

THE ORIGINS OF DECOCTION

“Decoction (*tang ji*). Add water to the herbs and boil, drain the lees, and take internally as an extract. Decoction (*tang ye*) is absorbed comparatively quickly, manifests results rapidly, and is used regularly as a treatment for both newly-contracted illness and acute illness.” (*Jian Ming Zhong Yi Ci Dian*, Renmin Weisheng Pub. Co., 1979)

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Decoction (*tang ye*), needless to say, is one form of medicinal preparations which has been used in Chinese medicine since ancient times. The ‘Preface’ to *Ben Cao Jing Ji Zhu*, edited by Tao Hong-jing during the Liang dynasty (456–536), is the oldest existing treatise on pharmacy. In the above treatise, Tao Hong-jing quotes the following sentence from the *Shen Nong Ben Cao Jing*:

“As for the nature of medicine, there are those for whom a pill (*wan*) is efficacious, those for whom powder (*san*) is efficacious, those for whom boiling in water (*shui zhu*) is efficacious, those for whom soaking medicine in alcoholic drink (*jiu zhi*) is efficacious, and those for whom an oil mixture extract (*gao jian*) is efficacious, and there are those for whom compounds are efficacious, and again those who should not use neither hot water nor alcoholic drink. No matter which, it is essential to thoroughly understand the nature of medicine, and to use it correctly.”

Wan (pill), *san* (powder), *tang* (decoction), *jiu* (alcoholic drink), *gao* (oil mixture): the main form of medicinal preparations which have been used frequently until recent times are all taken together here from the angle of the nature of medicine. Unfortunately, it is not known when the above quotation was written. However, that it was some considerable time after the appearance of all these medicinal preparations, and the conditions for compiling general rules on pharmacology had ripened, there is no doubt.

The difference in the forms of medicinal preparations lies in what kind of effect they have on the treatment of an illness. The opinion given by Li Gao (1180–1251) of the Jin dynasty, which can be read in *Tang Ye Ben Cao*, vol. 1, by Wang Hao-gu (c. 1210–c. 1310) of the Yuan dynasty, was the forerunner of the explanation in *Jian Ming Zhong Yi Ci Dian* which is quoted at the start.

“Generally, *tang* means to stimulate, and is used in the treatment of serious illness. *San* means to scatter, and is used in the treatment of acute illness. *Yuan* (which becomes *wan* in the quotation of *Ben Cao Gang Mu*) means ‘slow’ or ‘gentle,’ and cannot be used for immediate effect. It means to treat by means of gentle medicine.”

As Okanishi Tameto¹ pointed out, Li Gao seeks the efficacy of the different forms of medicinal preparations as lying in “the relative speed of its potency.” However, Okanishi sees it as, “not only the relative speed of the medicine’s potency, but major factors in deciding upon its form are preparation, dose, storage, portability, and the like.”

Different forms of medicinal preparations have different effects. When beginning a course of clinical treatment, it is only natural to use its various forms corresponding to the different symptoms. Nevertheless, from a considerably early period in China, special, and yet extremely systematic books on clinical medicine which were based around *tang ye* (decoction) began to appear. Among these are *Shang Han Za Bing Lun* (*Shang Han Lun* and *Jin Kui Yao Lue Fang Lun*), by Zhang Zhong-jing, whom it is said lived at the end of the Eastern Han dynasty, from the middle of the 2nd century A.D. through to the beginning of the 3rd

Table 1

Title	<i>Tang</i> (decoction)	<i>San</i> (powder)	<i>Wan</i> (pill)	<i>Jian</i> (infusion)	<i>Jiu</i> (alcoholic drink)	<i>Gao</i> (oil mixture extract)	<i>Dan</i> (pellet)	Total
<i>Shang Han Lun</i>	97	7	5	1	—	—	—	100
<i>Jin Kui Yao Lue</i>	130	30	20	2	—	—	—	182
<i>Qian Jin Yao Fang</i>	645	224	268	50	68	58	1	1314
<i>Qian Jin Yi Fang</i>	597	251	222	21	53	107	—	1251
<i>Wai Tai Mi Yao</i>	1761	747	717	83	245	156	—	3709
<i>He Ji Ju Fang</i>	140	239	281	2	—	22	71	755
<i>Ben Shi Fang</i>	56	115	124	3	4	5	13	320
<i>San Yin Fang</i>	337	261	188	7	17	23	47	880

Table 2

Title	%	Title	%
<i>Shang Han</i>	88.18	<i>Wai Tai</i>	49.39
<i>Jin Kui</i>	71.42	<i>He Ji</i>	18.54
<i>Qian Yao</i>	49.08	<i>Ben Shi</i>	17.50
<i>Qian Yi</i>	47.72	<i>San Yin</i>	38.29

century A.D., and who even served for a time as governor-general of Changsha. Once, Okanishi grouped under type a number of medicinal prescriptions which appeared in representative works of clinical medicine from the Eastern Han to the Northern Sung dynasties (Table 1).² According to this, what denotes a percentage of the decoctions which occupy a place among all the prescriptions is shown in Table 2. Even supposing *Shang Han Za Bing Lun* to be an exception, in three works of the Tang dynasty which gather treatment methods from the Wei and Jin dynasties to the Tang dynasty inclusive, *Qian Jin Yao Fang*, *Qian Jin Yi Fang*, and *Wai Tai Mi Yao*, decoction occupies nearly half of all of them. From the end of the Eastern Han dynasty to the Tang dynasty inclusive, there existed a period which should rightly be called the era of decoction, and the appearance of *Shang Han Za Bing Lun* is a symbol of this affair

which signaled the raising of the curtain on this era. In Japan, *Shang Han Lun* was promulgated by the Koho (old preparations) school, at whose pinnacle stood Yoshimasu Todo (1702–1773), and it is an extremely familiar form of medicinal preparations, so that if one were to mention Chinese medicine, decoction would immediately spring to mind.

According to the usual view, the forerunner of Zhang Zhong-jing was *Tang Ye Jin Fa* which can be seen in the ‘Yi Wen Zhi’ volume of *Han Shu* and, moving backwards, was *Tang Ye* of Yi Yin. Huang-fu Mi (215–282) of the Western Jin dynasty had long ago stated in the preface to *Zhen Jiu Jia Yi Jing* that, “Zhong-jing enlarged Yi Yin’s book and made several tens of volumes of explanation, and yielded many effects by the appropriate applications of those prescriptions,” and in *Shi Wu Ji Yuan*, vol. 7, Gao Cheng of the Northern Song dynasty judged that *Tang Ye Jing* “originates from Yi Yin of the Shang dynasty” (Shang is another name for the Yin dynasty). Further, Wang Ying-lin of the Southern Song dynasty quoted the words of Huang-fu Mi and *Shi Wu Ji Yuan* in the item on ‘Thirty Volumes of *Tang Ye Jing Fa*’ in *Han Yi Wen Zhi Kao Zheng*, vol. 10, and also, touched upon ‘Tang Ye Lao Li Lun’ of *The Basic Question*, chap. 14, and the article on *ye tang* prepared by Wang Mang in ‘Jiao Si Zhi’ of *Han Shu*. It was Wang Hao-gu who emphasized this view even further. A brief summary of his opinions which can be seen in the preface to *Tang Ye Ben Cao* and the article entitled ‘Yi Yin Tang Ye Lun Li’ in *Ying Zheng Lue Li* are as follows: Based upon *Ben Cao* by Shen Nong, Yi Yin of the Yin dynasty wrote *Tang Ye Lun*, and Zhang Zhong-jing expanded this into ten volumes. He said, “Zhong-jing’s prescriptions were all decoction” and “this should be the correct teachings for doctors, and even if it gives rise to the wise in future generations, nobody will surpass this.” The connection between *Tang Ye Lun* and *Tang Ye Jing Fa* is not clearly stated, but it is thought that they were probably one and the same, or else the latter was an amplification of the former. No matter which, for Wang Hao-gu, decoction possessed a long-lasting history.³

Leaving that legend aside, when *Tang Ye Jing Fa*, which had already been compiled by the end of the Western Han dynasty, is viewed as the

ancestor of *Shang Han Za Bing Lun*, two preconditions are hypothesized therein. Firstly, by the end of the Western Han dynasty, the concept of *tang ye* as a general form of medicinal preparation had already been established, and secondly, clinical treatment by decoction had already been systematized to a certain extent. Without needing to point it out again, there is in these two preconditions the implication that, by the end of the Western Han dynasty, decoction already had a rather long history.

Until now, there has been a considerable shortage of material with which to investigate these hypotheses. The names of several kinds of decoction can be seen in the biography of Cang Gong in *The Historical Record*, and the two or three references to the materials and preparations of decoction in *The Inner Canon of the Yellow Emperor*, *The Grand Basic*, or *The Basic Question* and *The Divine Pivot*, are nearly all the clues there are. Not only this, there are also differing theories as to the definition of “*tang ye*.” When I say that decoction was used as a general form of medicinal preparation, that means the extract of medicines which was boiled in water and given to the patient without being limited to various kinds of illness. Decoction in this meaning occupies about 80% of prescriptions in *Shang Han Za Bing Lun*. However, in the item on “*tang ye*” in *Zhong Guo Yi Xue Da Ci Dian* (*The Chinese Comprehensive Medical Dictionary*, 1921), the following is added: “Another view is, a thin gruel is boiled grains in water. In the past, this was used as a supplementary medicine.” In fact, *The Inner Canon of the Yellow Emperor* mentions the “*tang ye* of the five grains.” If we suppose that this is an old form of *tang ye*,⁴ then there is no immediate connection to the decoction in *Shang Han Za Bing Lun*. It is necessary to find several links in chain to connect the two.

What urged a reinvestigation into the history of decoction was the discovery of two ancient tomes on clinical medicine, the so-called *Wuwei Han Dai Yi Jian* and *Wu Shi Er Bing Fang*. For the first time, books which recorded numerous specific procedures for preparing potions had been brought into the light of day. Though these can be said to be insufficient in helping to chart the course of history, they are certainly not lacking as clues to the reconstruction of that history. Far from that, when thinking of hypotheses and theories which stand upon a condition as close as

imaginable to blank paper for data, we ought to say that we have managed to obtain a sure and, moreover, rich standpoint for the analysis of history.

In a medical treatise unearthed in 1972 from a grave presumed to date from the early part of the Eastern Han dynasty, in Wuwei of Gansu Province, *tang fang* (a prescription for the decoction) is included as one example. Ten kinds of medicines are boiled in water, which is unmistakably a type of decoction. However, contrary to expectation, there was only one example among all the prescriptions. Preparations which fall under the category of *tang ye* did not occupy a position of importance in the slightest. The following year, 1973, in *Wu Shi Er Bing Fang*, a silk manuscript which was unearthed from the Mawangdui Han tomb, in Changsha of Hunan Province, at least ten examples of prescriptions of boiling in water are recorded. However, the medicines which were used were very few, with only one or two examples of each. There are many examples of only one or two kinds of medicines in use among the preparations in *Shang Han Za Bing Lun*, but the majority of these use several different medicines, and occasionally reach at least ten varieties. If these are regarded as decoctions which possess the makeup of such constituents as typical *tang ye*, which have completed prescriptions between *Shang Han Za Bing Lun* and the prescribed infusions in *Wu Shi Er Bing Fang*, or even between *Wuwei Han Dai Yi Jian*, an enormous gulf lies wide open. In *Wu Shi Er Bing Fang*, only prototype *tang ye* is evident. The era of transcribing the *Wu Shi Er Bing Fang* manuscript which was discovered is presumed to have been around the time of the change from the Qin dynasty to the Han dynasty. In which case, there is no barrier to concluding that the era of the author was the end of the Warring States period. Hypothetically, I suppose it to be the middle of the third century B.C., but at the very least there can be no doubt the knowledge and skills recorded therein existed towards the end of the Warring States period.

Wu Shi Er Bing Fang from the end of the Warring States period, the biographies of Bian Que and Cang Gong in *The Historical Record* of the Western Han dynasty, and *The Inner Canon of the Yellow Emperor* over the Western and Eastern Han dynasties, *Wuwei Han Dai Yi Jian* in the begin-

ning of the Eastern Han dynasty, and *Shang Han Za Bing Lun* in the end of the Eastern Han dynasty: these are all important materials with which I have been provided in order to analyze the early history of decoction. Squeezed between old materials and new materials, the hitherto concealed radiance becomes visible, and new meaning can be found. With regard to these important documents, I intend to take the following procedures. Firstly, to make clear the meaning of the words *tang* and *tang ye* with regard to specific examples of their usage, then next, regardless of whether they are called *tang* and *tang ye* or not, to investigate methods of treatment and prescriptions which I think are related to the formation of decoction as a general type of medicinal preparation.

Let me take some examples from *Wu Shi Er Bing Fang*.

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Among the nearly three hundred examples of clinical treatment which exist in *Wu Shi Er Bing Fang*,⁵ there are nine examples of the word *tang*, and they are used with three different meanings. The first meaning is simply boiled water. □ indicates one missing character. A diacritical mark number *Wu* 1 which was added for ease of reference, means the first passage of quotation from *Wu Shi Er Bing Fang*. First of all comes the treatment for injuries (*zhu shang*) which are suppurating.

Wu 1: Place potassium nitrate in tepid *tang*, and use it to pour on carbuncles.

Next come two examples of clinical treatment for burns (□ *lan zhe*).

Wu 2: Pour hot *tang* over the dung of a pig and heat (*ao*) it, soak it in vinegar, and cover the burned parts with it.

Wu 3: Pour very hot *tang* over the dung of a pig and heat (*ao*) it, immerse it in alcoholic drink, and cover the burned parts with it.

Ao usually means to boil it down, that is, to heat it until there is no water content left, but here may simply mean to pass hot water through it. Besides these, what can be seen as clinical treatment (*Wu* 4) for carbuncles which have suppurated is hot water which is used for cleansing:

Wu 4: If they have become dry, reapply the salve, then remove the salve by pouring on *tang*, so the affected part is healed.

In the same way, the treatment for one type of chronic skin disease (□ *huan zhe*) for which the cause was thought to be insects, “pour on *tang* (next part is missing),” and for the wound which has been stung by the poisonous insects (*chong shi*), “(this part is missing) by pouring on hot *tang* again the following day, treat the medicine in the same way as the previous method.” Although, because so many characters are missing, it is impossible to say with any certainty, this was probably an operation to disinfect the mouth of the wound with hot water, or else to cleanse the affected area by washing away the salve which had been previously applied. No matter which, *tang* means hot water here. The meaning of water which can be seen in “use water to pour on prior to applying medicine” in the treatment of suppurating tumors is also very close to the same meaning of *tang*.

The second meaning is so-called “medical bath.” There are two examples. First of all, there is a remedy for an injury to the shin which has suppurated and burst, and from which pus is flowing out (*xing shang*).

Wu 5: In order to cure this, there are three kinds of materials which should be boiled in 2 *dou* (3.88 liters) of water, one-third of *yu*, one-third of *qiu*, and one-third of □. *Yu* and *qiu* should be ground together to powder (*ye*), □ in *tang*, which should then be immediately heated over a flame. Once the *tang* is just hot enough for the foot to bear, place small shavings of wood in the *tang*, □ □ is □ □, place the foot in the *tang*, and smooth the □ by tramping on the wood. If the *tang* is too cold, heat it, and if it is too hot, remove it from the flame, adjusting to precisely the right temperature. If the foot is placed in the *tang* after breakfast, removed at around 4:00 in

the afternoon (*fu shi*), and rested, the disease will immediately be cured.

Irrespective of whether the medicines are added before or after, they are equally called *tang*. The plant has not been clearly identified. *Fu shi* means the time for an evening meal, which is around 4:00 p.m., or the hour of the monkey according to Chinese horology. Next is a remedy for scabies (*gan sao*).

Wu 6: Boil both the leaves of the peach tree and *xin* three times, and use them to make *tang*. Go into a warm room, drink hot alcoholic drink, immediately bathe in the *tang*, and also drink hot alcoholic drink while doing so. Even a long-standing affliction of scabies can be cured in this way.

The peach is a plant which is frequently used in exorcising evil spirits, and this treatment can be easily hypothesized to mean a form of magic. Although it is not actually bathing water, we read in *Feng Su Tong Yi*, quoted in *Guan Sui Shi Ji*, vol. 5, "Drink both peach *tang* and oak leaf *tang* on New Year's day," and in the notes to *Jin Chu Sui Shi Ji*, "Take peach *tang* on New Year's day. Peach is the spirit of the five elements (wood, fire, water, earth, metal), quells evil well, and controls a hundred demons." According to the dictionaries, the meaning of the character *xin* is unknown. Another four examples can be read in *Wu Shi Er Bing Fang* (two examples for urinary tract infections, and one example each for carbuncles and *shen pi*), and all of the commonly use *san* (three) *zhen zhu* (boiling), and in one case of urinary tract infection, *nai* is used for *xin*. From this examples of usage, it is easy to understand the fact that "*san xin*" is a word that further defines the action of boiling. "*Zhen*" was probably used to mean the same as "*reng*." In *Guang Ya*, 'Shi Gu' 4, we read "*reng* is *chong*," and similarly, in the annotation, "*reng* is *chong*, again." *San zhen zhu* probably means the action of repeatedly boiling three times. Specifically, how is this done? Hints are to be found in *Wu* 11 and *Wu* 21, which will be quoted later. These two passages are cited in succession in *Wu Shi Er Bing Fang*. First, in *Wu* 11, the following preparation ap-

pears: “Divide the materials into three, and boil one-third in 1 *dou* and a half of water. When it has boiled sufficiently, drain the lees, and boil a further one-third. Use up all three thirds in this fashion.” Next, in *Wu* 21, we read, “Divide the materials into three parts, and boil three times repeatedly (*san zhen zhu*) in a half-*dou* of strong alcoholic drink.” That is to say, the application uses the definition of *san zhen zhu* precisely as the method of preparing medicine according to *Wu* 11. In which case, *san zhen zhu* is the act of dividing the materials into three parts, boiling a third, discarding the lees, and repeating the act of boiling one-third over again in the broth. Apart from this, there is a prescription for *shen pi* to perform the operation of *san zhen zhu* the roots, branches and leaves of the Japanese pagoda tree, and this, also, cleans out the lees by boiling in strict order from the roots.

The third meaning is the broth which dribbles out from steaming. This is expressed as a kind of magical treatment of when pathogens are located in the human abdomen, and are thought to be there as a result of witchcraft (□ *gu zhe*).

Wu 7: Burn the *fu* lined up toward the north, then steam a castrated sheep, pour the dripping *tang* on the ashes of the *fu*, and so forth.

Fu is a kind of talisman made of paper.

These three meanings of *tang* indicate that the concept of *tang* or *tang ye* as a type of preparation was not yet fully established. To put it another way, preparations which could be made through certain common procedures which could give comprehensive nomenclature to *tang* or *tang ye* did not yet exist in any fixed form.

Having said this, there did at least already exist several preparations which could be viewed as the seeds of this practice. First of all, there is a remedy for tetanus (*shang jing*).

Wu 8: When one gets a wound and suffers a convulsive fit, quickly boil Japanese plum fruits in water, and after a short period of time, dip the broth, retrieve the fruits and filter the broth, cool them to a suitable temperature, and have the patient drink it. . . . If there are

no Japanese plum fruits, boil 〇 〇 〇 〇 〇 〇 and have the patient drink that broth instead the same times as the number of the fruits.

This does not refer to the infusion, but rather to the juice of the Japanese plum fruits. It is not directly connected to the decoction of Chinese herbal medicine of later generations.

The debut of what can be called the prototype of decoction was as a prescription for urinary tract infections (*long*).

Wu 9: Boil *kui* (*Malva verticillata*, *L.*) and drink the broth.

Wu 10: Boil *kui*, heat it and drink the broth.

Although *kui* was used as a preparation for urinary diseases, because it was originally an edible plant, there is still some distance between its broth and decoction. Similarly, there is the following prescription for *long*, but this was already decoction.

Wu 11: Mix 2 *sheng* (0.194 liters) of coarsely ground jujube seeds and 1 *sheng* of *kui* seeds together, divide the materials into three, and boil one-third in 1 *dou* and a half of water. When it has boiled sufficiently, drain the lees, and boil a further one-third. Use up all three thirds in this fashion. Clean out and take the broth, sweeten slightly by mixing with honey, and when it is a suitable temperature, 〇 and drink this.

The prescription for “boiling in thirds” (*san zhen zhu*) two kinds of medicine which appears in *Wu Shi Er Bing Fang* is the closest to the decoction of later generations. Using only one medicine, but what is close to the so-called procedure of infusion is a prescription for bloody urinary tract infections which are painful and bleed, and later, bloody gonorrhea.

Wu 12: Boil *jin*, heat it three times, and drink it.

Jin may be *mu jin*, or vitex cannabifolia. The following prescription for “stone gonorrhea,” where stones are mixed in the urine, is close to this:

Wu 13: Boil *shi wei* or alcoholic drink in hot water three times, and drink it.

Shi wei is a plant used in treating urinary diseases. Another prescription is for women's urinary tract infections:

Wu 14: Boil *yin fu mu* and drink it. Wait a day, mix *yang* □, and use this to make a hot soup.

What is meant by *yin fu mu* is unknown. Although this is one kind of venereal disease, it is cited under a different pathological name from *long*, that is *gao ni* (tallow urine), which is muddied urine accompanied by high fever and other symptoms. The prescription for this "tallow urine" greatly resembles the one for women's urinary tract infections:

Wu 15: Boil old *kui* seeds in water and urine, and drink it. Also, mix with *yang* □, and use this to make a hot soup.

The seven prescriptions given above which were used to treat urinary tract infections can all be called prototypes of decoction in the sense that the medicines are boiled in water for a comparatively long period of time.

In *Wu Shi Er Bing Fang*, besides these, there is the clinical treatment for a patient poisoned by aconite (*du wu hui zhe*):

Wu 16: Boil iron and drink it.

However, it is probably better to omit this from the prototype of decoction. Although it cannot help but be viewed as *shi yao* (stone medicine), *shi yao* in the Chinese medicine of later generations was usually used in ground form. Among the sixteen (or eighteen) prescriptions above for boiling preparations in water, excluding the two examples of Japanese plum fruits and iron, the remainder are all prescriptions for urinary tract infections.

In *Wu Shi Er Bing Fang*, the concept of *tang ye* has not yet been established, and the prescriptions that are there are best described as prototypes, or as the germ of decoctions, and these are all extremely simple processes in which one or two kinds of materials are boiled in water. Not only this, they can be regarded as special preparations which

are only effective in urinary tract diseases (*lin zheng*). The fact that they can only be used effectively against one symptomatic disease, it goes without saying, means that the preparations made by boiling do not possess a generality as a form of preparations, and cannot be considered as preparations which can be given for other diseases.

Let us henceforth refer to the prototype or the germ of decoction which can be used in urinary tract diseases, as Prototype *tang ye* I. But why was this Prototype *tang ye* I, created as a special form of preparations which are only effective against urinary tract diseases? This was probably, as was shown in example *Wu* 15, which was boiling a medicine in water and urine because of a so-called *tong lei* (same class) relationship, a resemblance of appearance or nature between proto-*tang ye* and urine. Fluids which closely resembled urine, and consequently were thought to belong to the same category, accelerated urination, and could be used as a diuretic. If this interpretation is accurate, the concept of decoction as a general form of preparations, was most likely established for the first time when it was separated out from the concept of a diuretic or special preparations which were only effective against urinary tract infections arrived at through boiling in water.

The concept of *tang ye* was not born solely with Prototype *tang ye* I. In order to establish the notion that the broth of medicines boiled in water were effective against other diseases apart from urinary tract infections, there already had to exist beforehand a certain kind of prescription which was given in cases other than urinary tract infections and which had a close relationship in some meaning or other with Prototype *tang ye* I. By means of such a prescription, Prototype *tang ye* I was liberated from the stereotype of the diuretic, and began to develop into *tang ye* itself. So, what was this close relationship in some meaning or other? What I wish to cite here are prescriptions which possess commonalties with Prototype *tang ye* I on the basis of a broth which was boiled from medicines. One was a prescription using alcoholic drink or vinegar in place of water, and one was a prescription using the five grains as constituents. Let us call these in advance the former Prototype *tang ye* II, and the latter

Prototype *tang ye* III. Incidentally, one example of a prescription of Prototype *tang ye* II is to boil the five grains in alcoholic drink and vinegar.

As Prototype *tang ye* II, first of all, there is a prescription of boiling alcoholic drink which was used to treat tetanus.

Wu 17: Boil a bundle of scallion in strong alcoholic drink until it is bubbling, and then drink it. Sit and wrap the body in warm clothing, and once perspiration reaches the feet, immediately □.

Next is a prescription for aconite poisoning. □ indicates the unknown number of missing characters.

Wu 18: Shave the root of the Chinese matrimony vine approximately 1 *chi* (22.5 m) in length and the size of a finger into a wooden mortar and pound it, boil in alcoholic drink, □.

This was probably also drunk as a broth.

Boiling in alcoholic drink and vinegar were similarly often used in the treatment of urinary tract infections. Here are five quotations from prescriptions for urinary tract disorders (*long*):

Wu 19: Boil 3 *sheng* of black beans three times □ in fine vinegar. Boil over a strong fire quickly, and once it is bubbly remove it from the fire. If the bubbling stops, boil it once again, and repeat this three times, then stop. Filter and extract the broth, the two kinds of materials □ □, 1 oyster and 3 ground *du dong*, take an amount equal to a pinch of three fingers, which reaches to the knuckle of the each fingers, place it in the vinegar once it is of the right temperature, □, drink it.

Du dong is probably elder, a plant of the poppy family.

Wu 20: Soak the scurf and dandruff from the collar of short undergarments in a cup of alcoholic drink, boil it until bubbling and drink it.

Wu 21: Divide the material into three parts, take 1 stick of orpine, 1 *chi* in length and a handspan in width, divide it into three parts, boil three times repeatedly (*san zhen zhu*) in a half-*dou* of strong alcoholic

drink, and when it has well boiled down, clean out and take the broth, and drink it.

Wu 22: Take 27 snails and 1 small bundle of scallion, boil in alcoholic drink and drink it.

There is one more “*san zhen zhu*” prescription.

Wu 23: Boil *shu* and *ji* (two species of millet) repeatedly three times (*san zhen zhu*) in vinegar and alcoholic drink, and drink the resultant broth.

This is a special case for boiling the five grains which comes immediately afterwards.

Next are clinical treatments for *ju* (tumor). There are many missing passages, so one cannot say for certain, but there are three similar prescriptions written down side by side.

Wu 24: Boil half a *dou* of 罌 and make 3 *sheng*, drink it, and sleep wearing warm clothing 罌.

Wu 25: 罌 tumor, place the four 罌 of ginger, cinnamon, Japanese pepper, and 罌, 罌 half a *dou* of strong alcoholic drink, boil it and make into 3 *sheng*, 罌.

Wu 26: 罌 3 bundles, slice them, 1 *dou* of strong alcoholic drink 罌, immediately drain and 罌, warm clothing 罌.

When these three entries are taken together, all of them are apparently treatments which involve boiling together some medicines in strong alcoholic drink, drinking the resultant broth, lying down in warm clothing, and inducing perspiration. Different from the boiling in water, it seems that the aim is to accelerate perspiration with boiling in alcoholic drink. The case of example *Wu* 17, tetanus, as well, is a clinical treatment which involves causing perspiration. It might just be that the fragments of prescriptions which follow these “罌 cinnamon, Japanese pepper, 罌” are also prescriptions of a similar type.

Finally, there is a prescription for scabies (*jie xuan*).

Wu 27: Heat one-third of water chestnut until they turn yellow, then

boil them in half a *dou* of strong alcoholic drink. Bubble it three times then stop, and ? (unknown character) the broth. Drink this without taking any supper.

Boiling in alcoholic drink and vinegar are used not only in the five examples of urinary tract infections, but there is one example each of their being used against tetanus, aconite poisoning, and scabies, and at least three examples of their being used against tumor, and it is understood that they were more generalized, as a way of preparing medicines than boiling in water. Moreover, among the six examples of prescriptions which exclude urinary tract infections, supposing that the four examples of tetanus and tumor which use strong alcoholic drink aim to induce perspiration, it is to be hoped that boiling in alcoholic drink will yield effects which cannot be obtained by boiling in water. Of course, in the eleven examples of boiling in alcoholic drink and vinegar, urinary tract infections occupy five cases, and when combined with the seven examples of boiling in water, it is impossible to forget that twelve cases, or two-thirds of the eighteen cases of boiling in water, alcoholic drink and vinegar are prescriptions for this affliction. A type of medicinal preparation which takes the form of a broth made from medicines can evidently be viewed as the most suitable potions for treating urinary tract infections, no matter what one might say. However, because preparations boiled in alcoholic drink have the remarkable effect of inducing perspiration, they are very likely to lead to the result of making possible an expansion of mutated diseases which overcome comparatively easily the narrow frame of diuretics which are the preparation boiled in water. I believe that herein lies an important turning point in making preparations in the form of broth-boiled medicines more generalized.

Prototype *tang ye* III is a gruel of the five grains. Case *Wu* 23 is one example of this, and there are two examples of boiling in water. One is a prescription for when bitten by a viper (*yuan*).

Wu 28: Make a gruel from grains of pale green *liang* (a species of millet). Make this into 5 *dou* of gruel in the proportion of 1 part grain to 15 parts water. Remove from the pot, wait until the vapor

subsides, and place into a new, large cauldron. Seal the mouth with 3 寸 clothes, and block the mouth by daubing to a thickness of 2 寸. After broiling, extinguish the flames with mud and, once drunk, the bite wound will be healed.

The actions after sealing the mouth of the cauldron are not clear, but because the ratio of water to grains is 15 : 1, it is undoubtedly a very thin gruel. Another prescription (*qu yang*) is for when the patient has an itchy and sore anus due to a certain kind of hemorrhoids.

Wu 29: Prepare seven pairs of stones the size of a fist and heat them well. Grind *da ban sheng* of grains, prepare in the ratio of 8 parts water to 1 part grain, place the stones therein, 煎 煎 boil down well, and if drunk immediately, the patient will be cured in no time.

Da ban (larger half) here means either two-thirds or three-quarters. Since the type of grain is not specified, it was probably the most common available. According to Shinoda Osamu, the staple grains were *he* (a species of millet), *ji* and *shu*, and at large gatherings, barley and wheat could be offered to the guests, and such *liang* and rice which rather come under the category of a treat.⁶

As will be stated later, rice broth or grain-based gruel, was viewed as having much in common with boiling in water as a way of preparing medicines. And yet, the diseases to which it was applied were different from preparations boiled in water, and also from preparations boiled in alcoholic drink and vinegar. This fact hints at the possibility that, for the concept of *tang ye* to become widely accepted as a general form of medicinal preparation, rice broth and gruel, worked as a turning point. For the time being, let us call this Prototype *tang ye* III. This accords with one opinion in *The Chinese Comprehensive Medical Dictionary*, which was quoted at the beginning.

Although it is off the main point, what I would like to dwell on for a moment is the method of boiling given in example *Wu* 29. Shinoda has already written on the subject:⁷

What needs to have attention paid to it in cooking is the point that

it is difficult to see traces in China of the "boiling in water using hot stones" which A. Maurizio reported as being carried out from Africa, Australia, both North and South America, and the Pacific Islands, even as far as Eastern Europe.

Nevertheless, this method of preparing medicines proved that such techniques did indeed exist in China as well. *Wu Shi Er Bing Fang* includes not only a history of medicine and a history of pharmacology, but also important information on the history of food.

3

*Wuwei Han Dai Yi Jian*⁸ is not as systematic a book as *Wu Shi Er Bing Fang*, it is a very small volume, and extremely little is included on the subject of *tang ye* and related subjects. However, it does present two or three extremely suggestive pieces of information. The era of the grave from which the *yi jian* (medical bamboo and wooden tablets) was excavated cannot, unfortunately, be confirmed, but it is presumed to be the early part of the Eastern Han dynasty. In fact, the view that the age in which this *yi jian* was written is the early part of the Eastern Han dynasty can be inferred from the contents.

The word *tang* appears twice in *Wuwei Han Dai Yi Jian*, the first time as a treatment for chronic diarrhea:

Wuwei (Wuwei Han Dai Yi Jian) 1: Four *fen* of *huang lian* (*Coptis japonica*, *M.*), one *fen* of *huang ling* (*Scutellaria baicalensis*, *G.*), stone fat (a kind of mineral), mammal fossils, ginseng, ginger and cinnamon respectively; take all of the seven materials, grind them into a powder and mix them, and use honey to make tablets of about the size of dumplings. First eat a meal, then swallow one tablet with *shi da tang*.

If we suppose that the special characteristic of Chinese pharmacology

was to make one kind of preparation using many kinds of medicines in general without regard to the form of the medicinal preparations, the recording of the prescriptions in *Wuwei Han Dai Yi Jian* prove that the basic ideas and techniques of medicinal preparations had already been established in this era, separated by 300 years from *Wu Shi Er Bing Fang*. *Wuwei 1* is no more than one example of the same method of preparing medicines.

This being the case, what exactly was this *shi da tang* which was taken with tablets? As a very close example of a prescription, there is the next example: "First eat a meal, then take the (powdered) medicine with rice gruel." *Shi da tang* (*tang* arouse our appetite) was probably a warm liquid drunk with meals, but it was not simply clear hot water, but probably a kind of broth. No matter which, it was probably neither a prototype *tang ye* nor Chinese herbal medicine, itself.

One more example of usage called *tang fang* (prescription of decoction), which were infusions using ten kinds of materials.

Wuwei 2: A prescription of decoction for curing coughs and reflux. Seven bundles of *zi yuan* (*Aster tataricus*, *L.*), 1 *sheng* (0.1981 liters) of *men dong* (*Liriope graminifolia*, *Var.*), 1 *sheng* of *kuan dong* (butterbur), 1 *sheng* of *tuó wú* (?), half a *sheng* of gypsum, 1 匁 of white 匁, 1 *chi* (23.04 cm) of cinnamon, a half *sheng* of honey, 30 jujube leaves, ten *ban xia* (*Pinellia tuberifera*, *Ten.*); take all of the ten materials and grind them all down roughly to the size of soy beans. Do not grind *ban xia*. Add 1 *dou* and 6 *sheng* of water, and boil and bubble it six times, strain and remove the lees, and drink a small cup when it is tepid, three times a day. After one night passes, boil it once again. The affliction will be cured within three or four days.

Among the medicines listed, there are medicines which can be seen in *Jin Kui Yao Lue Fang Lun*, chap. 7 'Fei Wei Fei Tan Ke Sou Sheng Qi', written by Zhang Zhong-jing towards the end of the Eastern Han dynasty. Herein, we can confirm for certain the establishment of the concept of *tang*, as a general form of medicinal preparations which is liberated from a specific, narrow framework and which is neither a diuretic

nor a perspiration inducer. At the same time, we realize the proportion occupied by decoction in all kinds of prescriptions as a whole is not very large.

Since the concept of *tang ye* was already established, if we suppose that boiling in alcoholic drink and gruel were a prototype *tang ye*, there were most likely also changes to the manufacturing process.

Wuwei 3: A prescription for curing *fu liang* (tumors) on the stomach which form pus: Take 1 *liang* (13.92 g) each of rhubarb, *huang ling*, and peony, 2 *liang* of saltpeter, 1 *chi* of cinnamon, and 14 mantis eggs stuck to mulberry leaves, 3 *zhe chong* (stink bugs), take all of the above seven materials, grind them all down roughly to the size of soy beans, soak them in 5 *sheng* of strong alcoholic drink, leave them for one day and one night and then boil.

Soak the medicine in alcoholic drink for one full day and night, prepare an infusion, then boil it and drink it. It is the one and only example where alcoholic drink is used, but this cannot be said to already be boiling in alcoholic drink. The important point is clearly to create an infusion. One other example, besides the one already quoted, for gruel can also be seen:

Wuwei 4: ☐ void the bowels greatly, and if his water content is exhausted, drink a barley gruel.

The surrounding relationship is unclear because of the missing text, but it is probably to prescribe a laxative, and then to have the patient drink the gruel afterwards. In *Wu Shi Er Bing Fang*, gruel is a preparation. Nevertheless, in *Wuwei Han Dai Yi Jian*, it is treated as a liquid with which to drink preparations, or an invalid's food after the patient's symptoms have been suppressed or the like. This means that all of the three prototypes of *tang ye* had already disappeared completely.

The difference between *Wu Shi Er Bing Fang* and *Wuwei Han Dai Yi Jian* maybe not only separation by time, but also the distance between south and west that reflects the differences in the climate. However, there is no evidence by which to verify this. There is nothing else but to

return to thinking of it as a purely temporal difference. Making up this separation of 300 years a little, although they are not pharmacological texts, are the biography of Bian Que in *The Historical Record (Shi Ji)* and *The Inner Canon of the Yellow Emperor (Huang Di Nei Jing)*.

4

The meanings contained within the data of the biographies of Bian Que and Cang Gong in *The Historical Record* are completely different. Bian Que is a semi-legendary figure, and whereas the medical knowledge which can be seen therein is thought to come from the era of Sima Qian, Cang Gong Chun-yu Yi was an actual figure who lived at the time of the Emperor Wen (180–157 B.C.) of the Western Han dynasty, and the main portion of his biography has been compiled from extracts of patients' clinical records written by him. There is absolutely no way to discuss the two of them together. Instead, let us examine the biography of each separately, as complete information in its own right. Moreover, when quoting from, or else referring to, the annotations of forerunners without specifically indicating the source, they are from *Shi Ki Kai Chu Ko Sho (Historical Investigation of Collected Notes into The Historical Record)* by Takigawa Kametaro.

First of all, let us quote from the biography of Bian Que. The following text is not the words of Bian Que, but are spoken as the words of another individual who has some considerable knowledge of medicine.

Shi (Shi Ji) 1: I hear that, in ancient times, there was a physician named Yu Fu. To cure illness, he did not use *tang ye*, *li sa*, *chan shi*, *jiao yin*, *an wu*, *du yu*, or the like.

In the Lu Dian's annotations in *He Guang Zi*, chap. 6 'Shi Xian', *li sa* is written as *sho ji*, but as Taki Genkan points out, *sho ji* is probably an error in the writing of *li jiu*. Accepting this theory, Takigawa says that *as* was originally written as *jiu* (alcoholic drink), but this was mistaken by people

in later ages for a similar character *as*, and further, the character *as* was mistaken for another character *sa*. *Chan shi* is *bian shi*. *Jiao yin* is exercise, which later became *dao yin* (Taoist exercise), and the pictures and its simple explanations have been excavated from the Mawangdui Han tomb. *An wu* is Chinese massage. *Du* of *du yu* is harmful medicine, that is, highly efficacious medicine. *Yu* is a poultice. According to Si-ma Zhen, “a poultice with medicines should be applied to the afflicted part,” and according to Teng Wei-yin, this is “a kind of *wu fen yu*,” which I shall explain later, and says, “apply a hot poultice with medicine to the afflicted part. This method of medicinal poultice is in *The Divine Pivot*.”

Among the medical treatments cited here, those things which use medicines, or which have the possibility of using medicines, are, *tang ye*, *li jiu*, and *du yu*. *Li jiu* will be explained in detail later. In order to examine here what is known as *du yu*, let us quote from the method of medicinal poultice referred to by Teng Wei-yin, which is also interesting as a description of the process of medicinal preparation. Incidentally, the word *tang yu* can be seen in *Shi* 3 and *Han* (*Han Fei Zi*) 3, which are quoted later on. It says in *The Grand Basic*, vol. 22 ‘San Bian Ci’ or *The Divine Pivot*, chap. 6 ‘Shou Yao Gang Rou’.

Huang (*Huang Di Nei Jing*) 1: The Yellow Emperor asked, “How does one use this medicine and what must one do to apply it as a poultice?” Bai Gao replied: “Prepare 20 *sheng* (0.198 liters) of strong alcoholic drink (in *The Divine Pivot*, *sheng* is replaced with *jin*) take the following four ingredients, 4 (1 in *The Divine Pivot*) *sheng* of the seeds of Japanese pepper tree, 1 *sheng* of dried ginger, 1 *sheng* of cinnamon, and grind them all down to approximately the size of soy beans, and soak them in alcoholic drink. Place 1 *jin* (22.7 g) of soft cotton and 4 *zhang* (2.3 m) of fine white cloth in the alcoholic drink, place the alcoholic drink in warm horse manure and seal it. Daub the opening so that there is no leaking, remove the cloth and cotton after five days and five nights, dry them in the sun. When dry, immediately soak it again, and repeat the process until there is no broth left. If it was soaked once, it must be removed and dried

during the day. Pinch the cotton and the lees between the cloth, and fold over many times, until six or seven sheets, each of a length of 6 to 7 *chi* (23 cm), have been made. Warm the sheet of cloth over a charcoal of raw mulberry, press on the part afflicted with cold paralysis (*han bi*), and allow the warmth to percolate into the afflicted part. If the cloth becomes cold, warm it over a fire once again, press on the afflicted part, and repeat to a maximum of 30 times. If the patient begins to perspire, warm the sheets of cloth over a fire and wipe the body down, and again, repeat this to a maximum of 30 times.

This means that, in the case of cold paralysis, to apply a compress after using needles (acupuncture). Soak the medicine in strong alcoholic drink, permeate the infusion into the cotton and the cloth and dry it, wrap the lees from the infusion and the cotton in the cloth, warm it over a fire and apply it to the afflicted part. There is an even more simple medicinal poultice preparation in *Wu Shi Er Bing Fang*. If we quote one clinical treatment for tetanus,

Wu 30: In order to cure this, heat salt until it is a yellow color, take one *dou*, and wrap it in cloth, and dip in strong alcoholic drink. Remove it immediately after immersion, roll it in a *fu* and place it against the head to warm it.

Fu means an Oriental traveling rug made of tanned hide. Similarly, for infant convulsions which lock a child's body rigid, it is recorded to mix salt and another kind of preparation with clay, steam it and apply the poultice to the afflicted part. When these are compared to the poultices in *The Inner Canon of the Yellow Emperor*, the general trend, unrelated to the form of the medicinal preparation, towards an increasingly complex composition of preparations, can clearly be seen.

What I wish to pay advance attention to in *Shi* 1 is that both *tang ye* and *li jin* (sweet fermented drink) are recorded side by side. A passage extremely close in meaning to one stanza in *The Historical Record* can be seen in *The Inner Canon of the Yellow Emperor*. It reads, "Why is it that wise

men of ancient times made such *tang ye* and *lao li*, and did not use them?" (see *Huang* 8) In this way, there is no mistake in thinking from this commonplace expression that there was a very close connection between *tang ye* (decoction) and *lao jiu* (unrefined fermented drink).

What hints at unrefined wine is the next passage:

Shi 2: Bian Que says: if a disease is on the epidermis, bathing and poultices may cure it. If a disease is in the blood vessels, *zhen shi* may cure it. If a disease is in the stomach or intestines, *jiu lao* may be taken. If it is in the bone marrow, there is nothing to be done, although it is said to be up to fate.

Si-ma Qian is probably quoting this passage from *Han Fei Zi*, chap. 21 'Yu Lao', but he is adding a little of his own hand to the expression.

Han 1: Bian Que said, if a disease is on the epidermis, bathing and poulticing may cure it. If a disease is in the subcutaneous parts, *zhen shi* may cure it. If a disease is in the stomach or intestines, *huo ji* may cure it. If it is in the bone marrow, there is nothing to be done: it is in the hands of fate.

What I wish to concentrate on here is the fact that *jiu lao* becomes *huo ji*. The chapter entitled 'Yu Lao' is taken to be a work written in the author Han Fei's youth, probably around 250 B.C. Undoubtedly, for Si-ma Qian to change *huo ji* to *jiu lao*, some sort of historical basis must have been contained within. In which case, we can deduce that there was a similar close connection between *jiu lao* and *huo ji* as there was between *tang ye* and *lao jiu*.

The word *ji* can only be seen once in the biography of Bian Que. Although only one concrete clinical treatment is recorded in the biography, the words *ji* and *ji he* appear therein.

Shi 3: Bian Que then ordered his apprentice Zi-yang to sharpen a needle on a whetstone, and to use it to pierce the outer *san yang wu hui* (a vital point). A little while later, the Crown Prince was revived. He immediately ordered Zi Bao to prepare *wu fen yu*, to boil it with

ji he of *ba jian* (reduce by eight), and to press this as a poultice to both armpits alternately. The Crown Prince got up, and further, his *yin* and *yang* had been balanced, and by taking *tang* for a mere 20 days, he was completely cured.

The meaning of *wu fen* and *ba jian* is unknown. Further, there are two other possible readings of “*yi ba jian zhi ji he zhu zhi*” (to boil this with *ji he* of *ba jian*), namely, “reduce by eight, *ji he* and boil this,” or “take *ba jian* of *ji*, mix them and boil this.” Since the meaning is not known, the reading is also uncertain. For the time being, let us take examples of *ji* and *ji he*.

It says in *Zhou Li*, ‘Tian Guan’,

Zhou (Zhou Li) 1: The function of *xiang ren* is to prepare a large metal pot, and supply *ji* of water and fire.

It says in the annotations by Zheng Xuan that *ji* means “a degree of quantity.” Then, in *Han Shu*, ‘Yi Wen Zhi’ volume, the item of Fang Ji Lüe, we also read that,

Han Shu 1: *Jing fang* is founded on the hot and cold of herb and mineral and, having determined the degree of the affliction, employing the nutrients in the medicinal taste, and depending on the adequacy in the affect of *qi*, discerning the nature of the medicine as five kinds of bitter and six kinds of spicy medicine, and by servicing (*ji*) of water and fire, it is possible to release the hitherto-blocked *qi*, and to loosen the hitherto-bound *qi*, and to restore the *qi* to its normal condition.

Jing fang is the field of clinical medicine centered around treatment with medicinal therapy. In *Zhou Li*, ‘Tian Guan’, it says,

Zhou 2: The functions of carbuncle doctors (surgeons) is to treat tumors, ulcers, cuts, and fractures by adjusting (*ji*) the spells (*zhu*), medicines (*yao*), scooping (*gua*) and removing (*sha*).

In the annotations, we read, “the character *zhu* must be replaced exactly

with another character also read *zhu*. . . *Zhu* means to apply the preparation. *Gua* means to scoop out pus and blood. *Sba* means to use medicines to remove malignant flesh,” and in the annotations by Jia Gongyan we read, “Apply the preparation to boils; afterwards, conduct *gua sba*. Moreover, the word *ji* is used to express the adequacy of *ji liang* (amount of quantity).” In the same way, in the annotations on dietary doctors we read, “there is a kind of *he ji* medicine in food,” and in the notes, “all use *ji he* and take it as medicine.”

In the *Li Ji*, ‘Shao Yi’, we further read,

Li (Li Ji) 1: The container of *ji* (prepared food) should be taken up with the right hand, and placed on the left side.

In the annotations by Zheng Xuan we read, “*ji* means well-prepared and adjusted (*ji he*) food and drink,” and in the annotations by Kong Yingda, “*ji* means a method of preparing and adjusting (*ji he*).” In *Han Shu*, ‘Yi Wen Zhi’ volume, the item of Fang Ji Lüe, we read,

Han Shu 2: The *yi jing* is a field of medicine that, examining the people’s blood and vessels, meridians and capillaries, bones and marrows, *yin* and *yang*, exterior and interior, make clear the origin of all sorts of diseases and the boundary between life and death, ascertains which manner of acupuncture, and *tang huo* (decoction and fire) should be used, and deals with all sorts of appropriate medicine and *ji he*. The nature of the most efficacious quantity (*ji*) possess a power which uses materials in the same way as a magnet attracts iron.

To sum up, *ji* means quantity or adjustment, or a preparation adjusted by the degree of quantity of medicines. *Ji he* means preparing and adjusting the degree of quantity of medicines. Therefore, “boil it with *ji he* of *ba jian*” probably means to prepare using the way of adjustment called *ba jian* (eight regulations) and then to heat the result over a flame.

Let us now turn our attention to the biography of Cang Gong. Chunyu Yi was a master of diagnosis, and of examination through the pulse in particular. The remarkable special characteristic of his clinical medicine

was to make diagnoses using the pulse (*mai fa*), and to then treat the affliction by giving a preparation based upon this. It is fair to say that his attainments and confidence in methods of diagnosis using the pulse, which developed together with acupuncture and moxibustion treatment, supported his medical activities. While keeping that in mind, let us pick up some examples of prescriptions which are called *tang*, and related prescriptions, from the medical records of Chun-yu Yi.

Sbi 4: The youngest child of the middle son of the King of Qi became ill. The king called me and ordered me to examine the child's pulse. I reported the following: "He is suffering from *qi ge*." The patient feels a tightness in the chest, and his food sticks in his throat. Sometimes, he will vomit sputum. . . . For the sake of the child, I quickly prepared *xia qi tang* (*qi*-lowering *tang*) and gave it to the child to drink. The child's *qi* lowered within a day, after two days he was well able to eat again, and after three days the affliction was completely cured.

Here, we meet for the first time with the generic medicines which gave rise in later generations to *tang ji* (decoction). In fact, *The Chinese Comprehensive Medical Dictionary* cites the prescription for *xia qi tang*, which uses fourteen different kinds of medicines, under the name of Cang Gong's prescription. It is inconceivable that *tang* possessing such a complex composition could have already existed at the time of Chun-yu Yi. However, these symptoms are very similar to the symptoms given, for example, in 'A prescription of decoction for curing coughs and reflux' in *Wuwei Han Dai Yi Jian*, and in *Jin Kui Yao Lue Fang Lun*, 'Fei Wei Fei Yong Ke Sou Shang Qi'. There is, therefore, sufficient room to view "*qi*-lowering *tang*" as a prototype of the *tang* that was mentioned in these books.

In the biography of Cang Gong, what is most worthy of our attention is probably the several kinds of prescriptions which are called by the generic name of *huo ji*. The compound medical term *huo ji*, in truth, only appears in *Han Fei Zi*, 'Yu Lao' and the biography of Cang Gong in *The Historical Record*. Though rather strange, it is not even to be seen in *The*

Inner Canon of the Yellow Emperor. Later generations had completely forgotten the term. However, this term, which was in use throughout the end of the Warring States period and the beginning of the Han dynasty is highly suggestive and throws light on the process of the formation of *tang ye*.

Shi 5: Ling Dun, who was a night-watch official of the Qi state, fell ill. . . . I diagnosed him, and said: “It is an affliction called *yong shang*. The patient cannot urinate and defecate.” Dun replied: “I have neither urinated nor defecated for three day now.” I made him drink *huo tang*. After the first draught, he urinated, after the second draught, he defecated, and after the third draught, the affliction was cured.

Apart from medicine, we can find another example of the word *huo ji*. For example, in *Li Ji*, ‘Yue Ling’, we read,

Li 2: Then, order *da qiu* to ferment *shu* (a kind of millet) and rice, prepare malted rice at the appropriate time, soak in fine water and boil it, choose a spring and stream with a good scent, and use very good vessels, thus and thus obtain *huo ji*.

In the annotations we read, “Matured alcoholic drink is called *qiu*. *Da qiu* is the chief official in charge of the alcoholic drink. . . . *Huo ji* means a balance between raw and maturated materials.” In the notes, we read, “When boiling rice and preparing alcoholic drink to attain for certain a midpoint between raw and mature materials through *huo ji*, that is to obtain *huo ji*.” This means to mix the boiled rice and the malted rice to an appropriate degree, put it over a fire, and thus cause it to ferment. Further, in *Xun Zi*, chap. 16 ‘Jiang Guo Pian’, we read,

Xun (Xun Zi) 1: If the shape of mold is right, the quality of gold and tin is good, the artisan’s techniques and *huo ji* are obtained, when the mold is tripped, there will be a work comparable to a marvelous sword by the great swordsmith, Mo Xie.

In Yang Jing’s annotations, we read, “To obtain *huo ji* is to attain a good

balance between the raw and the processed, and obtain an excellent result.” At any rate, a series of operations, namely blending matured materials and raw materials, putting the materials on a fire, and producing a kind of fermented preparation, is called *huo ji*. Of course, from the examples of usage in *Han Fei Zi*, we know that the generic name for preparations produced by this operation is also *huo ji*.

There are five further examples of prescriptions under the generic name of *huo ji*:

Shi 6: Chang Xin, a court warehouse official of the Qi state fell ill. I went in his house and examined his pulse, then reported thus: “It is a fever of your *qi*. However, you are suffering from hot perspiration, and your pulse has faded slightly. You will not die.” . . . I immediately prepared a *ye tang huo ji*, and treated him to draw out the fever. After the first draught, he ceased to perspire, after the second draught his fever abated, and after the third draught the affliction was cured.

Huo ji was originally a word which denoted the operation of preparing medicines and, because there was no stipulation as to the materials, it is not necessarily the case that this *ye tang* of *huo ji* is the same as the *huo ji tang* in *Shi* 5. In fact, *huo ji tang* was a cathartic, whereas this *ye tang* of *huo ji* was used specifically as an antipyretic.

The word *ye tang* itself can be seen in *Han Shu*, ‘Jiao Si Zhi’ volume. The following is an article written about Wang Mang, emperor of the Xin dynasty, shortly after he ascended to the throne:

Han Shu 3: When two years had passed since Mang seized the throne, he set out to acquire the techniques of perennial youth and long life, following the words of the alchemist Su Le, he constructed the Eight Winds Tower in the imperial court. This tower was completed at a cost of 10,000 *jin* of gold. He had music played on it, and made *ye tang* in compliance with the winds.

Ru Chun writes in the annotations, “In (the *Han Shu*) ‘Yi Wen Zhi’ volume, there is *Ye Tang Jing*. Its meaning is unknown.” A book called *Ye*

Tang Jing Fa in the existing text of *Han Shu* was probably the same book that Ru Chun knew as *Ye Tang Jing*. Wang Mang's *ye tang* found herein is undoubtedly an elixir for immortality.

There are two further examples of *huo ji tang* which are used in the treatment of urinary and fecal dysfunction:

Shi 7: The mother of the King of Qi fell ill. The King called me, made me to go to her room and examine her pulse. I reported thus: "A feverish, malignant tumor has lodged in her bladder. It will be difficult for her to urinate and defecate, and her urine will be red." I made her drink *huo ji tang*. After the first draught, she urinated and defecated, and after the second draught her affliction was cured, and her urine returned to normal.

Shi 8: Chu Yu, who was a wife of the Chief Prosecutor, Bei Kong of the Qi state, fell ill. . . . I examined her pulse and reported thus: "A colic has lodged in her bladder. It will be difficult for her to urinate and defecate, and her urine will be red. When this affliction meets with the cold, she will wet the bed, and her abdomen will swell up." . . . I then applied moxa to each of the *jue yin* vessels in the right and left feet. She immediately stopped wetting the bed, her urine became clear, and her lower abdominal pain ceased. Further, I made *huo ji tang* and had her drink it. Within three days her colic symptoms had cleared up and she was cured.

Next, there is a broth of grains and gruel made by applying the *huo ji* operation:

Shi 9: Minister of War, Chun-yu of the Qi state fell ill. I examined his pulse, and reported thus: "This is the affliction which is called *dong feng*. The condition of *dong feng* is such that when food and drink pass through the throat, they go directly out of the back passage." . . . I then commanded him thus: "Concoct a broth of *huo ji* grains (*huo ji mi zhi*) and drink it. Your affliction will be cured after seven or eight days." . . . His family summoned me again. I called upon them and inquired as to his condition. "All was as you

diagnosed, master. I immediately concocted a broth of *huo ji* grains and drank it. After seven or eight days, my affliction was cured.”

The symptoms are such that any food which is taken immediately becomes feces and is expelled.

Shi 10: When the King of Qi was still the Marquis of Yangxu, he was taken serious ill. . . . I examined his pulse, and diagnosed palsy. There is a stiffness in the right armpit, to the same size as an upturned sake cup. Due to this, he has a cough, and a reflux, and is unable to eat. I immediately prepared him *huo ji* gruel (*huo ji zhou*) and made him drink it. After six days, his *qi* was lowered. I further made him take pills. After six days of fluctuations, the affliction was cured.

Viewed from the perspective that pills were used to bolster the efficacy of the preparation leads us to understand that the effects expected of the *huo ji* gruel were in no way strong enough.

If we now treat *ye tang huo ji* as a generic term for preparations as well, what is generally identified as *huo ji* or, to put it another way, what is thought to have been prepared by the operation known as *huo ji*, are the four kinds of *huo ji tang* (three examples), *ye tang huo ji*, *huo ji* grains broth, and *huo ji* gruel (one example of each). Concerning the effect, *huo ji tang*, which was used as a cathartic, is called to mind immediately as preparations made from boiling in water and boiling in alcoholic drink and vinegar which were used to treat urinary tract infections in *Wu Shi Er Bing Fang*, that which I called Prototype *tang ye* I and II. In contrast, the material which changed its structure and came to be used as an effective antipyretic was *ye tang hou ji*. *Huo ji* grains broth, which was used to halt diarrhea, and *huo ji* gruel, which was used to lower *qi*, is akin to Prototype *tang ye* III, but let us consider it from the point that *huo ji* grains broth strengthened the nature of foods for patient use, and *huo ji* gruel was used for the same effects as the *xia qi tang* (*qi*-lowering *tang*) found in *Shi* 4.

In one other place in the biography of Cang Gong, the word *ji* appears. This is a word belonging to the King of Qi's court physician,

which Chun-yu Yi rejected as being “your argument is far from the truth.”

Sbi 11: In the medicinal stone (*yao shi*), there is *ji* of *yin*, *yang*, fire, and water. Therefore, when the body is feverish inside, cure it by using a *yin* stone with soft *ji* (*yin shi rou ji*), and when the body is suffering from internal chills, cure it by using a *yang* stone with hard *ji* (*yang shi gang ji*).

The *ji* mentioned here is not an operation, but rather, indicates a preparation. There are no other examples of this usage.

Let us now move on to *tang* other than *huo ji*.

Sbi 12: An official with the fifth peerage had an ache in his decayed tooth. I applied moxa to the *da yang ming* vessel of the left, made up *ku shen tang* and had him rinse his mouth with three *sheng* (0.198 liters) a day. After five or six days of fluctuations, the toothache was cured.

Ku shen is *Sophora flavescens*, var. *Galegoides*. “Take 1 *sheng* of *ku shen*, infuse it in 1 *dou* of water and make 7 *sheng*, and drain the lees” can be seen in a prescription for *ku shen tang* in *Jin Kui Yao Lue Fang Lun*, chap. 3. Chun-yu Yi’s prescriptions are essentially the same.

Sbi 13: I diagnosed the empress dowager’s younger brother, Song Jian, from his outward appearance, and reported the following: “You are ill. After four or five days, your loins will hurt and you will be unable neither to look down nor look up and, what is more, you will be unable to urinate.” . . . I immediately prepared a soft decoction (*rou tang*) and had him drink it. After about eighteen days, the affliction was cured.

Song Jian’s affliction was lumbago which had begun the previous night, in that when he tried to lift a rock, he could not stand up. Maybe this was a kind of slipped disc. *Rou tang* is a pain killer for that, but *rou* is the same character as in *rou ji* in *Sbi 11*, and seems to be a word which denotes the way in which it proves effective. Chun-yu Yi quotes the

jargon words *han yao* (rough medicine) and *gang yao* (hard medicine). The concept *rou* is the opposite of this *han* or *gang*. Teng Wei-yin states that, “*rou tang* is a supplementary medicine. It is used as the opposite to *gang ji*,” but there is still room for debate as to how much the *gang* and *rou* correspond to the *gong* (attack) and *bu* (supplement) of later generations.

Chun-yu Yi, it is said, used *tang ji* not only as a treatment, but also taught the use of *tang* to pupils.

Shi 14: The King of Zichuan once ordered the chief horseman Feng Xin to learn the arts of healing. I taught him the diagnostics, the theory on the order and retrogression in the flow of *qi*, *yao fa* (the use of medicines), the arts of determining the five tastes (salty, bitter, sour, spicy, and sweet), and *he ji tang fa* (the use and preparation of *tang*).

He ji is the same as *ji he*. What is important is the fact that *yao fa* is separate and distinct from *he ji tang fa*. Whether as a form of medicinal preparation or as a method of preparing it, *tang ye* had already been awarded its own independent status. The comparative importance which *tang ye* holds in the medical treatments of Chun-yu Yi can be understood immediately from an examination of twenty-five clinical records, but what must be touched upon before that is *yao jiu*, or medicinal alcoholic drink.

Shi 15: The North King of Qi fell ill, and called me. I examined his pulse and told him: “this is *feng jue* (wind deficiency),⁹ or a tightness in the chest.” I thus prepared a medicinal alcoholic drink (*yao jiu*), and when he had exhausted 3 *shi* (30 *dou*) of it, the disease was cured.

The efficacy of this medicinal alcoholic drink is similar to that of *ye tang huo ji* or *huo ji* gruel. This is probably not “boiled with alcoholic drink,” but a kind of unrefined fermented drink (*lao ji*).

According to Chun-yu Yi’s medical records, of twenty five patients who had been examined, ten were diagnosed as being beyond help, and were accorded no treatment. The primary key to diagnosis is emphasized

Table 3

Decoction (<i>tang</i>) & fermentation by fire (<i>huo ji</i>)	9
Medicinal alcoholic drink (<i>yao jin</i>)	1
Powders	2
Pills	1
Suppositories	2
Moxibustion	2
Acupuncture	2
Total	19

Table 4

<i>Huo ji tang</i>	Cathartic	3
<i>Ye tang huo ji</i>	Antipyretic	1
<i>Huo ji</i> rice broth	Halts diarrhea	1
<i>Huo ji</i> gruel	Retrograde <i>qi</i> suppresser	1
<i>Qi</i> -lowering <i>tang</i>	Retrograde <i>qi</i> suppresser	1
Soft <i>tang</i>	Painkiller	1
<i>Ku shen tang</i>	Mouthwash	1
<i>Yao jin</i>	Antipyretic & retrograde <i>qi</i> suppresser	1
Total		10

from time to time as being “a decision between life and death” in *The Inner Canon of the Yellow Emperor*, and this phraseology can also already be seen in the biography of Cang Gong. This was the same not only in ancient China, but also in ancient Greece as well,¹⁰ and it was a condition of being an eminent physician to thoroughly ascertain whether a patient could be saved or not, and to refuse to lay hands on those patients who could not be saved. In such cases, Chun-yu Yi simply explains the diagnosis and the reasons why. The remaining fifteen patients recover in an extremely smooth fashion, but this is no more than is to be expected. Those clinical treatments are laid out in Table 3. There are three cases where two treatments are used in conjunction with each other. Those which can be called either by the name *tang* or by the name *huo ji* occupy

50% of the total, and even those which lay claim to the name of *tang* alone make up just under 40%. If medicinal alcoholic drink are added to this, the proportion is raised even further.

Tang, *huo ji*, and *yao jiu* (medicinal alcoholic drink) are all laid out in Table 4. Of the twenty cases of three kinds of Prototype *tang ye* in *Wu Shi Er Bing Fang*, twelve of them, or 60%, are used in the treatment of urinary tract disorders. Nevertheless, there are herein, only three cases of *huo ji tang* as cathartics, which account for no more than 30% over all. Further, although *huo ji* of *Han Fei Zi* is replaced by *jiu lao* (unrefined fermented drink) in the biography of Bian Que, *huo ji* appears here on the one hand as being linked to the concept of *tang*, and on the other hand as being linked to the concept of rice broth and gruel. Moreover, medicinal alcoholic drink which displays an efficacy similar to that of *ye tang* and gruel which come under the generic name of *huo ji* are also included here.

There is nothing recorded for the process of preparations in the biography of Cang Gong and, excluding one or two exceptions, there are no writings on the ingredients which were in use either. Therefore, there is also a limit to how much can be deduced. However, viewed from the Proto-*tang ye* in *Wu Shi Er Bing Fang*, there can be no doubt that the process underwent a considerably large change. Prototype *tang ye* I and II already possessed the concept of *tang* or *tang ye*, and, moreover, two examples among them share the common concepts of *huo ji* with rice broth and gruel, which belonged to Prototype *tang ye* III. In Chun-yu Yi's time, it is clearly evident that the concept of *tang ye* as a general form of medicinal preparations was already fully formed.

5

The Inner Canon of the Yellow Emperor is the work of the Yellow Emperor school, which advocated acupuncture. Nonetheless, it is inconceivable that they were able to ignore medicinal treatments, or that they did not

use them. We have a few very important and suggestive clues about this issue. There is no doubt that some of the passages were written either before Chun-yu Yi's clinical records or during the same period of time. I believe that most, however, were written after Chun-yu Yi's time, between the late years of the Western Han dynasty and the early years of the Eastern Han dynasty. If this is the case, this would mean that they are a bridge between the biography of Cang Gong and *Wuwei Han Dai Yi Jian*.

The word *tang* was used, as it is in modern Japanese, simply to mean "boiling in water." We then have the two cases of boiling/hot water used for drinking and that used for bathing. It was used in the former sense in expressions such as the following from *The Grand Basic*, vol. 27 'Qi Xie', or *The Divine Pivot*, chap. 80 'Da Huo Lun': "If you have already eaten or drunk hot *tang* . . .," as well as the following from *The Grand Basic*, vol. 28 'Bi Lun': "The feet are as if they had stepped on ice, and the stomach is sometimes as if it were full of *tang*." Examples of the latter include the following from *The Grand Basic*, vol. 27 'Xie Zhuan', or *The Divine Pivot*, chap. 66 'Bai Bing Shi Sheng': "Heated *qi* descends into the thighs, like *tang* being poured," the following from *The Grand Basic*, vol. 25 'San Yue' (*The Basic Question*, chap. 35 'Yue Lun'): "The chills caused by ague cannot be warmed by *tang* and fire," and the following from *The Grand Basic*, vol. 3 'Yin Yang Za Shuo', or *The Basic Question*, chap. 44 'Bi Lun'): "If one massages the lower abdomen and bladder, it will be as if *tang* were poured on the calves." In the case of the following, from *The Grand Basic*, vol. 21 'Zhu Yuan Suo Sheng', or *The Divine Pivot*, chap. 1 'Jiu Zhen Shi Er Yuan', either meaning could be inferred: "When piercing is done for a fever, it is as if the hands were probing in *tang*." As for examples of the *tang* containing medicines, in *The Basic Question*, chap. 19 'Yu Ji Zhen Cang Lun', dealing with a disease of "numbness, tumors with pain": "In this case, *tang* and poultices, moxibustion and acupuncture should be used to get rid of it." In reference to a different ailment, the same work goes on to say: "In this case, one should massage, give medicine, and bathe the patient." "Bathe" here refers to bathing in hot water, whereas "*tang*" of "*tang* and poultices" was probably applied by

placing the afflicted part in a container of medicated hot water and warming it.

The most conspicuous characteristic of the use of the term *tang* in *The Inner Canon of the Yellow Emperor* is probably that it is used as a concept to indicate a general form of medicinal prescriptions. In the case of *feng jue's* treatment, we have the following from *The Grand Basic*, vol. 25 'Re Bing Shuo', or *The Basic Question*, chap. 33 'Ping Re Bing Lun':

Huang 2: Pierce the outside and inside, and give *tang*.

Yang Shang-shan's notes explain that, "the *yin/yang*, outer/inner vessels are pierced, and thus the exterior is treated. *Tang ye* are given, and thus the interior is treated." Furthermore, in *I Sin Po*, vol. 1, the following quotation from *The Grand Basic* can be found:

Huang 3: Illnesses are caused by wind, cold, heat, humidity, drink, food, and sex. Those who do not have illnesses of the mind should get rid of their illnesses using needles and *tang yao*. In the case of those who fall mentally ill by rapture, wrath, grief and obsession, one should first clear the mind through reason, getting rid of rapture, wrath, grief and obsession, and then make use of needles and *tang yao* to save the person. Such a person cannot be cured by needles and *tang yao* alone.

Huang 2 is one of the few examples which mentions using medicinal treatment in conjunction with acupuncture. *Huang 3* is a passage which differentiates between illnesses caused by mental factors and other illnesses, and also relates the fundamentals of treating such illnesses. In the latter, *tang yao* probably refers to "decoctions" and "medicines" as two separate things. Chun-yu Yi also made a distinction between the use of "decoctions" and the use of "medicine."

The Yellow Emperor school, it seems, had been using the term "*tang ye*" since the early period. This can be seen in two writings that I consider to belong to the earliest work in *The Inner Canon of the Yellow Emperor*.

Huang 4: The Yellow Emperor was sitting in the Government Palace. Lei Gong said, “I have learned medicine from your Majesty, and when I passed the knowledge on to my apprentices, I taught them the theory of meridians, *cong rong xing fa* (?), acupuncture and moxibustion upon the *yin* and *yang* vessels, and the nutrition of decoctions (*tang ye suo zi*), just as your majesty taught these to me.” (*The Grand Basic*, vol. 29 ‘Shui Lun’, or *The Basic Question*, chap. 81 ‘Jie Jing Wei Lun’)

Huang 5: The Yellow Emperor said, “you are truly an expert on injuries to the five organs, diseases of the six viscera that cannot be cured, the failures of acupuncture treatment, illnesses suited to the use of strong medicines, and the nourishment of *tang ye*. Speak of this in detail. Explain everything by word of mouth. If there is any affliction that you cannot cure, please ask.” Lei Gong said, “when the liver, kidneys, and spleen are empty, the body feels heavy, and one suffers. Efficacious medicines, acupuncture and moxibustion, *bian shi*, and *tang ye* can sometimes be used to cure the patient, but they do not always work. Please tell me the reason for this.” (*The Grand Basic*, vol. 16 ‘Mai Lun’, *The Basic Question*, chap. 76 ‘Shi Cong Rong Lun’)

In the passage, *tang ye* (decoction) is compared to strong or efficacious medicine. It was probably generally considered a milder type of medicinal preparations. The following example also exists:

Huang 6: In medieval times, when treating an illness, treatment was begun as soon as the person fell ill. *Tang ye* was given for ten days, and thus illnesses due to the “eight winds and five paralyses” were driven out. After ten days, if the disease was not cured, roots of medicinal grasses were used. . . . In recent times, when treating an illness, this is not the case. . . . When symptoms had already appeared in the body, then the exterior was treated with small needles, and the interior was treated with *tang ye*.” (*The Grand Basic*, vol. 15 ‘Se Mai Zhen’, or *The Basic Question*, chap. 13 ‘Yi Jing Bian Qi Lun’)

The comparison of small needles to *tang ye* generalized *Huang 2*. These writings suggest that the Yellow Emperor school had recognized the generality of the use of the term *tang ye* to represent medicinal preparations. It may also be that they favored the use of *tang ye* as a supplementary means of treatment or as a means of treatment used in conjunction with acupuncture.

In any case, there are only two examples in *The Inner Canon of the Yellow Emperor* of specific formulas for *tang ye*.

Huang 7: An ailment which appears in the armpit is called a *bai ci*. This is a woman's ailment. Moxibustion is performed on it. The condition is characterized by a large festering part, in the middle of which is a patch of live flesh about the size of a red *adzuki* bean. To cure this, 1 *sheng* each of *ling qiao* grass (water caltrop?) roots and red pine seeds are cut up finely, and boiled in one and half-*dou* of water, until it is reduced to 3 *sheng*. The patient is forced to drink this, then dressed in thick clothing and set upon a pot. If it makes her perspiration reach her feet, she will be cured." (*The Grand Basic*, vol. 26 'Yong Ju', or *The Divine Pivot*, chap. 81 'Yong Ju')

This clinical treatment is very similar to *Wu 17* for tetanus and *Wu 24* and *26* for carbuncles. In particular, the treatment after taking medicine is extremely similar to those of *Wu 17*: "Sit and wrap the body in warm clothing, and immediately □ once perspiration reaches the feet." The only difference is that, whereas in *Wu Shi Er Bing Fang*, boiling in alcoholic drink is used, here boiling in water is used, and that the patient should sit upon a pot to induce perspiration. As medical treatments, these can be considered to be of the same lineage. Accordingly, in the transition from boiling in alcoholic drink to boiling in water, one can trace the footsteps of the formation of *tang ye*.

One more example is that of *ban xia tang*. According to Taki Genkan, *ban xia* (*Pinellia tuberifera*, *Ten.*) tablets seen in the biography of Cang Gong were used as a laxative, but these *ban xia* decoctions were given for insomnia.

Huang 8: The prescription of this *tang* uses 8 *sheng* of water that has flowed over one thousand *li* in a large river. Raise the top ten thousand times, scoop 5 *sheng* from the top and boil. Burn reeds as kindling and boil the water greatly on it. . . . Measure 1 *sheng* of *shu* grains, and grind 5 *he* (half of 1 *sheng*) of *ban xia* into a powder, then gradually boil the broth down to one and half *sheng*. Let settle and remove the lees that have formed, and drink one small cup of the broth. Drink three times per day, gradually increasing the dosage, until cured. Those who have just gotten the illness for the first time will fall asleep immediately after having one cup, and will be cured if they sweat. Those who have had the illness for longer will be cured if they drink three times.” (*The Grand Basic*, vol. 12 ‘Ying Wei Qi Xing’, or *The Divine Pivot*, chap. 71 ‘Xie Ke’)

The aim of this treatment is, “to compensate for deficiencies, remove excesses, correct the balance between void and form, and by these means to be rid of evil.” Furthermore, “Drinking one potion of *ban xia* decoction, the *yin* and *yang* flow smoothly, and one falls asleep immediately.” The water in a major river which has flowed at least one thousand *li*, is naturally, turbid water. “Raise the top ten thousand times” probably means to repeatedly allow impurities of the water settle and to skin off the top. It means to obtain 5 *sheng* of pure water from 8 *sheng* of turbid water. The reed is a waterside plant, and is seen as having its nature in common with water.¹¹ According to *Huai Nan Zi*, vol. 3 ‘Tian Wen Xun’, the goddess Nyu Huo gathered the ashes of reeds to control floods. Ashes of reeds signifies dryness. If something is cooked over reeds, the process of evaporation is thought to be promoted. This type of operation, which has magical significance, concludes with water being prepared for boiling. As previously mentioned, *shu* millet was a good grain second only to rice in esteem. If there is only *shu* millet, it would probably be made into a gruel or rice broth, but if powdered *ban xia* was added, and the lees were strained out, then it became a form of medicinal prescription called *tang*.

We have precious testimony as to the case of five-grain *tang ye* and *lao*

li in *The Grand Basic*, vol. 19 ‘Zhi Gu Jin’, or *The Basic Question*, chap. 14 ‘Tang Ye Lao Li Lun’:

Huang 9: The Yellow Emperor asked Qi Bo, “what should one do to make *tang ye*, and *lao li* from the five grains?” Qi Bo answered, “one must by all means use rice, and cook using rice straws as kindling . . .” The Yellow Emperor asked, “why is it that wise men of ancient times made such *tang ye* and *lao li*, but did not use them?” Qi Bo answered, “wise men of ancient times prepared these just in case they were needed.”

We have proof here that what was held in the highest importance, not only in alcoholic drinks but also in five-grain *tang ye*, was rice.

An even more suggestive question is posed in the passage that follows.

Huang 10: In ancient times, although *tang ye* was made, it was not used. . . . In modern times, the interior is treated by the *bi ji* and *du yao*, and the exterior is treated using *chan shi* and *zhen ai*.

Examining the phrasing, however, one understands that what is really meant is “*bi ji* (necessary preparation)/*du yao* (efficacious medicine)” in contrast to “*chan shi* (surgical implement)/*zhen ai* (needle and moxa).” So, what is meant by *bi ji*? Fortunately, this term is used in one other writing from *The Grand Basic*, vol. 15 ‘Se Mai Zhen’, or *The Basic Question*, chap. 15 ‘Yu Ban Lun Yao Pian’:

Huang 11: When the color of illness appears in the upper, lower, left, and right areas of the face, there are important points to be noted. Illnesses that manifest themselves with a pale color are mainly treated with *tang ye*. They are cured in ten days. Illnesses that manifest themselves with a dark color are mainly treated with *bi ji*. They are cured in twenty-one days. Illnesses that manifest themselves with an extremely dark color are mainly treated with *lao jiu*. They are cured in one hundred days.

Treatments were deemed necessary according to the length of time re-

quired to cure the illness. *Tang ye* was associated with those requiring the shortest time, followed by *bi ji* and, finally, *lao jiu*. The *bi ji* referred to was doubtless some form of medicinal preparation, the effects of which were not as immediate as those of *tang ye* and which was not used on such a long-term basis as *lao jiu*.

This brings *huo ji* to mind. As a medical term, *huo ji* appears only in *Han Fei Zi*, 'Yu Lao', and *The Historical Record*, biography of Cang Gong. The term then disappears from written history. Si-ma Qian rewrote what appears as *huo ji* in 'Yu Lao' as *li jiu* in the biography of Bian Que. It seems that by that time there was little familiarity with use of this term, and furthermore, that something called *huo ji* was taken to mean one type of unrefined alcoholic drink. If this is the case, it is understandable that the character *huo* whose role or meaning in this term was no longer understood, could be mistakenly replaced by the similar-looking character *bi*.

In short, I take the *bi ji* of *Huang* 10 and 11 to be a mistranscription of *huo ji*. Let us try reading the previous passages, making this one correction. According to *Huang* 10, *huo ji* was a preparation likely to be compared and contrasted with the surgical tools *chan shi*. According to *Huang* 11, *huo ji* was a preparation that ranked somewhere between *tang ye* and *lao jiu*. In both *Huang* 10 and *Huang* 11, it seems that the meaning of *huo ji* was not yet forgotten.

What, then, was this *lao jiu*? It would probably be more appropriate to refer to *lao jiu* and *li jiu* in the same breath. We have already seen *lao li* mentioned alongside *tang ye* in *Huang* 9. The passage of *The Grand Basic*, citing *I Sin Po*, vol. 30, has the following to say for *lao jiu* and *li jiu*:

Huang 12: *Lao* and *li* are consistent with the true nature of wise men, so one must drink them. By drinking them, illness is cured and the heart is made light. This is a "poison" that is sure to improve one's nature.

According to *Shuo Wen*, *lao* was "a fermented drink with broth and dregs," hence, an unrefined alcoholic drink. *Li* was "matured overnight," hence, a sweet drink made in one night from fermented rice. According

to Xu Ying, *li jiu* was very weak-tasting, whereas *lao* was full-flavored and sweet. Of course, there were also kinds of *lao li* with medicines added to them.

There is one mention of *li* in *The Inner Canon of the Yellow Emperor*:

Huang 13: The Yellow Emperor asked Qi Bo, “There is a person suffering from fullness of the heart and abdomen. If he eats breakfast, he cannot eat supper. What illness is this?” Qi Bo said, “This is called swelling.” The Emperor asked how to treat this. Qi Bo replied, “To treat this, chicken feces *li* is used. One dose will make it better, and two doses will cure it.” (*The Grand Basic*, vol. 29 ‘Zhang Lun’, or *The Basic Question*, vol. 11 ‘Fu Zhong Lun’)

According to Yang Shang-shan’s notes, chicken feces *li* is made as follows: “Chicken excrement is taken and rolled into balls. It is then heated until smoke appears. Ladle out one and half a *dou* of refined alcoholic drink, and strain it to obtain a broth. This is chicken feces *li*.” One wonders what source he used for these notes. We can certainly see from examples in *Wu Shi Er Bing Fang* that this sort of prescription existed, but this prescription does not match the definition of a drink “matured overnight.”

Lao is also mentioned as having been used for numbness.

Huang 14: When one’s body receives frequent physical shock or terror, *qi* won’t pass through the muscles and vessels, causing a disease known as numbness. To treat it, massage and *lao li* (unrefined alcoholic drink medicine) are used. (*The Grand Basic*, vol. 19 ‘Zhi Xing Zhi Suo Yi’, or *The Basic Question*, chap. 24 ‘Xue Qi Xing Zhi Pian’, or *The Divine Pivot*, chap. 78 ‘Jiu Zhen Lun’)

Yang Shang-shan changed *lao yao* to *lao li*, and Wang Bing notes that “*lao yao* refers to medicinal alcoholic drink.” In any case, it is not clear what sort of preparations *lao li* were. One wonders what was meant by the statements that it worked on “numbness” and was “a poison that improved one’s nature.”

We find the answer to the above question in *Yang Sheng Fang* and *Za*

Liao Fang, two works that were discovered along with *Wu Shi Er Bing Fang* in the Mawangdui Han tomb. The relevant sections of these two works have unfortunately suffered severe destruction, but according to Ma Ji-xing,¹² in *Yang Sheng Fang*, as far as can be made out, six methods of brewing medicinal alcoholic drink are included.

Extracts from his work follow:

1. Medicinal alcoholic drink brewed by combining *mai dong* (the same as *men dong*, or *dian ji*) and grains such as *shu* millet. (The original title is “A method of quick vinegar-making using *dian ji*,” used to treat “impotency in those who are too old and feeble.”)
2. Medicinal alcoholic drink brewed with grains such as *shu* millet and rice. (“A method of brewing *li*,” used to treat “impotency in those who are too old and feeble.” Ma Ji-xing says that this method seems to him to be extremely similar to the method of brewing *lao* described in *Shi Jing*, as cited in *Qi Min Yao Shu*.)
3. Medicinal alcoholic drink made from fine alcoholic drink and *mai lao* (unknown). (“Making *lao*.” This is a tonic.)
4. Medicinal alcoholic drink brewed with gypsum, *gao ben* (*Nothosmyrnium japonicum*, *Miq.*) and *niu xi* (*Achyranthes bidentata*, *Bl.*). (Method of production unclear, said to be “little-used.”)
5. Medicinal alcoholic drink brewed using materials such as *ze qi* (*Euphorbia helioscopia*, *L.*) and aconite. (Method of production unclear. A tonic, said to be “*lao* effective against internal diseases.”)
6. Medicinal alcoholic drink brewed using materials such as *ze qi*, *di jie* (*Polygonatum officinale*, *All.*), *shu* millet, rice, and aconite. (A tonic, said to be “*lao* effective against internal diseases.”)

The following is all that is found in *Za Liao Fang* about brewing medicinal alcoholic drinks:

Li jiu made using medicines such as *zhi* (medicinal name unknown) and climbing fig are placed in a steamer. (A tonic, said to be “□ □ add vinegar.”)

Incidentally, the method of producing *lao* in the *Shi Jing* referred to in

number 2 is probably the “*Shi Jing*’s method of making white *lao jiu*” cited in *Qi Min Yao Shu*, vol. 7 ‘Ben Ju Bing Jiu’:

Finely crush 1 *shi* of raw *shu* millet and 2 *jin* square of malt. Soak the malt in spring water, and seal it up. After two nights, the malt will have begun to froth. Cook 3 *dou* of rice, ferment again, and mix. Put a lid on the mixture and let sit. After five days, it will be ready. This *lao jiu* is sweet like milk.

The “square of malt” mentioned is a dried block of malt. The fermenting period is probably shorter because the drinks of *Yang Sheng Fang* are *li jiu*, rather than *lao jiu*. We know from this that *lao jiu* and *li jiu* made only from grains were also considered to have medicinal uses. Furthermore, among the seven *lao* and *li* of *Yang Sheng Fang* and *Za Liao Fang*, with the exception of number 4, of which nothing is known, it should be noted that all of them are tonics.

Luckily, the passage of number 6 on how to make *lao jiu* has been left to us in a state of relative completeness, and we are able to examine almost its entire content. According to Ma Ji-xing, the manufacturing process is divided into ten steps. Let us follow his method of classification as we examine these methods (items in parentheses are mainly explanations based on the notes):

Making *lao*

1. 1 *dou* each of *ze qi* and *di jie* are finely chopped up, and five □ *dou* (?) of water are used to □ □ □ □,
2. use the broth to boil the *zi zang* (material name unknown), □ □ □ □ □ □ □ □ and then,
3. take 1 *dou* each of malt and malted rice, □ □ □, when the time (one day and night) has passed, then,
4. □ □ □ 1 *dou* each of *shu* millet, rice, □ □ and water,
5. combine, pour in malt extract, and boil it as in the usual way for cooking rice.
6. Take three pieces of aconite and five of dried ginger, and *jiao mu* (medicinal name unclear). Cut these items down to the size of soybeans, and put in □ □.

7. First, put □ in the pot, put *shu* millet on top and ferment,
8. pour □ □ broth equally,
9. then, pour in 10 *dou* of fine alcoholic drink. Repeat three times,
10. then, □ □.
11. At *bu shi* (about 4 p.m.), drink one cup. Those who have already drunk one cup, and whose bodies itch, should rub. After continuing to drink this for one hundred days, the eyes will see more clearly, the ears will hear distinctly, the hands and feet will become strong, □ illnesses and hemiplegia □ (perhaps “will be cured”).

To brew this medicinal alcoholic drink, *shu* millet and rice were used as grains. *Ze qi*, *di jie*, *zi zang*, aconite, dried ginger, *jiao mu*, rice and wheat were used as malt. Furthermore, fine alcoholic drink was also added. There are not even a handful of preparations with such complicated compositions in *Wu Shi Er Bing Fang*.

This *lao jiu* is said to make the eyes and ears keen and the limbs strong. Hemiplegia is paralysis of one half of the body, a condition that is mentioned several times in *The Inner Canon of the Yellow Emperor*. In *Huang 11*, there is mention of *lao jiu* being used for 100 days, and here again we see it being given for a 100-day period. As Ma Ji-xing also notes, it is a nutritional supplement and tonic effective against feebleness, aging, and age-related illnesses. Doubtless, this is the “poison that improves one’s nature” mentioned in the quotation from *The Grand Basic*.

According to *Huang 11*, whereas *lao jiu* is used for 100 days, *tang ye* are used for ten days, and *huo ji* is used for twenty-one days. According to Chun-yu Yi’s medical records, preparations called *tang*, with the exception of soft *tang*, are given for between two to three days and five to six days. Soft *tang* are given for as long as eighteen days, *huo ji* grains broth for seven or eight days, *huo ji* gruel for twelve days, and *tang ye huo ji* for as long as twenty days for the treatment to be complete. Since medicinal alcoholic drink is said to use up 3 *dan* for a batch, it is reasonable to see its use as something that would take place over some length of time. This mention matches nicely with what is said in *The Inner Canon of the Yellow Emperor*.

6

The methods of production and categories of *tang ye* must have developed rapidly up to the end of the Western Han dynasty. The compilation of the thirty two volumes of *Tang Ye Jing Fa* bears witness to this. It is also noteworthy that, among the medical books recorded in *Han Shu*, 'Yi Wen Zhi', only this book bears the name of a type of medicinal preparation as a title. This suggests the place at the time for *tang ye* in the pharmacopeia. Notwithstanding, *tang ye* was not widespread, nor was it normally regarded as a representative or typical preparation.

In *Han Shu*, for example, the term *yi yao* (medical medicine) appears often, but the term *tang yao* (decocted medicine) appears only once, in the biography of Ai Ang (chap. 49):

Han Shu 4: Ang said, "when Your Majesty resided in Dai, the Empress Dowager fell sick once. For three years, Your Majesty did not sleep or change your clothes. Your Majesty would only allow her to take *tang yao* that you had tasted. . . ."

There is only one example in *Wuwei Han Dai Yi Jian*, of decoctions being prescribed. In *Lun Heng*, 'Dao Xu Pian', by Wang Chong of the Eastern Han dynasty, powders and tablets are presented as typical medicines.

Lun (Lun Heng) 1: As for the *qi* of various medicines, if a person is given one minced *be* of medicine or several dozen tablets, the medicine will be effective. The patient will be sick to the stomach, and will not be able to eat his fill.

Further, it says in 'Zhi Qi Pian',

Lun 2: A good physician is one who uses both needles and medicines skillfully, and who attempts treatment in accordance with the correct methods of medicine.

Wang Chong does not, in the end, use the word *tang yao*. Since there

were already doctors who used decoction frequently, such as Chun-yu Yi, by the first half of the Western Han dynasty, the question of what form the medicinal preparations should take was probably one of individual and school preferences, and the practitioner's personal forte and weaknesses.

Upon entering the Wei and Jin dynasties, however, the situation undergoes a sea change. Written in *Hua Yang Guo Zhi*, which is quoted in the annotations of the biography of Yang Xi in *San Guo Zhi*, chap. 45,

Hua Yang Guo Zhi: There was a man called Li Mi, a junior from the same province as Xi. . . . He was renowned for his devoted and pious service to his grandmother. When caring for her during her sickness, he would weep copious tears, lose his appetite, would not remove clothes either night or day, and tested all of her food and *tang yao* for poison by placing them in his own mouth.

Wen Xuan, chap. 7, Li Mi's 'Chen Qing Shi Biao' reads,

Wen Xuan: I always keep *tang yao* at hand, and have never done away with it.

Also, *Jin Shu*, chap. 33, the biography of Wang Xiang reads,

Jin Shu: When his parents were ill, he removed neither robes nor belt, and never failed to taste all of their *tang yao* himself.

In *Bao Pu Zi*, 'Nei Pian' by Ge Hong of the Jin dynasty, as has already been pointed out by Murakami Yoshimi,¹³ *tang yao* sometimes appears in the meaning of medicinal preparations. For example, in the vol. 5 'Zhi Li', we read,

Bao Pu Zi: A fool dares not to believe even in *tang yao* or in acupuncture and moxibustion, let alone a more profound technique (of immortality).

In other words, herbal decoctions, acupuncture, and moxibustion were already in common use as words to mean medical treatment.

There is no need for any more quotations. There was, however, one

more decisive change towards the end of the Eastern Han dynasty. What caused this is, I believe, the advent of a school of *tang ye* medicine which is symbolized in *Shang Han Za Bing Lun* by Zhang Zhong-jing.

Shang Han Za Bing Lun has gone through a process of several revisions before being handed down to the present day. It says in Zhang Zhong-jing's preface that, according to *The Grand Question, Jiu Juan, Ba Shi Yi Nan, Yin Yang Da Lun, Tai Lu Yao Lu*, and *Ping Mai Bian Zheng*, a total of sixteen volumes of *Shang Han Za Bing Lun* were written, but it is unclear how much of that is still the original format. The oldest surviving copy of the text are the seventh, eighth, and ninth volumes of *Mai Jing* by Wang Shu-he of the Jin dynasty. This is divided into *shang han* (chills) and *za bing* (miscellaneous illnesses), with *shang han* passing through the ninth and tenth volumes of *Qian Jin Yi Fang* by Sun Si-miao of the Tang dynasty to take its final shape as the *Shang Han Lun*, and *za bing* passing through *Jin Kui Yu Han Jing* to become *Jin Kui Yao Lue Fang Lun*. Those books on which Zhang Zhong-jing depended are, in the main, works on acupuncture and moxibustion treatment associated pulse diagnosis and treatment, and although they claim to "adopt a wide variety of techniques," one need only pay attention to the fact that books of pharmaceutical treatments are limited to *Tai Lu Yao Lu*.

The most striking characteristic of *Shang Han Za Bing Lun* and, what is at the same time, its largest contribution to later generations, lies in its systematic revision of pharmaceutical treatment based upon the methods of diagnosis, especially pulse diagnosis which developed together with treatment, especially methods of treatment involving acupuncture and moxibustion.¹⁴ Accordingly, the methods of treatment are made to correspond to the diagnosis on a one-to-one basis, and pharmaceutical treatment has escaped from the chains of mere empirical standards. This basic idea is as follows: Based upon a pulse diagnosis of the six cardinal vessels (three *yin*: *tai yin*, *shao yin*, *jue yin*, and three *yang*: *tai yang*, *shao yang*, *yang ming*), the syndromes of an illness are broadly classified into six types, the so-called six cardinal vessels illnesses. These six types of illness are then further sub-divided by type. Response to the type of illness through medical treatment. The type of pharmaceutical shares the main

properties of numerous compound constituents in common, and consequently, which share the main effects in common. A different group of pharmaceuticals is given for a different category of syndromes, and the dose is measured through slight changes, additions, and subtractions of what are pharmaceutical compounds such that small alterations in the prescription are necessary for slight differences in the symptoms of the same category of illness. Moreover, the theoretical premise that an illness invades the body from the outside inwards, and that it progresses, starting from *tai yang* illness into the three *yang* meridian illnesses, and thence into the three *yin* meridian illnesses, either continuously or fitfully, is contained within. In this way, pharmaceutical treatment metamorphosed from an accumulation of empirical knowledge to an individual system which was regulated by theory.

Another important feature of *Shang Han Za Bing Lun*, no less inferior, which left its influence on later generations is the fact that pharmaceutical treatments were essentially linked with *tang ye*.¹⁵ *Tai Lu Yao Lu*, on which Zhang Zhon-jing directly relied, has not survived to the present day, so it is not possible to verify the extent of his contributions. However, it would be permissible to view him as a character who stands at the pinnacle of the trend of clinical medicine which links *Tai Lu Yao Lu* and *Shang Han Za Bing Lun*. This school, in all probability, was influenced largely by schools of acupuncture and moxibustion, and was an eclectic school which conducted treatments alongside using all manner of techniques centered around pharmaceutical treatments based upon pulse diagnosis. In particular, their preferred form of medicinal preparation was *tang ye*. Already, by the beginning of the Western Han dynasty, there was the eclectic Chun-yu Yi, who conducted treatments mainly centered around *tang ye*, based upon pulse diagnosis, which he learned from *Mai Shu* of the Yellow Emperor and Bian Que. The Yellow Emperor school, which adopted acupuncture as their slogan, showed signs of preferring to use *tang ye* as a supporting treatment or as a joint treatment. Historically, there is a very cordial relationship between treatments involving pulse diagnosis and treatments involving *tang ye*. There can be no doubt that there existed schools who used a wide variety of *tang ye* and diag-

noses based upon pulse methods, in the so-called border area between pharmaceutical methods of treatment and acupuncture and moxibustion methods. *Tang Ye Jing Fa* was probably a text that collected together the fruits of these schools' successes up until the end of the Western Han dynasty.

However, in all probability, this school did not occupy the mainstream of eclectic schools or schools of pharmaceutical treatment. Rather, it was probably just a minority school. Although being far from decisive evidence, *Wuwei Han Dai Yi Jian* corroborates this point. There is no pulse diagnosis to be found herein. Not only this, this text, which does not touch upon pulse diagnosis, uses only a single example of *tang ye*. It has already been pointed out that the number of examples of use of the words *tang ye* and *tang ji* decoction of herbal medicine in the Eastern Han documents is extremely small.

Conditions changed dramatically at the end of the Eastern Han dynasty. The one school which crystallized all these successes in *Shang Han Za Bing Lun*, attempted an even tighter union between theory and past experience, and hammered out one to one correspondence between symptoms and their pharmaceutical treatments, and pressed on with the systemization of pharmacological treatment, awarding *tang ye* a core position based upon pulse diagnosis. The importance of the level and basic ideas attained by *Shang Han Za Bing Lun* is proven by the fact that the diagnosis/treatment methods (*bian zhong lun zhi*), which lie at the foundation of clinical medicine today, evolved from the so-called six cardinal vessels diagnosis system. Through the startling successes of the decoction school of medicine, personified in the name of Zhang Zhong-jing, the era of decoction was truly ushered in.

NOTES

1. Okanishi Tameto (1), *Honzō Gaisetsu* (An Outline of Ben Cao), Sogensha, 1972, p. 301.
2. Okanishi Tameto (2), 'Chugoku Igaku ni okeru Tanpo' (Prescriptions of Dan in Chinese Medicine) in *Chugoku Chusei Kagaku Gizhutsu Shi no Kenkyū* (A Study of the History of Science and Technology in Medieval China), ed. by Yabuuchi Kiyoshi, Kadokawa Shoten, 1963, p. 291.
3. The historians of medicine in modern China evidently think that it is entirely possible that Yi Yin created *tang ye*, or else that *tang ye* had already appeared by that era. For example, Chen Bang-xian (1), *Zhong Guo Yi Xue Shi* (History of Chinese Medicine), Shangwu Yinshuguan, 1957, 3rd printing, p. 13; and Jia De-dao (1), *Zhong Guo Yi Xue Shi Lǜe* (Abridged History of Chinese Medicine), Shanxi Renmin Chubanshe, 1979, pp. 8–10.
4. Jia (1) (p. 10, notes 8) quotes the relevant passage from *Huang Di Nei Jing*, and this appears to be the beginning of decoction.
5. All quotations are from *Wu Shi Er Bing Fang* (Fifty-two Prescriptions), ed. by Mawangdui Han Tomb's Silk Manuscripts Arrangement Group, Wenwu Chubanshe, 1979. For detailed explanations of the quoted text, refer to Yamada Keiji (ed.) (1), *Shin Hatsugen Chugoku Kagaku Shi Shiryo no Kenkyū: Yakuchūben* (A Study of Newly Discovered Material on the History of Chinese Science: Part of Translations), Research Institute of Humanities, Kyoto University, 1985. For the pharmaceuticals, refer to Morimura Kenichi (1), 'Shin Shutsudo Shiryo ni okeru Shizen Hinmoku no Kenkyū' (A Study of Natural Articles in Newly Unearthed Material), *Tobo Gakubō*, vol. 53, Kyoto, 1981; and Paul U. Unschuld (1), 'Mawangtui *Materia Medica*, A Comparative Analysis of Early Chinese Pharmaceutical Knowledge', *ZINBUN*, no. 18, 1982. For the methods of preparation, refer to Ma Ji-xing (1), 'Mawangdui gu Yi Shu Zhong you guan Yao Wu Zhi Ji de Wen Xian Kao Cha' (A Research of Literatures concerning Pharmaceutical Preparation in Medical Books from Mawangdui's Tomb), *Yao Xue Tong Bao*, Sept. 1979; and Shang Zhi Jun (1), 'Wu Shi Er Bing Fang, Yao Wu Pao Zhi Gai Kuang' (The Fifty-two Prescriptions, An Outline of Pharmaceutical Preparation), *Zhong Yao Tong Bao*, 6, 1982.
6. Shinoda Osamu (1), 'Kodai Shina ni okeru Kappo' (Cooking in Ancient China), in 'Chugoku Kodai Kagaku Gizhutsu Shi no Kenkyū' (A Study of the History of Science and Technology in Ancient China), *Tobo Gakubō*, vol. 30, Kyoto, 1959, pp. 253–274; Shinoda Osamu (2), *Chugoku Shokumotsu Shi* (History of Food in China), Shibata Shoten, 1974, p. 31. Also, refer to Hayashi Minao, 'Kandai no Inshoku' (Food and Drink in the Han Dynasty), *Tobo Gakubō*, vol. 48, Kyoto, 1975.

7. Shinoda (1), p. 262.
8. All quotations are from *Wuwei Han Dai Yi Jian*, ed. by Gonsu Province Museum and Wuwei Prefectural Culture Museum, Wenwu Chubanshe, 1975. For detailed explanations of the quoted text, refer to Yamada (1). Also, refer to Akahori Akira (1), 'Bui Kandai Ikan ni tsuite' (On Medical Tablets from Wuwei in the Han Dynasty), *Tobo Gakubo*, vol. 50, Kyoto, 1978, and Morimura (1).
9. "If a patient sweats and his body is hot, the condition is called *feng* (wind). If one sweats, and is feeling a tightness in the chest constantly, the condition is called *jue* (deficiency). So this illness is called *feng jue*." (*The Grand Basic*, vol. 25 'Re Bing Re', or *The Basic Question*, chap. 33 'Ping Re Bing Lun')
10. *Hippocratic Writings*, ed. with an Introduction by G.E.R. Lloyd, Penguin Books, 1983, p. 16.
11. According to instructions by Professor Hayashi Minao.
12. Ma Ji-xing (2), 'Wo Guo zuigu de Yao Ju Niang Zhi Fang' (The Oldest Chinese Methods of Brewing Medicinal Alcoholic Drink), *Yao Xue Tong Bao*, 1980, 7, pp. 28–29.
13. Murakami Yoshimi (1), 'Kanbo Shinhatsugen no Isho to Hobokushi' (Newly Discovered Medical Texts from Han Tombs and *Bao Pu Zi*), *Tobo Gakubo*, vol. 53, Kyoto, 1981, pp. 402–404.
14. Refer to Yamada Keiji (2), 'Gakumon Nihonka no Hoho Josetsu: Yoshimasu Todo *Yakucho* no Kinoho ni tsuite' (Preface to the Way of Learnings Japanization: On Inductive Method in Yoshimasu Todo's *Specifics of Medicine*), *UP*, Jan.–Feb. 1984.
15. Refer to Akahori Akira (2), 'Shin Shutsudo Shiryo to *Syokan Ron*' (Newly Unearthed Data and *Shang Han Lun*), *Chu I Rinsbo*, extra number, May 1982. According to Akahori, there are 99 *tang* prescriptions, 8 powders, 5 pills, 14 acupuncture and moxibustion, and 2 other prescriptions in *Shang Han Lun*, and it is worth paying attention to the fact that besides the pharmaceutical methods of treatment, this number of acupuncture and moxibustion prescriptions should have been included. This clearly proves the extremely close relation between the *tang ye* school, and the acupuncture and moxibustion school.