival of TCM is guaranteed, and much of the research made progress during the past more than half a century.

To Establish a Standard System for TCM

Based on a comprehensive understanding of basic TCM theories and different schools of thought, a standard for TCM has been established with the essential "syndrome differentiation." It is a great transformation for TCM in its history of development.

As the Western modern science spread across China in the mid-19th century, many negative and provoking remarks about TCM were surfaced. Under such a critical situation, the TCM community took the challenge and defended its position. After a lengthy debate, the TCM community had a clearer understanding of the relationship between the TCM and Western medicine. However, when Western medicine spreads across the country, its new system, which is greatly contradictory to that of TCM, takes turns to dominate the academy. Established on different cultures (especially philosophy), the two have their own understanding and treatment of human life, health and diseases. Therefore, both of them have their pros and cons. They can complement each other but are difficult to merge into one.



The debate towards the abandon of TCM arose self-examination among TCM community and inspired them to systematize TCM literatures, discuss basic theories, and research into different schools of thought. The move laid the foundation for further improvement and standardization of TCM.

After the 1950s, TCM institutions of higher learning were established throughout China, which prompted the birth of unified TCM textbooks and standard system of subjects. *Zhong Yi Xue Gai Lun* (*Essentials of TCM*), mainly edited by Nanjing Medical Academy in 1957, was the first textbook taught at medicine colleges and universities nationwide. This book not only introduced basic TCM theories and clinical framework, but also embodies the concept of "wholeness" (to see traditional Chinese medicine as a whole system) and "syndrome differentiation." In early 1960s, the Ministry of Health began to organize experts to compile the national standard TCM textbook for students at colleges and universities. The compilation was also a development and improvement of the medical system. By the end of the 20th century,



There are nearly 2700 hospitals of TCM in China. Picture shows the Beijing Hospital of TCM.

through the continuous amendments, supplements, adjustments and improvement, six editions of textbooks were completed. Up to now, there are more than 30 subjects for majoring in Chinese medicine. A relatively complete system of TCM was formed.

Standardization of TCM is also an important achievement and feature in academic development in the 20th century. The birth and publication of many versions of *Pharmacopoeia of the People's Republic of China* has effectively regulated the quality and standard of drugs. In 1980s, the World Health Organization and the Chinese acupuncture academic experts constituted more standards for TCM, such as "the standard of acupuncture points," "the Meridian positions" and "the name of ear points and locations." Later the State principle and professional criterion was promulgated, such as "TCM terms in clinical use," "Classification and codes of diseases and *zheng* of TCM" and "Standards for curative effect of treatments in TCM." The establishment of criterions is a must for the modernization of TCM.

Development and Innovation of TCM in Clinical Use

Since the 20th century, especially since the 1950s, the TCM practitioners have started to explore and sum up experiences from clinical practice. It prompted the development of TCM in clinical use, especially when Western medicine is helpless, such as viral infectious diseases, functional diseases, cardiovascular and cerebrovascular diseases and certain challenging diseases like bone diseases, skin diseases, blood diseases, cancer, etc. While fighting against these diseases, TCM generated a number of new and effective formulas, bringing forward its advantages in treatment.

In the past more than 100 years, Western medicine has revealed the pathology and cause of many diseases through studying and making use of modern science and technology. Its diagnosis was





A TCM doctor is practicing at drugstore.

reasonable and curative effect was obvious. However, the pathogen of some chronic diseases is still not clear according to Western medicine. Some diseases have clear pathogeny but can not be cured by drugs or surgeries. Chemotreatment, radiation treatment and surgery, which Western medicine mainly resort to in treatment, have also brought about adverse effects, such as toxicity, popularization of drug-tolerant bacterial strain, variation of pathogen, damage and lose of human organic function. At the same time, with the changing living environment and lifestyle, people's spectrum of disease also changed. Cardiovascular and cerebrovascular disease and cancer have become the main threat to people's health. Western medicine's limitations and side effects, as well as growing new diseases, have left rooms for TCM to play its special role with its natural medicine and drug-free treatments under the principle of "syndrome differentiation."

Take stroke as an example. After the 1980s, TCM had a further understanding in stroke, indicating that the problem of stoke lied in the venation in the brain, caused by transresistance of phlegm and stoppage. Its treatment and formula for stroke was greatly improved too. A new method detected by TCM in treating ronic ischemic cerebral crisis through eliminating phlegm and freeing channels, showed 83.3% of effective rate and 51.3% of obviously effective rate in half a month in treating 158 patients . In addition, acupuncture in treating stroke has also seen great improvement. The first affiliated hospital of Tianjin College of clinical practice

invented an acupuncture treatment called "refresh the brain and open the cavities" to treat cerebral hemorrhage, cerebral palsy, and bulbar palsy, with an efficiency of over 98%.

In 2003, TCM played an active role in fighting SARS. Through restraining early virus and incorporating with Western medicine, TCM became the focus of world attention. In prevention of AIDS, the combination of "syndrome differentiation" and Chinese medicine has also seen remarkable achievements, and it has been successfully practiced in the African health assistance project. In fighting against malaria, artemisinine has saved countless lives in the world, which is also the most popular and most successful achievement of TCM in the world.

To Integrate TCM with Western Medicine and Encourage the Modernization of TCM

Since the founding of the PRC in 1949, the Chinese government has always insisted the policy of "integration TCM with Western Medicine" and advocated to encourage the modernization of Chinese medicine. The integrated Chinese and Western medicine is China's unique medical model; it has developed into one of the major pillars in China's health care.

"Integration TCM with Western Medicine," mainly refers to combine "disease" in Western medicine and "syndrome" in Chinese medicine. "Combination of Disease and Syndrome" can be divided into two types according to the meaning. In the first case, the disease is recognized according to the criterion of Western medicine but treated with Chinese medicine with therapies and herbs. It helps TCM to improve in clinic treatments and to further its understanding of the underlying features of disease. In the other case, the disease is also recognized according to Western medicine but treated with both Chinese and Western medicine. It can





International students are studying TCM in China.

improve the effect by taking advantages of both, and also reduce the toxic and side effect of Western medicine. There are many cases in this regard. Tianjin Research Institute of Acute Abdominal Diseases has made great improvement in treating acute abdomen by integrating Chinese and Western medicines. The death rate of severe acute cholangitis dropped from 20% to 5%; severe acute pancreatitis mortality declined to 20%. There are ways to improve treatment and shorten the course of diseases and treatment by integrating Chinese and Western medicine, such as in treating accompanying infection of cor pulmonale, TCM with the faction of warming Yang and eliminating water and freeing lung and relieving asthma was combined with bacteriophage in Western medicine. In a number of difficult cases (such as cancer, serious cardiovascular and cerebrovascular diseases, etc.), the toxic and side effect from treatments in Western medicine can be reduced by applying "syndrome differentiation" in TCM.

Currently, China has more than 200 Chinese and Western Medicine Hospitals. Over 10 institutions of higher learning have the major of combination of Chinese traditional and Western

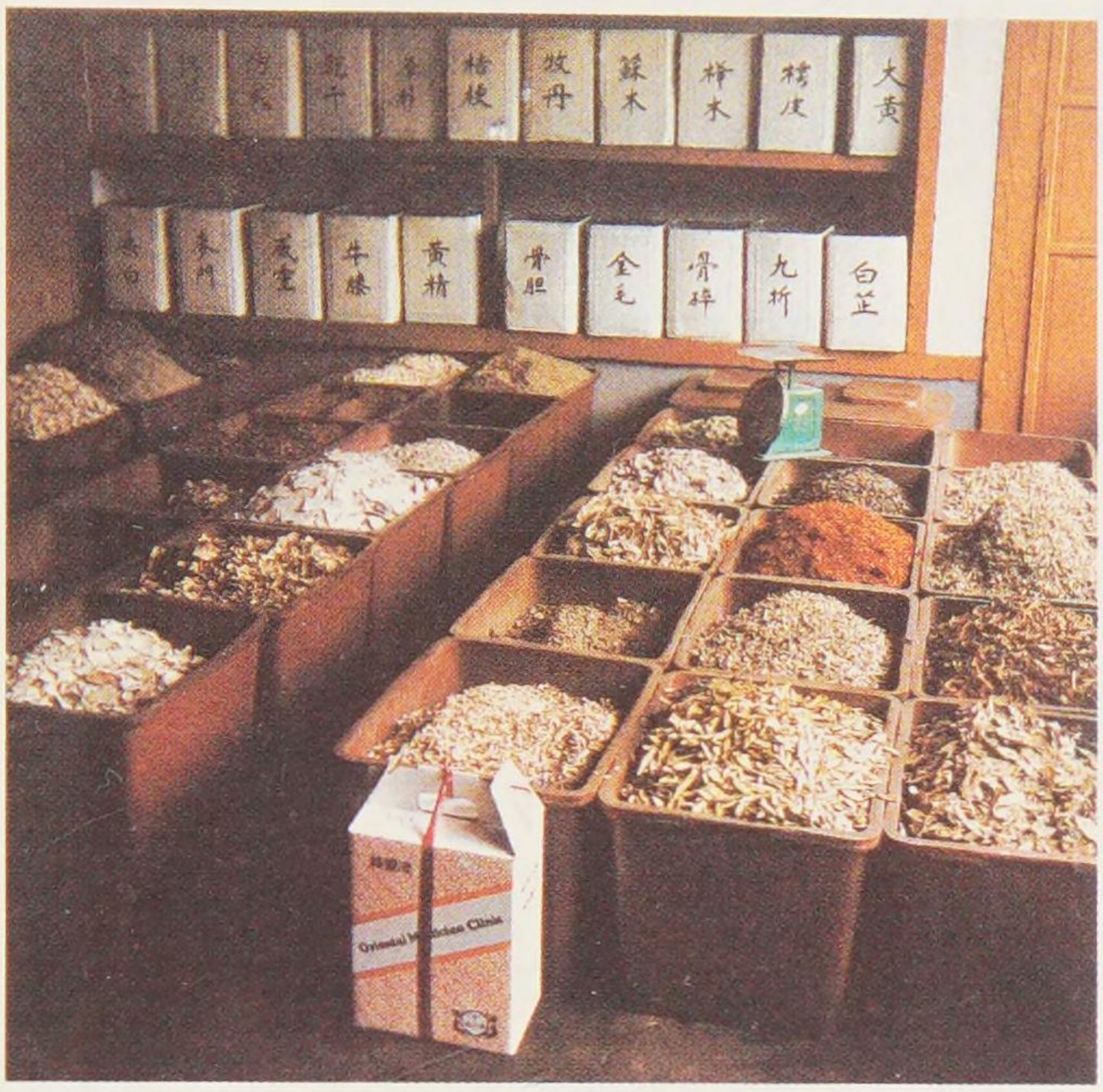
medicine. The new innovative projects with the combination of Chinese traditional and Western medicine have also seen great achievements, such as artemisinine and its ramification in treating malaria, arsenic trioxide in treating acute promyelocytic leukemia, blood-activating and stasis-dissolving prescription in preventing restenosis after coronary artery intervention therapy. Practice has proved that the combination of Chinese traditional medicine and Western medicine is better than using Chinese or Western medicine alone, and it also represents the future of the whole medical field.

TCM Going to the World

In recent years, traditional Chinese medicine in treating disease has gradually shown irreplaceable advantages. TCM treatments, like acupuncture, have gradually gained its positions in many places in the world and also become a part of the medical care in those countries.

Many TCM features like "natural therapies" and "green therapies," and concepts, such as "prevention is better than treatment" and "treating disease before its onset," have been widely recognized and welcomed by many foreigners. Many foreigners found that Chinese medicine better and more effective in treating certain diseases than Western medicine, and have fewer side effects. More and more foreigners have started to accept traditional Chinese medicine. In the United Kingdom, for example, where TCM was introduced in the late 1980s, there are more than 3,000 clinics and pharmacies in towns and cities throughout the nation, with more than 400 in London alone. Many patients turn to TCM when Western medicine does not work well. TCM is the spotlight among over 200 registered complementary medicines, and has become one of the most preferred complementary tools for Western practitioners.





A herbal medicine shop abroad.

In the process of traditional Chinese medicine going to the world, acupuncture has been widely welcomed in particular, and it has been very hot in some countries. In the 1980s, the World Health Organization promoted acupuncture on treating 43 diseases, which furthered the development of acupuncture in other countries in the world. Statistics indicate there are about 20,000 acupuncturists and more than 40 acupuncture schools in the United States. In Germany, according to an opinion poll, 70.4% of German patients like to take acupuncture treatment, 31% of them have received TCM treatment, and most people are satisfied with the effect.

According to incomplete statistics, China has signed a cooperation agreement with the official hygiene authorities of more than 70 countries and regions. TCM has spread to more than 140 countries and regions. At present, there are more than 50,000 institutions of Chinese medicine and acupuncture, over 20,000 practitioners of Chinese medicine and over 100,000 acupuncturists abroad.

At the same time, the traditional Chinese medicine has also attracted many foreigners to China. Hundreds of overseas students came to study Chinese medicine every year. In addition, the TCM textbooks have also become more and more popular among local students in some countries and regions.

Appendix:
Chronological Table of the Chinese Dynasties

The Paleolithic Period	Approx. 1,700,000–10,000 years ago
The Neolithic Age	Approx. 10,000–4,000 years ago
Xia Dynasty	2070–1600 BC
Shang Dynasty	1600–1046 BC
Western Zhou Dynasty	1046–771 BC
Spring and Autumn Period	770–476 BC
Warring States Period	475–221 BC
Qin Dynasty	221–206 BC
Western Han Dynasty	206 BC–AD 25
Eastern Han Dynasty	25–220
Three Kingdoms	220–280
Western Jin Dynasty	265–317
Eastern Jin Dynasty	317–420
Northern and Southern Dynasties	420–589
Sui Dynasty	581–618
Tang Dynasty	618–907
Five Dynasties	907–960
Northern Song Dynasty	960–1127
Southern Song Dynasty	1127–1279
Yuan Dynasty	1206–1368
Ming Dynasty	1368–1644
Qing Dynasty	1616–1911
Republic of China	1912–1949
People's Republic of China	Founded in 1949

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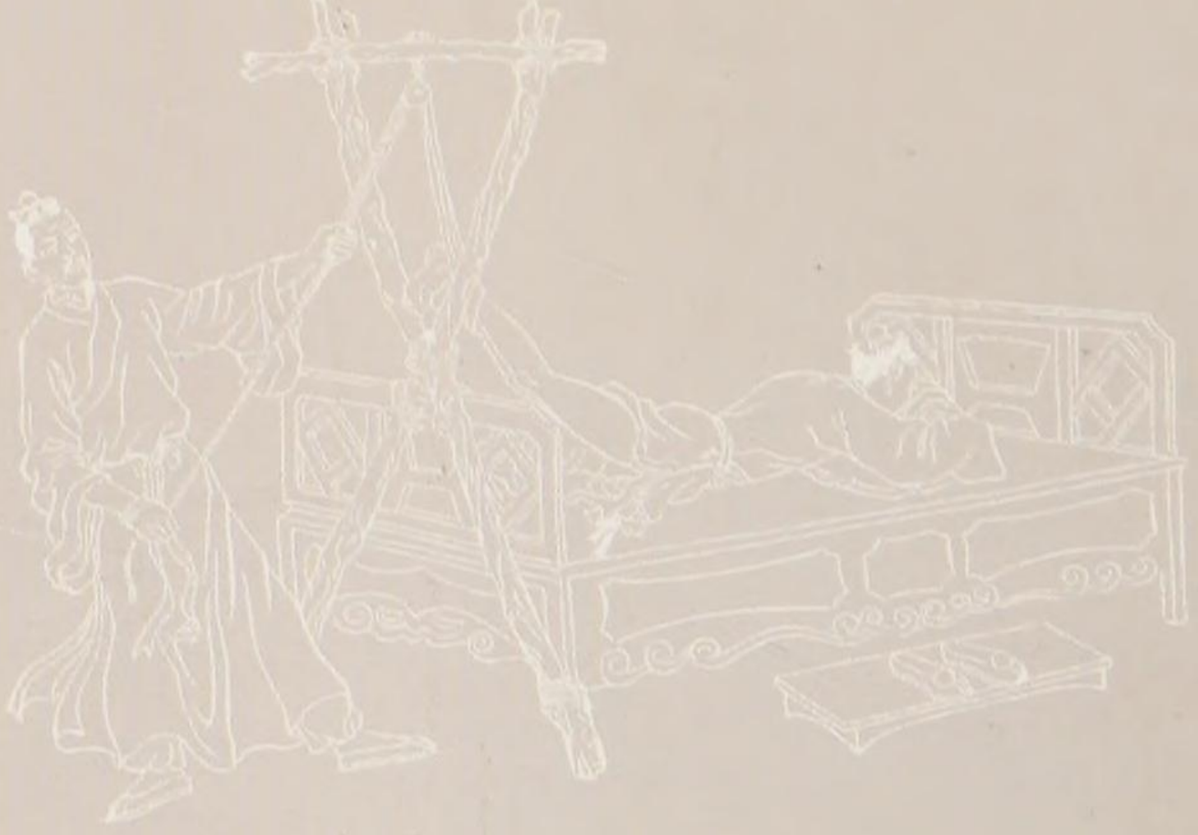
Chinese Festivals
Chinese Architecture
Chinese Vernacular Dwellings
Chinese Gardens
Chinese Clothing
Chinese Food
Chinese Tea
Chinese Wine
Chinese Kungfu
Traditional Chinese Medicine

Traditional Chinese Medicine

Liao Yuqun

In ancient Chinese civilization, astronomy, mathematics, agriculture and medicine were the four advanced sciences. Among them, medicine is the only one that has never been replaced by Western science and still plays an important role in protecting the health of Chinese people.

How traditional Chinese medicine, a classic system of medicine without any connection with modern science, can still exist in spite of the fact that modern medicine can basically meet the need of healthcare? Is traditional Chinese medicine a science or just a collection of experience? Does it still have the possibility and space to further develop itself along its own orbit? Is there any possibility that it may be replaced by modern medicine? These are the questions frequently being asked.



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