

THE
BEVERAGES OF THE CHINESE

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KUNG-FU

OR

TAUIST MEDICAL GYMNASTICS

—:O:—

THE POPULATION OF CHINA

—:O:—

A MODERN CHINESE ANATOMIST

AND

A CHAPTER IN CHINESE SURGERY

—:O:—

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TEA.

The first use of tea as a beverage in China dates from the commencement of the Sui (隋) dynasty (589 A.D.). Previous to this it appears to have been used as a medicine, and is said to be mentioned in Shên Nung's (神農) *Account of Aliments*, some 3,000 years before the beginning of our era. By some its origin is ascribed to Imperial notice in the After Han (後漢) dynasty (221-265 A.D.). It is recorded of one of the Heroes of the Three Kingdoms (about 221-263 A.D.) that he made his guests drink not less than seven pints of wine, but that a certain officer who could not drink more than three pints of wine, as a favour was allowed to have tea secretly given him in the place of wine. Mencius (368-321 B.C.) says—"In summer cold water was used in drinking; in winter, boiling water"—from which it may be inferred that tea was not then used. The use of tea, begun in the Sui dynasty, gained in reputation during the T'ang (唐), 620-907 A.D., and was abundant in that of the Sung (宋), 970-1280 A.D., being esteemed and used everywhere. It is stated that a duty on tea in the T'ang dynasty, to such an extent had its consumption

reached, was levied in the year 783 A.D. This duty was increased in the succeeding dynasty, the Sung, when tea was first sent up as annual tribute to the Emperor. We are, therefore, safe in assuming the origin of this beverage in the 6th century of our era, and that, although known earlier as a medicine, it was not till the 9th that its use became general over the Empire.

The above is the substance of two notes in *Notes and Queries* (Vol. III, Nos. 5 and 7). My own investigations have led me to the following account of the origin and antiquity of tea. In a work on Dietetics, entitled *Yin Shih Pien* (飲食辯), by *Chang Hsing-yün* (章杏雲), published in the 18th year of *Chia Ch'ing* (1814), and reprinted by *Ts'ao Chien* (曹建), in the 3rd year of *Tao Kwang* (1824), in 8 volumes, it is said in the section on tea that the *Pên Ts'ao* (*Great Herbal*), quoting the commentary on the *Erh Ya* (爾雅), a Dictionary of the 12th century B.C., by *K'wo* (郭), states that *chia-k'u-t'u* (槩苦茶) is tea. The people of the kingdom of *Shu* (蜀), modern *Sze-chuan*, called it *k'u-ch'a* (苦茶), bitter tea, also *chw'en* (葦), the old leaves of the tea plant. *Lu Yü* (陸羽), in the middle of the 8th century, author of the *Ch'a Ching* (茶經), a treatise on the tea plant, the earliest book on the subject, says there are five names given to tea, viz.,—*ch'a* (茶), *chia* (槩), *shě* (葍), *ming* (茗) [spring sprouts], and *chw'en* (葦). In the book called *Tan Ch'ien Lu* (丹鉛錄), tea is said to be the ancient *t'u* (荼), *sonchus oleraceus*, sow-thistle, a bitter edible plant. The *Shih Ching* (詩經) says:—Who ever says *t'u* is bitter? It is as sweet as the shepherd's purse. (*Capsella bursa pastoris*) *Ch'i* (薺). *Yen Shih-ku*

(顏師古), a celebrated scholar and one of the chief Imperial Secretaries in the first two reigns of the T'ang dynasty, 7th century, says:—There is a place called *Ch'a-ling* (茶陵), and that, in the Han dynasty, the name *ch'a* was first given to the plant *t'u*. In the *Spring and Autumn Annals* of the *Ch'i* (齊) kingdom, there occurs the character *t'u*. Both of the Han histories speak of the *T'u-ling* (茶陵). The geography of the same dynasty speaks of *Ch'a-ling* in the country of *Chang-sha* (長沙). The character *t'u* occurs twice in the *Erh Yà*. The character *ch'a* is made up of *grass*, *man*, and *wood*. It is said the *ch'a* character is not found in the *Six Classics*. Yang and Yen say it is found there. Under the radical *grass*, it quotes *t'u-k'u-ts'ai* (茶苦菜), as already explained by Kwo, in the *Shih Ching*. Under the section on *wood*, Kwo says of *chia-k'u-t'u* that soup can be made of its leaves. When picked early, it is called tea, later *ming*. There are clearly here, as our author maintains, two totally distinct things. *K'u-t'u* can be read as *Chai Chia* (宅加切). The *t'u* of *k'u-ts'ai* has retained its old sound. Yang has, therefore, not examined, our author asserts, this point carefully. There is great danger of pronouncing *t'u* as *ch'a*. It is not found in the ancient Herbals included among Drugs. The character first appeared in the *Herbal* of Su Kung-t'ang (蘇恭唐), an official who revised and completed the T'ang Dynasty *Materia Medica*, and Ch'ên Ts'ang-ch'i (陳藏器), first half of the 8th century. He published a work which may be translated:—*Omissions in previous Works of Materia Medica*. It is said to be found in Shên Nung's *Account of Aliments*, but this was added falsely by later writers. It does not occur in the ancient

records. Why do we know it was introduced afterwards? Because, before the time of Kwo's commentary on the *Erh Ya*, there was no such character as *ch'a*. How comes it then to be included in Shên Nung's list? In the *Shi Chi* (史記), and in the books of the anterior and after Han Dynasties, there was no *tea* character. In the time of the Three Kingdoms, in the Wu history there is an official named Wei Yao (韋曜), who did not drink wine; and, as it looked ill to be seated among guests and not to drink wine, Sun Hao (孫皓), the emperor, gave him *chw'en* (葷) in place of wine, that is tea.

In *Kang-hi's Dictionary*, it is said that everybody says that *tea* is the ancient *t'u*; but they do not know how many sorts there are of tea. The *t'u* of *chia-k'u-t'u* is the present tea. Sun says the *t'u* is not a clean plant, and is not the so-called *k'u-ts'ai* (bitter vegetable). The *chia-k'u-t'u* is said to resemble the *chih-tze* (梔子), *gardenia florida*. The *Pên Ts'ao* speaks of *shan-ch'a* (山茶), mountain or wild tea, *Camellia Japonica*, because its sprouts resemble the *ming* (茗).

Duty on tea was first levied in the 14th year of 德宗 (794 A.D.). It began then to be drunk as a beverage. Before this period, the drinks in use were soups made of flesh, vegetables, grains, and the juice of fruits. Every place has its distinctive name for the shrub or beverage, and these names are simply legion. The tea planters and sellers selected their own names, with a view to enhance the value of their article. Its consumption increased greatly after the T'ang. In the succeeding dynasties of the Sung and Yuen, more and more tea was drunk. In the Ming dynasty, tea was exchanged for

horses with the Hsi Fan (西番), Thibetans. There were officials appointed to control this duty on tea, which had become of very great importance, and added largely to the finances of the State.

The Indian account of the origin of tea is that Darma, son of an Indian king, who lived in profound solitude, devoting himself to study, and meditating all night in the garden, found himself one night almost succumbing to sleep; whereupon he tore off his eye-lids, which he threw on the ground, and which forthwith produced the tea plant. In *Kaempfer's Japan*, a slightly different and extended version of the same legend is given, it being there stated that Darma came to China, about 519 A.D., as a missionary; and that, eating the leaves, he discovered their extraordinary virtues, thereby acquiring renewed strength to enable him to continue his godly contemplations.

The Japanese tradition, which ascribes its introduction into China to this Indian Buddhist priest, who visited this country in the 6th century, favours the supposition of its Indian origin. Fortune describes its introduction into Japan by a Buddhist priest, in the beginning of the 9th century.

The Dutch were the first to make Europeans acquainted with the properties and use of tea, and have thus rendered Europe tributary to China to the extent of some thirty millions of taels annually. The average export is about two millions of piculs.

Assam would seem to have been the original habitat of the plant, and its cultivation in India is merely a return to its old home.

As infused and immediately drunk, Chinese tea is wonderfully free from tannic acid and rich in theine, and proves a good restorative without either milk or sugar. It is refreshing in a marked degree, and enables one to bear fatigue without exhaustion. In the Artic regions, it has been found that those who took tea stood the cold better and kept warmer than those who took spirits, although there is a widely prevalent fallacy abroad regarding the heating powers of spirits. Milk and sugar spoil Chinese tea, particularly the milk which clogs the mouth and prevents the palate from enjoying the aroma of the plant. The tea is made by pouring boiling water over it, and infusing it for a few minutes in a covered cup. The Chinese always use boiling water. They will not drink tea made with water not boiling. Such tea is said to cause indigestion and diarrhoea. If the water is not boiling, the tea leaves float for some time on the surface. With boiling water, they sink almost immediately. The Chinese, like many of ourselves, do not know the secret of using only freshly boiled water for making tea. The water-kettle in their houses and restaurants is constantly kept boiling, so that hot water and tea are everywhere to be had on the instant. Tea made with water which has long been kept boiling is not good. Even in the Russian samovar, which is supposed to have the advantage over the English hot water urn of having boiling water always ready, may sometimes be at fault in this respect. Water should be brought up to the boil, but not past it. In the West, we usually allow the water to boil for some time, and then allow it to "stand" too long, and, when refilling the teapot, the water is not boiling. There is much truth, therefore, in the homely saying—

“ Unless the kettle boiling be,
Filling the teapot spoils the tea.”

Some of our residents have adopted the practice of using only distilled water for all dietetic purposes. Such water, it is unnecessary to say, should be filtered through charcoal or other means employed to enable it to regain its lost oxygen.

The Chinese mode of infusion is perhaps not so well suited for our teas, as in their preparation they are already spoiled to delicate palates accustomed to the less highly cured, sun-dried teas of China and Japan. Tea which requires milk and sugar has been spoilt by repeated firing and fermentation. The infusion made from such tea is coarse and bitter, and so we find it necessary to disguise its bitterness with sugar and neutralize its astringency by milk, a thin albuminous fluid, which forms in the stomach an insoluble albuminate of tannin. We thus mollify and sweeten the black draught we are so fond of imbibing. In this way, we first make our tea unpalatable and semi-poisonous, and then minimize its nauseous and bad qualities by additions which destroy the delicate flavour. Tea should not be infused and left to “draw,” so as to take “the strength out of it,” as it is termed, but the leaves should be subjected to a rapid percolation with hot water. This object is attained by using a cup with a perforated bottom, held over or fitting into the teapot while the hot water is poured upon the leaves. The leaves do not come into contact with the infusion after it has passed the strainer.

Some medical men, however, at home are of opinion that a little tannin in our tea, as in our wines, may be

a good thing, as it restrains digestion and prevents our food passing out of the system too rapidly, as is apt to be the case when cookery is become, as with us, a fine art. One writer considers the effects of tannin as conducing to the exhilarating, satisfying, and narcotic action of the beverage.

The Chinese mode of infusion gives a tea free from excess of tannin, while extracting all the aroma. The difference in the amount of tannin by infusion and percolation is very marked. Such tea can be drunk without milk or sugar, and the delicate aroma and pleasant taste are preserved.

The demand at home is for the strong teas of Ceylon and India. They are cheaper, because they go farther; and, if China is to retain the English market at all, tea dealers inform me that less tannin must be expressed from the leaves. This is more important in their view than even a reduction in the duty of the higher class teas. Foreigners in China do not drink the tea as prepared for the *Chinese* but for the *Foreign* market. The difference between black and green tea is simply one of preparation. The green teas are not subjected to the same amount of fermentation, nor to such a high temperature in the final drying.

Tea-shops and tea-houses, or *kwan*s (茶館), abound everywhere, from the highly respectable to those of the plainest description. Although some of the lowest may bear a distant affinity to some of our public houses, there is the marked difference in the beverage, although spirits are to be had and are sometimes seen there also. These tea *kwan*s, or restaurants, often occupy extensive ranges of buildings. They have usually a large space on the public street, like the continental *cafés*, covered

over in summer with matting. Inside and outside stand square or long tables with benches; and at the further end, or sometimes in the centre, is the kitchen portion, fitted with huge kettles, teapots, and boilers for hot water. A goodly number of waiters are employed, who move about with hot kettles and cups, packages of tea, or trays of cakes or dried fruits. The people for the most part bring their own tea, and for one cash may sit there all day, sip their tea, and have as much hot water as they please. These benches are well filled all day long. Tobacco smoking is not prohibited, and conversation is freely engaged in. These places supply also basins of warm water, and towels of loose texture for washing or wiping hands and face. Indeed this is the first thing supplied at their inns and tea houses; and, in coming off a cart journey in a country where dust so largely prevails, nothing is more refreshing than such a warm wash or wipe, and afterwards a few cups of hot tea. Music, such as it is, is often supplied at these places, and the working classes resort to them for news, gossip, amusement, or recreation. They are frequently turned into places where recitals of strange legends or tales from ancient history are poured forth. General business and disputes of all sorts are invariably settled at the tea houses. Eating houses and inns are frequently connected with them, where a substantial meal, animal or vegetable, is served on the shortest notice, and where the various culinary operations are performed under one's eye. The charges, too, are excessively moderate.

The principal Peking tea dealers proceed once a year to Foochow, to purchase their supplies. Foreign steamers make this journey now comparatively easy, rapid, and cheap. A tea shop, adjoining my residence and having

several branches in the city, with a Mongol connexion, sells from 40,000 to 50,000 catties annually. The tea is flavoured with the flowers of the jasmine, called *monihwa*; and, on the streets, one often notices the agreeable aroma so distinctive, contrasted with the surrounding malodorous conditions, left behind the rapid carriers of these precious fresh flowers. These flowers are carried in numerous little bags at the ends of slight bamboo poles, and the tea-dealers throughout the city are thus daily supplied. Snuff is also rendered fragrant by the use of the same flowers.

It is here unnecessary to enter upon either the chemical analysis or dietetic value of tea. Suffice it to remark that it has become one of the necessaries of life in the west, tending to repair waste, reducing the amount of solid food necessary, diminishing the tear-and-wear of the body and consequent lassitude of the mind, and maintaining the vigour of both. A Chinese writer, more than two centuries ago, wrote —

“Drink it, and the animal spirits will be lively and clear.” The Chinese do not generally attribute any ill effects to tea drinking. They have no stated periods for imbibing it, and they never make a meal of it. It is drunk weak, and immediately after infusion. When it stands any length of time, it becomes intensely bitter and astringent. It is sometimes said to have a hundred disadvantages, and to possess only one benefit, viz.,—that for clearing the vision. Taken before meals, it moistens the throat and stomach; after meals, it washes the mouth and teeth, fastening and preserving the latter to old age. Taken to excess, it is said to destroy the juices formed in digestion, which should go to the nourishment of the body. It is said to keep the

stomach in too moist a condition, a certain amount of dryness and heat being necessary for healthy action. It is also said to discolour the white of the eye, turning it yellow.

In the work on Dietetics already quoted, it is further said, in speaking of the properties of tea, that, from the time of the T'ang dynasty, it was used as a medicine to dissipate the fat and oil of the body, to clear the head and vision, and to promote the expulsion of wind and phlegm. In Ch'ên Ch'êng's (陳承) *Pên Ts'ao* (a distinguished physician of the Sung; his work is a revised combination of the *Great Herbal* and the *T'u Ching*, 圖經), it is said that tea boiled with vinegar was used in the cure of diarrhoea. A Dr. Yang Shih-ying (楊士瀛) of the Sung dynasty, author of the *Jen Chai Chih Chih Fang* (仁齋直指方), says, what is still more wonderful, that ginger and tea combined cure dysentery. The ginger assists the male principle, and the tea the female; the one is cold, the other hot, and so the two principles are harmonized. Our author criticises these two supposed remedies very sharply. Celebrated emperors and scholars, he says, are said to have been cured by such and such remedies. The histories, however, take no notice of their illnesses and cures. Several centuries afterwards, such recipes are praised by the druggists, in order to deceive ignorant people. We can afford to despise all such prescriptions, even when they are backed by the most illustrious names. Some physician states it, and the *Great Herbal* believes it. There is no cure for mistakes of this sort. Is such practice not like a dream of dreams?

The action of tea is noted, as already stated, as clearing the head and eyes, and removing the fat of the body like *chw'en-hiung* (川芎), pleurospermum sp., and *ts'ung-pai* (葱白), onion bulbs. If taken strong, it will cure head-ache; but this is the end of its advantages, according to the Chinese. The injury which it causes is the scraping of the viscera, and the dissolving of the fat. In the case of great tea-drinkers, the air and blood are injured; and hence the skin loses its healthy colour, and their bodies become thin and yellow. Drinking constantly, these disadvantages pass unnoticed. Those in whom this tea-craving is set up do not understand this. No matter what good things a man may eat and become fat, he loses it all when he takes to tea; he becomes thin, and his sense of taste is vitiated. If a table be smeared with grease and it be washed with tea, it looks as if new; so likewise with man's body, which is made up of blood and flesh, and produces fat by means of which the body is nourished. It can not, therefore, withstand tea. Hence the peoples outside China, on the North and West (the Mongols), daily consuming so much beef and mutton, must have recourse to tea; otherwise they could not get rid of their enormous and abundant fat, which they naturally take on, and it was in this way and with this object that trade was begun with them, and a duty levied upon tea. But why do the Chinese, who live upon rice and millet and wash their food down with a little wine, drink tea? They do not need it. People who eat flesh and drink milk must take tea, to remove and prevent the accumulation of fat. People who live well and are fat and white (lean people are supposed to be thin and black) ought to drink tea, for the air is obstructed; hence apoplexy and such like

diseases. Here tea, which is bad, does good ; so we have a substance quite contradictory,—bad and yet at the same time good ! This difference in effect it is well to know.

Our author continues:—Tea prevents one from sleeping, and so injures one's vitality and blood. The work *Po Wu* (博物) speaks of the difficulty of obtaining sleep after drinking true tea. Li T'ing-fei (李廷飛), Yuen dynasty, author of the *Yen Shou Shu* (延壽書), says:—One ought to drink little tea ; still better, not to drink at all ; and certainly not on an empty stomach. There is reason in this. We do not know who was the first to drink tea, and it is hard to advise all men not to drink it. We must advise people to drink little, and that weak, not too much and too strong ; or, better still, take some other substances as a substitute. In diseases with thirst, the more you drink, the thirstier you become, and the diseases are more difficult to cure ; so there is the greater reason for having recourse to substitutes. Our author here appends a list of thirty-five such substitutes. So for our author.

Tea has attained to an enormous consumption among the peoples of the North. With them it has an incontestable hygienic advantage, as stimulating and maintaining the animal heat. Moreover, it is also nourishing ; and in some countries, as among the Mongols at the present day, not only is the infusion drunk but the leaves are eaten. The Chinese, when thirsty, often chew the leaves of the finer sorts. When it is drunk too strong, it agrees only with persons of a nerveless and lymphatic temperament. Men of dry and nervous constitutions, and weak and excitable women, ought to abstain, or to correct its too great activity with milk. Its medical uses are less extended. It is especially employed as a digestive and sudorific.

The consumption of tea is largely on the increase in the west. With many of the poor labouring classes, it serves as breakfast, dinner, and supper, with bread and butter and sometimes meat to it. The reason for this, over and above its stimulant properties, is probably the ease and readiness with which it can be proposed, and the ignorance of cooking, or the unwillingness or want of time to cook a proper meal. The proposed "free breakfast table" will in this respect, it is feared, accentuate the enfeeblement of body and mind, the inveterate dyspepsia, the general nervousness, loss of will power, palpitations of the heart, muscular tremors, etc., which are attributed to its addiction, by still further increasing its consumption, and consequently do more harm to the physique than the removal of a slight duty, which is not felt and will not be appreciated, will afford a boon. Du Halde remarks that it is a common saying among the Chinese—"Those who do not love tea, love wine." In this region, there is a saying—"First tea, then wine."

The sanitary and wholesome effects of tea upon the system cannot in truth be overlooked or disregarded. Much of the quiet life and domestic habits of the Chinese are to be traced to this beverage. The very weak infusion, which they drink, allows them to spend all the time they choose at the tea tables. What a change from thrift, quiet, and industry, to misery, poverty, quarrels, and sickness, would not obtain, if spirit drinking took the place of the sipping of this national beverage. There is no doubt whatever that the general temperance of the Chinese is largely owing to the extensive use of tea. It is making similar way in the West; and, if more largely used in the establishment of workmen's restaurants, with good, cheap,

and not too strong tea after the Chinese style, would be a most likely means to restrict the unfortunately too large consumption of alcoholic liquors. Tea rooms for the upper classes in some of our large cities are now much frequented in the afternoons by customers, many of whom previously found their way to the public houses. My friend Mr. Cranston of Glasgow has probably done more than any other tea dealer in the United Kingdom to provide a pure tea, infused on scientific principles, and to have provided tea saloons for ladies and gentlemen; and his efforts have been rewarded by an ever increasing amount of patronage. He has also done much in having a chemical analysis made of the various teas by an analytical expert, the late Professor Dittmar, showing the amount of theine and tannic acid in the different samples, and has done much to keep the excellence of the China tea, in its richness in theine, before the public. Cheap tea saloons on the Chinese plan are a desideratum among the forces that make for temperance, industry, thrift, and health, among our drink-sodden lower classes. Would that Mr. Cranston would direct his energies towards supplying this desideratum, and so remove the reproach that is attached to that city. Tea is certainly one of the greatest benefits these Oriental peoples possess, and its universal use among the Mongolian race for a thousand and more years proves the efficiency of its properties as a nervine, a stimulant, and a beverage. One has only to visit any large Chinese city, to observe the value of tea as "a harmonizer and satisfier of their wants and passions." Besides tea, as an important factor in keeping the Chinese a temperate people, other considerations relating

to the nature and mode of drinking their wines and spirits will be adduced further on, with the same object.

We have thus very briefly discussed the great drink of the Chinese, "the cup that cheers, but not inebriates." It is *par excellence* the beverage of this people, and is constantly presented on receiving visits, making purchases, transacting business, and at all ceremonies. It is offered at all hours, and drunk at all times. It is invariably offered on entering a Chinese house. The cup with its cover, containing newly infused tea, is placed before each guest. The request to take more is generally construed as a polite hint that the interview should terminate. The same etiquette rules with regard to wine, when it is offered. Not to present tea thus would be to disregard the usages of polite society, and to be destitute of good manners. It is to be feared that foreigners often offend unconsciously the Chinese, by not offering tea except the visit should happen to be at the foreign tea time. A closer observance of the Chinese style, in the matter of presenting tea in receiving visits, would favourably dispose this people towards foreigners, or at least prove that they understood the rules of good breeding and hospitality, and are in reality not barbarians as they are so frequently and contemptuously designated.

Another very common drink among this people is simple *hot water*. This makes a very good drink, provided the water be hot enough. It is very cooling and satisfying, washes out the stomach, forms a good solvent for the food, and seems in a variety of ways to act most beneficially, whether taken the first thing in the morning or before or after meals. I have known it, used in this way, to act beneficially on rheumatism, indigestion,

constipation, and other ailments. It certainly possesses curative powers in many stomachic, hepatic, and renal affections, and might be adopted with profit in the West. We are glad to learn that it is coming into more general use. It is death to all parasites or ova, or other germs of disease, that may be introduced into the system through water. Cold water is very rarely drunk by Chinese. Hence their carelessness, in too many cases, in regard to the source of their water supply, whether from rivers or wells containing sewage contamination, or suspiciously near foul drains. It would be a safe rule in the West to boil fluids like water and milk where epidemics are supposed to depend for their rise, continuance, and spread, on the water and milk supply. It is for this reason that the Chinese enjoy such an immunity from zymotic diseases, to which they are not entitled, considering their insanitary environments which set all our Western ideas of sanitation at defiance. In summer, cold tea and cold boiled water are extensively drunk.

Among summer drinks there is the *swan-mei-tang* (酸梅湯), a decoction of a certain kind of green plum obtained from the south, which is taken during the hot months with ice as a cooling pleasant drink. It is sold everywhere on the streets. The plum is mixed with sugar and made into a dry paste, and so sold in the dry fruit shops. It is also mixed with some *kwei-hwa* (桂花), the flowers of the *osmanthus fragrans* of Loureiro.

All the year through, apricot tea or gruel is sold on the streets, a drink made of sweet and bitter apricot kernels. White rice, with water and sugar, are pounded together along with the apricot kernels; water is boiled, and this paste is added until a proper consistence is reached.

Another summer dish, used extensively among the Manchus and Eunuchs, is *lau*. It is made of boiled milk, to which sugar and sour yellow wine are added, which causes the milk to coagulate. Sometimes wheaten starch, or starch prepared from the lotus, *alias* arrow-root, are added, to give greater consistence to it. Except in North China, milk is not a dietetic article; and, even there, to a very small extent, except in the form of curd just noted. The casein in their diet is supplied by bean curd. It may not be uninteresting to add here that, in some Chinese towns in the South, women's milk is sold on the streets for motherless infants, or octogenarians in second childhood, or where a milk diet is prescribed. As this substance nourished the vital powers in infancy and childhood, so the Chinese argue regarding its virtues in later life. The upper classes, in circumstances requiring milk, hire wet-nurses. The present Empress Dowager, when at the change of life, about ten years ago, had such a wet-nurse, the wife of a patient then in our hospital, and I am told still continues the practice.



WINES AND SPIRITS.

The Chinese, for the last few thousand years, have had a wine; and, since the Mongol dynasty in the 13th century, when distillation became known to them, have possessed a spirit. Not a few of our sinologues, however, in their translation of the term *tsieu* in the Chinese Classics, have rendered it, in my view, incorrectly, by *spirits*. Dr. Legge, for example, at first translated the word by wine; but he says there

can be no doubt the term, in the ancient books, signifies "spirits distilled from rice," equal to our "ardent spirits." The term "wine" seems to him inappropriate because, quoting from Gaubil, the grape has only been known to the Chinese since the First Han dynasty (前漢) (202 B.C.—25 A.D.). But, in all languages, the term "wine" is applied to the fermentation of fruits, whether these be grapes or not. We must understand, therefore, that the ancient Chinese had a fermented liquor prepared from rice, the staple food of the people. The art of distillation was certainly unknown at that time. The word *tsieu* is now used generically; and, when the fermented or distilled product is meant, a qualifying adjective is added, such as *shao* (burnt) for spirit, and *yellow* or *Shao-hsing* (the name of a city in the province of Cheh-kiang, about 70 miles from Ningpo,* where the most celebrated wine is manufactured) for wine. In Japanese, the spirit is termed *sho-chu*, which is identical with the Chinese expression of which *sam-shoo* (thrice fired) is the foreign-coined equivalent, and the fermented wine from the rice is termed *saké*, which is just the Chinese *tsieu*.

Fermented liquors were known in ancient times. Wine is mentioned both in Homer and in the Old Testament; and the Egyptians, Gauls, Germans, and other ancient nations understood the art of brewing beer from malted grain. They understood the preparation of wine from grape juice. The Alexandrians were the first to perfect the exceedingly rough methods of distillation, which had previously existed. Aristotle knew that

* Said by Du Halde to resemble Venice, although preferable to it, because the canals in the Chinese city are filled with running water.

sea-water by evaporation could be made drinkable, although he does not describe the method. In the Chinese dictionaries, under *tsieu*, it is simply said—Take *chü mi* (麴米) that is leaven and rice, and so obtain the *jang tsieu* (釀酒), or fermented wine (not spirits, as Giles renders it). From the definition of the *jang tsieu*, it is evident that a fermented liquor is intended, not a distilled one. Williams says that—“Samshoo is the general name for distilled and fermented liquors. The art of distillation has been known among them (the Chinese) from remote times, and rice and millet have been chiefly used by the distillers.” Doolittle says—“Ardent spirits among foreigners in China are called *samshoo*, or Chinese wine. This wine is always a distilled liquor, a kind of whisky.”

From the above extracts, it is evident that some confusion exists as to fermentation and distillation. I hope I shall be excused from dwelling so particularly on the meaning of the Chinese term *tsieu*, as it involves an earlier knowledge of distillation than the Chinese possessed. It favours an antiquity to which spirits cannot lay claim, and more particularly as all our sinologues have been carried away with the idea that ardent or distilled spirits is the liquor denoted by this term in the ancient books. I regret to be obliged to differ from so many high authorities. I appeal to the proofs adduced in support of the view here advocated. Not to multiply examples, take the following merely:—

In the *Shih Ching* (詩經) occurs the expression *Cho i ta tou* (酌以大斗), to pour out (for use) a large *tou*. This expression goes back to the time of the Lieh kingdom, before the Han dynasty.

Or, take the expression—*Li Pai tou tsieu shih pai pien* (李白斗酒詩百篇),—“Li Pai (Tai-po), the poet, drank his *tou* of wine, and wrote his hundred verses.” Although the measures of capacity may have altered, the *tou*, or ten pints, was at that time by no means a small quantity. Can we conceive of the poet drinking a *tou* of ardent spirits, and inditing his celebrated verses afterwards? The reference is undoubtedly to the yellow wine. Again, a writer in the T'ang dynasty has a couplet referring to the period of the Han dynasty, the first line of which reads—*P'ao mei tsieu yeh kwang pei* (葡萄美酒夜光杯),—“Good grape wine is a cup bright at night.”

As we have done with tea in the investigation of its origin and the Chinese ideas of its effects on the system, so it may be deemed advisable here to lay before the Society similar investigations with regard to the grape, wine, and spirits, chiefly drawn from the same work on Dietetics.

Wine (*Tsiu*).—People in the North call it Southern wine, also White wine. In the native place of the author (Poyang), it is called “Water wine.” The *Herbal* says:—The clear is called *jang* (釀); the turbid, *yang* (盎); the thick, *ch'un* (醇); the thin, *li* (醑); the heavy *jang*, *chow* (酎); the “one night” sort, *li* (醴); the beautiful, *hsü* (醕); the unpressed, *pei* (醢); the red coloured, *ti* (醞); the green, *ling* (醗); the white, *lu* (醞). But the seeds of all sorts of grasses, woods, grains, and fruits, free of oil, can be used in the manufacture of wine. The wine of rice is the best suited as a medicine in disease, because it develops the efficacy of the medicine, causes circulation

in the net work of vessels, stirs the blood, and sets in motion the air, causing it to mount to the head, determines to the skin, and disperses to the extreme limits of the whole body. Under ordinary circumstances, people who like wine, when ill are disinclined for it. In such a case, the disease is very severe. When the patient begins to drink wine, his sickness is beginning to improve. Pure wine is intoxicating. It can cure the ulcer, which has come in contact with equine sweat. An ulcer of this sort swells, the pain is increased, there may be convulsions and fatal syncope, if it is not rapidly cured. A patient, labouring under the bite of a rabid dog, ought not to drink wine. Chow Hou-fang (肘后方) says it is good not to drink wine for a whole year. If bitten by a serpent, the wound is to be washed with cold wine. If a person has been subjected to great dread, and death is feared, one or two cups of hot wine must be poured down his throat at once.

The injury caused by wine is that it destroys the intestines, confuses one's nature, promotes sexual intercourse, produces worms, destroys both the family and the state, and causes fighting and unseemly brawling. In ancient times, it was frequently forbidden.

Men love to drink strong wine, but the Doctors prefer the diluted sort. This latter is an effectual diaretic, somewhat like taking hot gruel. It is very effectual in reducing dropsy. To do so, however, the dilution must take place at the time of manufacture, and not at the period of drinking it; otherwise it injures the spleen, and causes diarrhœa. Many instances of its efficacy as a diaretic are adduced, in conjunction with rice gruel.

Tsao (糟), or Distiller's grains or drugs, is next treated. Another name for it is *Po* (粕). It warms and

dissolves food, opens the stomach, and strengthens the spleen. When the wine is taken out of it, the poison is lessened. By the addition of oil and salt, the poison is entirely removed. Salt removes the strength of wine. The poison of wine is owing to the presence of too much *tsao*. Its nature is hot. In Peking, our fresh milk supply is derived from cows fed on this refuse from the distilleries.

Spirits, Shao-tsiu (燒酒) = burnt wine.—Another name is “Fire wine.” In the book called *Yin Shan Chêng Yao* (飲膳正要), by Ho Ssü-hwei (和斯輝), of the Yuen dynasty, it is called *A-la-chi* (阿刺吉) (*Alcohol?*), a foreign expression. The method of preparing this spirit is not ancient. The process was introduced into China by the Siamese and Dutch, at the end of the Yuen dynasty (1280-1368 A.D.). Siam and Holland are countries lying to the East, near Fuhtsien; the Hollanders are the red-haired foreigners.* The injury caused by the “Water wine” is also possessed by this spirit. Its nature is very violent and bad; and, compared with the *tan* (醜), a poisoned wine, much worse. If you drink too much, the seven openings (ears, eyes, nostrils, and mouth) all run blood, and death ensues; and so does also blood flow from the anus and urethra (the large and small conveniences in Chinese), and death follows. Or, if death does not immediately take place, the pain that follows is still more severe than that caused by tying the

* Our author is quite wrong as to the situation of these countries. There is probably here a reference to the possession of Formosa by the Dutch. In the Ming dynasty, the Chinese took the Dutch and the Portuguese (Falanki, Franks) to be peoples of the Indian archipelago. The first appearance of the Hollanders in China dates from the first decade of the 16th century. The expression Siamese Brandy occurs in the Chinese works. It was “twice burnt,” and aromatic ingredients were added. This brandy was anthelmintic in its action.

legs with sticks (a mode of punishment; brass bars were formerly employed). It is popularly called "Flowing fire," *liu hwo* (流火). Before the advent of ardent spirits, there was no such disease [as here described], so that the ancient books mention no remedy, and give no name. All known remedies, such as those employed in the treatment of cutaneous affections, relieving pain, rheumatism of the joints, are all of no avail. If adults abandon it, they may get better; but the aged are sure to succumb to this disease.

People who have this craving for spirits cannot be restored; their bodies, lives, and vital spirits are all injured. The contracting of this terrible malady is all one's own doing. Hence no pity can be extended to such.

The manufacture of spirits consumes the grain, and leaves the people with nothing to eat. It thus injures all under Heaven. In ancient times, cultivators of the soil got an extra year's supply of grain every three years; in nine years, they reaped three years' advantage. At present, there is nothing over; and when rain, or drought, or pestilence occurs, and there is a famine, the officials of that region implore the Emperor to dispense charity, establish soup-kitchens, and remit the land taxes. The injury thus sustained affects not only the people, but also the state. There is nothing more serious than this. If spirits be taken with which to cure disease, the cold is dispersed, and the watery humidity removed. After inundations, when the people are suffering from illnesses, the body cold and there is vomiting and purging, the abdomen full and distended, with a feeling of tightness and narrowness, or if one fall into water and is saved, and there is still some water in the bowels, spirits, if given in repeated doses, will recover the individual. This is using it medicinally, and deriving advantage from it; but its evils are unspeakably great.

People with blood diseases, if they do not give up spirits, medicine has no effect upon them; and, if the bones be fractured and the flesh contused, and the man drink spirits, he is lost. If pregnant women drink spirits, their progeny break out with small-pox, and the children are few. If a man has sons and grandsons and still drinks, his posterity will rapidly disappear. If three generations drink, posterity becomes defunct. The author has known several tens of families who have been given up to drinking, like one falling into water. Why do not such take their fingers and reckon up their near relations who have died or are still alive, and thus awake to the injury produced? In the book *Erh Piau Chi* (耳剽集), it is related of the Wu-chiang (吳江) magistrate, Chow Wei (周偉) by name, that he loved to drink, and was daily fuddled and muddled; everything with him was topsy-turvy, and everything forgotten. After a few years he died, and was put in his coffin; spirits as usual were offered at his grave, the coffin took fire, the mourners sought to save his body from the flames,—but alas! both coffin and body were consumed. Was this not a reproof from Heaven for his drinking? And was this not a necessary punishment?

Grape Wine.—The *Pên Ts'ao* says grape wine was first made in the *Hsi Yü* (西域)*. The book *Liang Ssü Kung Tse Chi* (梁四公子記), *Chronicle of the Four Worthies of the Liang Dynasty*, by Chang Yuch (張悅), 667-730 A.D., speaks of the country of Kao-chang (高昌)† sending

*By *Hsi Yü* (西域) is meant Central or Western Asia,—the region of the Caspian Sea, which is acknowledged by botanists and confirmed by historical testimony to have been the original country of the vine.

† Kao-chang, the country of the Uigurs, is identified with Turfan.

tribute of frozen raisin wine, obtained by placing the wine in a cool cave where a cool wind prevailed, and which kept good for a year. Yeh Tse-ch'i (葉子奇), in the book *Ts'ao Muh Tse* (草木子) says:—In the Yuen dynasty, in the district of Chi-ning (冀寧), they preserve grape wine (蒲桃), and although it is extremely cold, sufficient to freeze it, there is a centre piece which remains unfrozen; this is its essence. If this is drunk, the cold goes to the arm-pits, and the person dies. Again, he says:—Wine of two or three years' standing contracts great poison. Here he says what is quite true, in speaking generally of the grape. Wine is made of all sorts of grain; a year after, the strength is increased; the older, the stronger. In drinking it at first, one is not intoxicated; but, if one goes to the door and exposes himself to the air, the irrepressible power of the wine is developed, and a person cannot control it. (The North wind is tolerable, the South one is unbearable). Some thus intoxicated die; others contract illness; the sick in no case must drink wine.

In the *Shih Chi* (史記), in the description of the nations of Central Asia, there is the *Ta Yuen Lich Chwen* (大宛列傳), or *Account of Fergana*, in which it is said that the custom of the people of Wu-sun (烏孫), a country on the Western borders near the Hiung-nu (匈奴), name of the Turkic tribes during the Ts'in and Han dynasties, is to drink wine and use the grape (蒲陶) with which to make it. The wealthy people store over ten thousand piculs, which may be kept good for scores of years. How is it that in this case it is not poisonous, after being preserved so long? It is because of the climate, which gives these people immunity from the poisonous effects of the wine. Therefore, this must not be taken as proof of

its innocuousness. In the book *Yin Shan Chéng Yao* (already quoted), the grape wine is said to be of various sorts. One sort termed Ha-so-hwo (哈嗽火) is the most dangerous. The wine from Hsi-fan (西番) (Thibetans residing near the source of the Yellow River and North-west of Szechuan) is less so. That from Ping-yang and Tai-yuen, in Shansi, is still less so. In the manufacture of this wine, although leaven is used, it has not the taste of grain. Whether new or old, the sick must not drink of it. He says, further:—If the grape be long preserved, it does not require the *chü*; it will of itself produce wine. The wine is very aromatic, sweet, and strong. The book *Kwei Sin Tsa Chih* (癸辛雜志), by Chou Mi (周密), latter half of the 13th and beginning of the 14th century, says:—Pears if kept for a time do not require *chü*, and yet produce good wine. The *Shu Ching* says:—If you make wine, you must have *chü*. How is it that, without the yeast, wine is made? How comes it that it is so violent? The reason of this can not be understood. All sorts of fruits can be used in making wine. In the Yuen dynasty, there is a poem in which occurs the expression:—“In the Spring, the colour of the Tung-ting is priceless; great multitudes of oranges are planted, to provide the materials for wine-making.”

The Hsi Yü Grape Brandy.—If Chinese drink it, they must die. The *Great Herbal* strongly interdicts it.

All sorts of Wine.—All wine moves the blood. The wine made of the Sweet Sorghum, and the paniced and glutinous millet stops the blood. All wine exalts the spirits. The wine made of barley, buckwheat, and beans, is not favourable to the air (does not harmonise). All wine is hot; the longer kept, the hotter it becomes. This latter sort is popularly called “mother wine.”

Wine destitute of water, although the taste is agreeable, its nature is very violent. If it be drunk, the throat and tongue become dry and hot; and, if much be drunk, there is belly-ache and hæmaturia. At the present day, all use the "old wine" (rice wine), for the most part thick and strong; and, when fragrant and pungent drugs are added, heat is developed (the heat character is employed to avoid the use of the *Yang* in this connexion), and it removes the essence of the *Yin*. It injures the spirits; and, compared with the Tang (當) wine (?), is still worse. The Tang-kwei (當歸) wine, made from an umbelliferous plant, probably *ligusticum dentilolum*, can not be intended as among the thirty-four different kinds of medicinal wines which are given. The tang-kwei sort is recommended as a tonic.

The Shaohsing wine is reckoned, at the present day, the best; its taste is acid and yet not acid, astringent and yet not astringent. If you drink it, it causes head-ache and dryness of the mouth. Everybody knows then the poisonous nature of the yeast.

A wine called Shě-hung and Shě-hung-ch'un (射洪春), known to all the [Chinese] world, is used as a cooling beverage in summer. A poem in praise of it was written in the Ming dynasty. The mode of manufacturing this species of wine was brought from the Western Barbarians. In the time of Han Wu Ti (漢武帝), who had business in the South-west at the same time with Fergana, the Yetae *Yueh-ti* (月氏), *Ch'iung-tse* (筇笮), and *K'ang-chü* (康居), Sogdiana, it was introduced into China. From the time of the Marquis Po Wang (博望侯), so the ancient Ode says—"All over the earth, there is no wine that is cold." In the summer,

the *Yin* essence is secreted inside; by taking a little, one does not experience great intoxication, and one feels a degree of comfort. At the present day, those who drink spirits also say that they take it as an antidote to the heat.

In the feudal states of Ch'in (秦), modern Shense and Kansuh, and Shu (蜀), there was a wine called Tsa-ma (咂嘛). In the Chin (晉) and Chao (趙) states, there was the Hsiang-ling wine (香陵酒); and so on, giving a list of places in ancient times producing celebrated wines.

On the whole, after weighing the *pros* and *cons*, the advantages and disadvantages are about equal. The methods of manufacture are numerous. All are hot and poisonous.

The *Herbal* states that the character for "peach" was borrowed, and in the Han dynasty applied to the grape. In the *Shih Chi* (史記), the grape character was written thus, 蒲陶. Another name given to the grape is Ts'ao-lung-chu (草龍珠), representing its clusters strung together like pearls. People drink it and become intoxicated; hence the name.* The round grapes are called as above (vegetable dragon pearls); the long are designated Ma-ju (馬乳), mare's teats;† the white, crystal (水晶); and the black, purple (紫). In the

* The derivation, according to the *Herbal*, is thus said to be due to its intoxicating property, *viz.*, -p'u (酺), to drink deeply, to be jolly, and t'ao (醕), drunk or tipsy, in allusion to the use and abuse of the wine made therefrom. The term *p'u-t'ao*, now in use for grape, has been supposed to be a corruption of some foreign word. The Greek *botrus*, the sound in Chinese of the first three letters, has been suggested.

† Mare's milk, applied to this species of grape, is suggestive of the drink *koumiss*, a favourite beverage in Central Asia.

Han dynasty, Chang Chien (張騫) brought back the vine seeds from *Hsi Yü* (西域). Shên Nung's *Herbal* is said also to contain the vine. Before the Han, the district of Lung-hsi (隴西) had the grape, but it had not entered China.* In the T'ang history, it is said grapes came from Po-sze (波斯), Persia, and also from Kao-chang (Fergana).

In the East of the Kiang provinces, included formerly in the Wu kingdom, there was a wild vine called *ying-yü* (嬰莢), the grapes of which were small and sour. In the fermentation of wine, the *chü* is generally used; but when the grape or honey is used, the *chü* is not necessary. In the ancient book *Chan K'wo T'se* (戰國策) is related the story of the Emperor's daughter and I-tih, the fabled inventor of wine. The *Shuoh Wên* (說問) gives Tu K'ang† (杜康), otherwise known as Shao K'ang (少康), as the first maker of wine. The *Herbal* says wine is still older than this, and goes back to the days of Hwang Ti (黃帝).

Mr. Sampson (*Notes and Queries*, Vol. III, No. 4, Page 50) is inclined to think the grape vine is a native of North China, and that superior varieties only were brought from Western Asia. The quotations from Sze Ma-t sien about the grapes and wine of Fergana and of Cophene in Afghanistan, as given in the *Description of Western Regions*, in the Han dynasty, and as being introduced into China by Chang Chien and

* Before the time of the Han, *Lung-hsi*, an old name for the South-eastern corner of Kansuh, did not belong to China. The vine, as here stated, was introduced into China, 122 B.C.

† Mayers says of him that he was one of the early distillers (?) of wine from the grains of rice, and hence classed with I-tih. His name is sometimes confounded with that of Shao K'ang, of the Hsia dynasty, 2079 B.C.

others at that time, are adduced. The author of *Méng Ch'uan Tsa Yen* (蒙泉雜言) is quoted, who maintains that, though grapes have been known in China from time immemorial, it is yet true that they were brought by Chang Chien from Fergana; for these latter were of a different kind to those previously known. Chinese authors write of the grape and the wild variety, some as distinct plants, some as forms of the same tree, and both existent in North China. One author says that the envoys of the Han introduced a *new sort* of grapes (蒲桃之異種).

Huc holds that the vine was extensively cultivated in China at an early period, and quotes Sze Ma-t sien (163 B.C.) as speaking of a certain rich man who had a vine-yard, out of which he made 10,000 measures of wine yearly. The reference here, as we have already shown, is to the extensive production and great consumption of wine in Fergana. Huc also says that the poems composed under the dynasties of Yuen and Han prove the extensive use of the juice of the grape. He here quotes two dynasties, 1000 years apart, and transposes them. No one doubts the prevalence of grape-growing and wine-drinking under the two dynasties named. Wine was very commonly drunk, and caused a good deal of mischief. Both grapes and wine, at the periods above mentioned, were largely sent as tribute or friendly offerings from the states of Central Asia to the Chinese Emperors, and were employed as complimentary gifts between the Emperor and his high officials.

The vine, Huc continues, has been sacrificed to the culture of cereals, owing to the immense population of China, and the necessity of reserving the land for food.

He thinks it indisputable that the vine was known to the Chinese long before the Christian era, and that grape wine was in use under every dynasty and every reign to the 15th century. The grape is now sparingly cultivated, only for eating either fresh or dried. He speaks of the great consumption of corn spirit, by which he doubtless means the ordinary *samshoo*. Corn brandy, he says, was not known in China at so ancient a date as wine,—not earlier than the end of the 13th century. It was only then that they became acquainted with the process of distillation. He says they hit upon, by mere chance, something like the origin of our own porter. But this does not agree with the statements of their own books. The most commonly used wine, Huc further states, is that obtained from the fermentation of rice. It is a kind of beer. This Chinese wine, although containing little alcohol, easily gets into the head. The Chinese knew of the fermentation of liquors at least twenty centuries B.C.

This subject is not without interest at the present moment, in view of the statement that opium as a stimulant in the East takes the place of alcoholic beverages in the West. This is a very favourite argument with pro-opiumists. No statement could well be further from the truth. Before the Royal Commission on Opium, Dr. Legge said there was little alcoholic liquor drunk in China; and that in 34 years he had seen only one drunken Chinaman. Drunkenness is rare, but not spirit drinking. It is feared by the Commission, and this view is generally held by pro-opiumists, that, by abandoning opium, much evil would result from spirit drinking. Great harm has been done to the Indians by the introduction of spirits, It is feared, if opium were prohibited, that the Chinese would follow the Japanese, and drink a great deal

of liquor instead. The Chinese (although, alas! large consumers of opium) are not universally addicted to it, as they are to tobacco, and very largely to wine and spirits. Although the latter can be made to take the place of opium, and as such used as a substitute for it where it is sought to abandon the opium habit, nevertheless ardent spirits are used extensively by opium smokers. The more inveterate smokers eschew drink, as the action of the two articles is known, in one respect at least, to be antagonistic, the one being astringent, the other diffusive in its action. At the same time, spirits are often partaken of, in order to experience the effects of opium more speedily throughout the system. And it is a fact which has often come within my cognisance that, in cases of opium suicides, the chances of recovery after spirits are much diminished. It must be understood then that drinking is by no means the uncommon practice which some believe, among opium smokers. It is very far from being so, too, among the general population. The experience of the Chinese, both as regards fermented and distilled liquors, may be said to be tolerably extensive, and some useful lessons may be learned from them.

I Tih is the reputed inventor, some 2,200 years B.C., of the use of wine in China. In spirit shops, we often observe the tablet with the words—*I Tih chih tsieu* (夷狄旨酒),—"The fine wine of I Tih." He is said to have made it to the order of the daughter of the Great Yü, who tasted it, found it good, poured it on the ground, sent I Tih into banishment, and forbade the knowledge of wine, adding that it would cause the ruin of his country. The characters used to designate this individual, viz.,—"barbarian fiery dogs"—lead us to suppose that this wine was of foreign origin, these barbarians being located

outside the North-west of China. Lieu Ling, one of the renowned fraternity of poets and wine-bibbers in the 3rd century A.D., is said to have uttered the wish that he might be followed by a grave-digger, so that he should be interred without delay or ceremony, when he should fall dead in his cups. Li Tai-po, the famous poet of the T'ang dynasty, whose poems are still sung by the boys on the street, and whose poems was the subject of an interesting Paper read before this Society by Dr. Edkins, one of our previous Presidents and most active members, was one of the most notorious drinkers of antiquity. Unless he drank wine to intoxication, he could not versify. The T'ang Emperor of his day once, it is said, received a despatch from a neighbouring outside kingdom, most probably Corea or Japan, which none of his officials could decipher. His minister Ho Chih-chang, a lover of dissipation and joviality, who was called the mad cap of Sze-ming, and by the Emperor, Ho Kwei, Ho the Devil, a friend of the poet's, introduced him to the notice of the Emperor. After executing the task found impossible by the Ministers of State, he became Poet Laureate to the Emperor, who, whenever he wished verses, plied the poet liberally with wine. On one occasion, the Emperor found him lying dead drunk, and himself wiped the froth that oozed from his mouth. Latterly the poet, afraid of offending the high officials of the Court, resolved to relinquish his post. The Emperor offered him money and rewards, but these he declined. He finally granted Li Tai-po a decree that, wherever he went, he should be freely supplied with wine. He formerly used to get into debt for drink, on all possible occasions. And upon these terms the poet parted with his august master,

and it is said shortly afterwards was drowned during a drunken spree in a river of the province of Szechuan.

The oldest temperance address in the world (older than the Proverbs of Solomon) is that by the Duke of Chao, as found in the *Shu King* (書經), in which it is said:—“When Heaven was sending down its [favouring] commands and laying the foundations of our people’s sway, spirits [wine] were used only in the great sacrifices. [But] when Heaven has sent down its terrors and our people have thereby been greatly disorganized and lost their [sense of] virtue, this too can be ascribed to nothing else than their unlimited use of spirits. Yea, further, the ruin of the feudal states, small and great, may be traced to this one sin,—the free use of spirits. King Wên admonished and instructed the young and those in office managing public affairs, that they should not habitually drink spirits; their use should be confined to times of sacrifices, and even then with such limitations that virtue should prevent drunkenness. Farther on, in the same address, he says:—“Sternly keep yourself from drink.” Dr. Legge remarks:—“The drunken debauchery of Kii was the chief cause of the downfall of the Hia dynasty, and that of Shang was brought to an end mainly by the same vice in Show.”

It is to the credit of the Chinese that drinking to excess is almost unknown, although moderate drinking is largely indulged in. The consumption of wine among the better classes, and of spirits among the middle and lower classes, is very common. The latter seldom, if ever, partake of a meal without a small cup of *samshu*. One of the most common contrivances for the promotion of drinking at their social gatherings, as for example

during the New Year festivities, is similar to the game of *morra*, played by the lower orders in Italy, derived from the Roman sport of *micare digitis*, of which Cicero remarked that you must have great faith in the honesty of any man with whom you played in the dark,—“multâ fide opus est, ut cum aliquo in tenebris misces,”—and which gave rise to the Latin proverb—“Dignus est, quicum in tenebris misces,”—said of a thoroughly honest man, since it would be easy to cheat in the dark.

The game consists in each person guessing at the number of fingers suddenly held up between himself and his opponent, and the penalty of the loser is each time to drink a cup of wine. In Western lands, the penalty would most probably be reversed, the loser forfeiting the glass of wine! The game is called in Chinese *Hwa Chu'en* (話拳), speaking with the fist, or *Ts'ai Mei* (猜梅), guessing the plum, and consists, as just stated, in two persons simultaneously throwing out towards each other one of their fists, with one or more fingers distended, each at the same moment pronouncing a number which the parties guess will be the aggregate of the number of distended fingers of both hands. The winner is the one who guesses the exact number of these fingers, and the loser drinks a cup of wine as a forfeit. Should neither guess rightly, the game proceeds without either drinking. If both should happen to be right, neither wins. For example, if A thrusts out three fingers and calls out six, and B thrusts out five fingers and calls five, neither wins. If B had called eight, he would have won. If B had thrust out three, and called five, A would have won. He called six, which is the aggregate of the two numbers. The Chinese are usually very boisterous in playing this game. Frequently all the guests at the table may be

engaged at the same time in playing it. Among scholars the same game of forfeits is played, the game consisting in writing poetical sentences to rhyme with some given words. I have often been present at such gatherings, but I have never seen any scenes such as, with us, would give rise to scenes worthy of Sir Toby and his associate in *Twelfth Night*. On such occasions, when some freedom is permitted, the drinking is almost entirely that of forfeits, the winner being freed from emptying his cup on "entering the year." The peculiar noise of calling out the numbers associated with some animal or other object is heard in the streets of a Chinese town in almost every house, along with the clanging of gongs and the firing of crackers to frighten away evil spirits.

The yellow wine of the South is made of *Chiang-mi* (江米), or glutinous rice, of which one may see dumplings with dates or sugar in them, covered with leaves, on the streets of the Capital, especially in the fifth moon. In the North, the small glutinous yellow millet is used instead of rice. The rice or millet is first boiled into a paste, and distillers' grains called *chü* (麴), leaven, are ground to powder and mixed with it. The mass thus becomes leavened and loses its viscosity, and resembles rice *chou*, or porridge; it is then put into a sack and pressed, and the expressed juice is the yellow wine in question. In colour and flavour it resembles some of our weaker pale wines, especially a very mild sherry. Vinegar is made in a similar manner, but with *kao-liang* (高粱) and grain husks; and the juice is not expressed, but allowed to trickle. Spirits in the North are made of the red *kao-liang*, with the addition of the *chü* made from wheat. Instead of saying that a person has drunk spirits, the Chinese sometimes say he has drunk *kao-liang*

water,—somewhat resembling our euphemism of “mountain dew,” or “old man’s milk.”

The *Yao* or *Drug* wines are legion, and answer to our tinctures, and need not here be specified or further referred to.

The residue, in the preparation of the yellow wine, is used in the distillation of a very strong spirit, little inferior in strength to pure alcohol, and like strong whiskey both in its colourless appearance and smoky flavour. Why does Giles define *shao tsieu* distilled spirit, the ardent spirit of millet, as commonly drunk in North China? The Mongols drink a strong liquor distilled from mutton. They have also a liquor prepared from mare’s milk, called *koumiss*, used in the West in cases of phthisis.

The spirit capacity, *tsieu-liang* (酒量), or power of drinking, varies much among the Chinese, as among ourselves. In liquor contests with foreigners, the latter have always prevailed. One catty at one time with guests is considered the largest; four ounces at meals is very common. This is considered rather a large “capacity.” This last class, when they are entertaining guests and have recourse to the *morra*, will drink a catty, and as a matter of course become intoxicated. The common practice at the two daily meals amongst nearly all classes of men (for we except the women, who do not drink) is to take one or two ounces. One hundred Peking large cash (5) will buy one ounce at present; and this is considered dear, the usual price being not more than 3 or 4 cash. Spirits are certainly cheap in China, and one might suppose this fact would favour their excessive use. Notwithstanding the

cheapness, the people, as we all observe, are sober. On ordinary occasions at meals, spirits to the value of $\frac{1}{4}d$ or $\frac{1}{2}d$ may be drunk. Few people go beyond this, and few could well stand more.

Huc tells us that gambling, drunkenness, and libertinism, are the three great vices of the Chinese that cause pauperism. As to gambling and drinking, he says, in the South they drink less, but play more; the reverse is the case in the North. Their liquors always retain an unpleasant taste, which can be got rid of by macerating various aromatics in them. The people drink this brandy with avidity. "This horrible drink," says Huc, "is the delight of the Chinese, especially of those of the North who swallow it like water. Many ruin themselves with brandy, as others do with gaming. One can hardly imagine what pleasure the Chinese find in imbibing these burning drinks, which are absolutely like liquid fire, and, moreover, very ill tasted."

Spirits are so cheap that all the alcohol and all the spirits required, for example in Great Britain, for industrial pursuits, medical preparations, and general consumption, might easily be imported from China and sold there at a much cheaper rate than the product of our own stills or that of Germany. A leading British merchant in China, my friend the late Mr. T. T. Fergusson of Chefoo, once wrote to me of the possibility with the advent of machinery for coal mining in the future, of large quantities of cheap alcohol being exported to Europe from China. Much cheap and good alcohol is at present produced here, and the impulse given to the production by cheaper coals would enable it to be exported at a cheap rate. This would be a "coming full circle of the wheel," *vis à vis* our opium traffic

with China. A British Consul in China, my friend the late Mr. T. T. Meadows of Newchwang, once strongly urged the cheapening of opium, with the view of making it non-respectable and so strangling the evil. The suggestion was fortunately not acted upon. India, by the way, has it in her power, by doubling the quantity of her poppy growth and reducing the price by one half, to kill the Chinese native growth, rivet her drug upon China, and continue to secure her revenue from this deleterious source. I dread to contemplate the results, in our own country, of the cheapening of the cost of spirits. We are not prepared for such a policy. Were the physiological effects of alcohol upon the system widely understood, we might have less to fear. The main hope of the people in the West, in the mean time at least, is in the raising, or at least maintaining, the duty on spirits. There is perhaps more to be gained from this course than from any partial or local diminution, however sweeping, of the number of licences, or even in local option, to mitigate the evils of this curse. This is our experience with regard to opium in China. Safety for our labouring classes and the common people lies in increased duties. Smuggling can be put down by an efficient preventive service, and the vigilance of the police should prevent the existence of Shebeens.

The Chinese agricultural class drinks little; the merchant and literary classes are the chief drinkers. The very lowest class of the cities, a class without fixed occupation, drink heavily almost without exception. They subsist by borrowing from their neighbours. Both wines and spirits, as a rule, are drunk *hot*. A common saying is that if wine or spirits be drunk cold, one is apt

to have anaesthesia (numbness). The heating adds to its flavour, but it is said does not increase the amount of drinking, nor lead to excess among the Chinese. My personal experience is that one drinks more, and certainly with more pleasure, or at least with less aversion, when it is heated, although at public dinners one does not quite approve of the custom of emptying undrunk wine that has become cold into the common wine-kettle, to be re-heated and re-served to the guests. The heating is done by placing the kettle in hot water. This is the mode in which most things are heated in China.

Wine stands at the head of the four great vices of the Chinese, as mentioned by themselves; the other three being lust, *seh* (色), wealth, *ts'ai* (財), and anger, *ch'i* (氣). At the betrothal of children, the words of agreement of the parents are not considered sufficient; each must give the other a cup of wine. In forming friendships likewise, the Chinese exchange cups of *samshoo*, like the Germans in their brotherhood of *Du*. On the first night of marriage, the same ceremony is gone through, the newly married couple pledging each other. The expression "wine mat," to designate that the tables are spread and the guests invited, refers to the period when there were no tables in China, and people sat on mats on the ground. The same expression is still current, although tables now exist. Three cups of spirits are always poured on the ground on the marriage day, in the centre of the court yard, when offerings are made to Heaven. Spirits are much used in sacrifice and worshipping at the temples. Pure water is sometimes also offered, as it is an original element; tea never, at least in the North, as it is not considered pure, and what is offered to the gods, or to

ancestors at the graves, or to Confucius, must be clean. Spirits are used principally because, being distilled, they are of course the perfection of purity. Spirits are largely drunk by the Chinese as by ourselves, to add to joy and to drown misery and cares.

At first, spirits were chiefly used in the North by the Mongols and others; and the Chinese soldiery there, taking to it, brought the habit to the Chinese. To us, the people appear the soberest in the world; to themselves, they are a people addicted to spirituous liquors. Drunkenness, as already remarked, is not a common vice, as we Westerners see it; and yet drinking is very common among all classes, and intoxication is by no means rare, although it is not seen on the streets of an Oriental city as it is seen in the West. It is, therefore, a serious mistake to suppose that opium has taken its place. There is the unrestricted sale of ardent spirits, but *mirabile dictu* unaccompanied by the scenes of brutality and violence which harmonize so miserably with our boasted Western civilization. I have seen more drunk persons between the hours of public worship on a Sunday in one street of Glasgow than I have seen on the streets of Peking in thirty years. There are no licensed shops in China, in our sense of the word, for the sale and consumption of spirits. Chinese retail spirit shops are known as *Tsieu-kwan* (酒館), or *Tsieu-lou* (酒樓); and those of smaller dimensions as *Tsieu-p'u* (酒舖). For convenience, the shops for the sale of articles of food, vegetables, oils, and such like, also sell spirits. Outside the Ha-ta Gate, the wholesale spirit inns, known as *Tsieu-tien* (酒店), exist in large numbers. The amount of duty levied on spirits brought into the city may be learned from the native Custom House, situated

just outside this Gate. But even this amount will fall very far short of the amount consumed, for there is much smuggling at the Ch'i-hwa (齊化) Gate, and over the high city walls, at which the officials wink. The spirits sold so plentifully at tables on the streets are of this smuggled sort. Both men and women, in considerable numbers, make a living by this smuggling. The chief distilleries are to the East of Peking, on the road to Tungchow. A Chinaman or woman, with their loose clothes and long gowns, can secrete 120 catties in 5 or 6 catty pig's bladders around their waists. They carry a few of these bladders likewise quite exposed on their shoulders, and for these they perhaps pay a small duty to the petty officials. They make three or four runs daily. A very large quantity of spirits is thus smuggled into the city. Poor people who desire to make a livelihood are found on the streets or by the road-sides, with tea and spirits for sale. The large kettles are wrapped round with a close-fitting felt covering, to keep the tea infusion warm; and the mouth of the spirit jar is covered with a pig's bladder, to prevent evaporation. It is often sold in considerable quantities in these bladders.

Well, if drinking habits are so common, how is it that we do not see far more drunkenness? One reason is owing to opium. The people now drink less, although Dr. Kerr of Canton thinks that the drinking habits of the people are very much the same before opium smoking was begun as we find them now. The Chinese here tell me that the quantity now consumed is distinctly less. Before the advent of opium, intoxicated persons, they say, were frequently to be seen. Then people found spirits, as they now find opium, an almost necessary medium of conversation and for the transaction of

business. A decade of years previously, I am informed, it was the custom in brothels to spread a repast with spirits; now it is opium. The customs in the country districts differ widely, however, from those of the cities. Foreigners notice the life of the Chinese principally in the towns, and it is there where opium is chiefly consumed. At the fairs in the country, which are held several times monthly, every five days as a rule, much spirits are drunk, with pretty much the usual consequences that follow drinking to excess in the West. But even here also there is a marked difference since the advent of opium. The universal prevalence of tea has largely moderated the use of spirits, although in the agricultural districts of the North even tea is little known. There is here a numerous sect of teetotallers, known as *Tsai-li* (在禮). Their tenets also forbid the use of opium and tobacco. They flourish specially in and around Tientsin. They, like all other sects, have been rigorously suppressed by the authorities, by whom they are regarded with suspicion as a secret political sect. The influence and fear of parents, teachers, masters, etc., has been largely felt in preventing the younger men, sons, pupils, and apprentices, from exhibiting themselves in public when intoxicated.

Comparisons between opium in the East and spirits in the West have often been drawn to the disadvantage of the latter. The appalling scenes of drunkenness so common to a European city are of the rarest occurrence in China. Alcohol is a much greater social evil than opium. The action of opium is personally more injurious than that of alcohol. The evils of alcohol are seen publicly; those of opium are seen privately. The use of alcohol, as practised in our own country, is a greater

curse to the community there than the use of opium, as practised in China, is to the Chinese. It has been said, where opium kills its hundreds, alcohol counts its victims by thousands. An Indian medical officer has testified before the Opium Commission that, for every hundred lunatic patients who enter asylums in India from drink, only five or six are from opium. He has also testified that opium is less injurious than alcohol, that it never produces any disease except in the last stages when the opium eater suffers from emaciation and diarrhœa, and this, he added, was quite exceptional. Opium, he said, never produced drunkenness, as alcohol did ; it caused no quarrelling, or wife beating, nor were suicides committed under its influence. Alcohol was said to cause disease of the heart, liver, kidneys, and other organs. Although there is much truth in these views, they are not all the truth.

The opium somker's debauch may be said to be a constant state, comparable to drunkenness, for the craving has to be satisfied at regular intervals. The loss of character, the destruction of morals, the premature aging of the body, the decay of the vital powers, the petty larceny, in short, the opium eating the man, and he becoming its slave, and numberless other points, have been quite lost sight of. Giles says—"Opium is a more self-regarding vice than drunkenness, entailing gout and other evils upon the third and fourth generations. Posterity suffers nothing from the opium smoker, for this blessing is denied to him." As regards posterity and the inheritance of disease, the Chinese have not remarked any results regarding spirits. Wine is strongly aphrodisiac ; opium less so. Until the habit is confirmed, the aphrodisiac action is increased ; but impotence

follows hard after. Such is not the result of spirit drinking. To commit great crimes, such as murder, spirits are necessary. The opium smoker takes to petty larceny and theft, to obtain the wherewithal to appease his craving.

The Chinese consider opium the worse evil. A person can do without the drink, even when he has a craving; but not the opium smoker. Opium is a much more expensive vice than drink. There are far more drinkers of ardent spirits than opium smokers. Drinkers recover readily from intoxication; an overdose of opium causes death. A non-drinker, if hungry, will call for food; a drinker will call for more drink. The drink habit can be more easily abandoned; the smoker lies down, wastes time, is utterly unfit for anything until the craving is satisfied. People of business and no leisure have no time to indulge in opium; hence spirits are had recourse to. The excise on spirits is greater than that on opium. The distillation of spirits is not considered a respectable calling; and, although the Emperor derives a large revenue from its manufacture and sale, distilleries may be closed at any time by Imperial decree when the years are bad, as the spirits take up the grain which ought to go to the support of the people. The distillers usually pay a definite sum per annum as duty, independent of their out-put, and they are usually licensed for six years. The duty is collected on the same ticket with pawn-shops and brothels!

The licence to distil is granted to these distilleries, called Shao-kwo (燒鍋), only on condition that they shall employ only spoiled grain unfit for any other purpose, and thus not destroy the grain for the food of the people. This, together with the law specially

forbidding the fabrication of rice wine, are instances of the excellent theory of this people. A fee to the officials removes all difficulties. Notwithstanding the large fee which is thus paid, distillation is still considered private. All may brew the yellow wine, upon which there is no duty and no embargo whatever.

About 30 or 40 *per cent.* of the opium smokers also drink moderately of spirits. Of this number, perhaps not more than 10 *per cent.* take it somewhat freely. This depends largely on their "spirit capacity." Before taking to opium, they were accustomed to spirits. Many who have acquired the drink craving will take to opium which relieves it, both being stimulants, and so take less.

That drunkenness and immoderate drinking are extremely rare in China is owing to a variety of causes, which it is somewhat difficult to specify in the order of their importance. We have noted some of the reasons which *prima facie* might have been supposed to favour drinking. Among the reasons which make for moderation may be specified the badness (want of fragrance, and great lack of variety) of Chinese wines and spirits. They have practically only one sort of each. There is every year a large increase in the consumption of foreign liquors, both wines, spirits, and beer. It is as yet almost solely confined to the ports, and to those Chinese who have been abroad or come into contact with foreigners. The Chinese are also trying our foreign cookery, and some of the officials have native cooks who understand the foreign art. Foreign drinks are sold at some of the native stores. The high price of foreign spirits is the only thing that prevents their extensive use. Their consumption is certain to go on increasing. This seems

to be a constant accompaniment of our Western civilization. Their fragrance and variety are sure to tempt the Chinese palate. The *Customs Returns* unfortunately take no cognisance of the import of foreign liquors, as they are supposed to be for European consumption exclusively. As the Customs authorities, however, have lately been obliged to take notice of the import of morphia (some 16,000 ounces per annum) by foreign druggists for the manufacture of the "White Medicine Powder," to the growing use of which and its true composition the writer called public attention some twenty years ago, and now beginning to be largely used for hypodermic injections, both to satisfy and cure the craving,—so spirits and wines will doubtless some day require also to be noted. Beer is now largely brewed in Japan, where it is fast becoming a very common beverage, ousting the German article, and finding an export trade beyond the limits of the country of the Rising Sun. Our Champagne, called by the Chinese *San-pin-tsieu* (三賓酒), from the sound, is much relished by the high officials. The Viceroy at Tientsin produces it to his foreign guests, along with the invariable and universal beverage, tea. Brandy, gin, and other spirituous drinks are now being called for by the Chinese at the ports. A few years ago, I was called to attend the Prince of the Turgouth Tartars, the twelfth in descent from the one whose memorable journey, immortalised by De Quincey, from the banks of the Volga in his return with his people to the allegiance of China, and the mission to whom, of Tulishen, the Ambassador deputed by the Emperor of China, is translated by Staunton. I found him the victim of both opium (one ounce daily) and wine (25 pints of Champagne daily). Once in about ten days

he was seized with violent spasms, to relieve the pain of which he had several slaves, his retainers, lie upon him. His wrists were paralyzed. The cure of the opium habit was preceded by that of the drink, from both of which, as well as the paralysis, he was happily free for eighteen months ; but, during one of my furloughs home, he again fell before the double evil, re-induced to it by a friend, a Mongol Duke, and both have since fallen victims.

This sad case illustrates the fallacy of supposing those who take to opium do not take to drink ; and that, if the opium were prohibited, the drink curse would be introduced. A large per-centage of opium smokers, as already stated, consume also a great deal of spirits. The interdiction of the one would doubtless increase the consumption of the other. It is not, however, the question of the prohibition of one vice and the creation, as is so often supposed, of another. It has often been said that the human race must have some stimulant or narcotic ; and, if they don't take to this, they will take to that. One country will take to opium, another to alcohol, a third to hemp, forgetting or ignoring the fact that the Chinese are largely addicted to opium, alcohol, tobacco, etc., the latter being in universal use by all classes, male as well as female.

Some have argued that temperament will always decide the form of stimulant which will prevail in any country ; that, in the West, with the excitable and sanguine temperament, spirits will always hold the pre-eminence ; and that, among Orientals, with the lymphatic temperament, opium will always prevail. Opium is certainly peculiarly suited to the Chinese constitution. But China, not to speak of Japan, is not by any means a country where the non-consumption of

spirits is remarkable; and yearly evidence is accumulating to show that morphia hypodermic injections, the eating of opium, and the drinking of laudanum, not to mention the extensive use of chloral and other narcotics, are very largely on the increase in the West.

In our estimation, the Chinese drinks are devoid of all fragrance, and there is a great want of variety. I have not the slightest doubt that much of the drinking, in which our people indulge, is owing to the aroma of the beverages, their great variety, mode of preparation and combination, to tempt the palate. Knowing the fiery nature of their spirit, the Chinese cannot carry their drinking to the extent of intoxication. Before this stage is reached, unpleasant symptoms supervene. On the other hand, their native wines are so mild that it is equally difficult to reach the point of intoxication consistent with all the circumstances that surround public drinking. This is a most happy self-moderating, self-regulating quality of the spirits and wines, not to mention other restraining reasons to be presently mentioned. Of course in some cases the extreme poverty, in spite of the cheapness of the spirits, obliges the drinker to stop short of intoxication. The Chinese say foreign wines are more intoxicating than their own, because they can drink of the foreign up to the point of intoxication; whereas, with their own spirits, the effects produced are such as to oblige them to stop short. The wine is, of course, much weaker than the spirits, and yet they are intoxicated with it sooner than with spirits. This point may help also to throw additional light on the meaning of the word *tsien* in ancient times.

Fusil oil or Amylic alcohol, potato spirit or hydrated oxide of Amyl, for it is known by all these names, the

substance in Chinese spirits upon which this self-regulating principle depends, is a colourless liquid with a characteristic odour obtained as a by-product of crude spirit. It exhales a powerful and peculiarly suffocating odour, and leaves a burning taste. It is obtained in distillation by continuing the process after the pure and lighter spirit has been drawn off. The Chinese ignorance of the rectification of spirits, and their desire to add body, pungency, and strength to the spirit, and thus permit of dilution with water, is the cause of the presence of this most deleterious substance in their liquors. It consists of several alcohols, which boil at different temperatures, and is extremely difficult to separate in a complete manner. Towards the end of distillation, it passes over in considerable quantity. It is generally supposed to be the product of the fermentation of sugar. It is this substance which causes flushing of the face, mounting into their heads, burning sensation in the stomach which it disorders, causing vertigo and next day a feeling like one threatened with immediate illness, and induces them to remain in-doors to conceal their suffusion, although they are not really drunk. These effects manifest themselves *before* the stage of intoxication is reached, showing that the action of fusil oil on the nervous system is more rapid than that of alcohol. The Chinese attribute the cause of nearly all their diseases, the *fons et origo malorum*, to either spirits or anger. Stricture of the gullet and malignant disease of the stomach, so common in China, are to a large extent to be traced to this cause. At the same time, it is a sure antidote with the Chinese to drunkenness. Ignorance of the chemistry and of the rectifying of liquors is, therefore, the salvation of the Chinese. This, it appears to me, is at least part of the explanation of the uncommonness of drunkenness in China.

The evil effects which are caused by indulgence in brandy, and of which the Chinese are sensible, are to be ascribed to the higher homologues of ethylic alcohol. To wine, manufactured by the addition of starch sugar before fermentation to a grape most poor in sugar, must be ascribed the head-ache and unpleasant symptoms produced, even when taken in small quantity. This starch sugar is obtained from the inferior potato starch, and leaves behind a quantity of unfermentable residue, which, like fusil oil, is poisonous.

Spirits are said to be adulterated with arsenic and pigeon's dung, the object being to accelerate and increase vertigo, and so add a fictitious strength to the spirit. The tobacco of the water-pipe is also credited with being steeped in opium and arsenic. I have sometimes wondered whether the use to which pigeon's dung was put in the siege of Samaria, as mentioned in II Kings, VI, 25, where it is said the famine was so great that an ass's head sold for so much and the "fourth part of a kab of dove's dung was sold for five pieces of silver," was not similar to this practice in China! The scriptural record obviously implies that it was eaten, and grain is not supposed in a siege to be so plentiful as to permit of waste of this sort unless they wished to drown their sorrows, deaden their privations, or increase their martial courage. I know not whether this substance in question produces this effect. In seasons of drought and famine, Imperial Edicts are issued against the distillation of grain, it being considered more in accordance with the will and harmony of heaven and the necessities of the situation that the grain should be preserved for the food of man and beast and as seed for the future harvest. The people consider this a wise step on the part of the "father of his people,"

and no opposition is offered to it, although such Edicts are rarely carried out in practice, as in so many other matters Chinese where the theory is excellent. It is very seldom, however, that this course requires to be adopted.

In a review of the reasons which make for temperance in China, the absence or restrictions of social life, the exclusion of the female sex, the ceremonies between hosts and guests, the general politeness of society, the etiquette of the family relations, official and literary status, the nature of the drink consumed, the mode of partaking of it at entertainments, etc., do not favour immoderate drinking, and therefore ought not to be overlooked. Our social customs in the West have done much to foster the consumption of spirituous beverages. They lead up to and maintain much of our drinking. In China, the seclusion of women largely accounts for the absence of the social element. This condition, therefore, has its advantages as well as its disadvantages. The guests drink only when called upon by the host. It is on such occasions, as may naturally be supposed, that the most wine is drunk. Such entertainments take place among the officials at the closing and opening of the seals when the month's holiday at the New Year takes place, and at births, marriages, funerals, official promotions, and the opening of places of business. At such times, and these are the only social gatherings in China, the amount of drinking depends largely upon the hilarity and *bon-homie* of the host. No guest would dream of drinking *ad libitum*, or whenever he felt disposed; the periods and quantity are to a large extent regulated by the host. If he sip his wine when he calls upon the table, the guests take their queue from him. Should he call for the glass to be emptied, the guests must have

some valid excuse for not following his example, and indicate the thorough draining of the vessel on their thumb nails. If the conversation be lively or argumentative, and particularly if the host be talkative and given to story-telling, very little wine is drunk; if a man of considerable liquor capacity, he will fill glass after glass and pledge the entire table, or engage in an encounter with any guest who chooses to accept his challenge. No one would ever dream of calling for wine for himself; the attentive host, or one's own servant who is in waiting, will attend to this. Moreover, all through the meal there is *only one sort* of wine furnished. Although the Chinese have a variety of wines, chiefly medicated, it may be stated generally that there is only one in use, the Shao-hsing or Yellow Wine, which contains much less alcohol than our mildest sherry, with which it is sometimes compared. This is a matter of some moment, as much of our immoderate drinking and intoxication arises from the great variety of wines. Mixing of liquors is acknowledged to be very injurious, especially when the varying densities of the fluids drunk is imperfectly appreciated. The importance of this point, and the German saying in relation to it, will be keenly appreciated by any one who has suffered from ignorance or indiscretion in this respect. If we followed the custom so largely prevalent on the continent, and kept ourselves to a good sound claret which would stand aqueous dilution, if necessary to a considerable extent, we should have less drinking and intoxication. It is somewhat remarkable that the wine producing countries are so free from the habit of intoxication; and this is doubtless the reason why taking wine is approvingly spoken of in our sacred writings.

Again, spirits are never presented at official or ceremonial repasts. This would be considered a low and vulgar beverage to present to the guests. As the Chinese saying has it,—“Wine is the polished gentleman; samshoo, the rowdy.” It is worth noting, too, that the wine is invariably drunk warm, because when cold it is much less palatable. The Chinese rule is to introduce meats and drinks, as far as possible, at the temperature of the body. Again, the wine is sipped rather than drunk; at least, the guests often try to beg off with a sip instead of emptying the cup, especially towards the end of the meal. It should be noticed here, too, that the cups are excessively small,—more like liqueur glasses. They are thus enabled to take a goodly number without being in the least affected, or at all exceeding the bounds of sobriety and moderation, and thus satisfying all the calls of hospitality. The necessity of drinking the wine warm may have originated the smallness of the cup. The size, at any rate, is to be commended. Our various glasses, as a rule, especially for spirits and the stronger alcoholic wines, are much too large. Our people argue that glasses were made to be filled. It is not considered polite or hospitable to half fill a glass. The size of the glass often adds to the amount drunk, people seldom taking the size into consideration. We often try to deceive ourselves by the use of such language as “only a thimble-ful,” a quantity often, if measured, of no mean amount. What keeps the Chinese a sober people is very largely without doubt to be attributed to the fact that wines and spirits are, as a rule, partaken of *only* at meals. The system is then in a condition to bear up better against the evil effects of the indulgence than if the

stimulants were taken on empty stomachs and debilitated constitutions. I wish here, in the strongest manner possible, to emphasize this most important point, and would therefore call particular attention to it. It is so also in the case of opium; the craving returns *after*, never *before*, the meal has been partaken of. I dread to think of the infinitely greater evils and misery which opium would produce, if the habit preceded the sustenance of the body. The opium debauchee's appetite is at best but miserable and inadequate, and it would be still worse if opium took more largely the place of it. If the glass of beer or wine were limited among our people to meals, we should probably not have occasion for the present crusade against this most stupendous evil.

Another point of some value is that, after the meal is finished, *no more wine is served*. This point is implied in the foregoing one; but, as it is so important and differs so widely from the usages of Western society, it will admit of separate statement. The Chinese host rises from table after the last course of the meal has been disposed of, and all the guests rise with him and retire to the library, garden, pavilion, or other room, where tea and tobacco are served, or opium, as the case may be. There is no sitting round the table, indulging in liquor and talking of business, politics, or gossip. At all such entertainments, ladies are of course never present. Their restraining influence is never needed. The rules of Chinese society strictly forbid the commingling of the sexes. Our ladies should insist on seeing the gentlemen in the drawing room as soon after dinner as possible, and it should be the duty of a good host and hostess to see this healthy custom strictly observed. After dinner, let there be various entertainments and amusements provided, as is

often the case in China. Music on the piano in the drawing-room is of course unknown among Orientals, and would be out of the question. Dancing would be opposed to all ideas of Chinese decorum and comfort; but, if desired, and the Chinese as spectators admire the foreign ball-room, would be supplied by paid dancers. Why, they argue, should people of means fatigue themselves so, when they can enjoy the luxury at no great expense. Private theatricals, shadow pictures, jugglers, and ventriloquists are the stock entertainments in China. Privately, Chinese chess or draughts may be engaged in, but no spirits or wine ever accompanies them; no night caps, or stirrup cups, or farewell visits to the dining-room are ever practised.

Chinese dinners take place at mid-day or early in the afternoon. This, too, is favourable to moderate drinking. Invitations to dinner most frequently take place at, and in conjunction with, theatres or at restaurants; rarely, if ever, at the home of the host. Such invitations are the stereotyped modes of showing friendship or gratitude. The social relations at home forbid the invitation of outside guests there. Most frequently, a public theatrical representation and a dinner are combined; and a table, equal to our box, is hired at the theatre, where a repast is partaken of while the play or plays are being acted. Public theatrical representations take place only during daylight.

The nature of the diet of a people has much to do with the prevalence of spirit drinking, our animal food favouring it, the Asiatic vegetable diet making more for temperance in drinking. The Chinese and Japanese are largely a vegetable, rice, and fish eating people; the large quantities of vegetables each meal, in the South, alternating with flour among the better classes, in the North, and of

millet among the lower classes. The Mongols are an almost exclusively mutton-eating people, and the coldness of their climate and their nomadic life finds addiction to spirits very prevalent. I have never, however, at Peking seen an intoxicated son of the grass land. The Chinese are very much subject to dyspepsia. The two meals, which are the rule, partaken of early in the forenoon and late in the afternoon, necessitating over-eating at meals, are to a large extent responsible for the indigestion of which they so commonly complain, and at the same time prompt to the use of spirits which are thus both a cause and an effect of the dyspepsia. Their vegetable diet has much to do with this condition. Those who take spirits regularly, twice daily to their meals, assert that they could have no appetite, and digestion would be impaired, were they deprived of spirits. Their dyspepsia is much aggravated by the coarse spirit, which becomes chronic; and, after some years, it lapses into complete inability to swallow, a condition very common among the male Chinese in advanced life. A vegetable diet, however, does not certainly call for indulgence in drink to the extent of the animal one. Why should that "fine confused eating," yclept *haggis* in Scotland, if not on this principle, require invariably to be washed down with *aqua vitæ*? Unfortunately for their health and agriculture, the Scotch have almost entirely given up the "halesome parritch." A return to a more vegetable and farinaceous diet would be advantageous to our health and beneficial to the country in other ways, besides removing the desire for ardent liquors.

In further reviewing the causes that make for temperance, the religious injunctions against spirit-drinking by all the religions of the East, which are so remarkable

and which have exercised so important an influence in checking the excessive use of ardent spirits, cannot be lost sight of. Abstinence from intoxicating liquors is one of the five precepts of Buddhism,—“Drink no wine.” It holds a similar position among the Mohammedan tenets, and similar precepts are contained in the religious books of the Hindoos and Sikhs. It is this injunction against spirits, in my opinion, which led to hemp and opium being used as stimulants and narcotics among the Mohammedan peoples, and by them extended to Eastern lands. Many of the less strict of the Buddhist priesthood, known to me personally, are in the habit of partaking both of spirits, opium, and flesh, and are addicted also to some other sins which more particularly pertain to the latter. But such are not held in the highest respect by their confreres, the best of whom lead a very simple, vegetarian, ascetic, and celibate life, carrying out the precepts of their religious founders, and seeking thereby, in the case of the Buddhists, to enter Nirvana. Giles tells us that, at the door of every Buddhist monastery, may be seen the notice—“No wine or meat may enter here.” Even the laity are not supposed to drink wine. At Hsi-yü-sze (西域寺) and Tan-choh-sze (壇哲寺), two large monasteries of Foh (Buddha) in the hills west of Peking, the priests have permitted foreign visitors to pass the night only on the condition that they did not eat meat and drink wine.

The religions of Asia,—Buddhism, Hinduism, and Mohammedanism,—have certainly done much for the sobriety of the Asiatics. In India, where the consumption of alcoholic beverages is largely on the increase, this drink question appears to the natives as of far more moment than opium-eating, which is reckoned as

comparatively innocuous. The liquor question to them seems of more importance than the opium one. On this account, they failed to understand the wisdom of the appointment of the Royal Commission to investigate into the lesser evil, while the greater is left untouched. To the minds of many, the consumption of spirits seems almost an integral part not only of our civilization but of our Christianity.

Our Christian religion inculcates temperance in all things. The moderate indulgence in intoxicating liquors is not only not condemned, but rather approved. One thing, however, may be taken for certain,—that, had the Founder of Christianity and St. Paul lived in these days, they must have favoured self-denial and total abstinence. The practice of the Church of Rome does not seem to have had much influence in combating the evil among its adherents, although one of the ornaments of the church, a lately deceased Cardinal, threw the weight of his great influence into the Temperance Movement. The self-denying life claimed for the Roman Catholic priests, as compared with the life of supposed luxury and ease enjoyed by Protestant missionaries, has been often remarked upon. I presume men of the right stamp are to be found within both communions.

But not only is spirit-drinking forbidden by the tenets of the Eastern religions, but it is likewise opposed to the teachings of morality by the ancient Chinese sages. In the Classics, virtue, morality, temperance,—the qualities of the superior man,—are there extolled and inculcated. Filial piety, regard for parents, self-respect, the duties of subjects to their patriarchal form of government, etc., are strongly inculcated; and these are all factors of considerable value against the people becoming sots to intemperance.

We have already referred to the oldest temperance lecture in the world as found in these ancient Classics.

Another set of reasons which make for or against temperance may be found in the temperament and constitution of the people. The peoples of the East and West may be differentiated in their mental and physical characteristics, in their literatures and religions, by the ideas of rest and activity, the lymphatic and sanguine constitutional peculiarities. Opium smoking or eating suits the oriental; spirits, the occidental temperament. Although, speaking generally, there is much truth in this, yet, like so many half truths, much error lurks in it. Opium is taken like spirits, for its first or stimulant action; not so much for its second and after sedative effects, in both of which it resembles spirits. It is the outwardly decent stimulant which public opinion, religion, and customs demand in the East. The Chinese idea of happiness (after possessing wealth, the god of which has the whole nation as devotees, and having posterity in the shape of sons to hand down unbroken the family links, and have his manes not left unhonoured and unworshipped, the greatest calamity that can befall mortal) is that of comfort, idleness, repose, the *otium cum dignitate* which no one knows better how to enjoy. Give the Chinaman his opium pipe and seraglio, with nothing to disturb the tranquil flow of life, and his blessedness is complete. Every thing about him, the government of his country, the absence of politics, of the Press, of the Nineteenth Century Western civilization with all its activities and worries, the absence of religious controversies, etc., all bespeak a disposition which finds its utmost happiness in repose and stagnation. Hence the charm which the opium pipe and lamp have for such people.

Much blame is attached to our climate for the prevalence of so much drinking. The Northern cold peoples have become addicted to spirits and animal food from more or less of a felt want; the warm Southerners, to vegetable diet, fruits, and light wines. While it is true physiologically that we require animal food to keep us warm, and we partake more of it in winter than in summer, it is not such a physiological necessity of our systems that we should favour spirit drinking. Warmer and more suitable clothing would render unnecessary the frequent recourse to ardent spirits, to keep out the cold. The sense of heat, when spirits are swallowed and for a short time afterwards, is followed after a brief period by one of depression and a greater sense of cold, the heat of the body being slightly lower; and this suggests a return to the stimulant, and so the habit is thus regularly appeased, and the necessity of constant addiction established.

I do not find any climatic reasons in China to account for the rise of the opium habit or the use of ardent spirits. Officials from the North, proceeding to the South and there acquiring the opium habit, on their return often state that their reason for beginning it was the miasma of the South, which the people say is fatal if encountered. This pestilential vapour is termed *chang* (瘴). The opium evil exists largely in large non-malarious tracts of the Chinese Empire. The supposed prophylactic properties of spirits in warding off fevers and other diseases do not fall within the scope of the present Paper.

Some of the suggestions here thrown out seem certainly worthy of our imitation. Part of the present Paper was originally intended for an article on the Drink Question in China, the sequel to one published a few

years ago in one of our first class provincial newspapers on the Norwegian Drink System, after a visit paid to that country and Sweden, and investigation into the subject on lines similar to those since followed by certain public writers and speakers.



APPENDIX :—Substitutes for Tea, proposed by the Chinese author of the work on Dietetics quoted in this Paper (See page 13).

金 銀 花 葉	Chin yin hwa ye	<i>Lonicera Japonica</i> (leaves).
枸 杞 子 苗 葉	Kow ch'i tse miao ye	<i>Lycium Chinense</i> (buds and leaves).
側 柏 葉	T-ě pai ye	<i>Cupressus funebris</i> (leaves).
松 葉	Sung ye	<i>Pine</i> (leaves).
五 加 根 葉	Wu chia ken ye	<i>Eleutherococcus</i> (roots and leaves).
槐 枝 葉 花 實	Hwai chih ye hwa shih	<i>Sophora Japonica</i> (twigs, flowers, and buds).
麥 門 冬 汁	Mai mentung chī	<i>Aneilematis medicirad.</i>
天 門 冬 汁	Ti'en men tung chī	<i>Asparagus filicinus</i> (juice of the roots).
地 黃 汁	Ti hwang chī	<i>Rehmannia glutinosa</i> (juice).
甘 草 汁	Kan ts'ao chī	<i>Glycyrrhiza</i> [liquorice] (juice).
蘆 根 汁	Lu ken chī	<i>Phragmitis Roxburghii</i> (juice).
土 伏 苓 汁	T'u fu ling chī	<i>China - root juice</i> (<i>Smilax</i>).
苧 根 皮 葉 汁	Ch'u ken p'i ye chī	<i>Boehmeria nivea China</i> Grass (bark of roots and juice of leaves).
藍 葉 汁	Lan ye chī	<i>Indigo leaves</i> (juice).
車 前 葉 實 汁	Ch'o ts'ien ye shih chī	<i>Plantago major</i> (juice of leaves and seeds).
木 槿 花 葉 皮 汁	Mu chin hwa ye p'i chī	<i>Hibiscus Syriacus</i> (juice of the bark of the leaves and flowers).

脂	麻	汁	Chi ma chī	<i>Sesamum (juice).</i>
小	麥	汁	Siao mai chī	<i>Triticum [Wheat] (juice).</i>
大	麥	汁	Ta mai chī	<i>Barley (juice).</i>
黑	豆	汁	Hei tow chī	<i>Glycine hispida (soja). Black bean (juice).</i>
綠	豆	汁	Lü tow chī	<i>Phaseolus mungo (Kidney bean). Green bean (juice).</i>
菹	豆	汁	Pien tow chī	<i>Dolichos lablab (juice).</i>
粳	米	汁	Ching mi chī	<i>Rice (juice).</i>
糯	米	汁	Lo mi chī	<i>Glutinous Rice (juice).</i>
粟	米	汁	Su mi chī	<i>Setaria Italica (juice).</i>
秫	米	汁	Shu mi chī	<i>Sorghum (juice).</i>
紫	蘇	葉	Tse su ye chī	<i>Perilla ocymoides (juice of leaves).</i>
薄	荷	汁	Po ho chī	<i>Mentha juice (Peppermint).</i>
萊	菹	汁	Lai fu chī	<i>Radish (juice.)</i>
梅		汁	Mei chī	<i>Prune (juice).</i>
橄	欖	汁	Kan lan chī	<i>Olive (juice.)</i>
棗		汁	Tsao chī	<i>Fujube juice (Zizyphus vulgaris).</i>
龍	眼	汁	Lung yen chī	<i>Nephelium Longana (juice).</i>
柿		汁	Shih chī	<i>Persimmon (juice.)</i>
橘	餅	汁	Chū ping chī	<i>Juice of orange cakes.</i>
檳	榔	汁	Ping lang chī	<i>Betel-nut (juice.)</i>

Errata and Addenda.

On Page 4.—Insert this omitted paragraph:—

In the *Herbal*, tea is found under the word *ming* (茗). It is there said that, in Shên Nung's *Shih Ching* (食經), *ch'a-ming* (茶茗) was first produced in I-chow (益州), a city in Szechuan, in the time of the Five Dynasties,—the modern capital of that province, Ch'êng-tu Fu (城都府).

On Page 6.—After boiling water, add—"or boiled water near the boiling point."

On Page 13.—For *for*, read *far*.

For *thirty-five* read *thirty-six*.

On Page 14.—Line 6, for *proposed*, read *prepared*.

By yellow millet is meant the grain called *shu* (黍), *panicum miliaceum*. The *siau-mi* (小米), small millet, is the *setaria italica*; and the tall millet, or *kau-liang*, is the *holcus sorghum*.

On Page 28.—For *ligusticum dentilolum*, read *Ligusticum acutilobum*.

For *Yetae*, read *Getae*.

After *Chiung-tse* add:— On the frontiers of Szechuan and Thibet, it was introduced into China from the time of the Marquis Po Wang (that is the title by which Chang Ch'ien, the envoy to the Central Asian states, was ennobled); so the Ode says, etc., etc., etc.

On Page 36.—For *aligno*, read *aliquo*; and for *misces*, read *mices*.

On Page 38.—After tinctures add—"or liqueurs."

On Page 52.—For *grape most*, read *grape must*.

KUNG-FU,
OR
MEDICAL GYMNASTICS.

BY

JOHN DUDGEON, M.D., C.M.



Movements for the development of the body and for the prevention and cure of disease were known and practised in the most ancient times in all countries. We find gymnastic exercises forming a part of the religion of the ancients. The great heroes of antiquity either instituted, restored, or took part in them. Poets made them the theme of their verses; and so, by immortalizing not only themselves but their victors whose fame they celebrated, they animated the Greek and Roman youth to tread in similar steps. Such exercises were then indispensable, the use of fire-arms being at that time unknown. The body required to be strengthened, and health to be confirmed and inured to fatigue. Contests were generally decided in close fight, by strength of body. Hence the origin of gymnasia, where the science of movement, as it were, was taught, and which were always dedicated to Apollo, the god of physicians. The Greeks owed much of their mental greatness to these exercises. They formed one of the three great parts into which all education was divided,

and this branch was the more important in that it did not cease at a certain period but was continued through life. The Greek effort in education seems to have been directed to the attainment of a sound mind in a sound body, and it was on this account that their physicians and philosophers placed well-regulated exercises as of first importance. We know that the officers of these institutions were recognised as physicians. Exercises of all kinds, such as walking, dry-rubbing or friction, wrestling, etc., were a few of the common aids of physic, as they were termed by Asclepiades, who did so much to bring them into repute. The term *athletae* might most appropriately be applied to the Chinese Tauist priests, the Greek word *athlos*, from which it is derived, being similar in meaning to *kung-fu*. In other respects, however, they resemble more closely the *Agonistae*, who followed gymnastics solely with the view of improving their health and strength; and who, although they sometimes contended in the public games, did not devote their whole lives, like the *Athletae*, to preparing for these contests.

Gymnastics became a part of medicine shortly before the time of the "Father of Medicine;" and, according to Plato, as a means of counteracting the bad effects of increasing luxury and indulgence. It soon passed into a complete system, as already indicated. The gymnasia were often connected with the temple services in Greece where chronic ailments, through bodily exercises, baths, and ointments, could be cured. Æsculapius came to be considered the inventor of bodily exercises. Plato styles two of these Greek gymnasts, who cured disease, the inventors of medical gymnastics, Iccus of Tarentum and Herodicus of Selymbra. The latter in particular made

use of them for medical purposes, which is the reason he is considered to have been the first inventor of this art. Plato relates that the latter was himself ill, and sought what gymnastic exercises might conduce to his recovery. He gained his object, after which he recommended the same method to others. Before his time, dietetics was the chief part of medicine. It was he who advised his patients to undertake the journey from Athens to Megara, a distance of 180 stadia, equal to 6 German miles, and back. Hippocrates, who was one of his pupils and superintended the exercises in his *palæstra*, tells us that Herodicus cured fevers by walking and wrestling, and that many found the dry fomentations did them harm. In consumption, he advised the patients to suck women's milk from the breasts, a practice found existing in China at the present day among the old and debilitated. Galen mentions Premigenes, who was great in the peripatetic theory and wrote on gymnastics.

Other ancient nations besides Greece and Rome seem to have been early convinced of the importance of a knowledge of the means of preserving health. Among the Hindu legislators, we find laws enacted with this object; and, with the view of enforcing them and making them obligatory, we see them joined on to religion, just as in China we find similar precepts extensively pervading their sacred books. The Chinese, like the Hindus, have quite a large number of works on the means of retaining health. These have reference to climate, seasons, time of the day, food, bathing, anointing, clothing, housing, sleep, etc. Exercise receives always a high place in all such works; for it increases strength, prolongs life, prevents and cures disease by

equalising the humours, prevents fatness, and renews and increases the power of resistance. In the *Book of Rites* (1,000 B.C.), we find archery and horsemanship laid down in the curriculum of study to be pursued at the National University. At the present day in China, besides the exercises involved in *Kung-fu*, the various exercises that prevail in Europe are practised publicly and privately by all classes, especially by the Mantchus, and to a much larger extent than among ourselves. Our present mode of warfare has done much to put an end to gymnastics as a part of education and a means conducive to robust health. The ancients may have esteemed them too highly, just as the moderns neglect them too much. True philosophy points to the golden mean as the place where truth is to be found. There are evils from inactivity as well as evils from excessive exercise; but gymnastics, when practised under proper control, must be invaluable in ensuring good health, a clear intellect, and in curing many complaints. Preventive medicine is coming every year more and more to the front, and gaining more attention and importance. The present age seems to be more alive to the importance of gymnastics than any preceding age of modern times. We find them introduced by enlightened teachers into many of our schools and warmly advocated by many medical men. Treatises on this subject are published yearly. One author considers hygiene to be the most useful sphere of the physician, and he believes that the subordinate value of therapeutics may be proved by statistics. Another writer, also a German, speaks of gymnastics as the principal agent for the rejuvenescence of body and mind.

But it is necessary to trace the rise of this subject in China somewhat more particularly.

The first mention in Chinese history of a system of movements, proper to maintain health and cure disease, dates back to pre-historic times, the time of the Great Yü, when the country was inundated, and the atmosphere was nearly always wet and unhealthy, and disease overflowed, so to speak, the earth. The Emperor ordered his subjects each day to take military exercise. The movements, which they were thus obliged to make, contributed not a little to the cure of those who were languishing, and to maintain the health of those who were well.

Premare refers to the same tradition, where he says in his researches of the time anterior to the *Shu Ching*:— In the time of Yü, the waters did not flow away, the rivers did not follow their ordinary channels, which developed a number of maladies. The Emperor instituted the dances named Ta Wu (大舞), the Great Dances. The native author, who reports this tradition, adds that the life of man depends upon the union of heaven and earth. The subtle material circulates in the body; and, if the body is not kept in movement, the humours do not flow, the matter collects, and from such obstruction disease originates. The great philosophers explained in a similar way the cause for the most part of maladies. But that which is specially remarkable in the Chinese tradition is that moisture and stagnant water are considered the source of the endemic and epidemic maladies, and that an efficient means to prevent them consists in the regular exercise of the body or in the circling dances. These movements tend in effect to produce a centrifugal result, from the centre to the circumference, very suitable to restore the functions of the skin, and to give tone and vigour to the whole economy. These dances form part of the institutions of the Empire.

We read also in the *Shu Ching* that the Emperor Yü ordered the dances to be executed with shields and banners. These two sorts of dances were the first sanctioned in the *Li Chi*, or ritual of civil and religious ceremonies. Great importance was attached to the regular bodily exercises. Like as in Greece, to sing and dance well constituted a good education. Even to the present day, the people take to exercises, in order to give themselves bodily strength and as much suppleness as possible; as, for example, the exercises of the bow and arrow, throwing and catching a heavy stone with a hole cut in it with which to provide a handle, heavy bags of gravel, the bar with the two circular heavy stones at the ends of it, the various feats of jugglery, etc. This taste for bodily exercise is one of the fundamental maxims which have not ceased to be considered as the base of all progress and all moral development, the improvement of one's self. Pauthier, in his *Chine Moderne*, mentions a large number of famous dances of antiquity.

The founder of the Shang dynasty (1766 B.C.) had engraven in the bath-tubs—"Renew thyself each day completely; make it anew, still anew, and always anew (苟日新日日新又日新).

From the earliest times there were public institutions where were taught the six liberal arts (music, arithmetic, writing, religious and civil ceremonies with their dances, fencing, and charioteering). We read in the life of Confucius that he applied himself to perfect himself in all these exercises. Regular and rhythmic movements were had recourse to, to develop the physical force, skill to maintain the health and to combat certain diseases.

After the period of movement for the cure of disease comes the period of healing by the virtues of plants, according to Chinese tradition. Although Fu-hsi had begun thus to cure maladies, the art is particularly ascribed to Shên Nung (about 3218 B.C.). He distinguished all the plants, and determined their different properties. The first *Great Herbal* is ascribed to him.

The term *Kung-fu* (工夫) means work-man, the man who works with art, to exercise one's self bodily, the art of the exercise of the body applied in the prevention or treatment of disease, the singular postures in which certain Taoists hold themselves. The expression *Kung-fu* (功夫) is also used, meaning work done. The term *Kung-fu*, labour or work, is identical in character and meaning with the word *Congou*, applied in the South to a certain kind of tea. In China it is applied medically to the same subjects as are expressed by the German *Heil Gymnastik*, or Curative Gymnastics, and the French *Kinesiologie*, or Science of Movement. Among the movements which are embraced within the domain of this method are massage, friction, pressure, percussion, vibration, and many other passive movements, of which the application made with intelligence produces essential hygienic and curative results. These different movements have been in use in China since the most ancient times. They are employed to dissipate the rigidity of the muscles occasioned by fatigue, spasmodic contraction, rheumatic pains, the effects of dislocations and fractures, and in many cases of sanguiferous plethora in place of bleeding. These practices have to-day passed into the habits of the people, and those who are in charge of them are usually the barbers, as they were practised in Europe in the middle ages, who frequent the streets advertising the

people of their presence by striking a kind of tuning-like-fork called *hwantow*. Those usually who practice these movements are the barbers who have shops, and the various exercises are generally gone through in the evenings. In the sequel of this Paper, we hope to describe the methods pursued by them. There is also a class of rubbers, who go to private houses or who undertake to teach the art. Here we have certainly a procedure allied to medical gymnastics, to which the Chinese attribute therapeutic value. Kung-fu embraces, as already remarked, massage (a word not found by-the-by in Webster's Dictionary, from the Greek *massein*, to rub, or Arabic *mass*, to press softly), and shampooing (a Hindu word meaning to knead), a practice still in vogue in China and highly esteemed. Massage consists in such operations as kneading, thumping, chafing, rubbing, pressing, pinching, etc. The barbers, as a part of their duty after shaving the pate and face or plaiting the queue, treat their customers to kneading the scalp of the head, eye-brows, spine, calves of the legs, etc. These operations are practised both by way of preventing and curing disease; but more generally, as in part in Western countries, for the comfort and sense of bracing which it confers. The practice is now largely had recourse to in the West, and with marked benefit in cases of deficiency of nerve force,—neurasthenia, paralysis, hysteria, etc. The various methods of manipulation comprised under the term massage include *effleurage*, *pétrissage*, *friction*, and *tapotement*. All these movements are centripetal, and done with the dry hand. The effect produced by such manipulations is the promotion of the flow of lymph, otherwise designated *humours* by the older writers, and blood, and the stimulation of the muscles of the skin and the skin reflexes.

A medical man, who was lately asked if he used massage much in his practice, replied—"Oh yes, a great deal; my butler does it." After that, one should not have been surprised to hear that the electrical treatment was conducted by his footman, and that the kitchen maid undertook the obstetric cases. Mere rubbing or shampooing is no more massage than a daub of paint is a work of art. It is not only a vicarious way of giving exercise to patients who cannot take it themselves, but it is a valuable curative agent. Lady Manners, in the *Nineteenth Century*, says—"The Chinese are supposed to have learnt the use of gymnastic exercises from the Indians, and the subject mentioned in the most ancient of their books is called *Cong-fou*, or Science of Living." The late Dr. Macgowan gives the term for Kung-fu as Kang (亢), the Great Bear, and fu (符), a charm.

The Tauists, the priests of the religion or system of rationalism of Lau-tse (500 B.C.), have always been the chief practitioners of this form of Medical Gymnastics. These Bonzes, as they are called by the French, a term corrupted from the Japanese and first applied by the Portuguese to a Japanese priest, were the early alchemists of the world, and have for centuries been in search of the philosopher's stone. In cinnabar they supposed they had found the elixir vitæ. Alchemy was pursued in China by these priests of Tao long previous to its being known in Europe. For two centuries prior and for four or more subsequent to our era, the transmutation of the base metals into gold and the composition of an elixir of immortality were questions ardently studied by the Tauists. The Arabs, in their early intercourse with China, thus borrowed it, and they were the means of its diffusion in the West. Kung-fu owes its origin to these same

investigators, and was adopted at a very early period, by which to ward off and cure disease and for strengthening the body and prolonging life, in which it has been declared a far-reaching and efficacious system. My friend, the late Mr. Wylie, in his excellent *Notes on Chinese Literature*, remarks regarding Tauism that it has "changed its aspects with almost every age. Commencing with the profound speculations of contemplative recluses, on some of the most abstruse questions of theology and philosophy, other subjects in the course of time were super-added which at first appear to have little or no connexion with the doctrine of Tau. Among these the pursuit of immortality, the conquest of the passions, the search after the philosopher's stone, the use of amulets, the observance of fasts and sacrifices, together with rituals and charms, and the indefinite multiplication of objects of worship, have now become an integral part of modern Tauism."

[NOTE.—The reader, who may wish to consult this curious subject along with the Medical Divinities and Divinities worshipped in Medical Temples in China, will find a series of Papers by the present writer—*On Chinese Arts of Healing*, in the *Chinese Recorder*, Vols. 2 and 3].

Besides a system of gymnastics and charms in Chinese Medicine, there are other systems, one of which deserves a passing notice. Numerous works exist on all such subjects. There is one on the *Art of procuring Health and Long Life*, without the aid of physicians and by means of regimen and general hygienic measures. Such things are inculcated as the regulation of the heart and its affections; and rules are laid down with regard to dietetics, business, and rest, containing many wise, useful, and quaint precepts, which, if attended to, would certainly

conduce to health and longevity, but which, being persistently neglected, the constitution is ruined and loaded with infirmities, life is shortened, and the body is sorely burdened with disease. [NOTE.—The reader will find one such work translated in Du Halde].

It is the object of Kung-fu to make its votaries almost immortal; at least, if immortality be not gained, it is claimed for it that it tends greatly to lengthen the span of life, to increase the body's power of resistance to disease, to make life happier, and to make the muscles and bones insensible to fatigue and the severest injury, accidents, fire, etc. The benefit, too, the soul derives from such exercises and the merit accruing to the individual are not to be lightly esteemed. I have seen these priests subject themselves to great hardship and severe trials, without producing any impression upon them.

Having briefly sketched the practice of the art in ancient times both in the Orient and Occident, a few remarks on its practice in modern times are necessary to complete our historical retrospect.

In 1569, Mercurialis at Venice published his treatise *De arte Gymnastica*, in which he recorded the most important exercises used by the Greeks and Romans, and which has proved a perfect mine for subsequent writers of the 17th and 18th centuries, who derived their knowledge of this subject largely from this source. In 1740, according to M. Dally, and 1728, according to Dr. Roth, appeared in English a work by Francis Fuller on *Gymnastic Medicine*, every man his own physician, treating of the power of exercise in its relations to the animal economy, and its great necessity for the cure of various maladies, such as consumption, dropsy,

hypochondria, itch, and other skin eruptions. This book made a sensation at the time, and it passed through several editions, and was translated into several languages. In 1748, there were published at Helmstadt two works in Latin, entitled *Dissertatio de arte gymnastica nova* by Boerner, and *De Gymnasticæ medicæ veteris inventoribus* by Gerike. The medical world was too much pre-occupied with pharmaceutical and chemical speculations to pay attention to the Gymnastics of the Greeks, and still less to those of the Tauists, those Priests of Supreme Reason. Père Amiot, one of the Roman Catholic missionaries at Peking, drew attention to the subject of Kung-fu, or, as he spells it, Cong-Fou, by the publication of his *Notice du Cong-Fou in 1779*, in *Les Mémoires sur les Chinois*, of which more anon. In 1781 appeared Tissot's work *La Gymnastique Medicale*. In 1821, another Frenchman, Londe, published a treatise on the same subject, or exercise applied to the organs of man according to physiological, hygienic, and therapeutic laws. These works merit study at the present day for the high estimation of the power of regular and methodical movement on the living mechanism which they indicate. The most important works for rational gymnastics have been undertaken on the mechanism of locomotion. In 1794 an English work appeared, by John Pugh, the anatomist, entitled *A Treatise on the Science of Muscular Action*, showing its utility in restoring the power of the limbs. A work by Dr. Barclay, called *The Muscular Motions of the Human Body*, published in Edinburgh in 1808, was one of the most remarkable, having for its object the anatomical study of each organ with relation to movement; and another on *The Power of Compression and Percussion in the cure of Rheumatism*,

Gout, Debility of the Extremities, and in promoting Health and Longevity, by Dr. Balfour, of Edinburgh, in 1819. Various works in French appeared for the cure of deformities of the spinal column and osseous system generally, and chorea by means of pressure, percussion, friction, massage, position, attitudes, movements (active and passive), which constitute the science and art of medical gymnastics, the therapeutics of antiquity, which has had such prodigious success, principally in the deviations and spasmodic and chronic maladies against which modern therapeutics has generally recognised its powerlessness. In 1830 Dr. Koch's *Gymnastics in relation to Dietetics and Psychology* was published. Numerous other works in French and other languages appeared, treating of friction, ligatures, compression, vibration, percussion, etc. Dr. Roth believes a great part of the results produced by the so-called water cure is owing to the importance of movements, in which the douche, compresses, friction, etc., have so great an influence as well by their dynamical as by their mechanical effects.

We have reserved, for the sequel of this retrospect, notice of the originator of what is now called the Swedish system of Gymnastics, Ling (born 1766, died 1839). His system is based on anatomical and physiological principles; and, in this respect, differs entirely from the Chinese, which can lay claim to no such foundation, and is therefore not calculated to produce all the curative results claimed for the Swedish system. His great principle was the oneness of the human organism and the harmony between mind and body, and between the various parts of the same body. The development and preservation of this harmony is the educational or prophylactic part of the system; the restoration of the disturbed harmony forms the subject

of the medical part. His idea, in Dr. Roth's words, was that an harmonious organic development of the body and of its powers and capabilities by exercises, considered in relation to the organic and intellectual faculties, ought to constitute an essential part in the general education of a people. He looked upon anatomy and physiology as the basis of gymnastics essentially necessary. His intention was to make gymnastics not only a branch of education for healthy persons, but to demonstrate it to be a remedy for disease. The curative movements were first practised in Stockholm in 1813. His system is now largely extended through the various countries of Europe. He arranged the vital phenomena, which are subordinate as well to physiological as to physical laws, in three orders, known as the Dynamical, Chemical, and Mechanical agents. The union and harmony of these three, combined, constitute a perfect organism.

Under the Dynamical he places the manifestations of the moral and intellectual powers; under the Chemical, generation, nutrition, reproduction, sanguinification, secretion, etc; under the Mechanical, breathing, circulation, walking, etc. He carries out this analogy of these three fundamental agents of the vital powers in various directions, as, for example, telluric influences, such as light, heat, electricity, magnetism, etc., are embraced in the Dynamical; nutriment, medicine, poisons, etc., in the Chemical; and shock, pressure, etc., in the Mechanical. The organism itself is divided into the brain, heart, and lungs; arms and legs corresponding to the same three agents. The animal, vegetable, and mineral kingdoms permit of a similar analogy. Hitherto it has been principally by medicines, acting generally on the Chemical agent alone, that we have tried to preserve health and

cure disease; the Dynamical and Mechanical agents have been either entirely neglected or unscientifically considered. In any discordant action of the organism, in other words, in indisposition and disease, which of the three agents must be principally acted upon, must be considered. As the chemical agent is as inseparable from the other two as these are from it, hence it must be impossible to effect a cure in all diseases solely by pure medicines which act principally on the chemical agent. Wherefore medical men frequently prescribe either exercise influencing the mechanical, or amusement, etc., acting by means of the dynamic agent. "It is as wrong," and we are now quoting from Dr. Roth, "to recommend a healthy person only to eat and drink, and not to move or amuse himself, as it is in diseases to act exclusively on one factor of the vital power." The great Sydenham, when dying, consoled those who complained of the loss of the great physician by saying—"I leave behind me three great and most important means, *viz.*,—air, water, and exercise, which will compensate for the loss of my person."

Ling's idea of the harmonious development of the organs of the body, being the essential base of the education of the young and of the people, is a Greek idea which is found in all the writings of the philosophers. Barclay of Edinburgh in 1808, as we have shown, professed the same idea in the treatise on the muscular motions of the body. St. Paul's words in his Epistles to the Corinthians (I, XII, 24) and to the Ephesians (IV, 16), considered solely from the physiological point of view, are still to-day the most perfect synthesis of the science. M. Dally thinks it would be doing a real wrong to Ling's reputation to have him posed as the inventor of it.

His system resembles exactly that of the Kung-fu of the Tauists, and to M. Dally it appears less complex than that of the Tauists. The Chinese system, continues our author, is sanctioned by 5000 years of continued experience. For it is from Central Asia, and from the seat of the origin of mankind, that the Tauists have imported this doctrine into the Orient, and since this epoch have not ceased to make application of it. But it is also from Central Asia, and from the same source as that whence the Tauists have drawn them, that the ancestors of the Greeks imported into the Occident the same doctrine. What then, asks M. Dally, is the merit of Ling? As his body of doctrine does not differ from that of the Tauists, it must be admitted also that at the same time Ling had in his hands the *Notice* of Amiot or some other original Chinese treatise, produced it may be by other missionaries or by some persons attached to Embassies from Europe in China. (Lawrence Lange, by-the-bye, was a Swede, and the first Russian Consul at Peking in the second decade of the 18th century). The doctrine of Ling in its entirety, theoretical and practical, is only a sort of counter-drawn daguerotype of the Kung-fu of the Tauists. It is the royal vase of Dresden, the splendid Chinese vase with its Chinese figures overlaid with European paint. This is, according to our historical studies, says Dally, the real merit of Ling. After all, whether the work of Ling is only an importation of the doctrine conserved in China in all its primitive originality and in its essential therapeutic character, or a simple renovation of Greek art more especially applied to the education of man, or a harmonious development of form and force applied to aesthetics and the military art,—in a word, whatever be the sources whence Ling may have drawn

the elements and the combinations of his system and its applications, it is none the less true that he is one of the men who have much aided to bring back gymnastics among us as a science and an art to the purer traditions of high antiquity.

My attention was first called to the *Notice* of P. Amiot, now nearly thirty years ago, by the following communication from a friend in Edinburgh:—
 “The Chinese have a mode of treating many diseases by various ways of breathing while the patients are placed in previously determined positions, which vary according to the nature of the disease. The treatment is called Cong-fu, and was practised by the followers of the Bonzes, Tao-sse, who prepared the patients by religious ceremonies for the treatment. The French Missionaries of Peking have published in their *Mémoires concernant les Chinois*, Paris, 1779, a chapter on this treatment under the name of *Notice du Cong-fu des Boznes Tao-sse*. Will you kindly furnish answers to the following?

- 1.—Detailed information on the positions and breathing movements.
- 2.—Whether the followers of the Bonzes, Tao-sse, still exist and practise the treatment by breathing movements.
- 3.—The titles of Chinese works on this subject. Some works with wood engravings have been published on the subject.
- 4.—Any other information regarding this mode of treatment.”

This letter was perhaps dictated by Dr. Roth, with whom I have since kept up a friendly and constant correspondence, and supplied him with the various Chinese works containing illustrations on the subject.

The result of my attention having been called to this treatment is the following article on Kung-fu, which was submitted to Dr. Roth, and by him recommended for publication. I was unwilling at the time to present to the medical profession or to the general public a subject so meagerly handled, and during all these years have waited for the convenient time to devote to it more study and research, with the view of supplying at least sufficient details to render any one, ignorant of Chinese and medicine, able to grasp the subject and determine its usefulness or otherwise as a prophylactic and curative agent. Unfortunately the press of work, necessitated by the care of a large hospital and other duties, has prevented me from pursuing further this study. The subject was brought by me before the Peking Oriental Society a few years ago, and it is now published in their Journal.

Dr. Roth has been the most prominent exponent and successful practitioner of the system in Great Britain. As an Hungarian exile after the Russian invasion which crushed the Hungarian cause in 1849, he settled in London after studying Chinese in Paris for some time, and chose this speciality in which he rose to eminence. He published numerous works on the subject which are well known, the chief of which are—*The Cure of Chronic Diseases by Movements, Handbook of the Movement Cure, On Paralysis in Infancy, The Prevention of Special Deformities, The Treatment of Writer's Cramp*, etc., etc. He presented the present writer with copies of all his published works. His *Hand-book* is characteristically "dedicated to all Medical Practitioners who are disposed to examine before they condemn." His work on *Infantile Paralysis* is

dedicated to my friend and namesake Dr. R. E. Dudgeon, who was the first to befriend the exile on landing on our shores, and who was the first to give proof of this confidence by placing some patients under his care. I visited Dr. Roth at his residence, 48 Wimpole St., London, on more than one occasion, where he showed me his institution for carrying out this treatment by movement. He had a similar institution at Brighton.

Amiot says Kung-fu consists in two things,—the posture of the body, and the manner of respiration. There are three principal postures,—standing, sitting, lying. The priests of Tao enter into the greatest detail of all the attitudes, in which they vary and blend the different postures. As these, however, have more connexion with their doctrines than the medical part of Kung-fu, it will be enough to indicate the general principles. The different modes, in the three principal positions, of stretching, folding, raising, lowering, bending, extending, abducting, adducting the arms and legs, form a variety of numerous attitudes. The head, the eyes, and the tongue, have each their movements and positions. The tongue is charged to make in the mouth such operations as balancing, pulsating, rubbing, shooting, etc., in order to excite salivation. The eyes close, open, turn, fix, and wink. The Tauists pretend, when they have gazed for a long time, first on one side then on the other, in regarding the root of the nose, that the torrent of thought is suspended, that a profound calm envelopes the soul, and a preparation for a doing-nothing inertia which is the beginning of the communication with spirits.

Regarding respiration, there are three ways,—one by the mouth, one by the nose, and inspiration by the one and expiration by the other. In the three modes of

respiration, sometimes it is the inspiration that is, as Amiot puts it, *précipitée, filée, pleine* or *éteinte*; sometimes it is the expiration, sometimes also both. The other principal differences which lie at the base of Kung-fu in respiration, as noted by Amiot, are inspiration and expiration by *sifflement, haleinée, sauts, répétition, attraction, and deglutition*.

It has now been said in what Kung-fu consists. It lies with art to choose and combine them, to change and repeat them according to the malady which it is sought to cure. The morning is the best time for it. After the sleep of the night, the blood is in a state of greater repose, the humours are more tranquil, and the organs more supple, especially if one has been careful to sup lightly. Fat persons, or those charged with humours, gain it always by eating nothing at night; and this preparation is absolutely necessary for certain maladies.

In Amiot's *Notice*, twenty figures are given illustrative of the text. In each of the postures, the principal thing is to respire in a particular manner a certain number of times, and to proportion the length of the Kung-fu to the malady. The body is either half nude or dressed, and the position is either standing or sitting. There are series of each. In respiration, the mouth must be half full of water or saliva. Various potions, decoctions, and drugs, are ordered to be taken before or after Kung-fu; they seem to have been added in the course of time, to facilitate the effects.

Amiot dispensed with entering into greater details, as Kung-fu was only a bagatelle, or at least may be so merely; yet, as he might fail to make his meaning clear, and as otherwise, as he says, it is always good to speak to the eyes, he had figures copied to give an idea of the

subject. In a few words, he indicates the different maladies which they are said to cure, in order that the European physician may be in a position to pronounce on this singular practice. Of the twenty figures drawn, although seventeen are given for the sitting posture, it would be necessary, he says, to add many more to give all the attitudes and positions which are blended with the posture; "but in truth we have not had the courage to copy out a larger number," or, as Huc says in speaking of current facts in Chinese medicine, he prefers to abstain because, says he, "Le vrai peut quelquefois n'être pas vraisemblable." Amiot says—"The account which we have under our eyes is in a manner so obscure and in terms so bizarre that we have not ventured to risk a translation of it." If some alleviation to the ills of humanity is the result of it, he will believe himself well recompensed for the courage he has had in risking the *Notice*.

The physical and physiological principles of the art are the following, and I am indebted to M. Dally for this resumé.

- 1.—That the mechanism of the human body is altogether hydraulic, that is to say, that the free circulation of the blood, of the humours (*i.e.*, the lymph), and of the spirits, and the respective equilibrium which modifies their movements and their reciprocal action, being all the time the weight and the wheels of the human body, the health subsists only by this circulation, and this equilibrium, wherein it is re-established, only by their re-establishment.
- 2.—That the air, which without cessation enters the blood and the lymph through the lungs, being as the balance which tempers and restores their fluidity, can neither be re-established nor subsist of itself.

The consequences of these two principles are :—

- 1.—That the circulation of liquids in the human body having to conquer the two great obstacles of weight and friction, everything which tends to diminish the one or the other will aid in re-establishing it when it is altered.
- 2.—As the activity and elasticity of the air increases the fluidity of the liquids, and facilitating by that means their movement, all that tends to increase or diminish the force and volume of them in those of the human body, ought to accelerate or retard their circulation.

These principles and consequences being supposed, the defenders of Kung-fu enter into very great details, to approximate it to the sympathetic correspondence of the different parts of the body, the action and reaction of the great organs of the circulation, of the secretion of the lymph, of the digestion of the aliments, etc. So much for the principles. What of the theory ?

There are the two essential principles of Kung-fu,—the posture of the body, and the mode in which respiration is quickened, retarded, and modified.

- 1.—If we look at the circulation of the blood, lymph, and spirits, on the side of the obstacles which the weight opposes to it, and of the friction which retards it, it is evident that the mode in which the body is straight or bent, lying or raised, the feet and hands stretched or bent, raised, lowered or twisted, ought to work in the hydraulic mechanism a physical change which facilitates or impedes it. The horizontal situation, being that which diminishes the greatest obstacle of the weight, is that also which is most favourable

to the circulation. That of being upright, on the contrary, leaving all its resistance to the action of the weight, ought necessarily to render the circulation more difficult. For the same reason, according as one holds the arms, the feet, and the head, raised, or inclined, or bent, it ought to become more or less easy for it. This is not all; that which retards it, in one place, gives it more force, where it does not find any obstacle; and, from that time, it assists the lymph and the blood to overcome the engorgements which obstruct their passage there. One can further add that, the more it has been impeded in one place, the more its impetuosity brings it back there with force when the obstacle is removed.

It follows from this that the different postures of Kung-fu, well directed, ought to operate in a salutary disengagement in all the maladies which spring from an embarrassed, retarded, or even interrupted circulation. Now, how many complaints are there that are not thus caused? One can even demand if, except fractures, wounds, etc., which derange the bodily organisation, there are any which do not so originate?

2.—It is certain that the heart is the prime mover of the circulation, and the force which it has to produce and conserve it is one of the grand marvels of the world. It is further certain that there is a sensible and continual correspondence between the beatings of the heart, which fills and empties itself of blood, and the movements of dilatation and contraction of the lungs, which empty and fill themselves with air by inspiration and expiration. This

correspondence is so evident that the beating of the heart increases and diminishes immediately, in proportion to the acceleration or retardment of the respiration. Now, if we inspire more air than we expire of it, or *vice versâ*, its volume ought to diminish or augment the total mass of blood and lymph, and ought to invigorate more or less the blood which is in the lungs. If one hurries or retards the respiration, one ought to hurry or weaken the beatings of the heart. The bearing of this on Kung-fu is self-evident, and need not further be illustrated. It is evident that, in accelerating or retarding the respiration, we accelerate or retard the circulation, and by a necessary consequence that of the lymph; and that, in the case of inspiring more air than we expire, we diminish or augment the volume of the air which is therein contained. Now, all this mechanism being assisted by the posture of the body, by the combined and assorted position of the members, it is evident that it ought to produce a sensible and immediate effect upon the circulation of the blood and lymph,—an effect physical, necessary, and intimate, linked to the mechanism of the body, an effect so much the more certain as the repose of the night has rendered the organs more supple, as the diet of the evening has diminished the plenitude of the arteries, of the veins, and of the canals of the absorbents and lacteals. The object of the *Notice* in the *Mémoires*, Amiot says, is not to teach Kung-fu, but to enable European physicians to examine its value without prejudice.

The above is chiefly a translation from Amiot's article. M. Dally subjoins some observations. He supposes the Tauists to consider the body as a vertical line, and the members which are attached to it as articulated springs of the line, able to take in turn all the different positions. Upon this vertical line they have made four general divisions,—the head, the arms, the trunk, and the legs. Each of these divisions has general movements proper to it, and the articulated parts of each of these divisions have also their particular movements. He takes, for example, the head, of which they have considered not only the general movements, inclined in front and to the back, to the right and to the left, but also the particular movements of torsion of the neck to the right and left, those of the eyes, of the nose, of the mouth, of the tongue, and of the jaws. They have obtained new movements in combining the general movements among themselves, the particular movements among themselves, and the particular movements with the general movements. Is it wished to get an idea of the number of attitudes, orders, series, or formulae, of which this system is composed? It is sufficient to represent only what in mathematics one calls permutations, arrangements, and combinations; and the figures become infinite. This infinite multiple of formulae reproduce themselves again by the addition of the different modes of respiration, and by other conditions, such as the quickness, the resistance, the body being naked or dressed, burdened with a weight upon the head, on the shoulders, or in the hand, according to the malady; besides the body lying, sitting, standing, stretched or relaxed, immovable or movable, walking, running, dancing, leaping, in an active or passive state, or one part active and another passive;

all the conditions which influence specifically the physiological effect of the same movement, or of a similar series of movements.

After mentioning the above six observations, M. Dally gives an example which he says one can verify upon one's self. Stretch forth the arms forcibly, while friction is made in a concentric curve over the abdominal region. What do you feel? An increase of heat in the intestines, at the same time also a diminution of the heat in the anterior side of the abdomen. Therefore, there is an augmentation of the circulation in the arteries of the intestines, and a diminution of the blood in the abdominal veins. Would you like that the friction cause an effect altogether the contrary? Lower the arms, and hold them hanging. In this position, the same friction produces a diminution of the blood in the intestinal veins, and an augmentation of the circulation in the arteries and in the anterior abdominal walls. Then, in the one case and in the other, there has been, at will, an exchange of arteriosity and absorptivity between the walls of the abdomen and the intestines. Then again, in the one case and in the other, the conditions of vitality which preside over the functions of all the organs of the abdominal region are powerfully active, and one conceives that it is possible to produce the same effects on the entire economy, in assisting by general friction the tension or distension of the whole muscular system, the tension or distension which the reserve of the breath or the simple ordinary respiration can again notably modify. Thus, of the different attitudes, they can produce physiological phenomena exactly alike or variously modified; and what is of great importance in the

application to the treatment of disease is this, that we can isolate a portion of the body, by acting on some other parts.

Such is the system of Kung-fu, and P. Amiot, says Dally, one of the most profound mathematicians of his time, has perfectly understood the grandeur of this system when he says that all the known postures and attitudes do not form a moiety of those which the Tauists have imagined.

These are M. Dally's observations on the system. He then adds these on the method. We know the elementary movements of Kung-fu and their various combinations to be infinite. By the examples which we have given of the physiological effects of friction, combined with tension or relaxation of the abdominal muscles, one can judge with what precision and exactitude these effects can be produced, in order to combat the diseases against which they are indicated, such as constipation, diarrhœa, or any other enteric trouble. In order to better appreciate the power of Kung-fu, it would be necessary to make a special study of the thousand different modes of respiration; for this is the essential point, and, according to the observation of Amiot, the most difficult of this method. Yet, says M. Dally, the difficulty can be overcome by special physiological and anatomical study, and by the stern experience obtained by the effects. One can be assisted in this matter by the traditions of the employment of this exercise among the peoples of antiquity.

After citing instances, he sums up thus:— Upon this point, as upon all others, one comes back to the wisdom of high antiquity, where movement is still timid and partial, but which tends constantly to complete

and generalize itself. Amiot's figures (4, 6, 12, and 20) recall to M. Dally the formulae similar to those which he has previously given, in affections of the abdominal region. He quotes figure 9 as a formula against vertigo and dazzling. It indicates a movement of double pressure of the head, combined without doubt with a movement of vibration and a certain respiration. He himself applied this remedy with success against vertigo and inveterate pains of the head. The physiological effect of this formula is innervation, molecular division, and increase of activity of the absorbent vessels. Applied to the head, it ought necessarily to bring back there the freedom of the functions. An analogous practice is found among the Greek physicians and in Ling's method. M. Dally has also verified attitude 15 against gravel, nephritic pains, and lumbago. He obtained instantaneous relief. As it is here only a question of a certain pressure upon the kidneys, with tension of the anterior muscles of the body, one is able to take the different attitudes which pre-dispose the muscles in the same manner, and to make them exercise this pressure by another person. This gymnastic remedy, M. Dally says, is an hereditary usage in Hungary. Amiot was afraid to risk a translation, which M. Dally deeply regrets; and he hopes, in the interests of science, that some able and curious expert is to be met with who will undertake to reconstitute this method, with the elements of which he has annotated the system. M. Dally here, in a foot note, refers to his visit in 1854 to Dr. Roth in London, who was the learned and zealous director of an establishment there. He spoke of the discovery he had made of the *Notice du Cong-fu*, in the *Mémoires sur les Chinois*, praying him to examine this doctrine which had

the greatest affinity with that of Ling. He hoped much from this step. M. Dally thought that efforts made in the libraries of Europe, and in the yearly papers sent by the missionaries in China, might probably find out the works which Amiot had consulted. The works with figures, consulted by Amiot, and many others, are now before the present writer.

In the meantime, continues our author, we remark in the *Notice* that the conditions of time and diet were accessory elements in the application of Kung-fu. We notice also in it that the simultaneous administration of movements, along with certain medicaments, was a practice foreign to the primitive and rational doctrine of this institution, as well as the superstitious practices with which it is to-day surrounded. Amiot does not say whether the system of Kung-fu is applicable to the treatment of deformities, luxations, and other surgical cases. In support of the treatment of surgical cases by this method, he (M. Dally) quotes from Lay's *The Chinese as They Are* and Dr. Williams' *Middle Kingdom*, and says he could multiply facts of this kind, which clearly establishes that the science of physiological movement furnishes the Chinese with effectual means in the treatment of maladies of all sorts. According to Du Halde, the residence of the Chief of the Tauists, called the Celestial Doctor (T'ien Sze), is in the department of Kan-chou Fu, in the province of Kansuh, a mountainous country which furnishes an extraordinary abundance of medicinal plants. There is the central establishment for the teaching of the doctrine. They possess secondary establishments, one of the most considerable being that in Kiangsi, where a crowd of sick come together from all parts, in search of a remedy for their ills.

M. Dally next gives us some observations on the principles and the theory. According to Amiot, the Tauists consider the human body as a purely hydraulic mechanism, and he explains their physical principles and their physiological theory according to this sole fundamental idea. In this case, there will be between the doctrine of the Tauists and those of the Iatro-mechanists such a similitude of affinity that one can believe that they pertain to the same school. Yet Amiot makes it understood that Kung-fu relies still upon other principles. The primitive priests considered the body not only as a physical and mechanical apparatus, but also as a chemical one. They recognized even that the physical and chemical laws of the body are subject to the influence of a superior principle, which rules and harmonizes them in the unity of the living being. This Chinese conception recalls exactly the theory of Ling—of mechanical, chemical, and dynamic agents, which balance themselves and hold themselves in equilibrium upon a central point which is the life and whence proceed the three principal agents. Dr. Bayes of Brighton, in his memoir entitled *On the Triple Aspect of Chronic Disease*, London, 1854, takes also for the base of his observations the theory of the Chinese balance of the three vital forces, which he borrowed probably from the doctrine of Ling. M. Dally has already spoken of them; it is necessary, he says, to revert to them again.

The animal forces, locomotive or muscular, *Yang*, and the vegetative forces, secretory or chemical, *Yin*, are harmonised and held in equilibrium by the physical forces, *T'ai-chi*; and from this state of equilibrium results life and health. These three forces have contrary tendencies; the *Yang* tends to produce and perpetuate itself incessantly, the *Yin* tends to descend to the terrestrial region, and the

T'ai-chi remounts to its origin, the *Tao*, the reason of all the visible manifestation. The *Yang* and the *Yin* are so united among themselves that they are in a state of reciprocal dependence, and they possess only a certain power of reaction proportioned the one to the other, a power dispensed by the *T'ai-chi*. It is in the maintenance of this proportionality, of this species of static, physical, chemical, and intellectual equilibrium, that the will, the moral power of man, and the acts by which this will manifests itself, ought to tend incessantly. Now, Kung-fu has been instituted for this object. It is charged with the maintenance or re-establishment of all parts of the body and its faculties in their condition of unity and primitive harmony among them and with the soul, in order that the soul may have at its disposition a powerful and faithful servant for the execution of its will. In other words, and from the *Notice* of Amiot, Kung-fu is "a real exercise of religion, which, in curing the body of its infirmities, frees the soul from the servitude of the senses," and gives to it the power to accomplish its duties upon the earth and of raising itself freely to the perfection and perpetuity of its spiritual nature in the *Tao*, the reason of the grand creative power. Thus Kung-fu, in its primitive institution, appears as a souvenir of the Tree of Life, under which man of the first days came, after his labours, to shelter his forces and his health and conserve his soul, still pure, a docile instrument of his will. Such are the principles upon which reposes the theory of Kung-fu of the Chinese, like that of their chemical and pharmaceutical medicine, and also that of their religious, social, and philosophic doctrines; for the Chinese, whatever be their studies of man or the institutions which concern him, carry always their considerations into all the

elements of his nature and his constitution. However we may think that the progress of the civilization of the West has not yet arrived at this degree of practical reason; we are certainly astonished to see that, from the first ages of humanity, the priests of *Tao* were in possession of this grand thought of the unity of the human nature, and that they had made the application of it to all things, even to hygiene and to therapeutics, by movement organised in its relations with the physical, chemical, and psychical laws of the human being.

Indeed, this will be a curious history to write, says Dally, that of these old priests of *Tao*,—these remains still living of the first Brahmans of India, of the Magi of Chaldea, of the priests of Egypt, of the Druids of Gaul, their contemporaries, diverse sects,—sprung more than 3000 years before our era, from the alteration of the primitive tradition of mankind. Depositories of the tradition, these founders of nations carried the doctrine of *Kung-fu* from the common cradle into all the countries where they established themselves. Perpetuated whole and complete among the Chinese, we shall find it more or less mutilated and altered among other peoples.

Lao-tse was the founder of the religion of *Tao*, or rather the restorer of it, as he himself says. He appeared in the 6th century B.C.; and, like Confucius, his rival, the political reformer of China, at the same epoch as Buddha, Zoroaster, Socrates, and Plato, curious synchronisms which prove the providential solidarity of all the fractions of humanity. M. Dally, believing that he hears the distant echo of the religious principle of the *Kung-fu* in Plato whom he quotes, he concludes this chapter with the words of St. Paul, in his Epistle to the Thessalonians (v. 23), where M. Dally recognises the pure

tradition of the religious and scientific principle which presides in the doctrine of the Kung-fu:—"And the God of peace himself sanctify you wholly; and may your spirit, and soul, and body, be preserved entire, without blame, at the coming of our Lord Jesus Christ."

I am indebted for much of what has now been presented, in illustration of this system, to Père Amiot, and particularly to M. Dally, who has published a large work on the subject, called *Cinésiologie ou Science du Mouvement*, Paris, 1857, in which he reviews Amiot's *Notice*. He sums up the subject in these terms.

This art is a very ancient practice of medicine, founded on principles originally pure and free of all the superstition with which it is to-day surrounded. It goes back to a period when the Tauist priests formed an official sacerdotal caste, in the time of Hwang-ti (2698 B.C.).

The art consists in three essential parts :—

- 1.—It comprises divers positions of the body, the art of varying the attitudes; and it explains how, during these positions and attitudes, the act of respiration ought to be carried on, following certain rules in various inspirations and expirations.
- 2.—The method has its own scientific language.
- 3.—It has really operated in the cure of disease, and in the alleviation of many infirmities.

The Chinese, to whatever order they belong, have recourse with eagerness to this mode of therapeutics, when all other means of cure have been tried in vain. Thus, Kung-fu has really all the characters of an ancient scientific method.

So much for the principles and theory of Kung-fu as given by Amiot, and so ably enforced and explained by Dally. The latter entertains higher ideas of the value of Kung-fu than, in my opinion, is warranted. Amiot gives some of the salient points of position and breathing movements for the cure of certain maladies, but has not criticised or pointed out the unscientific ideas of the Chinese, not only regarding their cosmogony or philosophy of creation, but the physiology and anatomy of the human body which in their system are closely correlated, including the number, position, and functions of the viscera, the circulation of the blood, the true cause of the pulse, etc., and which are diametrically opposed to our modern Western medical science. A couple of illustrations, which will be found in the sequel, will explain the Chinese ideas of the human body. Although their theories, however, may be and are wrong, there may be and doubtless is advantage derived from Kung-fu in the prevention and cure of disease, and the strengthening of the body, just as in their therapeutics, although entirely empirical, they are often successful in the treatment of disease.

We reserve for the conclusion of this Paper our own remarks and investigations into these principles and theories, and now hasten to place before the reader some of the various methods, active and passive, prophylactic and curative of disease, and for strengthening the body. There are numerous works on the subject, copiously illustrated by more or less rude wood-cuts showing the various positions,—sitting, standing, and lying. To facilitate the full understanding of much that lies at the basis of all Chinese philosophy, and of course also of their medical practice and theories, and is taken for granted in Kung-fu, would require our entering into the general

subject at some length. At present it must suffice, aided by brief notes where the references would otherwise be unintelligible, to give as briefly as possible the rationale of the art from the Chinese standpoint. This remarkable people have always highly esteemed the study of physic, because of its utility in the preservation of life and the cure of disease, but chiefly from the close connexion which they believe exists between the body and its various members and the heavenly bodies. The reader will, therefore, not be astonished to find in Kung-fu, as in their medicine generally, much that is puerile and sublimely ridiculous, with here and there grains of wise observation and practical remark. Their reverence for antiquity, and their clinging to their elaborate and beautiful theories which their ignorance led them to make, and their conservatism leads them to keep, has been the chief cause of retarding progress in medicine and the cognate sciences. Had they shown as much talent and industry in studying man as he is, as they have exhibited in the industrial arts, etc., the Chinese would undoubtedly have been the first physicians in the world. With the highest heathen civilization, they stand lowest in point of practical medicine.

The Eight Ornamental Sections.

This name has been handed down by the sages of antiquity, and hence the eight illustrations. The object aimed at is to prevent the entrance of demons and vicious air, to obtain clearness in dreams and sleep, and not stupidity, to shut out cold and heat from the body, and prevent disease from gaining a lodgment. The time when

the exercises are enjoined to be carried out is after the third watch (11 to 1 a.m.), and before noon, as this period agrees with the creation of heaven and earth, and also with their fixed series of diurnal revolutions; and the blood and air cannot stop, but must proceed also in their revolutions, and this is in accordance with the principles of the Eight Diagrams, which has excellent reason on its side. The idea in the expression "to close the fist tightly" has not been deeply investigated. Not only must the eyes be closed and see one's own eyes, and thus the heart shut to the external world, but at the time of sitting cross-legged, the left heel must be so flexed as to buttress the movable place (perinæum) below the root of the *membrum virile* of the kidney, so as to prevent leakage of the semen. In performing this *kung*, it is not absolutely necessary to do it at the periods specified. Any time of the day when the body is at leisure and the heart unoccupied will do equally well. To use the exercise much or little must be left to each one's own discretion. If persons, however, will abide by the after midnight and before noon arrangements, then, if at these periods they should have no leisure, what then? Those who wish to learn *Tao* cannot but understand this. Such is the native introduction to these sections. It will be observed that they are prophylactic.

No. 1.—*Knocking the teeth and collecting the spirits.* Bump the teeth and assemble the spirits 36 times. Let the two hands embrace the *Kw'en-lun** (the head) and

* A mountain of Central Asia, the Hindu Kush, widely celebrated in Chinese legends, especially in ancient fable and Taoist mythology. The cosmogonists and mystics elevated it to the position of the central mountain of the earth, or as we say now "the roof of heaven," and the source of the "four great rivers," also the residence of the queen of the genii. Innumerable marvels are related of this mountain, with its trees of pearls, jade-stone, and immortality. The appropriation of the name of this mountain to the head is, therefore, not out of place.

beat the "Heavenly Drum" (the occiput) 24 times. *Note.*—The eyes must first be shut, and the heart dark (*i.e.*, in Taoist phraseology, sit cross-legged), the fists must be tightly closed, and the heart at rest, and both hands placed behind the vertex (of the head); then 9 respirations such that the ears will not hear, afterwards respire, but still to be inaudible to the ears; then sound the "Heavenly Drum" 24 times; afterwards knock the teeth and assemble the spirits; then both hands with their palms must cover the ears, and the fore-finger is to press upon the middle finger, and the back of the brain to be tapped right and left each 24 times. (The occiput is also sometimes termed the "Jade Pillow").



No. 2.—*Shaking the "Heavenly Pillar"*. The right and left hand to shake the "heavenly pillar" each 24 times. *Note*.—First close the fists tightly, then move the head once right and left, look at the shoulder and upper arm while following the movement 24 times.



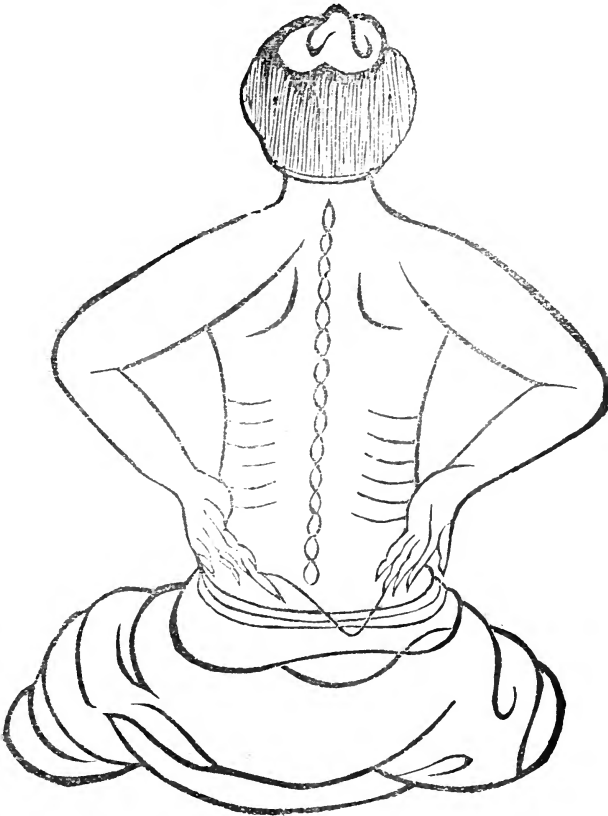
No. 3.—*The Tongue Exciting Gargling and Swallowing the Saliva.* Let the tongue stir up the palate right and left 36 times, gargle 36 times, divide into 3 mouthfuls, and, like hard things, swallow [the saliva thus produced], and afterwards the “fire” (inflammation) will go.



Note.—Let the tongue excite the mouth, teeth, right and left cheeks; and, when the saliva has been thus produced, then gargle; and, when the mouth is full, then swallow it. The tongue is the “red dragon,” the saliva is the “divine water,” and the swallowing of the three mouthfuls must imitate the sound *ku ku* (汨汨, the sound of gurgling water).

No. 4.—*Rubbing the Kidneys.* With both hands rub the court or hall of the kidneys (the loins) 36 times, the more the better. (T'ang [堂], chia [家], and fu [府], are indifferently used; and, when applied to the viscera, denote their residence). *Note.*—Close the respiration, rub the hands until warm, then rub the kidneys according to the number of times already mentioned; afterwards draw back the hands, close the fists tightly. Again shut the breath, reflect, use the fire of the heart and burn (heat) the *tan tien* (navel); and, when you feel that it has become very hot, then use the subsequent method. In the expression “the dragon going and the tiger fleeing,” the saliva represents the dragon and the air [of respiration] the tiger. In closing the breath and rubbing the hands warm, the nose first inspires the pure air, and then the respiration is closed; after a little, the hands are rubbed quickly until they become quite hot; then slowly let the nose give exit to the air. To rub the back *ching mén*, 精門 (*i.e.*, semen door) means the external kidney behind the loins (as explained by the Chinese). When the joining of the hands in rubbing is finished, withdraw the hands and grasp the fists firmly (as before). Again shutting off the air, think of

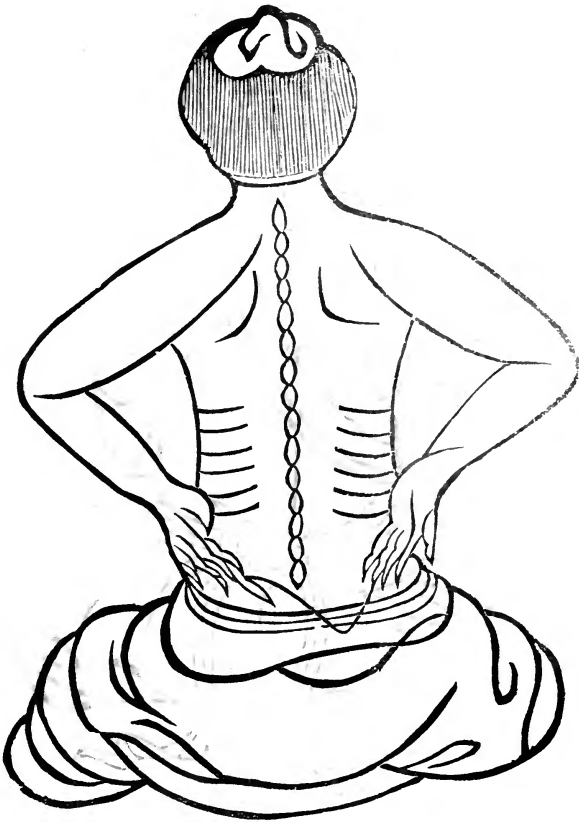
the fire as burning the "wheel of the navel." This refers to the *tan tien*, and using the "heart fire" to think it down to the heating of the *tan tien*.



No. 5.—*Winding the Single Pulley.* With the right and left [hand], turn the single pulley 36 times. *Note.*—First bend the head and move the left shoulder 36 times, then the right also 36 times.



No. 6.—*Winding the Double Pulley*. Thirty-six times.
Note.—Move the two shoulders like a pendulum 36 times. Bend the head, move the shoulders, think the fire from the *tan tien* upwards by the “double pass” (one of the acupuncture apertures in the back) to the brain, the nose introducing the pure air; then close for a brief period, and extend the feet.



No. 7.—*Pressing the Vertex*. Rub the two hands together, and after five *hems* (voluntary half-coughs, in Chinese, *k'o*, 咳), interlace the hands and support Heaven, and then press the vertex each 9 times. *Note*.—Interlock the hands and raise them aloft to support the void 3 or 9 times.



No. 8.—*Grasping the Hook*. Let the two hands take the form of a hook, advance them to the front, grasp the soles of the two feet 12 times, again withdraw the feet and sit upright. *Note*.—Bring both hands to the front, clasp the soles of the feet 12 times, re-collect the feet and sit upright. Wait till the saliva in the mouth is produced, then gargle and swallow according to the number of times already indicated, move the shoulders and body 24 times, and also the pulley exercise (termed the “river cart”) 24 times; think the fire of the *tan-tien* from below upwards, and burn (heat) the body. At the time of thinking, the mouth and nose must be closed for a very little. Wait till the saliva is produced in the mouth; if it fail, then re-excite it, gargle and swallow according to the former method. When the “divine water” is swallowed 9 times, and the gurgling sound produced, the pulses become all harmonized and regulated.



The Five Animals.

These figures for the cure of disease by perspiration were designed by the celebrated surgeon Hwa-to, of the Han dynasty (2nd century A.D.), who is not only the Esculapius of China but was well versed in all the secrets of Tauism. He was wondrously skilled in acupuncture, and some of his surgical operations are of a very marvellous description. He was the first to use anæsthetics in scraping the poison from the arm of Kwan-ti, the god of war and patron of the present dynasty. If one's body is not in health and peace, the performance of these five figures will produce perspiration and cure the disease and discomfort.

Figure 1.—*The Tiger*. Close the breath, bend the head, close the fists tightly, and assume the severe form of a tiger. The two hands are slowly to lift a supposed weight of 1000 catties; the breath is to be retained till the body is upright, then swallowed and carried down into the abdomen. This is to cause the "divine air" (animal spirits, energy) to proceed from above downwards and produce in the abdomen a sound like thunder; to be done some 7 times. By this sort of movement,

the air and pulses of the body will be harmonized,
and the hundred (all) diseases prevented from being
produced.



Figure 2.—*The Bear*. Assume the form of a bear, incline the body slightly to the side, swing it to the right and left, place one foot in front and one behind, and stand fast. Use the air till the ribs on the two sides and the joints all resound. Also, move the strength of the loins to remove the swelling (?) some 3 to 5 times. This will relax and tranquilize the tendons and bones. This also is the method for nourishing the blood.



Figure 3.—*The Deer*. Shut the breath, bend the head, close the fists tightly, turn the head like a deer viewing its tail; the body even, contract the shoulders, stand on tip-toe, stamp on the heel, and including the "heavenly pillar" (the neck) the entire body will move; do it some 3 times, or each day once will also do. To do it once, on getting out of bed in the morning, is the best of all.



Figure 4.—*The Monkey*. Stop the breath, assume the form of a monkey climbing a tree, one hand as it were holding some fruit, one foot raised; on the heel of one



foot turn the body, and cause the "divine air" to revolve,* carrying it into the abdomen till you feel perspiration is exuding, and then it is finished.

Figure 5.—*The Bird*. Close the breath, assume the form of a bird flying, raise the head, inspire the air of the coccyx, and cause it to ascend to the hollow of the vertex (head); let the two hands assume in front [the attitude of] reverence [or worship], raise the head

* The expression *yün-ch'i* (運氣) occurs in almost every exercise. In fact, without this there is properly speaking no *kung* (功). It is the very essence of the art, and the greatest stress is laid upon it. Its impossibility, absurdity, and uselessness, even if possible, do not require to be demonstrated. The benefit which is derived is from the exercise in attempting the impossible. Man is considered a "little heaven." The pure air is inspired, and, by swallowing it with effort, it is carried down to the navel or *tan tien*—an imaginary spot one inch below the navel—thence to the coccyx, where there is an aperture which in young persons is pervious but in old persons is filled up with fat; thence up the back, past the "double barrier" to the occiput; then over the vertex to the "heavenly door" (the brow), and finally finds egress by the nostrils as foul air. This is performing a revolution of the microcosm, and that which is denoted by *yün-ch'i*. The Taoists prefer the retirement in the monasteries in the hills to go through these exercises, as the air there is pure.

(so as to have the face upwards), and go out to meet the spirit and break the vertex (*i.e.*, open the brain, as it were, to receive it).



Kung-fu for the Four Seasons.

In the year's exercises, we must omit all references to the time each day, which ranges from mid-night to 7 a.m., when they are enjoined; also the numerous correlations with pulses, blood-vessels, viscera, the five elements and their natures, the atmospheric influences,—whether heavenly, earthly, or respiratory,—the eight diagrams, the cyclical signs, points of the compass, etc. There are two exercises for each month, making 24 in all, arranged according to the 24 solar terms or periods (breaths) of the year, corresponding to the day on which the sun enters the first and fifteenth degree of one of the zodiacal signs. To each of these an appropriate name is given, which we have retained, as they are in popular use. The exercises are arranged according to the four seasons, and each season is prefixed and suffixed with some animal representing the correlated viscera. These we have also retained from their quaintness, excellency of design, and with the view of conveying an idea of the Chinese correspondencies. It will be observed that the Black Tiger and the Dragon occur very frequently in the Taoist works. Charms also frequently accompany them; but, as this is a wide subject and has a special form of treatment, it is omitted here. It has been discussed elsewhere. The various correlations of the human body will be found treated in the *Philosophy of Chinese Medicine*, a work contemplated by the writer. In the medicinal exercises which follow, I have given the prescriptions attached to them, as they throw some light upon their materia medica and mode of preparing drugs, the nature of their recipes, etc. Included in the chapters on *Seasonable Regimen*, referred to further on, are found prescriptions ascribed to

the Yellow Emperor (2697 B.C.), to cure or prevent diseases of the viscera which are omitted. The spring governs birth; summer, growth; autumn, harvesting; and winter, storage. For each period and for each viscus, the various things that regulate and assist are given; what is indicated and what contra-indicated, with all matters that ought to be attended to.

The liver is the viscus which stands at the head of the three months of spring. It is represented as a dragon (see illustration, below). The name of its spirit is "Dragon Smoke;" its appellation is "Containing Brightness."



The form of the liver is that of a dragon ; it stores up the soul ; it resembles a hanging bottle-gourd of a whitish brown colour ; it is placed below the heart, a little nearer the back ; the right has four lobes, the left three lobes ; its pulse emerges from the end of the thumb. The liver is the mother of the heart and the son of the kidneys. To repair and nourish it, during the first half of the three months, one must sit facing the east, knock the teeth 3 times, shut the breath and inspire 9 times ; breathe the south air,—take in 9 mouthfuls and swallow 9 times. Certain medicines are also ordered. The *kung* to direct the liver for the spring three months is to press equally the two hands on the shoulders, slowly press the body right and left each three times. It can also be done by clasping or interlocking the two hands, turning the palms and dorsa alternately to the chest 3×5 times. This will cure obstruction of the liver from vicious wind and poisonous air, and prevent disease from developing. These exercises must be incessantly attended to morning and evening in the spring, without intermitting even one day ; and, with the heart set upon it, the cure is complete. If, after driving out the corrupt air, the eyes be fixed and closed, opening them only a little, and then puff out the air slowly and by little, the cure of a flushed face and flow of tears will be effected.

1.—*For the Solar Term of the First Month, or "Beginning of Spring."*—Hands folded, press the thigh, turn the body, twist the neck towards the right and left alternately 3×5 times ; knock the teeth, respire, gargle (as it were the air in the mouth), and swallow 3 times. For the cure of rheumatism and obstructions, pain in the neck, shoulders, ear, back, elbow, and arm.—*See Figure, next page.*



2.—*For the Middle of the First Month, or "Rain Water."*—Hands folded, press the thigh, turn the neck and body as before, alternately to the right and left 3×5 times, etc., as above. For the cure of obstruction and the storing up of vicious poison in the Three Divisions (imaginary viscera) and net-work of vessels, difficult deglutition, deafness, and pain of the eyes.*

* The illustration, being identical with the above Figure, is omitted; the pressure of the hand is applied to the right instead of the left thigh, and the head is turned to the left. The character used in the second is *pi* (腓), which is not found in any of our Chinese-English Dictionaries. In the writer's *Vocabulary of Anatomical Terms*, to be published shortly, it refers to the region of the stomach. The part to be pressed upon in the above Figure is *pi* (髀), the thigh, which agrees with the illustrations

3.—*Second Month, name of Solar Term,—the “Waking of Insects”* (animals that have secreted themselves all winter are supposed to come out on this day).—Close the fists tightly, turn the neck, move the elbows like the wings [of a bird] 5×6 times, draw them backwards and forwards, tap the teeth 6×6 times, inspire and swallow 3×3 times. To cure the corrupt poison and obstructions of the loins (lumbago), back, lungs, and stomach, dryness of the mouth, yellowness of the eyes, epistaxis, difficult deglutition, face swollen, aphasia, rheumatism of the head, tooth-ache, darkness of vision, intolerance of light, loss of smell, polypus, and boils all over the body.—See Figure, below.



4.—*Middle of the Second Month,—termed the "Spring Equinox."*—Extend the hands, turn the head to the right and left 6×7 times, knock the teeth 6×6 , inspire and swallow 3×3 . To cure weakness and the vicious poison of the chest (consumption), shoulders, back, and small blood-vessels, tooth-ache, neck swollen, rigors, feverishness, deafness or ear-ache, tinnitus aurium, pain behind the ears, pain of the shoulders, elbow, upper arm, and back, oppression in the lungs (fulness), skin feeling like a husk or shell (not painful but itchy).—*See Figure, below.*



5.—*Third Month,—Solar Term "Pure Brightness."*—
 Change hands right and left, like drawing the bow, each
 7 × 8 times, knock the teeth, respire, taking in the outside
 pure air to displace the foul air from within, and swallow
 the saliva each 3 times. To cure the weakness and vicious
 air of the loins, kidneys, intestines, and stomach, painful
 deglutition, ears deaf and painful, pain of the neck and
 inability to turn it, pain in the shoulder and unable to
 raise it, body bent and without strength, arm painful,
 and weakness of the loins.—*See Figure, below.* *



* This Figure corresponds with Amiot's No. 2, which is explained as directed against asthma and the pains of the loins and bowels. It is not necessary to turn the head.

6.—*Middle of the Third Month,—termed "Corn Rain."*—Sitting evenly, alternately raise the right and left hand as if supporting something, and alternately with the



right and left cover the breasts, each 5×7 times, etc.*
 To cure blood obstruction in the spleen and stomach,
 yellowness of the eyes, bleeding of the nose; cheeks, neck
 and arm swollen and painful, palms of the hands hot.—
 See Figure, opposite page. †



* Each exercise concludes invariably with the phrase *t'u³ na yen ye* (吐納嚥液), which we have translated *respire and swallow the saliva* so many times. The word *t'u* refers to the air coming out of the mouth softly and slowly (expiration); *na* to its entering by the nose (inspiration) also slowly and continuously. The expression is equivalent to breathing out the foul and sniffing in the pure air. The repetition of the phrase is omitted.

The air of expiration moves the "heavenly stems" (10), and the air of inspiration the "earthly branches" (12); those cyclical signs forming the cycle of 60 combinations.

† This Figure corresponds with No. 4 of Amiot, which is said to be against embarrassment and obstruction of the stomach and jaundice.

The name of the spirit of the gall-bladder is "Glorious Dragon," and its appellation "Majestic Brightness." Its form is that of a tortoise coiled round by a serpent (see illustration on previous page); its resemblance is to a suspended gourd; its colour is a green purple; it is placed in the middle of the liver. Its *kung* is to sit upright, place the two soles of the feet together, raise the head, with the two hands take hold of the ankles and move the feet 3×5 times. Or with the two hands press the ground, straighten the body, and add force to the loins and back 3×5 times. In this way, the vicious air and poisonous wind can be driven out.

Then follow the summer three months,—Fourth, Fifth, and Sixth. The period starts with the picture of the heart. The name of its spirit is "Great Red;" its designation is "Guarding the Soul;" its form is like "the Scarlet Bird" (the fancy name of a position in geomancy); as the Red Ruler, it stores up the spirit. It resembles the lotus turned upside down; in colour, like white reflected on brown; it is placed in the middle of the lungs above the liver, one inch below the apex of the ensiform cartilage (in Chinese the aperture called the "dove's tail"). The pulse of the heart issues from the end of the left middle finger, at the aperture termed "the communicating centre." In order to direct the heart into a right course, sitting straight, with both hands clenched, with strength ram down alternately the right and left each 5×6 times. Also, with one hand raised aloft in space as if supporting a picul of rice, right and left alternately. Also, with both hands clasped, and the foot placed within the clasped hands, each 5×6 times, during which period let the breath be held, to drive out all diseases caused by vicious wind in the heart and thorax. This exercise to be performed for a long time, with the eyes shut, the saliva swallowed

3 times, and the teeth knocked 3 times. Afterwards hem slowly. Whatever grief may be in the heart or ulcers in the mouth will be cured. Or, sitting upright, throw both fists forward (as if fighting), and bring them back 6 times.—See illustration, below.



Additional two exercises for directing the heart are given as follows:—*First*, sitting upright, body inclined, use strength in this position like a hill supporting a hill. In this way, sit, using force to drive out the vicious wind of the loins and spine, to make pervious the five viscera and six *fu*, to disperse foot vapours (gout), to tone the heart, and strengthen the system; and do it the same on the right and left sides. The *second* method is with one hand to press the stomach, one hand raised upwards, use all your strength as if supporting a stone, and retain the breath; and do the same on both sides, to dispel the poisonous wind of the ribs, to cure the heart, and cause the blood and pulses to circulate and harmonize.

When the seven apertures of the heart are all open, the Chinese assert the highest intelligence. With a moderate amount of wisdom, only five openings are pervious; and, in the case of the intensely stupid, all the openings are blocked up, and no air passes through. The heart is the son of the liver and mother of the spleen (in their view).

In the beginning of the Fourth and Fifth months, early in the morning, facing the south, sitting straight, bump the teeth 9 times, gargle the saliva in the mouth 3 times, silently think, draw the south air into the mouth and swallow 3 times, hold the breath, and take 30 inspirations after each such holding, and so fill up and replace the vicious air.

7.—*Fourth Month, Solar Term named "Beginning of Summer."*—Breath closed and eyes shut, turn and change the hands, and press them on the knees each 5×7 times, etc. To cure wind and dampness collected in the *ching-lo* or net-work of small blood-vessels, arms and

axillæ swollen and painful, palms of the hands hot. This illustration (see Figure below) corresponds with Amiot's No. 16, which is said to be against the continual heat of the palms of the hands and soles of the feet.



8.—*The Middle of the Fourth Month, termed "Small Full."*—One hand is raised as if upholding something, one hand pressed down, right and left each 3×5 times, etc. To cure obstructions in the liver and lungs of the usual character (*i.e.*,—the vitiated air and poison which

has become stagnant and refuses to disperse), fulness of the thorax and ribs, pain and palpitation of the heart, flushing of the face, eyes yellow, heart sad, painful and afraid, palms of the hands hot. This (see Figure, below) corresponds with Amiot's No. 17, which is against embarrassment of the lungs and suffocation.

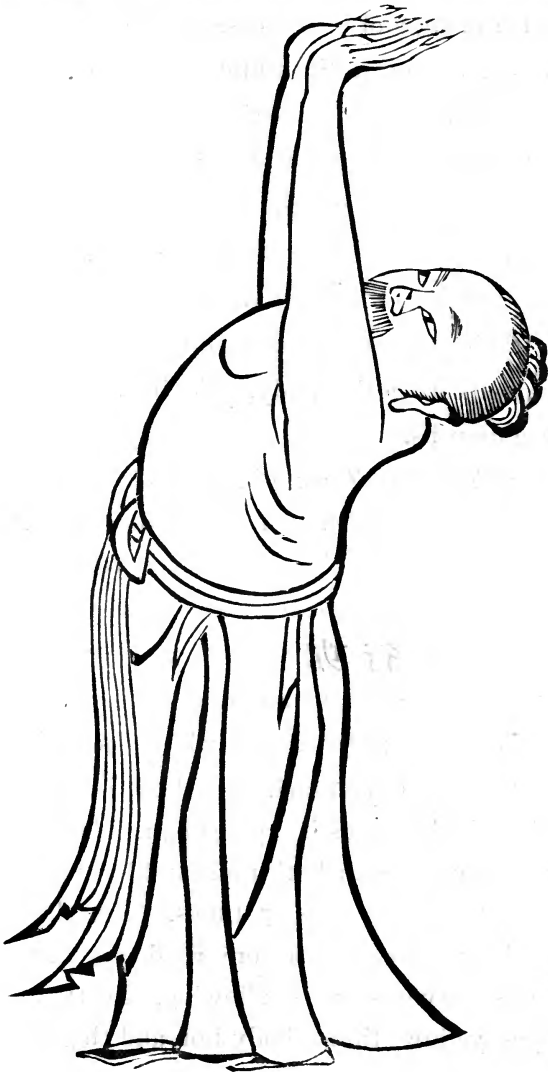


Before engaging in the *kung-fu* of the Fifth Month, there is as usual the preliminary exercise of placing the palms of the two hands together, and as it were pushing forward the fore-arm and wrists 7 times, to purify the heart of wind and trouble, and to disperse the obstructing air.

On the 5th day of the Fifth month, take a little of the earth of the grave, a piece of brick and a stone, go home and place them in a little bottle and bury it outside the door below the door-step; the whole family will thus be protected against disease of the period. Also take vermilion and write a charm, and apply it to the front of the heart. This will cure all sorts of diseases, and prevent disease from entering the body. To be applied for the united three months.

9.—*For the Solar Term of the Fifth Month, named "Sprouting Seeds."*—[Although the figure is standing, the instruction is sitting. The sitting character [*tso*] seems, however, to indicate the passing a season in such exercises; just as *hsing-kung* (行功) refers to the carrying out of the same; an expression which occurs almost invariably in the body of the instructions, while the other (坐) forms the title or introduction]. The body is thrown back, both hands raised aloft as if supporting a thing, and great force is to be used with both right and left in raising up (the supposed weight) 5 × 7 times. Fix the breath, the remainder as usual. To cure weakness of the loins and kidneys, dryness in swallowing, heart and ribs painful, eyes yellow, thirst, body hot and thighs painful,

head and neck painful, face red, cough and expectoration upwards, leakage downwards (diarrhoea of the lower air may mean passage of wind, emission of semen, or diarrhoea), grief, fear (see Figure, below). It corresponds with Amiot's No. 5, which is against pains of the heart, leanness of exhaustion, and thirst accompanied with heat of the body.



10.—*The Middle of the Fifth Month, termed "Summer Solstice."*—Kneel, stretch the hands, interlock the fingers and bend them over the foot, change the feet right and left each 5×7 times, etc. To cure the obstructed wind and damp not dispersed (rheumatism), painful knees, ankles, and arms, palms hot and painful, kidneys, loins and spine painful, heaviness of the body, all sorts of pain. (See Figure). Corresponds with Amiot's No. 11, which is directed against pains of the knees, embarrassments of the kidneys, and the swelling of weakness.



11.—*For the Solar Term of the Sixth Month, named "Slight Heat."*—Press the two hands to the ground, bend one foot under the body, stretch out the other with force 3×5 times, etc. To cure rheumatism (wind and dampness) of the legs, knees, thighs, and loins, fulness of the lungs with excessive flow of phlegm, asthma, cough, pain in the middle of the sternum, violent sneezing, abdominal distension and pain to the right of the navel, the hands contracted (bent crooked), body heavy, hemiplegia, loss of memory, whooping cough, prolapsus ani, weakness of wrist, joy and anger inconstant. (See Figure). Corresponds with Amiot's No. 12, against paralysis of certain members, short and precipitate respiration, pains of the lower belly with tension.



12.—*For the Middle of the Sixth Month, termed "Great Heat."*—Sit all in a heap on the ground, twist the head toward the shoulders, and look like a tiger to the right and left each 3×5 times, etc. To cure rheumatism of the head, neck, chest, and back, cough and asthma, thirst, dulness (taking pleasure in nothing), fulness of chest, pain of the arm, palms of the hands hot, pain above the navel or the shoulder and back, cold and hot perspiration, frequent micturition, diarrhoea, skin anæsthetic, inclination to grief and crying. (See Figure).



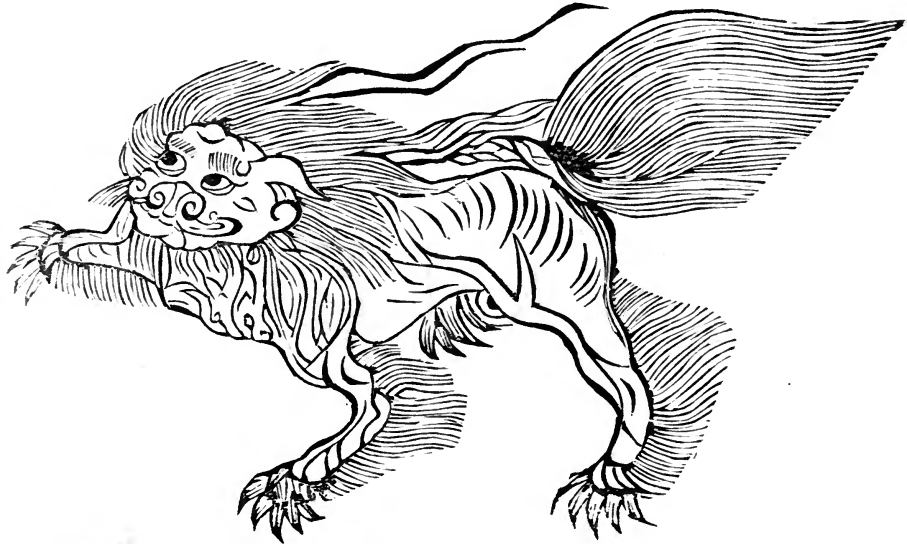
For the last half of the Sixth Month, the *kung-fu* is sit quite straight, extend the fingers upwards, bend them backwards, perform this 3 times, then bending them to the front in the same way in front and behind alike. To cure the loins, spine, feet and knees of paraplegic wind, and to disperse the vicious air of the bladder.

The spleen is called "Constantly Present;" designation, the "Soul's Residence;"—in form, phoenix like. It secretes the soul, resembles an upturned basin, colour like white reflected on yellow, covers the centre above the navel, in front covers horizontally the stomach, its pulse issues out of the side of the end of the big toe of the left foot just at the corner of the nail, distant about the breadth of the leaf of the *chiu-ts'ai* (*allium tuberosum*). (See illustration).



During the Sixth Month, the following exercise is given as directing into the right courses. Extend one foot, bring both hands to the front, and let them draw the feet 3×5 times. Also kneeling, both hands grasping the earth, turn the head and look, using force and looking like a tiger 3×5 times. This exercise can drive away the rheumatism which obstructs the spleen, and promotes digestion.

The tiger appears as the illustration of the lungs in the *kung* beginning the Autumnal three months. Its spirit's name is "Truly Beautiful," and its designation "Empty Completeness." It is like a tiger, and secretes the soul. It resembles the suspended bell (*ching*) of the Buddhists; its colour is like white reflected on red; it is placed above the heart, opposite the chest, and is of 6 lobes. Its pulse issues from the inside of the end of the thumb of the left hand, distant from the nail over two *fén*, in the middle of the hollow there. (See illustration).



The *kung* for the Seventh, Eighth, and Ninth Months is with both hands to grasp the ground, contract the body, bend the spine, raise the body 3 times, to disperse the vicious wind of the lungs and the old injuries that are there collected. Also turn the fist and beat the back with the left and

right hands each 3 times, to drive out the enclosed poisonous air in the thorax; and, after having done this for a long time, shut the eyes, knock the teeth, and rise.

13.—*For the Solar Term of the Seventh Month, called "Beginning of Autumn."*—Both hands to the ground, contract the body, close the breath, raise up the body in a jerking manner 7×8 times, etc. To fill up the empty (weak) and injured parts, to dispel the air of the loins and kidneys collected there, the heart and ribs painful and so unable to turn the body, the face as if covered with fine dust, the outside of the foot hot, head-ache, jaws painful, eyes projecting, canthi painful, sternum and arm-pits swollen and painful, paroxysms of cold perspiration. (See Figure).



14.—*For the Middle of the Seventh Month, termed "Stopping of Heat."*—Turn the head to the right and left, raise the head, turn the two hands and beat the back each 5×7 times, etc. To cure rheumatism, pain of the shoulder, back, chest, ribs, thighs, knees, small blood vessels, outside of the leg and ankle, pain of the various joints, cough, asthma, shortness of breath, thirst,—all will then disappear. (See Figure).



15.—*For the Solar Term of the Eighth Month, termed "White Dew."*—Seated upright press the two hands on the knees, turn the head, pushing and stretching it each 3×5 times, etc. To cure rheumatism of the loins and back, aguishness, epistaxis, lips deepened in colour, neck swollen, aphasia from disease of the pharynx, face of a dark colour, retching, inclination to sing and desire to ascend high places, eager to cast off clothes and go about naked (insanity). (See Figure).



16.—*Middle of the Eighth Month, named "Autumnal Equinox."*—Sitting cross-legged, both hands covering the ears, turn sideways to the right and left 3×5 times, etc. To cure rheumatism of ribs, loins, thighs, knees, and ankles, distension of the abdomen with rumbling of air, feeling as if air were colliding with the breasts, the thighs legs and ankles painful, incontinence of urine, inability to turn the thighs, from the ham space to a little above the ankle feeling as if ripped up, very rapid digestion, fluids eagerly drunk, stomach cold, asthma, dyspnoea. (See Figure).



17.—*For the Solar Term of the Ninth Month, called "Cold Dew."*—Sitting upright raise both arms, jerk up the body as if supporting something, right and left 5×7 times,

etc. To cure all sorts of vicious wind, cold, and damp, pain of the ribs, head, neck, loins, and spine, head-ache, eyes as if falling out, neck as if being pulled out, hæmorrhoids, fistulæ in ano, insanity, head painful on both sides, frontal pain and also pain of vertex, yellowness of eyes, polypus, epistaxis, cholera, and such like. (See Figure).



18.—*Middle of the Ninth Month, termed "Frost's Descent."*—Seated even, extend both hands and seize the feet; and, accompanying this exercise, use strength in the middle of the feet, then relax and withdraw the hands 5×7 times, etc. To cure wind and damp having entered the loins, inability to extend and flex the feet and thighs, painful joints, lower part of leg painful as if laid open, painful head, back, loins, pelvis, thighs, knees, muscular paralysis, lower portion of body swollen, evacuation of pus and blood (dysentery), the small abdomen distended and painful, difficult and painful micturition, tendons cold, gout, hæmorrhoids, prolapsus ani. (See Figure).



The kidneys form the illustration at the beginning of the last three months of the year, which is as follows:— The name of its spirit is "The Water Spirit," and its designation "Nourishing Infants." Its form is that of a yellow deer with two heads. It stores up the will. It resembles a round stone, is of two colours like white silk reflected on purple. It is placed opposite the navel, and lies in close contact with the lumbar spine. The left kidney is the real one, and mates with the five viscera. The right kidney is called the *Ming Mén* (命門) or "Gate of Life," and in the male secretes the semen, in the female the foetal membrane. The pulse of the kidney issues from the middle of the soles of the feet. (See illustration).



19.—*The Solar Term of the Tenth Month, called "Beginning of Winter."*—Seated upright, one hand on the knee, one hand grasping the elbow, change right and left and support the right and left 3×5 times, etc. To cure the *hsü-lao* (empty toil, consumption) and vicious poison in the chest and ribs, fulness of the thorax, loins painful, neither able to bend nor straighten [the body], deficiency of saliva, face dusky, nausea and hiccough, indigested faecal motions, head-ache, deafness, jaws swollen, eyes red swollen and painful, sense of fulness and depression in abdomen and ribs and the four extremities, vertigo, pupils painful. (See Figure).



20.—*For the Middle of the Tenth Month, termed "Slight Snow."*—One hand placed on the knee, the other grasping the elbow, right and left using force 3×5 times, etc. To cure wind, damp, and warm poison of the wrist and elbow, a wife's enlargement of the small abdomen and a husband's hernia, fox (?) hernia (all sorts of hernia), incontinence of urine, swelling of the joints, contraction of tendons, small *membrum virile*, five sorts of gonorrhœa (wind, fire, cold, poison, damp), diarrhœa, fear, fulness of the chest, asthma of the lower ribs. (See Figure).



21.—*For the Solar Term of the Eleventh Month, named "Great Snow."*—Standing straight, the knees extended, both hands to the right and left as if supporting the two feet, right and left stamping, each 5×7 times, etc. To cure wind and dampness of the feet and knees, heat of the mouth, dryness of the tongue, swelling of the throat, jaundice, hungry and cannot eat, cough, hæmoptysis, asthma, vision indistinct, fear (as if about to be seized).—See Figure.



22.—*For the Middle of the Eleventh Month, called "Winter Solstice."*—Sitting evenly extend both feet, clench the two hands, press both knees, and with extreme force perform this with the right and left 3×5 times, etc. To cure cold and damp of the hands, feet, minute blood vessels, spine, and thighs, insensibility of feet, inclination to recumbent position, soles of feet hot, navel painful, pain of the lower ribs between the shoulders and the middle of the thighs, fulness of the thorax, large and small abdomen painful, difficult micturition, distension of abdomen, neck swollen, cough, loins cold like water and swollen, air below the navel not harmonious, little belly (below navel) very painful, diarrhoea, feet swollen, chilblains, dysentery, heart desiring. (See Figure).



23.—*For the Solar Term of the Twelfth Month, named "Slight Cold."*—Sitting upright, one hand pressing the foot,

the other raised aloft as if supporting something, turn the head and change alternately [the hands], use great force 3×5 times, etc. To cure the air stored up in the arteries and veins, retching and vomiting, stomach painful, abdomen distended, ague, fulness of thorax, failing appetite, sighing, great heaviness of body, grief, below the heart painful, diarrhoea, suppression of urine, jaundice, the five diarrhoeas of five colours, large and small "convenience"



impervious, face yellow, mouth dry, indolent, desire to lie down, angina pectoris, hungry, liking savoury things, want of appetite. (See Figure).

24.—*For the Middle of the Twelfth Month, termed "Great Cold."*—Both hands thrown behind, sitting kneeling with one foot extended straight out, with one foot use force right and left alternately each 3×5 times, etc. To cure the storage of all sorts of influences in the small net-work of blood-vessels, the root of the tongue hard, painful and unable to be moved, inability to move the body or to lie down, unable to stand great expenditure of strength, thighs and ham space swollen, the pelvis, thighs, legs, feet and back painful, distension of abdomen, rumbling in the intestines, food indigested causing diarrhœa, feet unable to be pulled together in order to walk, the nine openings impervious. (See Figure).



Medicinal Kung (功藥).

No. 1.—The Honourable and Real Form of the Great Pure Ancestral Teacher.— To cure pain in the abdomen and suddenly alternating cold and hot.

Sit upright, with both hands embrace below the navel, wait till the *tan-t'ien* is warmed, perform the *kung*, revolving the air in 49 mouthfuls.*

In one work this Figure is termed "Twisting (or Pressing) and Holding the Tan-t'ien."— For the cure of abdominal pain and nourishing the strength of the male principle.

The Leading Air Soup.

Prescription.—Take of ts'ang-shu [or ts'ang-chu] (蒼朮), *Atractylis ovata*; hsiang-fu (香附), *Cyperus rotundus*; ch'ên-p'í (陳皮), orange peel; chw'an-hiung (川芎), *Pleurospermum* Sp., or *Conioselinum univittatum* (umbelliferae); pai-chih (白芷), root of *Angelica anomala*; fu-ling (茯苓), fungoid growths on roots of *Pachyma cocos*; t'u-fu-ling (土茯苓), root of the smilax (China-root); shên-ch'ü (神麴), a celebrated medicine cake for curing colds and dispersing wind, brought from Chin-chew near Amoy (the name means "divine leaven"); tzü-su (紫蘇), *Perilla ocymoides*; dried ginger and liquorice;—of each the same quantity. Make a decoction in water.

* The illustration is that of a Taoist priest sitting cross-legged as described. As the illustrations are too numerous and occupy too much space, they are omitted unless the positions or figures are more or less striking, and where they resemble or are identical with those already given, reference to the illustration is sufficient.

No. 2.—The Venerable Prince Li playing the Lute.—
To cure chronic disease and yellow swelling.

Sit silently with both hands on the knees, rub forcibly, let the heart consider and wait till the air has circulated to all parts of the body, and make it go round in 49 mouthfuls. The air will thus revolve, the blood harmonize, and diseases vanish.

The Jujube Iron Pills.

Prescription.—Take of green alum (綠礬) sulphate of iron? burnt, orange peel, ts'ang-shu, of each 2 ounces; sha-jên (砂仁), cardamoms, 3 mace; dried ginger, 2 mace; chih-ch'ïöh, or chih-k'o (枳殼), *Aegle sepiaria* (large fruit); ping-lang (檳榔), *Areca catechu* (betel-nut); jên-shên (人參), ginseng, root of *Aralia quinquefolia* (Pansax Ginseng), of each 3 mace; powder, boil the jujubes, beat them into a pulp, mix the powder and make into pills of which 49 form a dose morning and evening, to be taken with rice gruel. Fish, fowl, cold and raw articles, and fatty substances are contra-indicated.

After each Prescription, there is a stanza of poetry. The older work consulted omits the poetry. The stanza accompanying this recipe reads:—

At first when there was chaos, there was the female principle, then there ascended the male principle, and heaven was divided; the former principle increased, the latter diminished, and then both harmonized; heaven and earth then appeared, and the Great Reason, and this was the Creation.*

The Figure given in the books is that of the Founder of Tauism. He is popularly termed Lao-tse, the Old Child, from the white appearance of his head and the aged appearance of his face at birth. The epithet really means the Old Master. His surname Li was derived from the name for a plum tree, under which he was said to have been born. He was a contemporary of Confucius. The illustration is, as described, an attitude of meditation assumed by the Tauist and Buddhist priests.

* In the accompanying exercises with prescriptions, the Chinese characters with the botanical identification of the substances will be inserted only on their first occurrence. Where the substance is well known, its common and popular name only will be used.

No. 3.—Hsü Shên-wêng's (徐神翁) Method of preserving the Air and opening the Passes.—To cure false satiety (*i.e.*,—being empty and yet having the feeling of fulness).

The closed places, or passes, are:—

- 1.—The mouth, the door of the lungs.
- 2.—The teeth, the leaves of the door.
- 3.—The larynx, the inspiratory door. (The sounds in Chinese for expiration and inspiration resemble the sounds produced by the acts, as for example *hu hsi*, to expire and inspire respectively).
- 4.—The gullet, the mouth of the stomach.
- 5.—The cardiac orifice.
- 6.—The pyloric orifice.
- 7.—The anus.

The soul goes by the head in the good, and by the fundament in the bad, into the earth. The nine openings of the body do not here require to be specified.



Sit firmly, place the two hands cross-wise on the shoulders (the naked beggars in winter adopt this attitude to keep themselves warm), let the eyes look to the left side, move the air round in 12 mouthfuls; then turn the eyes to the right, and respire as before.

The attitude resembles Amiot's No. 6, which is said to be against fulness and embarrassment in the intestines, with weakness.

The Protecting Harmony Pills.

Prescription.—Take of shan-ch'a-jou (山查肉), fruit of *Crataegus pinnatifida*, 2 ounces; shên-ch'ü (fried); pan-hsia (半夏), tubers of *Pinellia tuberifera* (or rad. *Ari macrori*); ginger juice to be beaten with it; fu-ling, of each 1 ounce; lo-fu-tse (fried) 蘿蔔子, *Raphanus sativus* (radish seeds); orange peel; lien-ch'ïöh (連翹), lotus fruit, of each 5 mace; powder, form the shên-ch'ü into a paste, with which to make the pills. Dose, 30 to 50, to be taken in a little soup (hot water).

No. 4.—The Immortal with the Iron Crutch pointing the Way.—For the cure of paralysis.

This disease is supposed by the Chinese to be caused by phlegm blocking up the passages; that on the left is called *tan* (癱), that on the right *hwan* (瘓).



Stand firmly, point with the right hand to the right, eyes to be directed to the left, move the air round in 24 mouthfuls. Let the left foot point to the front, look to the right and left, move the air round in 24 mouthfuls, then the right foot in front.

The Harmonizing Air Powder.

Prescription.—Take of ma-hwang (麻黃), *Ephedra vulgaris*; orange peel; wu-yao (烏藥), *Daphnidium myrrha*; pai-chiang-ts'an (白僵蠶), chw'an-hiung, pai-chih, of each 1 mace; liquorice, chieh-kêng (桔梗), *Platycodon grandiflorum*, dried ginger, of each 5 candareens; chih-ch'ioh 1 mace. To be taken in boiled water, in which 3 slices of ginger have been digested.

“The Immortal with the Iron Staff” is included by Tauist writers in the category of the Eight Immortals. His surname was Li. He is largely represented in Chinese legendary lore. No precise period is assigned to his existence upon earth. His disembodied spirit entered the body of a lame and crooked beggar, and in this shape the philosopher continued his existence, supporting his halting footsteps with an iron staff. Hence his name, *T'ieh Kwai*.

No. 5.—The Maiden Immortal Ho (何仙姑) slowly ascending to Heaven.— To cure gravel twisting the intestines and abdominal pain.

In one work, the Figure—a male—is termed “The Eighty-one (9×9) Ways of ascending to Heaven.”



Sit inclined, the two hands embracing the knees on a level with the navel, tread up and down with the right and left feet 9 times, move the air round with 24 mouthfuls.

This Maiden is one of the Eight Genii. When born, six hairs were seen growing on the crown of her head. At fourteen she dreamed that a spirit gave her instruction in the art of procuring immortality, in the obtaining of which she was to eat powdered mother-o'-pearl. She vowed herself to a life of virginity, wandered in the mountains, lived on herbs, and ultimately disappeared from mortal view. She has since, it is said, been twice seen.

The Salt Soup (Water) Method for bringing on Vomiting.

Prescription.—Use very much salted water to cause vomiting and the affection is cured.

This corresponds with Amiot's No. 19, which is there said to be against calculus and nephritic colic.

No. 6.—Pai Yü-ch'an (白玉蟾) seizing his Food like the Tiger.— To cure twisting intestinal gravel.

This Figure is elsewhere termed—The Hungry Tiger seizing his Food.



The abdomen to the ground, the hands and feet with force to be turned upwards, move the air in 12 mouthfuls, and move the hands and feet right and left 3×5 times. Then sit up erect firmly, make the air advance by this *kung* in some 14 mouthfuls. (See Figure 6).

This corresponds with Amiot's No. 15, which is against gravel and sand in the kidneys; and he adds—"People speak well of its effects and cures."

Prescription.—Take red earth and alum, of each 5 mace; powder, use one bowl of cold water, mix, allow it to settle, and then drink.

No. 7.—Han Chung-li's (漢鍾離) Method of sounding the "Heavenly Drum."—To cure vertigo.

Sometimes called—The Vertigo-curing Tiger, or the Peach Blossom Tiger.

A similar exercise is given under the heading—The Hands beating the Wind Residence (acupuncture aperture below the occipital protuberance) causing Thunder.—For the cure of head-ache from inflammation of the membranes or from wind.

Bite the teeth, sit straight, shut the breath, use both hands and cover the ears, beat the "Heavenly Drum" 36 times, again tap the teeth 16 times.

Adding to the Taste of the White Tiger Soup.

Prescription.—Take of gypsum (roasted) 2 candareens; chih-mu (知母), *Anemone asphodeloides*, liquorice, of each 1 mace; pan-hsia 2 candareens; mai-tung (麥冬), tubers of *Ophiopogon japonicus*, 8 candareens; chu-ye (竹葉), bamboo leaves, 5 candareens; rice a pickle. Make decoction with 3 slices of ginger in it. (The heart will thus become as bright as a mirror, and as clear as Heaven,—the first couplet of the poetical stanza).

This Figure corresponds with Amiot's No. 9, which is said to be against vertigo and dazzling, and resembles No. 1 of the Eight Sections, and is therefore here omitted.

No. 8.—The Immortal Maiden Ts'ao (曹仙姑) looking at the Figure of the Ultimate Principle of Being (太極).— To cure inflammation, pain and swelling of the eyes.



Fix the tongue on the palate, direct the eyes to the vertex and nose [alternately], cause the fire of the heart to descend to and enter the *yung-chuen* (acupuncture aperture in the centre of the sole of the foot), draw up the kidney water (semen) to the *ku'ên-lun*. In performing it, do it 3 times each time; set it on fire in 36 mouthfuls.

The Bright Eye Flowing Air Potion.

Prescription.—Tang-kwei (當歸), *Ligusticum acutilobum*, pai-shao (白芍), *Pæonia albiflora*, shêng-ti (生地), *Rehmannia glutinosa*, lung-tan-ts'ao (龍膽草), *Gentiana scabra*, ch'ai-hu (柴胡), *Bupleurum falcatum*, hwang-lien (黃連), rhizome of *Coptis teeta*, chih-tse (梔子), *Gardenia florida*, tan-p'i (丹皮), root bark of *Pæonia montan*;—of each 1 mace. Take of rhubarb boiled in wine, dried and again boiled and dried 3 × 7 times, 2 mace; and make a decoction and drink.

No. 9.—Ch'ieu Ch'ang-ch'un's (丘長春) Method of Turning the Windlass; otherwise called the Genii turning the Windlass (the Shoulder).—To cure severe pain of the back and arm.

Sit high (as on a chair), extend the right and left feet inclined, with the two hands press the knees, moving the air round in 12 mouthfuls. Do it daily 3 × 5 times.

The Moving Air Soup.

Prescription.—Take of kau-pen (藁本), *Nothosmyrnium japonicum*, fang-fêng (防風), *Peucedanum terebinthaceum* (?), root of an umbellifera, chw'an-hiung, of each 1 mace; ch'iang-hwo (羌活), *Peucedanum decursivum*, tu-hwo (獨活), *Angelica inæqualis*, of each 2 mace; man-ching-tse (蔓荊子), a kind of turnip with a white tuber below ground, 6 candareens; liquorice 5 candareens. Boil in water, and drink.

The Figure is omitted.

No. 10.—Ma Tan-yang's (馬丹陽週天火候訣) Method of using the strength of Fire for the whole Body.—To cure the primordial air in a debilitated condition.

Sit firmly cross-legged, first rub the two hands warm, then rub the eyes; afterwards use them to sustain below the ribs on the two sides. When the air advances, rouse it to go upwards, and move the air round in 12 mouthfuls.

The Ginseng Astragalus Soup.

Prescription.—Take of ginseng, hwang-ch'i (黃芪), Astragalus, pai-shu (白朮), tang-kwei, of each 2 mace; orange peel, fu-ling, liquorice, of each 1 mace. Add ginger and jujubes, and boil in water.

The Figure is omitted.

No. 11.—Chang Tze-yung (張紫陽) driving the Pestle.— To cure indigestion, distension and rumbling of the abdomen, with pain each time.



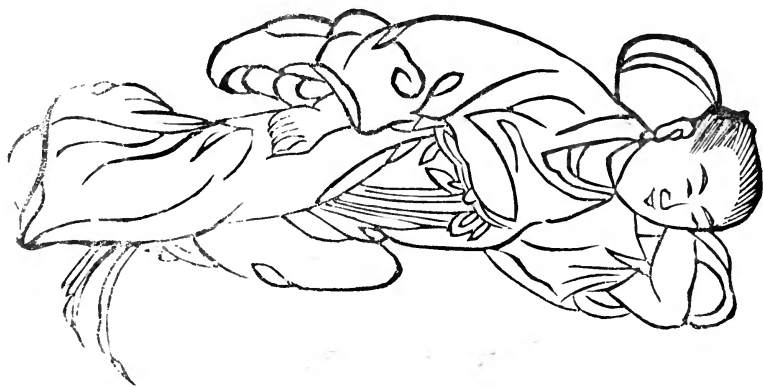
Stand firmly, with the two hands support heaven, stamp the earth, and circulate the air 9 times.

This Figure corresponds with Amiot's No. 20, against intestinal movements and disquiet in the whole body.

The Soup for widening the Middle (Thorax).

Prescription.—Take of tzu-su, kêng-yeh (梗葉), *Hemiptelea Davidi* (*Zelkora Davidi*), cardamons, chih-ch'ioh, ch'ing-p'i (青皮), immature fruits (dried) of a species of citrus, orange peel, betel-nut, mu-hsiang (木香), root of *Aplotaxis auriculata* (putchuck), pan-hsia, lo-fu-tse, hou-p'o (厚朴), flowers of the Szechuen hou-p'o-tzŭ, ts'ang-shu, tsě-hsieh (澤瀉), *Alisma plantago*, mu-t'ung (木通), *Clematis*, of each the same; crude ginger, 2 slices boiled in water.

No. 12.—Miss Huang-hua (黃花姑) Sleeping on Ice.— To cure consumption and extreme debility from venereal excesses.

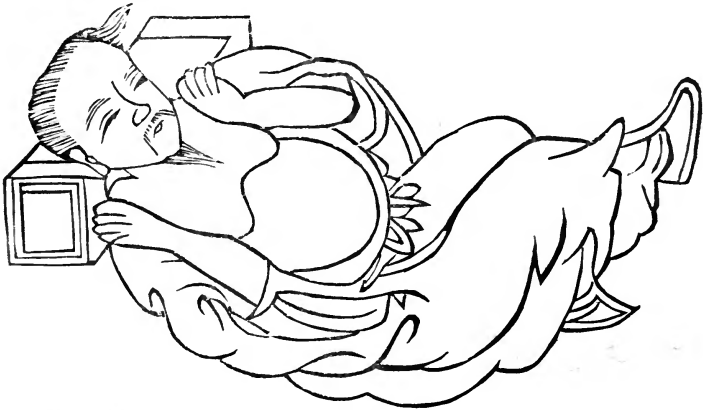


Lie with the left hand for a pillow, rub the abdomen with the right fist, flex the right foot a little, press the right leg upon the left a little, and as if sleeping in this manner inspire 32 mouthfuls, and move the air round in 12 mouthfuls.

The Soup of the Great Shop for strengthening the Centre (Thorax).

Prescription.—Take of ginseng, pai-shu, fu-ling, pai-shao, shu-ti [see shêng-ti] (熟地), hwang-ch'i, of each 1 mace; tang-kwei, chw'an-hiung, tu-chung (杜仲), bark of an Euphorbiaceous tree, ts'ung-jung (從蓉), *Æginetia* Sp., ku-chi (故紙), legumes of *Psoralea* (Bauchee seeds), of each 7 candareens; liquorice, cinnamon, of each 3 candareens. Boil with ginger and jujubes, and take it at any time.

No. 13.—Yin Ch'ing-ho's (尹清和) Sleeping Plan.—To cure weakness of the spleen and stomach, and indigestion of the five cereals (hemp-seed, millet, rice, wheat and pulse).



Recline on the back, place the right foot like a frame on the left foot, lay the two hands straight on the shoulders, the abdomen coming and going; move the air round in 6 mouthfuls.

The Strong Spleen Pills.

Prescription.— Take of pai-shu (roasted with earth), chih-shih (枳實) roasted, *Aegle sepiaria* (small fruit), orange peel, mai-ya (麥芽) roasted, sprouts of wheat and barley, shen-ch'ü (roasted), shan-yao (山藥), *Dioscorea* Sp. (yams), fu-ling, ts'ang-shu (roasted), of each 1 ounce; hou-p'o (prepared) 8 mace; mu-hsiang 5 mace. Powder, take non-glutinous rice flour and make into a paste and form pills, of which 6 or 7 for a dose in rice gruel.

No. 14.— Li Ch'i-ch'an's (李棲蟾) Method of dispersing the Semen (精) [ching]; sometimes called Lü-tsu's Method for strengthening the same.— To cure spermatorrhœa from dreams.



Sit upright, raise up both feet, rub until warm the soles of both feet, and move the air right and left each in 30 mouthfuls, and so the semen will not flow away. The Chinese believe that the *ching* is secreted in the kidneys and can be dispersed throughout the entire body, and thus be prevented from collecting and flowing away.

The Strong Ching Pills.

Prescription.—Take of chih-mu (roasted), hwang-po (黃栢), Phellodendron amurense or Pterocarpus flavus, of each 1 ounce; burnt oyster shells, burnt fossil bones, tz'u-shih (芡實), Euryale ferox, lien-jui stamens of lotus flowers, fu-ling, yuen-chih (遠志), root and root bark of Polygala sibirica, shan-chu-yü (山茱萸), fruit of a shrub not yet identified,— of each 2 ounces. Powder boiled rice, make the pills with a cinnabar coating. Dose, 50 pills on an empty heart (stomach), and swallow with diluted salted water.

No. 15.— The Maiden Chang Chên-nü (張真奴) fixing her Animal Spirits.— To cure emptiness and great pain of the heart.



Sit upright, with the two hands press the knees, use the idea in it, look to the right and elevate the left, move the air in 12 mouthfuls, look to the left, raise the right, and move the air in 12 mouthfuls.

The Pain-removing Powder.

Prescription.— Take of wu-ling-chih (五靈脂), magpie's dung, p'u-hwang (蒲黃) roasted, Typha sp., tang-kwei, of each 1 ounce; jou-kwei, Cinnamomum cassia, mu-hsiang, shih-ch'ang-p'u (石菖蒲), Acorus gramineus, of each 8 mace. Powder, boil, dose 4 mace, to be boiled with a little salt and vinegar.

This corresponds with Amiot's No. 13, which is against the ills of the heart, with fulness, grief and languor.

No. 16.—Wei Po-yang's (魏伯陽)* Method of beating the Wind.— To cure chronic paralysis.

Sit upright, place the right fist against the right ribs, with the left hand press the knee, extend and withdraw the feet, think, move the air to the diseased part right and left each in 6 mouthfuls.

The Gold-producing Tiger-bones Powder.

Prescription.—Take of tang-kwei, ch'ih-shao (赤芍), Paeonia albiflora (the cultivated variety which bears red flowers), ch'wen-hsü-twan (川續斷), Dipsacus asper or Lamium album from Szechuan, pai-shu, kau-pên, tigers' bones,—of each 1 ounce; wu-shao-shě-jou (稍烏蛇肉) 5 mace. Powder, dose 2 mace, to be swallowed with tepid wine.

No. 17.—Hsueh Tao-kwang (薛道光) rubbing his Heel.— For nourishing the original essence.

Sit straight, with the hands rub until warm the sole of the left foot, move the air in 24 mouthfuls, afterwards rub warm the sole of the right foot, the rest the same as the left.

* A celebrated Taoist philosopher and alchemist of the Han dynasty, who is known to have devoted himself to the preparation of the elixir of immortality, and who is the author of a professed commentary on the *Yih-king*, or *Book of Changes*.

The Figure resembles No. 8 of the Ornamental Sections, and is therefore omitted.

The Extract of the Two Immortals, Kwei and Lu. (The Tortoise and Deer).

Prescription.—Take of deer horns 10 catties, shell of a land tortoise 5 catties, kow-ch'i-tse (枸杞子) Lycium chinense, 30 ounces, ginseng 15 ounces. Use a jar and make it after the manner of an extract, then dissolve it in wine, and take for a dose 2 to 3 or 4 mace on an empty stomach.

No. 18.—Ko Hsien-wêng (葛僊翁) opening the Thorax.— To cure the thorax of obstruction.



Stand erect, the feet placed after the Chinese figure of 8 (八); interlock the two hands, carry them to the front of the chest, rub them times without number, and move the air in 34 mouthfuls.

Another plan is with the left hand using force directed to the left, the right hand also forcibly following the left, the head also with strength directed to the right, the eyes strongly directed to the right, move the air in 9 mouthfuls, change the hands and repeat.

The Powder for widening the Centre.

Prescription.— Take of chih-ch'ioh (roasted), chieh-kêng, fu-ling, pan-hsia, orange peel, hou-p'o, hsiang-fu, sha-jên,—of each the same quantity. Add a few slices of ginger, and make a decoction.

No. 19.—Wang Yü-yang's (王 玉 陽) Method of dispersing Pain.— To cure periodical air and a painful condition of the whole body.



Stand upright firmly, let the left foot be carried to the front, the right to the back, place the two fists on the belly, move the air in 24 mouthfuls. The exercise is the same on the right and left.

The Ginseng Harmonizing Air Powder.

Prescription.— Take of chw'an-hiung, chieh-kêng pai-chih, orange peel, chih-ch'ioh, liquorice, ma-hwang, wu-yao, ginseng, ch'iang-hwo,—of each 7 candareens. Make a decoction.

No. 20.—The Maiden Ma (麻姑) rubbing (away) the Disease.— To cure imperviousness of the air and arteries.

Stand firmly. If it be the air and blood vessels of the left side that are not pervious (*i.e.*, not circulating so as to reach all points), then the right hand acts the *kung*, and the idea or thought is to be directed to the left. If it be the right side that is impervious, the left hand acts, and the will is to be on the right. Each side to have 5 mouthfuls of the revolving air.

Except that the hand is pointing, this Figure of Miss Ma resembles that of Miss Ts'ao (No. 8), who is viewing the Absolute from which is evolved the two primordial or positive and negative essences, or male and female principles.

Ma Ku is one of the female celebrities of Tauist fable, a sister of the immortalized soothsayer and astrologer Wang Yuen of the Han dynasty.

The Putchuck Flowing Air Potion.

Prescription.—Take of pan-hsia, ch'ing-p'i, liquorice, o-shu (莪朮), *Kampferia pandurata*, betel-nut, hsiang-fu, ts'ao-kwo (草菓), *Amomum medium* (Ovoid Chinese cardamom), pai-chih, mu-kwa (木瓜), Chinese quince (*Pyrus Cathayensis*), ginseng, ch'ih-fu-ling, red variety mu-t'ung, hwo-hsiang (霍香), *Lophanthus rugosus* (bishopwort), ting-hsiang, cloves, flower buds of *Eugenia carophyllata*, orange peel, tzü-su, jou-kwei, hou-p'o, mu-hsiang, mai-tung, pai-shu, ch'ang-p'u, *Acorus calamus*, ta-fu (大腹), betel-nut skin. Add 3 slices of ginger and 1 jujube, and make a decoction.

No. 21.— The Picture of Chang Kwo-lao* abstracting from and adding to the strength of Fire. (抽添火候).— To cure the heat of the blood of the Three Divisions (imaginary functional passages) advancing upwards, vision indistinct.

Sit upright, let the hands rub the navel warm, afterwards press the knees, shut the mouth, sit quiet and wait till the air is fixed, then revolve the air in 9 mouthfuls.

* One of the Eight Immortals of the Taoists, who flourished toward the close of the 7th and middle of the 8th century. He led an erratic life and performed wonderful feats of necromancy. Mayers informs us that he had a white mule as his constant companion, which carried him thousands of miles in a day, and which, when he halted, he folded up and hid away in his wallet. By spirting water from his mouth upon the packet, the beast again resumed its proper shape. He was asked to Court, but the ascetic wanderer spurned every tempting offer.

The Chrysanthemum Powder.

Prescription.— Take of ch'iang-hwo, mu-tsei (木賊), Equisetum japonicum, hwang-lien, chw'an-hiung, ching-chieh, (荆芥), Salvia plebeia, fang-fêng, tang-kwei, pai-shao, liquorice, kan-chü-hua (甘菊花), Chrysanthemum sinense (sweet), a kind exported from Canton, man-ching-tse (蔓荆子), hwang-ch'in (黃芩), Scutellaria viscidula,—of each the same. Make a decoction, to be taken after food.

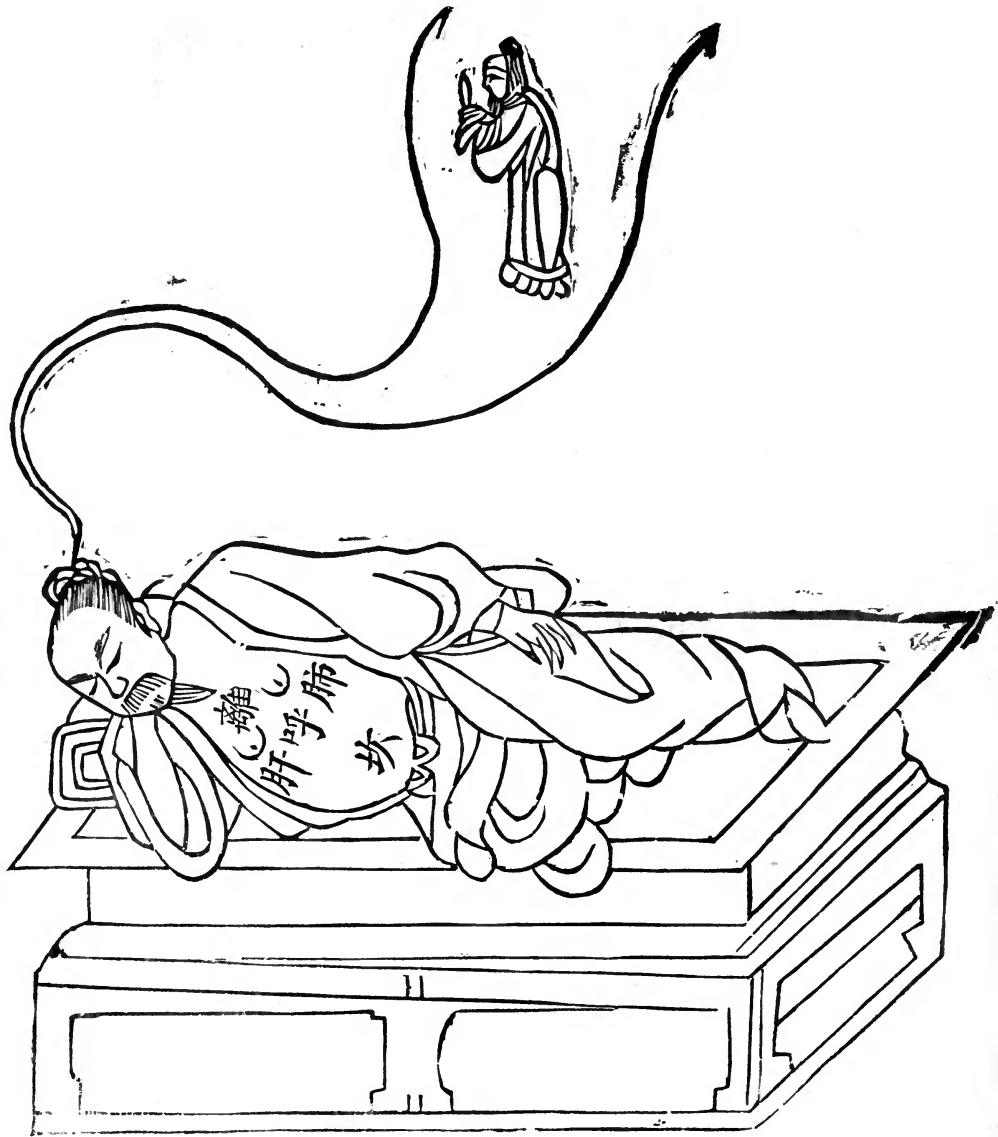
The illustration is similar to Numbers 2, 9, 10, 16.

No. 22.—Ch'ên's *kung* for obtaining his Great Sleep.— To cure cold caught at any of the Four Seasons.*



Lie on one side, flex the legs, rub the two hands until warm, embrace the membrum virile and scrotum, and revolve the air in 24 mouthfuls.

The Ch'iang-hwo (acting) like a Divine Powder.



* One of the most frequently occurring names in the works on Kung-fu is Ch'ên Hsi-i, or tw'an (陳希夷·搏), and who seems to have designed many of the Figures for the cure or prevention of disease. The year's Kung-fu is attributed to him. He died about 990 A.D. He was a celebrated Taoist philosopher and recluse, who devoted himself to the study of the arts of sublimation and the occult philosophy of the *Yih Ching*. He is recognised, as the late lamented and rare sinologue Mr. Mayers says, by Chu Hi as having founded the modern school of interpretation of the system of the diagrams. He was summoned to court of the second Emperor of the Sung dynasty, for the purpose of instructing the Emperor in the mysteries of the arts of sublimation and the occult philosophy of the *Book of Changes*. The designation by which he is known was conferred upon him by the Emperor. All the works on Kung-fu contain his celebrated Sleeping Recipes. Hence perhaps the popular fable that he slept 800 years. Although he appeared in the Sung dynasty, he is said to have been born in the Chow (1122-249 B.C.). He certainly passed much of his time in meditation, in the exercise of Kung-fu, and this too perhaps may have given rise to the tradition of his long sleep. The popular tradition also asserts that he did not speak till he was seven years old. He lived in a cave at Hwa-shan in Shansi; his bones were buried by order of Kanghi, the Emperor (1662-1723 A.D.), the poor Taoists priest having used his skull for about 1000 years as an object with which to extract alms from the benevolent, the use to which it was put resembling the "wooden fish," a skull-shaped block, the emblem of sleeplessness, on which the priests beat time when chanting.

There are illustrations of Ch'ên sleeping on the left and right sides in two of the works consulted. It is accompanied by two poetical stanzas, the last line of the left sleeping *kung* running thus:—

When the tiger and the dragon are collected together at two of the "Earthly Branches" (related to fire and water), the Great Elixir is complete.

The tiger is here placed on the right, the dragon on the left. In the sleeping exercise for the right side (see illustration), the liver occupies the right and the lungs the left side, with two of the Eight Diagram figures, *Li* and *K'an* (fire and water respectively), above and below, and *Hu* in the middle, and the whole stanza reads:—

The air of the lungs resides in the place of the *K'an*; the liver is directed towards the *Li* place. Revolve the air (an older work gives spleen air instead), call it to harmonize in the middle position; the five airs (the atmospheric influences or natures of the Five Elements) collect together as one, and enter the great void. (See also Nos 27 and 33).

Prescription.—Take of ch'iang-hwo, tu-hwo, pai-chih, orange peel, tzü-su, shan-cha, ts'ao-kwo, fang-fêng, kan-ko (乾葛), Pachyrhizus angulatus, pan-hsia, liquorice, ts'ang-shu, ch'ai-hu, hwang-ch'in, chw'an-hiung,—of each 8 candareens; ginger 3 slices, and 3 onion tubers. Make a decoction, and take it hot, to produce perspiration.

No. 23.— Shih Hsing-lin's (石杏林) Method of warming the Tan-t'ien.— To cure the small bowels of air, cold and pain.

Sit upright, rub the two hands extremely hot, direct them to the navel, and circulate the air in 49 mouthfuls.

Adding to the taste of the San-ling (三苓) Powder.

Prescription.—Take of chu-ling (猪苓), tuberiform bodies of an unknown nature, tse-hsieh, pai-shu, fu-ling, cinnamon, hwei-hsiang (茴香), Fennel (Foeniculum vulgaris), betel-nut, mu-t'ung, chin-ling-tse (金鈴子), chü-ho-jeu (橘核仁), orange seed kernels. Make a decoction, adding a little salt.

The Figure is the usual one, with the hands embracing the navel as directed.

No. 24.—Han Hsiang-tse's (韓湘子)* Figure for nourishing Man's Heart (活人心).—To cure curvature of the lumbar spine and shaking (palsy) of the head.



Stand firmly, bend the head, curve the lumbar spine, and perform the act of showing reverence. In doing this *kung*, let the hands and soles of the feet be on the same level. Revolve the air in 24 mouthfuls.

* One of the Eight Immortals of Taoist fable, and an ardent votary of transcendental study. He was a pupil of the patriarch Lü, Mayers says, "and having been carried up to the supernatural peach tree of the Genii he fell from its branches, and in descending entered upon the state of immortality."

In one work the Figure is designated — “The Dragon wagging his Tail.”— For the cure of lumbago. Soup for expanding the small blood-vessels.

Prescription.—Take of ch'iang-hwo, fang-chi (防己), roots and bulbs (?), pai-shu, tang-kwei, pai-shao, chiang-hwang (姜黃), turmeric (*Curcuma longa*), of each 1 ounce; liquorice 7 mace, hai-t'ung-p'i (海桐皮), either *Acanthopanax ricinifolium* or *Bombax malabaricum*, 1 ounce. Dose 3 mace, with 10 slices of ginger. Make a decoction.

No. 25.— Miss Chao-ling's (昭靈女) manner of making disease go.— To cure cold, numbness, and extreme pain of the leg and foot.



Stand erect, extend a finger of the left hand, with the right hand nip the belly of the arm. Revolve the air in 24 mouthfuls.

A similar exercise is termed—The Patriarch Lü's Method of causing the blood and air to circulate.—For the cure of pain of the back and shoulder.

Stretch out the left arm and press the inner aspect of the fore-arm with the right hand, and *vice versa*. Take 22 breaths.

The Fang-fêng T'ien-ma Powder.

Prescription.— Take of t'ien-ma (天麻), *Gastrodia elata*, fang-feng, liquorice, chw'an-hiung, chiang-hwo, tang-kwei, pai-chih, hwa-shih (滑石), Talc, of each 2 ounces; ts'ao-wu-t'ou (草烏頭), Aconite, pai-fu-tse (白附子), *Arisæma* sp., ching-chieh-sui (荆芥穗), of each 5 mace. Powder, take warm wine, and dissolve in a little honey, take $\frac{1}{2}$ to 1 mace; and mix with it. Take of this medicine until you feel slightly numb, and then stop.

No. 26.—Lü Ch'un-yang's* Figure of sustaining the Pulse.— To cure the hundred (all) diseases.

Sit upright, let the two hands press the 'sun' and 'moon,' two lateral acupuncture apertures two inches below the heart, 9 times; circulate the air 9 mouthfuls.

Another method is to press the knees with the two hands, twist the body right and left, and with each turn of the body revolve the air in 14 mouthfuls.

* Lü Tsu (呂祖), or Yen (嵒), or Tung-pin (洞賓), or Ch'un-yang (純陽), for he is known by all these names, was born 755 A.D. He was one of the most prominent of the later patriarchs of the Taoist sect, of whose doctrines he was an ardent votary. He was invested with the magic formulas and a sword of supernatural powers with which he traversed the Empire, slaying dragons and ridding the earth of divers kinds of evils during a period of upwards of 400 years. In the 12th century, according to Mayers, temples were erected to his honour and were dedicated to his worship under the title Ch'un-yang, which he had adopted. Several such temples exist at Peking. He is worshipped especially by the fraternity of doctors and barbers. He and Ko Hsien-wêng (No. 18), each at 64 years of age, met their teachers and embraced the Doctrine. For an account of this patriarch, see the writer's articles on *Medical Divinities and Divinities in Medical Temples* (Chinese Recorder, Volume 3, 1870).

The Figure resembles in every respect No. 7, also No. 1 of the Ornamental Sections.

A similar exercise is elsewhere termed—The March of the Blood Vessels.

Prescription.—Use 1 wei-ling-hsien (威靈仙), Clematis sp., on the two days known as *ping-ting* (丙丁) and *wei-sze* (戊巳), horary characters, dry it in the shade, powder, pass through a sieve; 2 mace for a dose in warm wine; avoid tea. It is well, while cutting the drug, not to hear the sound of water. To be taken on an empty heart, and in summer there will be no epidemics, and in autumn no ague and dysentery, and all diseases will be banished easily and without trouble, as the title of the Prescription intimates.

Corresponds with Amiot's No. 7 for sustaining the health.

No. 27.—Ch'ên Hsi-i imitating the Cow descending from looking at the Moon (降牛望月).—To cure spermatorrhœa only.



When there is about to be an emission, let the middle finger of the left hand plug the right nostril, and let the right hand middle finger press the *wei-lü* (尾閭) aperture, coccyx, (where the seminal road or vessel is supposed to be situated), and so stop the flow of the semen; revolve the air in 6 mouthfuls.

The *kung* is sometimes termed— A Cow grasping the Moon.

The Shên-hiung (神芎) Soup.

Prescription.—Take of ginseng, kow-ch'í, yuen-ch'í, hwang-ch'í, liquorice, kwei-shên (歸身) [see tang-kwei], tu-chung (roasted), pai-shu, ti-kuh-p'í (地骨皮), root bark of Lycium chinense, p'ò-kuh-ch'íh (roasted), of each the same quantity. Add 1 slice of ginger and 7 lotus seeds deprived of their core. Make a decoction with water, and take.

No. 28.—Fu-yeu-ti-chün (孚佑帝君) drawing the Sword from its Scabbard.— To cure all sorts of cardiac pains.



Stand erect and firm like the character 丁 (a nail), raise the right hand and look to the left; if the left hand be raised, look to the right. Revolve the air in 9 mouthfuls, turn the head, and look to the four quarters.

The above is elsewhere termed — The Immortals unsheathing the Sword.— For the cure of cardialgia.

With the raising of the right hand, the body is turned in the opposite direction, and *vice versâ*.

The Falling cup Soup.

Prescription.—Take of Hsuen-hu-so (玄胡索), tubers of *Corydalis ambigua*, wu-ling-chih (thoroughly roasted), chien-k'ow-jên (建寇仁), nutmeg kernels from Fukkien, of each 6 candareens; liang-chiang (良薑), Galangal (*alpinia officinarum*), shih-ch'ang-p'u, hou-p'o, orange peel, hwo-hsiang, of each 1 mace; chih-ch'ioh, su-kêng (蘇梗), *Perilla ocymoides*, of each 6 candareens. Make a decoction with water, and drink.

No. 29.—The divine ancestor Hsü (徐神祖) shaking the “Heavenly Pillar.”— To cure all sorts of ulcers on the head, face, shoulders and back.

Sit upright, let the two hands seize below the heart, agitate the “heavenly pillar” right and left, with each revolve the air, hem and blow 24 mouthfuls.

The Figure resembles Numbers 1, 18 (standing) and 23.

The Powder for dispersing the Poison.

Prescription.—Take of hwang-ch'in, hwang-lien, rhubarb, pai-chih, ch'iang-hwo, fang-fêng, chin-yin-hwa (金銀花), *Lonicera japonica*, lien-chi'oh (valves of fruit of *Forsythia suspensa*), tang-kwei, ching-chieh, t'ien-hwa-fen (天花粉), root of *Trichosanthes multiloba*, and liquorice,—equal quantities of each. Make a decoction, and drink.

No. 30.—Ch'ên Ni-wan's Method of grasping the Wind's Nest (acupuncture aperture below the occiput; see No. 7).— To cure want of clearness of the brain, and rheumatism of the head.



Sit with the back to the outside, and let the two hands embrace the ears and the back of the head. Revolve the air in 12 mouthfuls, and bring the palms together 12 times.

The Ch'iang-hwo Pai-chih Soup.

Prescription.—Take of ch'ai-hu, fu-ling, fang-fêng, ching-chieh, hwang-lien, ts'ê-hsieh, tang-kwei, pai-shu, man-ching, gypsum, ts'ang-shu, hsin-i (辛夷), buds of *Magnolia conspicua* (or *M. Kobus*), shêng-ti, chw'an-hiung, kao-rên, liquorice, pai-chih, ch'iang-hwo, hwang-ch'in, hsi-sin (細辛), *Asarum Sieboldi*, shao-yao (same as pai-shao), of each the same quantity. Add crude ginger, and make a decoction.

No. 31.—Ts'ao Kwo-chieu (曹國舅)* taking off his Boots.— To cure pain of the foot, calf of the leg and abdomen.



Stand firmly, place the right as if scaling a wall, let the left hand hang down, direct the right foot in front, and step *in vacuo*. Revolve the air 16 times. The left and right are the same.

* One of the Eight Immortals of Taoist fable.

This exercise is elsewhere called—The Immortals taking off their Shoes.— For the cure of lumbago.

The right foot is directed to be firmly planted on the ground and the other slightly raised on the toes, and 18 breathings to be taken.

The Ch'iang-hwo Soup for nourishing the exhausted.

Prescription.—Take of ch'iang-hwo, chw'an-hiung, ts'ang-shu, pai-chih, nan-hsing (南星), *Arisæma japonicum* (?), tang-kwei, shên-ch'ü, of each 1 mace; sha-jên, kwei-chih, bark of cassia twigs, fang-chi, mu-t'ung, of each 8 candareens. Add 3 slices of ginger, and make a decoction.

No. 32.—Chao Shang-tsa'o's (趙上灶) Method of transferring and stopping the *ching*.— To cure wet dreams.



Sit on one side, use the pair of hands to take hold of the soles of the two feet, first take hold of the left sole and rub it warm, and revolve the air 9 times. Afterwards do the same with the right sole, and perform the *kung* like the left.

The Jade Pass Pills (玉關); *Yü-mén* (玉門),—the Jade Door, the *Ching* Door.

Prescription.—Take of ginseng 6 mace; jujube kernels, roasted oyster shells, wu-pei-tse (梧倍子), nut-galls of *Rhus semialata* (commercial), *punjabensis* (medicinal), roasted alum, fossil bones, of each 5 mace; fu-shên (伏神) roots and bulbs, 1 ounce; and yuen-chī (core to be extracted), 1½ ounces. Steam the jujube kernels, and make the whole into pills. Dose 50 to 60 on an empty stomach, to be taken in soup made from the seeds of the lotus.

No. 33.—The pure peaceful Heavenly Preceptor's Sleeping Kung.— To cure spermatorrhœa from dreams.



Recline on the back, the right hand supporting the head (as a pillow), the left hand grasping firmly the obscure parts, extend the left leg straight, flex the right leg, let the heart think, and revolve the air 24 times.

The above is elsewhere termed — The Sleeping Exercise of Ch'ên Tu'an.— For the cure of consumption and the effects of venery.

Recline obliquely on a pillow, with the right hand under the head; with the left rub the abdomen, draw up the legs, the left not quite up to the level of the right, the left pressing on the right, breathe gently, vacant in thought, and take into the abdomen 32 mouthfuls. Do this 12 times. If long continued, the disease is certain to be cured.

Another similar exercise is simply termed — The Sleeping Method.— For the cure of nocturnal emissions.

Lie on the back and make a pillow of the right hand, with the left hand press on the thigh of the extended left leg, draw up the right leg, think, and inspire 24 mouthfuls.

There is yet another Sleeping Method, for the cure of dyspepsia.

With both hands rub up and down the abdomen in all directions, like the whirling of a river or the eddying of the ocean.

The Nourishing - heart Soup.

Prescription.—Take of ginseng, shan-yao, mu-t'ung, fu-shên, swan-tsao-jên (酸棗仁), seeds of Diospyros lotus, kwei-shên, clarified tang-kwei, pai-shao, yuen-chih flesh (pulp), lien-hsü (蓮鬚) [same as lien-jui], of each the same quantity. Add ginger, jujube, and lotus pulp. Make a decoction, and take.

No. 34.—Sun Hsuen-hsü (孫玄虛) imitating the Black Dragon taking hold of his Claws.— To cure pain of the loins and legs.



Sit firmly on the ground, extend both feet, push out the two hands in front and take hold of the two feet on the same level, and come and go in this way performing the exercise. Revolve the air in 19 mouthfuls.

Elsewhere this exercise appears as—The Dragon grasping his Claws.— For the cure of pain of the whole body.

Sit with the body straight, both feet extended together, close and open alternately the fists, stretch forward the body along with the fists, and take 12 mouthfuls.

Another is termed—The Tiger stretching his Claws.— For the cure of pain of the back and limbs.

Sit upright with both legs crossed, stretch both arms to the front on a level with the feet, move them backwards and forwards in this manner, so that the air may follow the motions of the arms and thus be introduced into the parts affected.

The Niu-hsi Wine.

Prescription.—Take of ti-kuh-p'i, wu-chia-p'i (五加皮), Eleutherococcus, i-i-jên (薏苡仁), seeds of Coix lachryma (roasted), chw'an-hiung, niu-hsi, of each 2 ounces; liquorice, shêng-ti, 3 ounces; hai-t'ung-p'i (海桐皮), 1½ ounces; ch'iang-hwo, 1 ounce; tu-chung (roasted), 2 ounces. Use good wine without lees, to be well digested. Dose 1 or 2 cupfuls, 3 or 4 times daily, to be drunk before the flavour of the wine has passed off.

No. 35.—Kau Hsiang-sien's (高象先) imitation of the Phoenix* spreading its Wings.—To cure diseases the same as the preceding one.



* A fabulous bird. The male is termed *fêng*, and the female *hwang*; combined form the generic designation of this wondrous bird, a compound between the peacock and the pheasant, with the addition of many gorgeous colours. (See illustration in the Year's Kung-fu).

Bend and contract the body a little, raise the hand higher than the vertex, let the mouth and nose slowly emit the pure air (!) in 3 or 4 mouthfuls, let the left foot be directed to the front, let the toes of the right foot be opposed to the left heel, and revolve the air 10 times.

The Flowing Air Potion.

Prescription.—Take of ch'iang-hwo, ts'ang-shu, chw'an-hiung, tang-kwei, hsiang-fu, pai-shao, orange peel, pan-hsia, mu-hsiang, chih-ch'ioh, mu-t'ung, liquorice, betel-nut, tze-su, of each the same quantity. Make a decoction.

No. 36.— Fu Yuen-hsü (傅元虛) embracing the Vertex,— To cure vertigo.



Sit upright, rub the two hands warm and embrace the vertex door (anterior fontanelle), shut the eyes to prevent the animal spirits from being dissipated, blow, hem, and drum the air to cause it to ascend to the top of the vertex; revolve the air 17 times.

The Rhubarb Soup.

Prescription.—Take of the best rhubarb, and digest it in wine 7 times; dry, and then powder. Use tea, and take 3 mace for a dose.

No. 37.—The immortal Li Hung-chi (李弘濟) admiring the Moon.— This Figure is designed to harmonize the air and invigorate the blood.



Bend the arms as if prostrating one's self to do obeisance; cross the hands and feet, crawl along on the ground, practise the *kung* right and left, and revolve the air each in 12 mouthfuls.

Harmonizing the Air and Nourishing the Blood Soup.

Prescription.—Take of tze-su (leaves of the stem), 1 mace, ch'iang-hwo, 1 mace; pan-hsia, tsang-pai-p'i (桑白皮), root bark of the mulberry (*Morus alba*), ch'ing-p'i, orange peel, ta-fu-p'i (大腹皮), same as betel-nut, of each 8 candareens; ch'ih-fu-ling, mu-t'ung, of each 8 candareens; ch'ih-shao (same as pai-shao), 1 mace; liquorice 5 candareens, tang-kwei 1 mace, and jou-kwei 3 candareens. Make a decoction.

No. 38.—Li T'ieh-kwai the Immortal leaning on his Staff.— To cure pains of the loins and back.



Place the hands to the back and stand firm, take the staff to buttress the loins, let the left side lean on the staff, revolve the air 108 times, divide into 3 mouthfuls and swallow, afterwards kneel, swing from side to side as if sweeping the ground. Do it on the right side in like manner.

This Figure is elsewhere called— The Immortal leaning on a Stick.— For the cure of lumbago.

Take 18 mouthfuls 3 times, and move alternately the legs as if sweeping the floor.

The Tang-kwei Method of picking out Pain.

Prescription.—Take of ch'iang-hwo, liquorice, hwang-ch'ín (digested in wine), yin-ch'ên (茵陳), *Artemisia* sp., roasted in wine, of each 5 mace; k'u-shên (苦參), root of *Sophora flavescens* or *gustifolia*, ko-kên (葛根), *Pachyrhizus angulatus*, ts'ang-shu, of each 2 mace; fang-fêng, kwei-shên (clarified), chih-mu (washed in wine), ginseng, shêng-ma (升麻), *Astilbe chinensis*, fu-ling, tse-hsieh, chu-ling, of each 3 mace. Dose 8 mace, made into a decoction with water, and no special time for taking it.

No. 39.—The True Jade Immortal's method of harmonizing the Hall of the Kidneys.—To cure pain of the legs.



Sit upright, clench the two hands, rub them warm, place the palms of the hand to the posterior *ching* door, rub several times, the more the better, and each time revolve the air 24 times. (In spermatorrhœa the legs are said to be painful).

The Soup for removing the Heat and overcoming the Damp.

Prescription.—Take of hwang-p'ò (moistened in salted water and afterwards roasted), ch'iang-hwo, tze-hsieh, ts'ang-shu, prepared liquorice (half the quantity of the other ingredients), tu-chung (roasted), pai-shao (roasted in wine), mu-kwa, wei-ling-hsien, orange peel, of each 1 mace; niu-hsi (牛膝), 8 candareens. Add 3 slices of ginger, and make a decoction in water.

No. 40.—Li Ye-p'ò (李埜朴) imitating the child reverencing.— To cure the same as the preceding.



Sit firmly, extend straight both feet, use pressure to the root of the thighs, let the heart think, and revolve the air 12 times.

The Hai - t'ung - p'í Potión.

Prescription.—Take hai-t'ung-p'í, wu-chia-p'í, chw'an-tu-hwo, ch'ih-ch'íoh, fang-f'eng, tu-chung (roasted), niu-hsi (digested in wine), i-i-jên (roasted), of each 1½ ounces. Put it into good wine, boil it to drive off the "fire" and the poison; to be taken on an empty stomach. Dose 5 mace.

No. 41.—Lan Ts'ai-ho (藍采和)* imitating the Black Dragon shaking his Horns.— To cure pain of the entire body.



* One of the Eight Immortals who, according to Mayers, wandered about a beggar in a tattered blue gown, with one foot shoeless, wearing in summer wadded garments and in winter sleeping on snow and ice. She waved a wand in her hand, and chanted verses denunciatory of fleeting life and its delusive pleasures.

Sit upright, extend both feet, close firmly the two hands, and together with the body direct them to the front, revolve the air in 24 mouthfuls, place the feet on the ground, bend the head, let the two hands grasp the toes of the two feet, and revolve the air as above.

The Soup to cause the Blood-vessels to circulate.

Prescription.— Take of hsuen-hu-so, tang-kwei, jou-kwei, of each 1 ounce; powder, mix with wine, and take 3 or 4 mace. Add wine according to each individual's wine capacity; when the pain ceases, cease the medicine.

No. 42.—Hsia Yün-fêng (夏雲峰) imitating the Black Dragon in a horizontal position on the Ground.— To cure pain of the back and spine.



Bend the body, creep on the ground, kneel, place the two hands on the ground, revolve the air right and left 6 times.

A similar exercise is enjoined in that known as Using the Golden Block to sodden the Earth.— For the cure of abdominal pain.

Both hands are raised above the head with the palms upwards as if supporting heaven, and both heels are pressed firmly on the ground; the arms are drawn down, and nine respirations are taken. (Compare No. 7 of the Ornamental Sections).

The Trinity or Three Harmonies Soup.

Prescription.— Take of orange peel, pan-hsia, fu-ling, wu-yao, ch'ih-ch'iōh, chw'an-hiung, pai-ch'ih, ch'iang-hwo, fang-fêng, hsiang-fu, of each the same quantity, and make a decoction.

No. 43.—Ho T'ai-ku supporting Heaven, seated.— To cure swelling of the abdomen from debility.



Seated upright the two hands are raised as if supporting a thing, move the air, and by upheaval lead the air upwards in 9 mouthfuls, then make it descend in 9 mouthfuls.

The above is sometimes called — Supporting the Pagoda towards Heaven.—For the cure of enlargement of the abdomen. (Compare this with standing Figure No. 11 of Chang Tze-yang driving the Pestle).

The Fragrant Sha Ling and P'i Potion.

Prescription.—Take of fu-ling-p'i, ta-fu-p'i, wu-chia-p'i, ginger-skin, ts'ang-pai-p'i, root bark of mulberry, chih-ch'ioh, sha-jên, pai-chu, lo-fo-tse, mu-hsiang, mu-t'ung, tse-hsieh, chu-ling, of each the same quantity. Boil, to be taken a little while after meals.

No. 44.—Liu Hsi-ku (劉希古) exhibiting terribly the Ferocious Tiger.— To cure dysentery.



Place the two hands in front and behind (one in front, the other behind), like grasping a horse and putting aside flowers, the feet also to be placed in front and behind, and take steps in performing the exercise. For white dysentery, let the air advance directed to the left in 9 mouthfuls; for red dysentery, the same to the right.

The Yellow Wax Pills.

Prescription.—Take of yellow wax 1 ounce; almonds 49, digested in water to strip off the skin and the point (the latter supposed to be poisonous); mu-hsiang, 5 mace; 7 croton seeds, Croton Tiglium (fold them in paper and beat to express the oil); melt the wax, and mix in the ingredients to make pills the size of green peas. Dose 15 for red dysentery, to be taken with liquorice soup; for the white variety, use ginger as a menstruum.

No. 45.—Miss Sun Pu-erh (孫不二) waving the Flag.— To cure the same as the preceding.



Direct the body to the front, the two hands to be extended straight in front like taking hold of a thing; raise the right foot, so as to have the heel off the ground; then flex and extend the feet; revolve the air in 24 mouthfuls; right and left the same.

The Pai Shao Yao Soup.

Prescription.—Take of pai-shao, tang-kwei, of each 1 mace; rhubarb 2 mace, mu-hsiang 5 candareens, hwang-lien 1 mace; hwang-ch'in, betel-nut, of each 8 candareens; liquorice 7 candareens. For one dose. A decoction.

No. 46.—Ch'ang Yao-yang (常天陽) imitating the Child worshipping the Goddess of Mercy.—To cure pain in front and back of heart.



The body to assume the Chinese figure 8 (八); bend the head as far as the front of the chest, place the two hands on the abdomen, and revolve the air 19 times.

The Soup of the Two Oranges.

Prescription.—Take of chih-so (same as so-sha-mi), *Amomum villosum*, pan-hsia, orange peel, chih-shih, sha-jên, hsiang-fu, mu-hsiang, hou-p'ò, hwei-hsiang, hsuàn-hu, ts'ao-tou-k'ou (草豆蔻), tze-su (stem and leaves), of each the same quantity. Add ginger 3 slices, and make a decoction.

No. 47.—Tung Fang-shuo's (東方朔)* Method of grasping his Big Toes.— To cure hernia.



* Tung Fang-shuo, 2nd century B. C. It is related that he was the child of a miraculous conception, and his mother removed to a place further to the eastward from her home to give birth to her child; and hence his name. According to common repute, he was the embodiment of the planet Venus.

With the two hands grasp the big toes of the two feet, bend the toes for a period equal to 5 respirations, lead the air in the abdomen throughout the entire body.

Another method is bending all the ten toes in this manner, which is better.

Hwei - hsiang Pills.

Prescription.—Take fu-ling, pai-chu, shan-cha, of each 1 ounce; chih-shih 8 mace, ta-hwei-hsiang (roasted) 1 ounce, wu-chu-yü (吳茱萸) roasted 1 ounce, orange seed (roasted) 2 ounces, stones of the Lichee (荔枝核), Nephelium Litchi, 1 ounce. Powder, with honey form pills, each pill to weigh $1\frac{1}{2}$ mace, to be taken on an empty heart. Break up the pills, and take with soup of ginger.

No. 48.—The Patriarch of P'êng's (彭祖)*
Method of brightening the Vision.



* The Patriarch of P'êng is a mythical being, who is reputed to have attained a fabulous longevity. He was 767 years of age when the Yin dynasty came to an end (1123 B.C.). He is said to have nourished himself upon the powder of mother-o'-pearl and similar substances. By some he is regarded as one of the incarnations of Lau-tse.

Sit on the ground firmly, reverse the two hands and place them behind, extend the left leg, flex the right knee and press it upon the left leg equal to a period of 5 respirations, and induce the lungs to drive out the wind. If this attitude be assumed for a long time, things at night will be seen as clear as day.

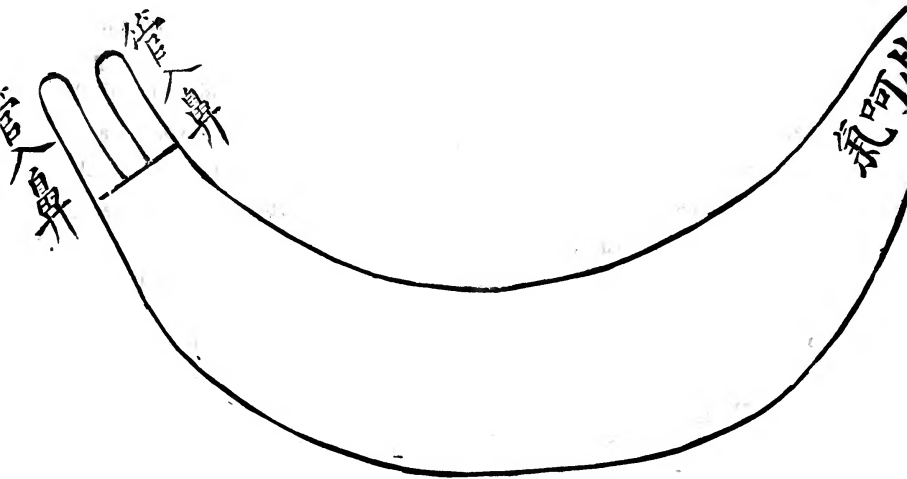
Another method is at cock-crow to rub the two hands warm, and iron (as it were) the eyes; rub thrice, and iron the eyes as often; then take the finger and rub the eyes, and right and left will become divinely brilliant.

The Ti-hwang Pills (same as Shêng-ti; see No. 8) for clearing the Eyes.

Prescription.—Take of shêng-ti (washed in wine), shu-ti (the same), of each 4 ounces; chih-mu (roasted in salted water), hwang-p'ò (roasted in wine), of each 2 ounces; cakes of Cuscuda (Dodder) seeds, t'u-szu-tzu (兔絲子) prepared in wine, tu-hwo, of each 1 ounce; kan-kow-chi, chw'an-niu-hsi (washed in wine), of each 3 ounces; sha-yuen-chi-li (沙苑蒺藜), seeds of an unknown plant, 3 ounces. Powder, and with honey make pills the size of the wu-t'ung-tse (seeds of sterculia platanifolia). Dose, 80 pills. In summer, use weakly-salted water as a menstruum. After more than a month, use wine in taking it.

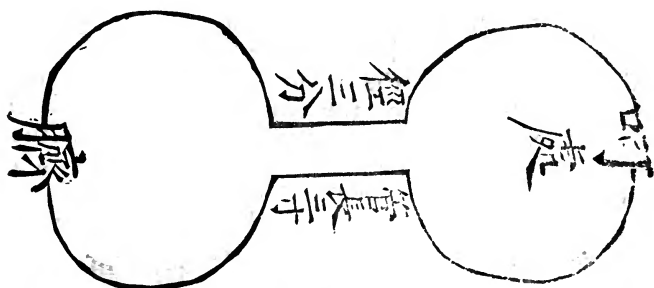
These exercises conclude with a description of three Figures. The first is a pipe or reed (see Figure below), which is introduced into the two nostrils 3 *fén*, and in calibre must fit exactly the nostrils, so as to allow no leakage of air. The tube is pervious, and the apex has an aperture for blowing into. It is employed in constant coughing, in profuse perspiration, body hot, voice hoarse or lost, loss of flesh and constitutional weakness. In the case of hæmoptysis, a cure is guaranteed in seven days by its use. It is only necessary to hem or flow into the tube.

To cure red sputum, each time the instrument is used, a small cupful of *hsiang-ch'an*, 香蟾 (a venereal medicine, very costly and highly esteemed, said to be produced from a toad's forehead, and coming from the south); woman's milk, two eggs, and pig's pancreas cut very fine. Mix the whole thoroughly, then put it in a porcelain vessel or silver wine-cup, steam it until well done, and take it every morning for seven days on an empty stomach at the same time as blowing into the pipe.



The second Figure is designed against fulness of the chest, and weakness of the air (constitution). The instrument (see Illustration below) is to be placed on the navel. It will also cure amenorrhœa and spermatorrhœa.

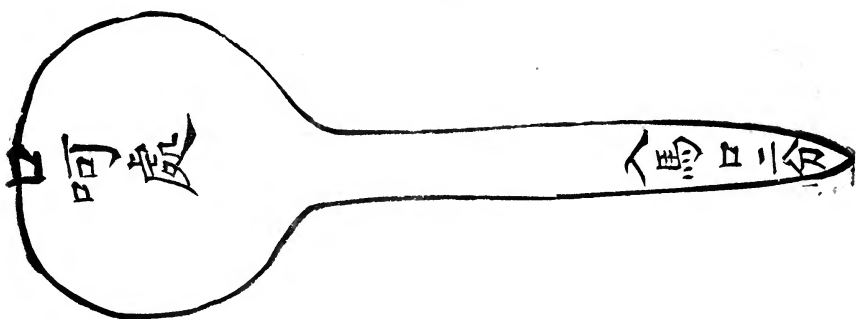
Before blowing into it, take 3 *li* of musk (10 *li* = 1 *candareen*), gum olibanum 1 mace; catechu, myrrh, and sandal wood, of each 1 mace. Powder, and with honey form into cakes, one cake to be applied to the navel. Take 1 slice of ginger, the size of the cake and half the thickness of a cash (Chinese copper money); take the artemisia (*Tanacetum Chinense*) and make into a pill or tuft the size of a bean (number unimportant), and burn till the ginger is hot. When the heat is felt inside, remove the medicine and blow into the instrument. No second application is necessary.



The third instrument (see Figure below) is to be inserted two *fēn* into the meatus urinarius, for the cure of spermatorrhœa; to be introduced smeared with wax. The blowing into it is to be according to the age of the patient, one blow for each year; the number may be increased, but not diminished.

From 5 to 7 days before commencing the use of the instrument, whether the patients be male or female, the body is to be strengthened by the use of good wine, flesh and rice, that the improvement may be speedy.

可	男	女	用	若	病	男	人	用	若
子	人	女	丈	者	壯	病	童	男	
呵	病	人	夫	呵	盛	用	女	子	
亦	用	呵	病	之	無	童	女	病	



In the fourth illustration (a tube resembling a rib), the patient reclines on the back with warm water or olibanum wine in the mouth; afterwards a young man is to blow into the tube according to the above directions. The following is the method.

Take red lead, etc. (a disgusting preparation made from the menstrual discharge, and so called because of its resemblance to red lead);—the details are hardly fit for publication in English.

入	之	將	橐	用	童	撮	揉	童	吹
童	如	大	籥	時	便	下	洗	女	法
女	上	頭	小	以	洗	晒	令	所	先
氣	法	令	頭	童	下	乾	淨	行	取
	病	童	口	便	晒	如	或	經	紅
	人	口	邊	化	乾	用	淨	脈	鉛
	候	便	入	開	收	時	花	以	用
	氣	力	鼻	滴	起	將	亦	夏	破
	引	吹	內	於	臨	熱	可	布	身

A portion is dropped into the small end of the tube and placed in the nose; the youth then blows into the other end with all his force; the sick person waits till he experiences the **童女氣**. Onions and garlick and all sorts of acid and acrid things are to be avoided. This plan, if followed for a long time, will add to one's longevity. If, after using the method, warmth is felt inside, woman's milk may be drunk.

Extra Curative Kung without Prescriptions.

In a work copiously and beautifully illustrated on Kung-fu, which apparently has been abstracted from my library but of which I made a translation and had the most striking illustrations copied and cut nearly 30 years ago, I find many of the illustrations and descriptions with unimportant variations in other and later works on the subject, some of which have already been presented to the reader. The titles of some of the *kung* are altered, and the positions slightly varied; the description of the exercises is very closely adhered to in all. The titles are in most cases very poetical and graphic, and are supposed to be suggested by the attitudes. To save space, incorporation has been attempted. Repetition both in letter-press and figures is sought to be avoided, and only the more striking ones are presented. These curative exercises are followed by prophylactic ones, including the Dragon and Tiger series.

No. 1.—The Patriarch Lü's Method for separating the Roads (the supposed vessels proceeding to the various viscera).— For the cure of weakness of the pulses of these vessels.

The Figure is similar to that for the middle of the Fifth month of the series for the Year.

No. 2.—The Patriarch Lü's Method for distributing and regulating the air that has become stationary.— To cure spermatorrhoea.

This Figure is identical with that of the middle of the Ninth month of the Year's *kung*.

No. 3.—Pa Wang raising the Incense Burner. (If the cock crow at the first watch, fires are prevailing; if at the second, thieves).

The Figure is similar to that of the middle of the Fourth month of the Year's series.

No. 4.—Ursa Major's Tail opening what is closed.—
For the cure of all miscellaneous diseases.

Sit erect with both hands on the legs and bend the head and body, now to the right, and then to the left, and take in 14 breaths.

No. 5.—For the cure of chronic abdominal growths.

Sit straight, rub the ribs of both sides, and the part over the tumours; and while rubbing inspire 34 times.

No. 6.—The Etiquette of the Immortals.—
For the cure of paralysis.



Sit on a high seat, the left foot placed on the opposite thigh, and the right extended forwards; clasp both hands, and, with the head turned in the opposite direction, stretch out the clasped hands in the other, and *vice versa*, inspiring 24 times.

No. 7.—For the cure of Lumbago and Sciatica.



Both hands together, bend them to the ground slowly; raise them up again quietly straight above the head; shut the mouth, and breathe through the nose 3 or 4 times.

No. 8.— For the cure of cold of the Kidneys, with pain in the back and limbs.

Both hands are made warm and pressed against the lumbar region. (See Ornamental Sections, No. 4).

No. 9.— Li Peh * enjoying the Moonlight.—
For the cure of stoppage of the blood.



The position is like beating a serpent. Grasp the feet with the hands, reverse the hands, and take 12 breaths.

No. 10.— Moving the “Heavenly Pillar.”—
For the cure of headache, rheumatism and
imperviousness of the blood vessels.

Place both hands on the knees, twist the head to both sides, and take 12 inspirations. (See Ornamental Sections, No. 2).

* Li Peh, the most widely celebrated among the poets of China. He derives his name, T'ai-peh, from the planet Venus, which is said to have shot down and entered the bosom of his mother. The Imperial Courtier, Ho Che-chang of the T'ang Emperor, on hearing of his remarkable talent, exclaimed—“This is indeed an Immortal banished to earth.” (See the author's article on *The Beverages of the Chinese*, for further notice of the Poet).

No. 11.— The Patriarch Lü's Method for curing Disease, caused by the blocking up of the vessels with the blood and air.

Stand, and if on the left raise the left hand, and *vice versâ*.

No. 12.—For the cure of diaphragmatic dyspepsia.

Let the left hand be thrown to the left side, and let the right hand follow it with the head thrown in the opposite direction, and *vice versâ*; to be repeated on each side 9 times. (The illustration resembles that of the Solar Term of the Tenth month).

No. 13.—The Patriarch's Lü's Method for separating the Air.— For the cure of stiffness of the body.

With closed fists press on both ribs on a level with the hollow of the breast (the ensiform cartilage at the bottom of the heart), and use strength internally in breathing on both sides 24 times.

No. 14.—To harmonize the blood vessels, the three divisions of the body (upper, middle and lower parts of the trunk, into which the Chinese divide the body), and to cure indistinctness of vision and weakness.

Sit cross-legged and rub the hands till warm, and then rub the soles of the feet; then press both hands on the knees, open the mouth, and inspire deeply 9 times.

No. 15.— Pa Wang's Walking Method.— For the cure of painful contraction of the whole body caused by cold.

Stand, and with the hands press closely upon the part above the crest of the ilium, first on one side, then on the other, in three positions, with one leg forward. Repeat 12 times. (See Dragon series, No. 2).

The Dragon Series.

The Dragon is the chief among the four divinely constituted beasts, a legendary monster depicted by Chinese tradition as a four-footed reptile resembling a huge saurian. The watery principle of the atmosphere is pre-eminently associated with it. For a notice of the Dragon King see the writer's article in *The Chinese Recorder*, on *Praying for Rain* (Volume 1, 1867).

No. 1.—The Dragon stamping the Earth, or The Stamping-Earth Dragon (and so with all the other titles).

Let both hands embrace crosswise both shoulders; fix the toes on the ground, and stamp with the heels 24 times. This is used for the strengthening of the ligaments and bones. The stamping with the heel causes the blood to circulate in heaven and earth, high and low (that is, all over the body). The blood and air thus circulating everywhere, boils, abscesses, etc., will not be produced. In this way, man can voluntarily and gratuitously strengthen himself.*

* These directions are usually in rhyme, so as to be easily remembered and committed to memory. The Chinese have no correct notion of the circulation of the blood. They speak invariably of blood and air; and, together, these words stand for the constitution. Original air is supposed to be mixed with the blood, and to be the cause of its onward movement. (The position of the arms resembles No. 3, Medicinal Kung).

No. 2.—The Dragon wagging his Tail.



Place both legs firmly together, and move from side to side like a dragon's tail, 24 times. For pacifying and making comfortable the ligaments and bones. (These results are produced by the movement of the coccyx).

No. 3.—The Dragon rubbing his Head.

Take hold of the Dragon with the left hand, and rub his head with the right hand; seize it slowly, and afterwards move it firmly; do not be afraid to repeat it any number of times. The black dragon is the liver, and the white tiger is the lungs. By so manipulating, hardness will disappear, and the dragon at the sight of the tiger will not be afraid. (The illustration is similar to Nos. 1, 18, 23 and 29, of the Medicinal Kung).

No. 4.—The Whirling - Wind Dragon.

With closed fists and head slightly bending downwards, strike out first the right hand and then the left, each hand following the other. This is in order to move the bones and muscles, and cause the blood to advance forwards, and so prevent the body from becoming weak. (The illustration is similar to that for the Third month).

No. 5.—The Dragon joining his Feet.

Sitting straight place first one leg and then the other in the opposite axilla, and with the hands grasp the opposite elbows. To cause the blood to pass down the vertebrae to the kidneys and coccyx. (The illustration, a male, is similar to No. 5, of the Medicinal Kung).

No. 6.—The Dragon shutting the Pass.

The hands to be lifted up with the palms towards heaven, and the air is thus driven up to the head. To be done 24 times; and, if the air reach to the *ni-wan* bone, * the organs of vision and hearing will be strengthened. (The illustration is similar to No. 7, of the Eight Ornamental Sections).

* "Mud pellet bone," so called from its containing the brain called the "mud pellet palace," and this again from a reference in the Han dynasty to an official who, with such a pellet, could close the Han Pass. (See the writer's *Anatomical Vocabulary*,—"Ni-wan").

No. 7.—The Dragon closing in the Inspired Air.

Perfect quiet to be maintained, without which the exercise is useless. To be done 81 times. To impart strength to men. (The illustration is similar to Nos. 2, 10, 16, 21, 23, and 29, of the Medicinal Kung).

No. 8.—The Dragon supporting Heaven.

The object of this movement is to cause the air to pass from all parts of the body to the coccyx. The person lies on his back, the heart is empty (free from all care, etc.), the legs are drawn up, and the hands clasped underneath, 81 times. By this *kung-fu* alone can the air freely circulate to the coccyx.

No. 9.—The Ascending Dragon.

The person sits cross-legged, the breath is retained and drawn into the abdomen, the mouth is closed and the tongue thrown against the palate. Prescribed for driving out cold, with the hands in the loins, and against incontinence of urine.

Inspire by the nose 90 times. If inspiration by the nose be not attended to, the passages will be blocked up; and, if the mouth be not closed, the dorsal muscles will be rendered uncomfortable; and, if the tongue be not rubbed against the palate, the air from below will not pass to the occiput, and all pass round like the flowing of the Yellow River and the tides of the ocean and go into the heart.

There are three more given to complete the dozen, forming the "Dragon Set:"— one, *The Dragon taking Water*; another, *The Dragon fearing Fire*; and *The Dragon meditating on the Elixir*. These, not being very different from some others already given, are omitted.

The Tiger Series.

The Tiger is the greatest of the four-footed creatures, the lord of wild animals, and represents the masculine principle of nature. He lives for a thousand years. When 500 years old, he becomes white. His claws act as a talisman; and the ashes of his skin, when worn about the person, act as a charm against disease. In Tauist literature, the Dragon and the Tiger play a most important part.

No. 1.—The Mountain - Jumping Tiger.

Jump from one place to another, and then back, 24 times. In this way, the black dragon and white tiger are brought face to face, and the door of the hill (to become genii) will be opened.

No. 2.—The Tiger coming out of the Cave.



The person, on all fours, moves backwards and forwards, each 12 times. The muscles and bones are thus made and kept movable, the viscera enjoy peace, and the blood and veins flow regularly.

No. 3.—The Flying - Rainbow Tiger.

The two arms are stretched out together in one direction, first to the left and then to the right, 24 times, as if flying to the right and to the left. This opens the chest, and makes it feel comfortable. The muscles, bones and heart are likewise benefited, and so disease is prevented. (The illustration resembles those for the Second and Tenth months of the Year's Series).

No. 4.—The Relaxing - Tendon Tiger.



Both legs are stretched out flat on the ground from the body right and left, with the arms grasping the feet like the string of a bow, turning to the right and left 12 times each way. With the view of moving the muscles, ligaments and bones, preventing the production of disease, or removing it far off.

No. 5.—The Tiger suspended from a Beam.

Suspended from a cross-bar, weigh the body, first on one hand, then on the other, 24 times; and all manner of diseases will vanish, the air and blood will circulate, and the viscera be made comfortable.

No. 6.— The Tiger fixed like the Tripod of an Incense Burner.

Sit cross-legged and straight, with hands at the side like a tripod firmly fixed, with the shoulder placed straight, and the head thrown up 24 times. This is considered great *kung-fu*, and calculated to produce great good.

No. 7.—The Standing - on - one - Leg Tiger.

First on one side, and then on the other, each 12 times. To give peace to the bones and ligaments of the entire body.

No. 8.—The Turning - his - Body Tiger.



As if the feet were flying, and the two hands on the ground supporting the body. To be done 24 times without stopping. To prevent the air stopping anywhere, and causing debility and laziness of the body.

No. 9.—The Tiger turning himself.

The hands are turned with palms backwards, and the shoulders are grasped firmly 81 times. Used for broadening the chest, and causing the blood and air to move constantly. (The illustration is similar to No. 3, of the Medicinal Kung).

No. 10.—The Tiger swallowing Saliva.

The saliva to be swallowed 24 times. To diminish the fire (inflammation) of the heart.

No. 11.—The Peach - Blossom Tiger.

The face is to be roughed with both hands, the voice is to be thrown out by pronouncing *ha* until the face is red and quite hot, and there are no wrinkles, and the face is as if the person had been drinking.*

No. 12.—The Peaceful Spirit Tiger.

Sit cross-legged, to pacify the heart, as if looking at a beautiful garden or picture.

*The peach tree is an emblem and symbol of longevity, and derives much of its allegorical character from a reference to it in the *Book of Odes*. It occupies too a prominent position in the mystical fancies of the Tauists. Magical virtues were very early attributed to twigs of this tree, and its use in making handles, beating down earth with the view of driving away demons, is in constant demand, and originally in writing charms to be placed over the doors at the New Year to drive off evil spirits. The pilgrims to Miao-fêng-shan, in the Fourth moon, bring back peach sticks to ward off evil spirits. A host of superstitious notions cluster around the peach-wood,—many of a magical nature. It yielded the fruit of immortality. According to Mayers, one of the panaceas of the Tauists was said to be composed of the peach tree mingled with the powdered ash of the mulberry, which not alone cured all diseases but also conferred the boon of immortality.

No. 13.— The Tiger (a lady) playing the Dragon's Flute.

There are no holes in the sides; therefore played at the end. If it be not blown, the air can not enter; and, if the air do not enter the road is not open; and, if the road be not open, the *tan-t'ien* air does not move, and the person is not able to play. If it succeed, then the *tan-t'ien* air passes to the "Heavenly Door," and so round the entire body, according to diagram illustrative of the *Physiology of Kung-fu* (inserted at the end).

No. 14.— The Dragon (a man) playing the Tiger's Guitar.

To cause the heart to desire and wish for things, and then both their hearts will be joyful and contract no disease (different musical instruments are recommended).

Then follows—*The Dragon asking the Tiger the News*, and *The Tiger (a lady) arriving at the Village of the Dragon*. The illustration is unfit for publication.

Kneading.

Under this title we include all forms of friction, pressing, rubbing, shampooing, massage, pinching etc. This method of cure and prevention of disease is of very ancient origin. It has been revived in modern times and is of growing importance, the practice being employed in a large and ever-increasing number of diseases. From times immemorial the department of pressing and rubbing *an-moh-k'o* (按摩科), has been one of the 13 divisions of the great Medical College of China. This mode of treatment is used when the skin, tendons and muscles are injured or when the bones are fractured,

or dislocated, or where the soft parts are swollen, hard or anæsthetic. If the vessels become pervious and the air is no longer blocked up, this method acts as a deiscutient and the disease is cured. The Medical College of the present dynasty has only five officially recognised departments; viz., medicine, surgery, children's diseases and diseases of the mouth and eye. The other branches are forbidden and particularly acupuncture which is not allowed to be practiced in the Palace. The prevention and cure of disease by rubbing existed long anterior to the Founder of Tauism. Its place seems afterwards to have been taken by charms, incantations, magic and prayers, all of which, along with *kung-fu*, alchemy and the elixir of immortality, are treated together in the Tauist books.

In the volume from which we have taken the "divine" Surgeon Hwa-to's "Five Animals" there is the following on Shampooing (pressing and rubbing) called the Indian Method or that of Solomon, from the Sanskrit *sala* (*Shorea robusta*) the immense tree under which Buddha was born and died.

Grasp the hands and twist them as if washing them. Slightly interlock the hands and turn them backwards and forwards towards the breast. Grasp the hands and press them alternately on the right and left thigh.* Let the hands act on both sides as if drawing a bow of 5 piculs' resistance. With both hands press heavily on the thigh and slowly hoist the body on both sides. With firmly closed fists push forward the hands alternately. Stretch the fists upwards and downwards alternately to open the thorax.

* The pi (髀) which occurs frequently in these directions for Shampooing is the thigh. It is the same as pi (脛) which is the same as pi (髀) the thigh. Pi ch'ih (脛頸) is the stomach. See foot note year's Kung, first month.

Act as if supporting a stone on the palm. Turn the hands backwards and strike the back on each side. Lay the hands on the ground and tift up the body by bending the spine thrice. Embrace the head with the hands and turn it on the thigh. This is to pull out the shoulders. Sit sideways on the two sides alternately as if leaning against a hill. Sit and stretch out alternately the feet and draw them forward in space. Lay the hands on the ground and look backward on the right and left alternately. This is termed the "tiger looking." Stand on the ground and twist the body round thrice. Deeply interlock the hands and tread the feet alternately in them. Stand erect and with the feet tread right and left in space. Sitting, stretch out the legs and hook them alternately at the knees.

These eighteen forms are to be practised thrice daily, and after one month, even an aged person will become strong and walk as fast as a galloping horse, will be able to eat, the eye will become bright, and moreover, will never feel tired or contract illness.

The Pressing and Rubbing Method of Lau-tse (Tauist).

Press down heavily on the thigh with the hands on each side and twist the body twice seven times. Press the thigh with the hands on each side and twist the shoulder twice seven times. Embrace the head with the hands and twist the loins twice seven times. Shake the head twice seven times and support it thrice. Embrace the head with one hand and support the knee with the other and bend the body thrice on each side. Support the head with one hand and the knee with the other from below directed upwards three times on each side. Grasp the head directed downwards with the hands and stamp the feet three times. Grasp the hands and pass them over the head right and left three times. Interlock the hands, support the heart in front (front of the breast) pushing out and turning them back three times. Interlock the hands and press the heart three times. Bend the wrist, buttress the ribs and draw back the elbow thrice on each side. Draw back right and left side, pull forwards and backwards each three times. Extend the hands, draw back the neck thrice on each side. Lay the back of one hand on the

knee and let the other draw back the elbow, then lay the palm on the knee three times on each side. Let the hand press the shoulder from above downwards and change the hands on each side. Push (the air) with the empty fists, (loosely closed) three times. Interlock the hands and move them backwards and forwards reversing the dorsa and palms three times. Move the hands outwards, inwards and downwards each thrice. Rub and twist the finger thrice. Shake the hands backwards (reversing the dorsa and palms) three times. Interlock the hands and hoist the elbow up and down times without number and exhale the breath ten times only. Place the two hands together three times. Lower the two hands three times. Interlock the hands and pass them over the head expand the ribs on the right and left ten times. Turn the fists backwards and rub the spine up and down three times. Turn the hands and grasp the ridge straight up and down three times. Pronate the palm, take hold of the wrist and move it inwards and outwards thrice. Pronate the palm and raise it in front three times. Pronate the palm and interlock the two hands and move them horizontally three times. Pronate the palm in a straight horizontal position and lift them up three times. If the hands get cold beat them from above downwards until they become warm. Extend the left foot and support it with the right hand, the right and left taking hold of the foot, from above downwards and straighten the foot three times. Let the right hand take hold of the foot, the same as the other Whirl the foot backwards and forwards three times. Whirl the foot to the left, and to the right each three times. Whirl the foot backwards and forwards three times. Straighten the feet three times. Twist the thigh three times. Shake the foot inwards and outwards three times. If the foot gets cold, beat it until warm. Twist the thigh so many times and stamp the feet three times and straighten them three times. Act like a tiger on the right and left and twist the shoulder three times. Push the heavens and support the earth right and left three times. Swing (like a pendulum) a mountain right and left, carry (on the back) a hill, and pull up a tree, each three times. Extend the hands and twist them straight in front three times, knees and feet each three times. Twist inwards and outwards the spine each thrice. (For further remarks on this method see further on).

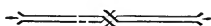
The patriarch of Pêng says that by rubbing the face and ears with the hands every morning, the vigour of the face will then flow everywhere. Again by rubbing the hands until they get warm, and then rubbing the face, it will look bright and be able to bear the cold without suffering. He also says that the man who wishes to harmonize the breath must take a room, shutting the window and door, with a warm mat, a high pillow and the body reclining perfectly straight, shut up the eyes and the breath in the chest, and put a feather on the nose so that it does not move and after 300 breaths, the eyes will not see, the ears will not hear (will become insensible) and thus neither cold nor heat will come nigh the body and no poisonous insects will deposit their virus on it, and the person will attain to the age of 360 years and thus become a neighbour of the genii. Every morning and evening with the face towards the South, place the hands on the feet and the knees, knead the joints gently, exhale the foul breath by the mouth, and inhale the pure air by the nose, and with the hands right and left, support the abdomen in front and behind, above and below. After a while, open the mouth, knock the teeth, wink the eyes, press the head, pull the ears, curl up the hair, loose the loins and cough in order to develop and excite the breath. Turn the hands and using the idea stamp the feet eighty or ninety times and then stop. Settle the heart slowly, preserve the thought like a Buddhist priest, shut the eyes and you will then see the original air come down as a canopy of distinctly different (5) colours gradually to the head, pass through the skin, to the flesh, the bones, the brain and finally to the abdomen and all the inferior viscera will derive benefit from it like the absorption of water. When the *ku ku* noise is heard in the abdomen, then keep the thought and do not let it communicate with external things, so the original air will be transported to the "sea of air" (氣海), and finally to the *yung chuen* (湧泉), (acupuncture aperture on the inner aspect of the sole of the foot between the heel and great toe) and the body be excited. It is to be done once or twice a day up to as many as three to five times, when the effect will be that the body will feel pleasant, the face appear bright, the hair glossy, the ear and the eye become clear and intelligent, and the strength of the air become robust and all diseases be removed. If it could be performed 5,000 or 10,000 times without stopping up

to the full 100,000 times, the Kung-fuist is not far from the genii. And thus it comes about that the body is full of the suitable air free from sickness, otherwise all manner of disease will be engendered. Whoever, therefore, wants to improve his health must know how to harmonize the breath. It may be held after midnight and before noon, when the air is alive and can be profitably harmonized ; in the afternoon or before midnight the air is dead and unprofitable. By lying on the back on thick and warm bedding, high pillow, keep the body even, stretch out the hands and feet, bend the joints of the thumb 4 or 5 inches apart from the body and the feet the same distance apart from each other, knock the teeth frequently and swallow the saliva, breathe air through the nose into the abdomen until full, after awhile, gradually exhale from the mouth and repeat the process continuously. Where there is a heavy fog, bad wind and extreme cold, the breath should not be inhaled. When one has caught a cold and is feverish or has malignant boils, the kung must be performed at once, no matter what the time may be, and continued until cured. Another of the Tauist patriarchs, Ju Hsü, says that at cock crowing we should rise, sit on the bed and guide (refine) the breath; when finished and the toilet completed we should sit straight and according to the season, whether cold or hot take some refreshment; before partaking, a little medicinal wine is to be drunk. After it has dispersed, enter some quiet place, burn incense and purify the heart, after which read or chant prayers or charms and thoroughly wash away every thought of anger, grief, care etc., from the heart; after a little while, go out into the courtyard, slowly take step after step, letting off the breath. If the ground be damp the walking must be intermitted. Take 5 steps outside the room to disperse the air, pass the management of all domestic affairs to your son and thus set the heart free from all family cares. If the heart cannot be made and kept pure at home, then seek a retreat elsewhere, whether 50 or 100 *li* distant, and daily contemplate peace, and what is needed there, let some of the family bring it, etc.

The patriarch Shih-shih says, after meals fist rub the abdomen with a warm hand and walk 50 or 60 steps ; repeat the operation after the midday meal and walk 100 or 200 steps but never walk hastily to cause panting, and return to the couch and lie down, extend the limbs but do not sleep, after the breath becomes settled, sit up and take

some medicinal articles such as dates, ginseng, China-root and liquorice in a decoction, and when a degree of warmth is experienced, take a decoction of bamboo leaves, *imperata arundinacea* (*ophiopogon japonicus*); and when the stomach is full do not walk quickly and when it is empty do not use the voice to call or use one's breath.

The patriarch, Chung Cheng, says, that man ought not only to know how to take his proper food but also to know how to harmonize the body by rubbing and kneading, moving the joints and guiding the breath. The importance of the latter is to keep it moving so as not to become an obstruction.



Books on Kung-fu.

The Taoist work Tsun-sheng-pa-chien (遵生八牋), in 20 books was written by Kau-lien-shen-fu (高濂深甫), in 1591. The first and third prefaces are by the author, the second by Ch'ai-ying-nan (柴應楠). The work is divided into eight parts; two books are occupied with the subject of Undivided Application, four with Seasonable Regimen, from which we have taken the Kung-fu for the year; two with Rest and Pleasure; two with Prevention of Disease, from which we have taken the Eight Ornamental sections; three with Eating, Drinking and Clothing; three with Amusements in retirement; two with Efficacious Medicines and one with Examples of the Virtuous, and the Contents form the twentieth volume. In the large list of drugs the poppy is mentioned only once and among a list of prescriptions opium occurs only once as an ingredient in a pill entitled The Great Golden Elixir.

This work is well got up: There is a sameness of language and illustration running through the works of this class. The more recent and cheaper books have been reproduced from the older works with minor changes and additions.

Another work called Hsing-ming-kwei-chih (性命圭旨), is by an accomplished Tauist of the Sung dynasty called Yin-chen-jen (尹真人), on the Government of the inner man. This is one of the most celebrated treatises on this art. It is in 4 volumes and treats at large of the principles and method of practice and is amply illustrated by plates. It was first printed in 1615 and another edition in a large and handsome style was issued about 1670. The 1st preface is by Li-p'ò, (李樸), the 2nd by Ch'ang-chi (常吉), the 3rd by Tsou-yuen-piao (鄒元標), and the 4th by Yu-t'ung (尤侗), all in the time of Kanghi.

The contents of this work are of the usual Tauist character, discourses on the Great Reason, Birth, Life, Death, the Elixir, the Absolute, the Yin and Yang, Refining the Heart etc. One chapter, entitled the Three Passes, Agreeing and Opposing, begins thus:—Reason (tau) produced one; one produced two; two produced three and three produced the myriad things. Another chapter on the True and False or the deflected and the perfect beginning with the great Tau producing heaven and earth; and these, man and things, states that there are 3,600 Tauist methods; 24 sorts of the Great Elixir and 96 sorts of outside doctrines. There are numerous side sects but only one Golden Elixir Doctrine which is the one and only perfect way. Outside this there is no other way of becoming immortals and Buddhas. This is real, all else is empty and false. About sixty different sects are mentioned who prosecute their doctrines, hoping by means of which to gain immortality, The list is said to be inexhaustible. They are compared to looking through a tube at the panther [and seeing one spot only] or like looking at heaven from the bottom of a well the horizon in both

cases being contracted and limited. There is no panacea but the Golden Elixir—the Great Reason. This is the end and there is nothing better. Many of the sects are incidentally referred to in the preceding kung-fu. The list though intensely interesting and instructive is too long to reproduce here. Another work is called *Fuh-show-tan-shu*. (福壽丹書), or The Elixir of Happiness and Longevity, in 6 vols., published in 1621. Hwato's Five Animals are drawn from the first volume of this work entitled *An-yang-p'ien*. (安養篇), a discourse of Peace and Nourishment; the 2nd vol., is termed *Yen-ling-p'ien*. (延齡篇), a treatise on Longevity, The Medicinal kung are extracted from this volume. The remaining four vols., are entitled respectively *Fuh-shih-p'ien* (服食篇), a collection on dress and food of prescriptions by Ying-yuen; the *Tsai-pu-p'ien*. (採補篇), by the same; the *Hsuen-sien-p'ien*. (玄脩篇), *ditto*, and on Drugs or the *Ching-yao-p'ien*. (清樂篇) by Cheng-chi-chiao. (鄭之僑). Another work is termed *Tan-ching-san-chuen*. (丹擬三卷), in 6 vols., coonsisting of the *T'ien-hsien-chêng-li*. (天仙正理), in two books by Pa-tse-yuen. (巴子園), reprinted in the year 1801. One vol. is entitled *Foh-hsien-ho-tsung*. (佛仙合宗), a Harmony of Buddhism and Tauism, by Wu-shen-yang in the reign of Wan li; three vols. entitled *Wan-shou-hsien-shu*. (萬壽仙書), the same in import as the *yen ling p'ien* or Treatise on Longevity. The first vol., contains the Eight Ornamental Sections and the year's illustrations, in every respect identical with those of the *Tsun sheng pa chien*, except that the list of diseases which the exercise is designed to cure is very much briefer and more reasonable. We have followed the earlier work from which this seems to have been copied. The miscellaneous illustrations in the second vol., are identical with those in the *Yen ling p'ien* noticed above. The illustrations are inferior as works of art to the *Yen ling p'ien* from which apparently they have been copied. My copy is, however, a cheap edition. The same vol. also contains Hwato's Five animals and also Ch'en Hsi-i's right and left sleeping exercise which occurs also in the vol., on Prevention of Disease in the future, in the *Tsun sheng pa chien*. The prefaces to most of these works are purely ornamental, conveying no exact truth or of historical interest.

Another work in one small vol., one of the smallest, cheapest and most popular books on Kung-fu, is the Wei-sheng-yi-chin-ching (衛生易筋經), supposed to be spurious by scholars. Several abridged editions of this book are sold under the designation Wei-sheng-yao-shu (衛生要術).

The first mentioned book has a preface by Sung-kwang-so (宋光祚), written in 1875, in which he says that he is a lover of good books, that he visited a great temple where Kung-fu was practised with advantage to the original air and vital spirits, protecting not only against disease but prolonging life and still more of enabling persons to become divine sages. He had much leisure and was anxious to reprint good books, dispense medicines and cure serious disease. People from all quarters praised his good deeds, his own evil thoughts banished, he ate and drank orderly and discreetly; his one desire was to obtain peace; he spent much time and labour in searching into prescriptions for the nourishment of the body, when he came across this book and he was rejoiced to obtain the benefit of the two books *Hwang-ting* (黃庭), and *Nei-ching* (內經), and learned the methods of the genii. He was glad at the possession of this book and wished others with the same heart as his own, to reap the same advantage and help them to nourish their bodies.

This is followed by a preface written by Li-ching (李靖), a great military officer of the T'ang dynasty, in the second year (529 A.D.) of the second Emperor of that dynasty. He says in the time of the after Wei (後魏), in the year T'ai-ho (太和), of the Emperor Hsiao-ming (孝明), the priest Ta-mo (達摩), (Bodhidharma—the sound of the last two syllables of his Indian name) arrived at the court of Wu-ti the first Emperor of the Liang dynasty, where he first dwelt and afterwards removed to the Wei Kingdom, and dwelt at a temple called Shao-lin-sze (少林寺). After a residence of 9 years in China (he was 69 years' old when he arrived in the year 526, and was the 28th of the patriarchs) he was changed (died) and was buried at the

foot of the Hiung-erh mountain (熊耳山), (between Honan and Shensi). He left one shoe. When his monument was being repaired after the course of years, an iron box, unlocked, but firmly fastened with glue, was found, which on the application of heat was opened. The inside was filled with wax and it was this that rendered its opening difficult. Inside were two books, one termed the *Hsi-sui-ching* (髓洗經), the other the *I-chin-ching* (易筋經). The latter had to do with the conservation of the body. After generations saw nothing of the former, the latter was found at Shao-lin-sze, written in the language of the country called T'ien-chuh (天竺 India). There was great difficulty in having it translated. Each one took the best meaning out of it he could and by so doing obtained the bypath—not the highway, the leaves and branches—not the stem, and so lost the real method of turning genii. At present the priests of the temple obtain advantage from the wrestling (method) merely. One of the more intelligent argued that what Tamo left could not be unimportant and so he went on a pilgrimage to the O-meï (峨嵋), mountain in Szechuen in search of one who could translate the work and there met an Indian priest by name Pan-la-me (般刺密). To him he spoke of the classic and reason for his coming. The Indian priest explained the work so far as was possible, for the language of Buddha cannot be translated, it is extraordinarily deep, deeper than water. He was invited to stay at the temple and so got initiated by degrees into the details of Kungfu. In 100 days he became quite strong, in 100 more his entire body had received benefit and after the third hundred days he was able for everything and his constitution became as hard as steel, and he could aspire to the position of a Buddha. He accompanied the Indian priest wherever he went. One Hsü-hung met them and obtained from them the secret method, and he gave it to a red bearded guest who gave it to the writer of the preface, who tried the method with the best results and so became a believer. He deeply regretted he did not obtain the *Hsi-sui-ching* and he also felt regrets that his convictions were not strong enough to induce him to give up all and follow the priests and not being able to carry out this plan, he felt as if there was something wanting in his heart. He complains of people not having heard of this work, so

he writes this preface to inform them how the work came into his hands and hopes that through this they may truly learn of Buddha. That each may attain to the Kungfu of Buddha is the ideal which Tamo had in his heart in bequeathing this classic. This is an extract and in part the substance of the principal part of the preface. Dr. Edkins tells us that Tamo in carrying out his mystic views, discouraged the use of the sacred books. His highest aim was the work of the heart. He left Nanking where the Emperor resided and went to Loyang, the modern Honanfu. For 9 years he sat with his face to a wall, hence the epithet applied to him—"the wall-gazing Brahman." He died of old age. Sung-yün who was sent in 518 A.D. to India for Buddhist books by the Prince of the Wei country, returned and inspected the remains of Tamo. As he lay in his coffin, he held one shoe in his hand. Sung-yün asked him whither he was going. To the Western Heaven was the reply. Sung then returned home. The coffin was afterwards opened and found empty, the shoe alone was lying there. This shoe was preserved as a relic in the monastery but was stolen in the T'ang dynasty.

The succeeding preface appears in the section entitled Physiology of Kung-fu. The concluding preface is by one Niu-kau, a military officer, of the Sung dynasty in the 12th year of Shao-hsing the first Emperor of the Southern Sung (1143). He was an illiterate individual, he says, ignorant of characters. He was a follower of a celebrated general named Yueh-fei (岳飛); he once met a remarkable priest, so like a *lohan*. In his hand he had a letter which he gave to him to give to *Yueh-fei*, who, he said, had divine power—was able to stretch a bow with the resistance of 100 piculs' weight, this strength was given him not by Heaven but by the priest. When a youth he was my pupil and he practised the Kung-fu most thoroughly. I asked him to become one of my followers and adopt the doctrine of Buddha which, however, he said, he did not believe and so left me to prosecute worldly affairs. He had become a great officer with a great reputation—this seems his destiny. Give him this letter and let him know the evils of the world—that he may be in Imperial favour one day and the next day in disgrace, suffering punishment; that the pursuit of the Buddhistic doctrines was alone satisfying. Niu was afraid to hear the priest talk thus—asked his name to which no reply was given. Yueh took the letter and

before finishing the perusal of it he wept and said: he was my master, a holy priest and if he had not taken care of me I should have died. Thereupon he brought out of his breast a book and told Niu to take it. He afterwards lost the Imperial favour; Niu-kau in order to hand down the work, hid it in a wall in the Sung-hill (嵩山), that someone hereafter finding it might propagate it, he himself being destitute of all ability and in this way obtain some merit and be able to look Yueh-fei in the face, *i.e.*, do something which would not only not disgrace him but be a credit to him.

The work begins with the rules for Kung-fu in rhyme to be committed to memory which we omit as their substance is embraced in the 8 Ornamental Sections. Next comes a discourse in general. Then follows a chapter on Membranes.

There are two grand methods included in Kung-fu, the internal and the external. The internal Method has to do with the Membranes. The body is distinguished into many parts of which the internal are the five organs, the six viscera, the animal vigour and the spirit; the external are the four limbs, the bones, sinews and flesh. These form one body. The essential part of them are the blood and the animal vigour. To invigorate these two things are therefore of the first importance in Kung-fu. The animal vigour and spirit are immaterial but the sinews, bones and muscles are material. The method is to discipline the material as the assistants of the immaterial and cultivate the immaterial to aid the material. These two are intimately related. If it is desired to discipline the sinews, the animal vigour comes first in order, then the membranes, and last of all the sinews which is then easy. To discipline the membranes is difficult but to discipline the animal vigour is the most difficult of all. The true plan is to lay the foundation in the difficult. The important part of kung-fu is to nourish the original air (constitution), to collect the central air, care for the perfect air, protect the kidney air, nourish the liver air, nurse the lungs and manage the spleen, transforming the turbid into the pure condition, to prevent the external things or emotions as grief, desire, and such-like from injuring the constitution and thus enable it to become

tranquil, pure and even and then united its influence will be distributed to and felt over the whole body. When it arrives at the tendons and reaches to the membranes, the entire body is then full of motion; when the air arrives at the place, the membranes rise and when the air moves, the membranes are extended, so that the membranes and the air become equally strong. If the sinews be disciplined and not the membranes, there is nothing for the membranes to govern and *vice versa*, if the two are disciplined and not the air, the two do not increase in strength, and if *vice versa*, the air remains weak and fails to flow to the blood vessels but reciprocally if the sinews are strong but are not strengthened by the air and membranes, it is like planting herbs without earth.

Pan-la-mi says that disciplining the membranes comes first but in order to do so, the discipline of the air is the lord or root of the matter. Most people do not understand the membranes—it is not the fatty membranes; it is the membranes of the tendons; the former is inside the middle of the breast, the latter is outside the bones; the membranes are the things that connect the vessels, arms and body, they protect and are in contact with the bones and sinews of the body. Comparing the sinews and membranes, the latter are the softer, they are harder than flesh and are inside the flesh and outside the bones; they are the substances that embrace the bones and support the flesh. In kung-fu the air must traverse to the middle of the membranes, protect the bones, strengthen and support the sinews which together form one body. This is the whole of kung-fu.

The discourse on internal vigour embraces three laws. First, protecting the animal vigour which includes attention to the five senses and motives. The best way to begin is by kneading, at which time the clothes are to be opened and the recumbent position adopted, with one palm placed on the space between the chest and abdomen. This is what is termed the "medium" where the animal vigour is stored and must be protected by closing the eyes and ears, equalizing the breath of the nose, shutting up the breath of the mouth, not overtoiling the strength of the body, preventing desire and evil thoughts. This is thinking of the "middle" and the road is then well regulated simply because the animal vigour, the essence and the spirit are accumulated here. Second,

the absence of thought. The animal vigour, the essence and spirit and also the blood are not independent but are under the control of motives and follow what the motives originate. It is necessary for the motive to agree with the palm (of the hand) when protecting the "medium;" if the motive should jump to another part of the body, the vigour, essence and spirit will be scattered and then it will become the external not the internal vigour. Third, the management of a sufficient circulation. The kneading and guarding have for their object the prevention of the dissipation of the air which has already been collected into the one place, the animal vigour, the essence and the blood will follow. By thus watching over it, we keep it from escaping and kneading it for a long time, the vigour is stored in the "medium" and prevented from running over to other parts of the body. Vigour so accumulated, energy will also accumulate and when the vigour is sufficient, then the energy will circulate. This air is what Mencius had in view when he said—the greatest and strongest is the strength of air which can fill the entire heaven and earth—*i.e.*, air without limit. If the air is not full and has not circulated, and the motives are scattered, it is not only the internal but also external robustness that is devoid of strength.

Pan-la-mi held with Mencius that man's nature was originally good, that the good was gradually covered by the evil which found admission through the senses, the body and ideas, and clouded the understanding, so that a partition, as it were, has come in between the individual and the Doctrine (Tau). So Ta-mo at Shao-lin-sze remained 9 years ignorant of mundane affairs, and by shutting out the eye and ear was enabled to tie, as it were, his ideas which are like the monkey or the horse, so fleet that one cannot catch them, and so the Tau is closed, but shutting up the senses is like binding these two animals. So Ta-mo secured the true method and left a shoe and went to the West (died) and thus became one of the genii. Ta-mo left this true method and the *Show-chung*, (the shutting out of the world and guarding the "medium" and so preventing its dissipation) In this way an ignorant person can become wise and a weak one strong and so arrive quickly at the Happy Land.

The drugs recommended for internal robustness are the following: Take of Ye-chi-li (Tribulus terrestris.) (野蒺藜), (roasted and

the seeds removed) Pai-fu-ling (skin removed) Pai-shao-tao (roasted a little with wine) Show-ti-hwang (prepared with wine) Liquorice (made with honey) Chu-sha (vermilion, precipitated with water) of each 5 ounces; Ginseng, Pai-shu (roasted with earth) Tang kwei (prepared with wine) Ch'wen-hiung of each 1 ounce, powder and with honey make into pills of 1 mace in weight. Dose: 1 to be swallowed with soup or wine.

It is said that pills made up of so many ingredients, the strength is not one but must vary and go into different channels, so three prescriptions are added any one of which may be taken. (1).—Take Chi-li deprived of its pricks and made into pills with honey and take one or two mace. (This plant is of extreme value it is said, in bringing donkies rapidly into fine condition.)

(2).—Chu-sha, 3 candareens, washed in water and swallowed in honey water.

(3).—Fu-ling, skin removed, powder and make into pills with honey or take water and mix and so take, or make into a paste and dissolve in honey water.

KNEADING.

The idea of kneading is rubbing or shampooing the sinews and bones strong. It consists of three portions, each of 100 days.

(1).—*Kneading in season.* Beginning in spring when the weather is still a little cold and the body is closely wrapped up in clothes, it is only necessary to open the upper clothes. In the middle of the second month when the weather has grown warmer, the lower part of the body may then be exercised and thereafter one may practise most conveniently.

(2).—*Certain forms of kneading.* Man's animal vigour (air) is situated on the right side of the body and the blood on the left. In kneading one must begin and advance from the right to the left. The *raison d'être* are three. (1).—To push the vigour so that it enters the blood and makes them mix. (2).—To broaden the stomach so that it may receive more vigour. The stomach is situated on the right side. (3).—The right palm of the kneader is more powerful than the left.

(3).—*The quality of the kneading.* It must be light and superficial. The process, although the individual's, ought to be in accordance with heaven's laws and with the production of things by heaven and earth ; slowly, little by little and not suddenly. When the air arrives it necessarily causes growth; then wait till it is complete, kneading ought to be done after this fashion, the pushing ought to be even and uniform, slowly coming and going backwards and forwards; not too heavy and not too deep. When one has exercised for a long time, then one obtains the advantages, this is the proper thing; if too heavy, the skin may get injured and perhaps set up disease (such as pityriasis versicolor and lichen tropicus); if deep the muscles, sinews and membranes may inflame and swell, hence the necessity of care.

METHOD FOR ACQUIRING THE ESSENCES OF THE SUN AND MOON.

(The important thing is to have the lungs full of air). The two essences of the Sun and Moon must unite to produce the myriad things of nature. The ancients swallowed these essences and in time became genii. The method is secret. People in the world are ignorant of it. Even among those who know it, their will not being strong and with want of constant practice, it becomes useless. Although those who daily exercise the kung are few, yet if it is done from the beginning and continued until it is complete and until death, whether at leisure or busy and whether or not there is any outside business, if only it is done daily and constantly, one can become an immortal without much difficulty. By receiving and swallowing it, the essence of the sun and moon is added to the spirit and intelligence and then ignorance and all crudities are dissolved and the person feels full of vigour and is very efficient and the myriad diseases are not developed. Truly the benefit is great. The method is daily on the first of the month (shuo) when the air is new and fresh and during the last half (wang) when metal and water (two of the 5 elements) are full and the air is perfect and progressive, at this time one can obtain the lunar essence. If it rain or be cloudy on any of these days, or if from want of leisure on those days, the 2nd, 3rd and 16th and 17th will also do, and so can also increase the vigour and essence; if after these six days when the sun is inclining to the West and the moon becomes smaller and

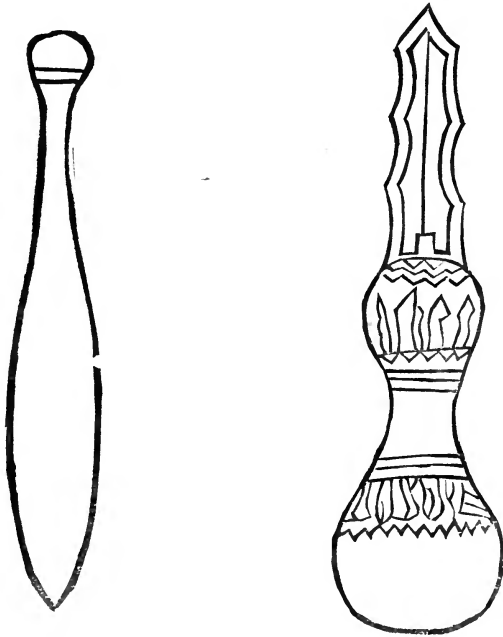
weaker their essence is insufficient and therefore unimportant to health. In speaking of the sun, its essence ought to be swallowed on the 1st and 15th between 3 and 7 a.m. One must go to a high place, opposite the sun, remain perfectly still, harmonize the air inspired by the nose and slowly inhale the solar essence one full mouthful, then close the respiration, collect the animal vigour, and slowly swallow it little by little and thinking, let the idea introduce it into the Central Palace (the tan-t'ien). This is the manner of performing one act of deglutition and it must be repeated 7 times. Then stop a little, retaining it, after which you may repair home and attend to your ordinary business without inconvenience. During the lunar diminution (the sun and moon are said to be full on the 1st and 15th respectively) also according to the foregoing method from 7 to 11 p.m., also 7 times repeated. This is the principle pervading heaven and earth; if one pursues it with a constant and fixed heart, great advantage can be obtained; those who believe it can lay hold of it and use it. This is the method for performing a very large and important Kung. Do not reckon it unimportant and make no mistake in regard to it.

In refining the animal vigour by external exercises we use kneading and at the time of practising the exercise, a medicine pill is taken, swallowed and when it is conjectured, that it is dissolved (in the stomach), use the kneading; the strength of the pill unites with the kneading and thus the advantage is obtained. No benefit accrues from beginning the kneading before the pill has dissolved nor long after it has dissolved. Knead and take a pill once in three days and continue in this manner. (The ingredients of the pills have been already given).

Another matter to be attended to under kung-lu is constantly washing and bathing the body in brine. The salted water can make the hard soft and disperse the heat. It is performed daily or once in two days. The prescription is to take of the root-bark of Lycium Chinense and salt, of each *ad libitum*, in warm water and thus the blood and air will harmonize and the skin and epidermis will feel most comfortable.

The third thing calling for attention is the wooden pestle and mallet, both of which are made of hard wood. The pestle is 6 inches long, the mid part $\frac{1}{2}$ inch in diameter, the head round,

the tail, sharp (a knob at one end and a point at the other end). The mallet is 1 foot long, 4 inches in circumference; the handle is slender at the upper part, the top is thick with a knob at the end of the handle and at the middle the body of it a little higher. (See illustrations).



The fourth thing is the pebble bag. It is necessary to beat the muscles with the wooden pestle and mallet but the joints must be exercised with the pebble bag. It is made of linen cloth, in form not unlike the pestle and of three different sizes, the major one eight inches long, and one catty in weight; the medium one 6 inches long and 12 ounces in weight and the minor one 5 inches long and half a catty in weight. The size of the largest pebbles must not exceed the size of the grape and the smaller, the pomegranate seed, and only those must be used which have been found in water and are free from edges and corners.

Kung-fu for the First Month. At the beginning of kneading a succession of little boys is required for they possess little strength, and so knead not so heavily and their animal vigour is strong. First swallow the pill and just as it begins to digest commence the kneading; the advantage is to be gained when the two go hand in hand. On beginning the kneading the dress on the breast must be opened, recline and place the palm of the hand on the part below the heart and above the navel, and knead from the right to the left, slowly coming and going, not so light that the hand leaves the skin and not so heavy as to press heavily upon the bones, and not to be performed confusedly. This is the proper mode. While kneading, the heart must look inwards *i.e.*, denuded of all external thought and the idea guarded in the "medium" and the thoughts not allowed to roam outside and thus the essence, the air and the spirit, are all below the palm. This is truly the golden mean (hwo how 火候). At this period there is no scattering of the thoughts, and the kneading is equalized. If this condition is attained, one can sleep during the process and the method is all the more remarkable; the *show-chung* idea is better when the person is asleep. The duration of the exercise must be about the time taken to burn two sticks of incense, each day thrice, morning, noon and evening. If the person be young and strong, twice daily, morning and evening, will be sufficient, if more frequently performed harm might be the result. After kneading, a short sleep is advisable after which other business may be engaged in without detriment.

Kung-fu for the Second Month. The animal vigour has accumulated during the first month, the stomach has become large and broad, and the sinews on the sides of the abdomen have been raised over one inch, and can, when pressed with air, become as hard as wood or stone. This is the result. But the space between the sinews from the heart to the navel is still soft and hollow, because the membranes are deeper than the sinews and the palm kneading has not yet reached them and consequently they have not risen. This time, knead by the side of the palm so as to open a [another] palm according to the former method and pound deeply the soft parts with the wooden pestle and after a time the membranes will be raised above the skin and possess the same strength as the sinews, without being either soft or hollow and this is the complete kung. The period occupied

by kneading and pounding must be that of two sticks of incense thrice daily, and daily by the use of this exercise no defect will be developed.

Kung-fu for the Third Month. After two months' exercise, the hollow space in the centre is a little raised; and then gently beat with the wooden mallet on the kneaded portion of the two sides of the first palm "width" and pound with the wooden pestle the parts which reach the end of the two great sinews one "palm wide" according to the kneading method. The time occupied is to equal the time taken in burning two sticks of incense thrice daily.

Kung-fu for the Fourth Month. Three months' exercise being now completed, the three middle "palm-wide" parts are all beaten by the wooden mallet and the external two "palm-wide" parts are first pounded, then beaten, thrice daily, for a period equal to the burning of each two sticks of incense. After exercising over 100 days, the air becomes full, the sinews strong, then the membranes raised and thus advantage is reaped.

Light and heavy Method of performing the Kung. In beginning the exercises, light manipulation is of the first importance, and a young boy must be employed because his strength is even; after one month when the air has slowly increased the strength can be increased; it must not be used too strongly in case inflammation should be set up; it must be pursued in strict order and not confusedly in case the skin should get injured, therefore care must be exercised.

Deep and superficial Method of performing the Kung. In the beginning the exercise is superficial, the strength increases daily, because the air is becoming stronger and therefore the weight may be gradually increased although it is still superficial. Following this the pestle is used to pound which can be done deeply and afterwards beat and although the beating outside is shallow, the movement is felt deeply inside and this is to make both the inside and outside strong and in this way benefit accrues.

Internal and external Kung-fu for the ribs. The animal vigour is full when the kung have been performed over 100 days, like a mountain torrent which is full to the brim (margin) and there is no place to which it cannot flow if a channel be left for it. At this time therefore precautions must be adopted to keep the air from escaping to the four extremities by improper pounding or beating outside the kneaded portion, otherwise if there is the slightest idea

of conducting it elsewhere, it will become external strength (robustness.) If once the animal vigour has thus become external, it cannot be brought back and made to enter the bones and so cannot become the internal robustness. In order to make it enter inside, the pebble bag already described is used and beginning at the "mouth of the heart" (breast) and proceeding to the end of the ribs, the space between the bones and muscles must be closely pounded, again kneading and beating them after a long time the animal vigour which has accumulated will be led to the bones and not over-flow to the limbs. This is the internal robustness. Here the distinction between inside and outside is to be observed and maintained; if not clearly differentiated in such actions as drawing the bow, moving the fists, beating or grasping a thing, the air will proceed to the outside and can never be brought back to the inside, so it is necessary to use the utmost care.

Kung-fu for the Fifth, Sixth, Seventh and Eighth Months. The exercises on the ribs have now been performed for over 100 days and we have already beaten with the pebble bag and kneaded from below the "mouth of the heart" to the end of the ribs on the two sides, that is the part where the clefts of the bones unite, and where the external and internal robustness divide. If at this place it is undesirable to lead the vigour to the outside, the accumulated air can enter the fissures of the bones following the course of the beating. One ought to beat from the breast to the neck and from the ends of the ribs to the shoulder, performing revolution after revolution in this manner but never retrograding, thrice daily, occupying the time taken to burn six sticks of incense. This Kung must be done continuously and without intermission for 100 days when the breast in front becomes full, and the *Jen* pulse also full. The Kung-fu is now half finished.

Kung-fu for the Ninth, Tenth, Eleventh and Twelfth Months. When the Kung-fu has been performed for 200 days, the animal vigour in the front of the chest is full and the *Jen* pulse full, the vigour must be transferred to the back and made to communicate with the *Tu* pulse. The air has already reached to the shoulder and neck. The former method must be pursued in beating and kneading, going upwards to the occiput, in the middle of the spine between the scapulae and downwards to the coccyx beating each part and

returning and repeating the operation and never retrograding. The soft parts on the sides of the spine must be kneaded with the palm or pounded and beat by the pestle and mallet thrice daily, occupying the time taken to burn six sticks of incense, whether above or below, right or left kneading or beating one revolution. In this way in 100 days the back will be full of air, and dissipate all manner of disease and the *Tu* pulse full to overflowing. After each beating it must be rubbed with the hand in order to make it uniform.

We have omitted here several sections, partly as unimportant but chiefly as being quite unfit for publication. One is entitled the Method of Pairing the Yin and Yang principles. Another is called the Method for applying kung-fu to the Lower Portion of the body. A third is termed Things Forbidden in the Practice of Kung-fu. Then follows a prescription for the washing of the Lower Portion of the Body, the object of which is to cause the efficacy of the drugs to be communicated to the air and unite with the blood in the system, to toughen the skin, dissipate the heat and free the system from desire. The receipt is as follows. Take of She-ch'wang-tse (蛇床子), (*Selinum Monnieri*); root bark of Lycium Chinense and liquorice *ad libitum*. Make a decoction, foment the parts once or twice daily. The next section is entitled "Joining Battle."

Internal robustness and "divine strength." We have not yet exhausted the subject of the internal and external energy, so must now exhibit it. Since we have used the Kung by beating and kneading the ribs, the air has reached to the joints, and the two pulses *Jen* and *Tu* have become full, and the air has circulated and filled everywhere, and before and behind have entered into communication, still we have not yet perceived any great addition of strength. How then do we speak of strength (energy) because the air (energy) has not yet reached to the hands. The method for securing this is by the use of the pebble bag as already described, beginning with the right shoulder beating bit by bit down to the back of the middle finger, then from the back of the shoulder beating down to the back of the thumb and forefinger and then again from the front of the shoulders beating down to the back of the ring and little fingers, and once more from the inside of the shoulder beating to the palm and the end of the thumb and forefinger and again

from the outside of the shoulder beating to the palms and ends of the middle and little fingers. When the beating is finished, the hand must rub and knead to make them uniform, thrice daily, time, six sticks of incense. Also frequently washing with warm water in order to cause the blood and air to flow together. After thus exercising 100 days, the air has reached to all parts. The same exercises must be gone through with the left hand for the same length of time and then by this time "divine strength" is developed in the inside of the bones and in the course of time go on adding exercise after exercise, the arm, the wrist, fingers and palm will become totally different from what they were formerly. Then taking hold of the idea and using energy they will become as hard as stone and iron and the fingers will be able to go through a bullock's abdomen and the palm on edge will be able to decapitate a bullock's head. This is but a very small particle of the benefit to be derived from kung-fu.

To exercise in order to transport the superfluous strength to the hands. The plan to be adopted is constantly to bathe the hands in warm water, at first warm, then hot, then very hot. Both palm and wrists should be washed and after washing they should not be thoroughly dried but shaken and so dried spontaneously. While washing the hands in this way use force to press the air in order to make it reach to the points of the fingers. This is the method to produce strength. Then fill a vessel with mixed black and green peas and constantly dip the hands into the vessel. The bathing and washing above mentioned was with the object of harmonizing the blood and air, the object of the two sorts of peas is to disperse and remove the "fire" poison; and the dipping is to strengthen the skin by rubbing it. By using this sort of kung-fu for a long time the accumulated air can be forwarded to the hand and the strength thus become complete, and the skin, sinews and membranes will mutually be strengthened and closely embrace the bones, neither soft nor hard. If not in use, it will be as with ordinary mortals, but in use and the idea exercised, will become as strong as iron and stone and nothing will be able to withstand it. This strength is developed from the bones and is totally different from what is usually termed external robustness. The difference between outside and inside robustness is to be recognized by the sinews. In the internal, the sinews are long and comfortable, the skin is fine and glossy and the strength

is heavy (intense); in the external, the skin is coarse and tough; the various sinews of the palms and wrists are coiled like the common earthworm and apparent on the skin, and the strength although great, has no root. This is the difference between the two.

The External Robustness and Divine Strength of the Eight Ornamental Sections. Having now obtained the internal robustness, and the strength of the bones firmly consolidated, afterwards it can be led to the outside, because the inside has a root and it can be driven from the inside to the outside, and so become the root of the science. In disciplining the outside kung there are the eight methods lifting, holding up, pushing, pulling, clutching, pressing, seizing, and overflowing. Perform these eight methods energetically, each method once and repeat times without number, thrice daily about the time that six sticks of incense would take to burn, and after a long time when the kung is finished the whole body will be filled with strength. When required it will be freely developed without fail. When people hear of this they are thunderstruck. The ancients thought that lifting the portcullis was a feat of marvellous strength (referring to a Herculean feat of this sort performed by K'ung shu-liang-ho, the father of Confucius who was renowned for his great personal prowess and unusual strength.) or the strength capable of lifting a tripod (referring to Wu yün and Pa wang who could lift a tripod 1000 catties in weight—the latter the Hercules or Samson of China.) Practise the above eight methods separately one after the other and the greatest benefit is to be derived therefrom; if otherwise minded, follow the exercise *sua volonte*.

Added kung to the Divine Strength. Internal and external kung being now both complete, which can be termed Divine strength, but although complete, it must afterwards be constantly employed and must not be thrown aside at will. You must find out growing in the garden a large tree, in order to obtain the air of the soil and wood which causes it to grow and which is different from that of other localities. When you have leisure you must proceed to the shade of the tree and according to your own convenience practise the exercises, whether beating, or rubbing, pushing, drawing, kicking or pulling up, in order to obtain the growing energy of the tree to produce or excite your vitality and during leisure can

complete the kung-fu. Again search out a wilderness adjoining hills and find a large erect stone that has grown beautiful and the finest to be found and constantly resort to it and practise the pushing, pressing and the other above mentioned exercises and obtain the auspiciousness of the site and if you can obtain this air there is certainly great advantage. In ancient times the Great *Shun* dwelt beside stones and wood and his practice was not devoid of meaning.

On the Method of Calculating and Revolving the Strength, so as to store up the energy in all parts of the body. The chapter is too long and somewhat intricate for translation, and is therefore omitted.

These are followed by the Twelve Ornamental Sections which are simply an amplification of the Eight already given. They are derived from the Buddhist sect in which meditation is the all important thing. If one proposes to practise these exercises the first thing is to close the eyes, shut the heart, close tightly the hands; all worldly affairs are to be banished, the heart must be perfectly pure the breath harmonized, and then the spirit will be fixed, afterwards performing the kung according to the order and forms given, the energy and idea will react to the place desired. The exercise of the form without the idea is useless; if the heart as governor wanders here and there and the spirit and idea are both dissipated, the trouble of the exercise is borne in vain; no good is to be derived from the kung. At first in disciplining the movements, the heart and strength must both have arrived [at the place desired in the exercise], this is the movement, the peaceful repose, is the heart thinking of the number 30 times, and daily increasing up to 100 times, thrice daily and after 20 days the kung are complete. When the air and strength are obtained, thrice daily will do, and when the air and strength are strongly consolidated, once daily will do. The important thing in all these exercises is that the idea constantly accompanies them.

THE EIGHTEEN DISCIPLINARY RECORDS.

The Method of Rubbing the Shoulder and Wrist.—On the completion of the kung, first stretch out the left arm and let another lift up with both hands the "tiger's mouth," (the space

between the thumb and forefinger) and rub energetically and gradually increase the times; if at first it was ten times increase gradually to 100 times. The right arm is to be rubbed in the same manner. The object aimed at is to produce heat in the two shoulders and wrists which will reach to the bones.

Disciplinary beating of the Hands and Feet. At first according to one's strength have a cloth bag made of two layers in which are five or six cattles of small gravel or sand and hang it on a frame. In performing the kung, constantly push it with the palm, beat it with the fist, kick it and step upon it with the feet. The important thing is to keep the bag in motion, pushing and kicking it back. As time goes on gradually increase the weight of the sand in the bag.

The Method of disciplining the Fingers. One must calculate his own strength whether it is great or small and select a round, smooth clean stone of one or two cattles in weight and grasp it with five fingers, let it go and again seize it before it reaches the ground. At first practise it several times and after a time regularly increase the number of times and the weight of the stone and thus the five fingers will become strong.

Another method is, when sitting at anytime press the seat with the fingers and gently raise the body on them and in this way the fingers themselves will develop strength. This exercise can be done whether one or many be present and after a time the result will be evident.

This is followed by a section on the "Jade Ring" Aperture; and this again by prescriptions entitled the Elixir capable of Beating a Tiger, the Great Strength Pills, the Immortals' Receipt for Washing the Hands and for Strengthening the Sinews and Bones. The two pulses—the *Jen*, (running down the middle of the body in front) and *Tu*, (from the vertex to the coccyx) with the acupuncture apertures are next described. Then follows a chapter on the number of the bones in the body, next on the blood vessels; then a discourse on the air and blood, the former being taken in the old sense of our artery and the latter of the veins or only real blood vessels and in this case a most convincing proof of the knowledge of the circulation of the blood possessed by the Chinese, without, however, respect to the cause of the circulation.

Divisions under the External Method.

KUNG-FU FOR THE HEART.

While performing the exercise must first rest the mind, cease from all thought, banish all grief, anger and suchlike and give up all the animal propensities, in order to keep and not disperse the vital essence.*

FOR THE BODY.

1.—At the time of sitting crosslegged, the heel of one foot must block up the perinaeum and not allow the vital spirits to leak out. 2.—Sit evenly, the kness must be level with the body, the “sons of the kidney” must not rest on the seat but hang down. *Note.* Sitting high and level refers to sitting on chairs and beds. 3.—After finishing the exercise and rising, the limbs must be slowly extended, and on no account be done hastily. 4.—In sitting, the body must be level and straight, the spinal column must be perpendicular and not bent, and not lean against anything on the right or left.

FOR THE HEAD.

1.—Close the ears with the hands, let the second (fore) finger fold itself on the middle one and thrum the two bones at the back of the skull with the second finger to make them sound. This is called sounding the “heavenly drum.” *Note.* This is to remove the vicious air from the “wind pool” acupuncture opening in the

*One author recommends, with the view of prolonging life, to employ one's self in such thoughts and designs as lead to virtue—to reflect often on the happiness of our lot, to seek to know the value of health and study to preserve it. Once in bed, lull the heart (mind) to sleep by composing it throwing aside thoughts that would banish sleep. The heart will be kept in good condition and the dissipation of the vital and animal spirits prevented, if, while in bed, we lie on either side with the knees bent a little.

region of the mastoid. 2.—Twist the neck with the hands and glance back to the right and left and at the sametime rotate the shoulders and arms, each 24 times.—To remove the obstructed air in the stomach and spleen. 3.—Interlock the hands and grasp the back of the neck, then look upwards and let the hands wrestle with the neck. To remove pain of the shoulders and indistinctness of vision.

FACE.

Rub the hands until hot, then rub the face with them, high and low, all over, no spot to be left unrubbed; then spit on the palms and rub them warm and apply them several times to the face. While rubbing, the breath, by the mouth and nose is to be closed. The aim of this exercise is to brighten the countenance. The more you rub the better the colour. This is the cure for wrinkles; with this action you will have none.

EAR.

1.—Place the hands over the ears, then rub them right and left and up and down several times. This is to hear distinctly and prevent deafness. 2.—Sit level on the ground with one leg bent and the other extended. Stretch forth the arms horizontally with the hands perpendicularly towards the front as if pushing a door, and twist the head 7 times to each, side to cure ringing in the ears.

EYE.

1.—When you awake, do not open the eyes, but rub the back of the thumbs until they become hot, then with them wipe the eyes 14 times; still keeping the eyes shut, rotate the eyeballs to each side 7 times. Then shut them tightly for a little while and then suddenly open them wide. This is to protect the “divine light” and to

remove for ever disease from the eye. Rubbing the thumbs hot on the palm of the hand will also do. 2.—Use the bent bone of the thumb (ungual phalanx) and press heavily on the little apertures at the sides of the eyebrows (temples) $3 \times 9 = 27$ times. Again with the two hands rub above the malar bones and round the pinna of the ear 30 times. Again let the hands press upon the frontal region, beginning between the two eyebrows and proceeding backwards to the margin of the hair at the back of the head 27 times, and swallow the saliva times without number. To give clearness and brightness to the eyes and ears. 3.—Place the hands on the inner canthi of the eyes near the root of the nose; shut up the breath, and when the air has become pervious then stop. By doing this constantly objects will be seen very distinctly, obstructions in the nose will be removed, and coryza may also be cured in this way. 4.—When kneeling or sitting let the hands touch the ground and turn the head in order to take a backward glance 5 times. This is termed the “Tiger’s glance.” To remove the vicious wind of the thorax and kidneys. This exercise can be carried out in bed; the hands need not necessarily be placed on the ground.

MOUTH.

1.—When performing the exercise, the mouth must be closed. 2.—When there is great dryness and bitterness of the mouth, the tongue rough, swallowing without saliva; pain in the pharynx, whether in swallowing or expectorating, inability to eat, this is owing to inflammation (heat). The mouth must be opened wide, the air blown (hemmed) over a dozen times, the “heavenly drum” sounded 9 times, and the tongue must excite the saliva, blow again and then swallow. Wait till the “pure water” (saliva) is

produced, and the heat will be driven back and the viscera become cooled. Again if the saliva in the mouth be cold and without taste, the heart feeling as if it contained water—this is owing to cold, one must take the air and warm it, Wait till the mouth has recovered its taste, the cold is disarmed and the viscera become warm. 3. Every morning breathe out gently the foul air from the mouth and at the sametime take in the pure air by the nose and swallow it. 4.—In sleeping shut the mouth, do not let the original constitutional air come out and the corrupt air enter.

TONGUE.

Place the tongue against the roof of the mouth in order to excite the saliva and fill the mouth, then rinse the mouth 36 times and swallow it in three mouthfuls, making the gurgling sound *ku ku* in the pharynx. The saliva entering the abdomen will moisten the viscera.

TEETH.

1.—Knock the teeth 30 times to collect the spirits. 2.—During micturition shut the mouth, press the teeth firmly, to remove toothache.

NOSE.

1.—Rub the thumbs of the two hands until they become hot, then rub the nose with them 36 times, to moisten the lungs. 2.—Let the eyes look at the point of the nose and then breathe silently several times. 3.—Every evening lying prone in bed with the pillow removed, bend the legs and keep the feet upright, and inhale the pure air by the nostrils 4 times and expire by the nose 4 times. In expiration use energy, afterwards breathe gently by the nose. To cure heat of the body and pain of the back.

HAND.

1.—Interlock the hands and support the empty void of heaven with the palms and lay them on the head 24 times, to remove the vicious air of the thorax. 2.—Let one hand be stretched forward and the other bent backward as if drawing a very tight bow equal to a resistance of 500 catties. to remove the vicious air of the arms and axillæ. 3.—Clench tightly the two hands and with the fists strike the arms and thighs with them; then turn the hands backwards and strike the back each 36 times, to remove the vicious air of the four pits (the two axillæ and the two groins) 4.—Hold the fists tightly, bend the elbows backwards and draw them backwards 7 times and let the head twisted follow the hands to the right and left, to cure red boils of the body. 5.—Let the two fists with energy strike right and left the emptiness 7 times, to remove the vicious wind of the thorax.

FEET.

1.—Sitting upright, stretch the feet. bend the head as if worshipping and with energy let the hands grasp the soles 12 times, to remove the vicious air of the pericardium. 2.—Sitting on a high place with the feet hanging down let the heels be rotated opposite each other outwards and let the toes converge opposite each other inwards, each 24 times, to cure rheumatism of the feet. 3.—Seated cross legged take hold of the toes with one hand and rub the sole with the other until it becomes hot. In the sole there is the "bubbling fountain" aperture from which damp and wind find exit; when rubbed hot may stop; then move the toes themselves, to cure dampness and heat and increase the walking energy 4.—Kneeling on one leg, the hands supported by the bed, extend and flex the legs alternately 7 times. Change from right to left, to remove swelling.

of the knees and ankles. 5.—Clench the fists slowly, step with the left foot to the front, pronate and supinate the left hand in front, and the right behind; in the same manner do it on the right, to remove the vicious air of the two shoulders.

SHOULDER.

1.—Set the shoulders with the hands in a rotatory motion, alternately right and left turning the windlass, 24 times; first rotate the left, then the right; this is termed the "Single Pulley;" then both together; this is called the "Double Pulley" 2.—Rest and harmonize the mind, rub the navel alternately with each hand 14 times then the ribs and shoulders 7 times and inspire and convey the air to the *tan-t'ien*; clench tightly the fists and lie down on one side bending the feet, to prevent nocturnal emissions.

BACK.

Let the hands rest on the bed, contract (shrink) the body in a heap, bend the back, bow the vertebra column and raise it up 13 times, to remove the vicious air of the heart and liver.

ABDOMEN.

1.—Rub the abdomen with the hands and walk 100 steps to cure indigestion. 2.—Close the breath and think the fire of the *tan-t'ien* up and burn the whole body.

LOINS.

Hold the fists tightly, place them on the ribs and shake the shoulders 24 times, to remove pain and vicious air from the loins. 2.—Rub the hands hot, take a breath of pure air by the nose and gradually let it out, then with the warm hands rub the semen door *i.e.*, the soft part below (at the lower part of) the back.

KIDNEYS.

1.—Grasp with one hand the “two sons” of the inside and outside kidneys (the Chinese suppose them connected) and with the other hand rub the navel, each hand 81 times. This instruction is put into a rhyme thus:—one rub, one suspend, right and left change hands, nine times nine in number and the male principle will not go. 2.—Before sleeping sit on the bed, with the legs hanging down, open the clothes, close the breath, apply the tongue to the roof of the mouth, and direct the eyes to the “door of the vertex” (the crown of the head). Elevate and contract the “cereal road” as if to prevent defecation and with the two hands rub the two apertures called *Shen-ü* of the two kidneys, each 120 times, to produce semen, strengthen the membrum virile, remove pain from the loins and prevent frequent micturition.

People according to their diseases and wishes must select the proper exercises or use them as prophylactic; in general, officials and merchants not having time to perform them and considering themselves sufficiently strong are not willing to go through these exercises; if they wait till the body is enfeebled and then express their willingness, it will be too late. Such people are to be commiserated.

NOTES ON KUNG-FU REGULATING THE VARIOUS
PARTS OF THE BODY.

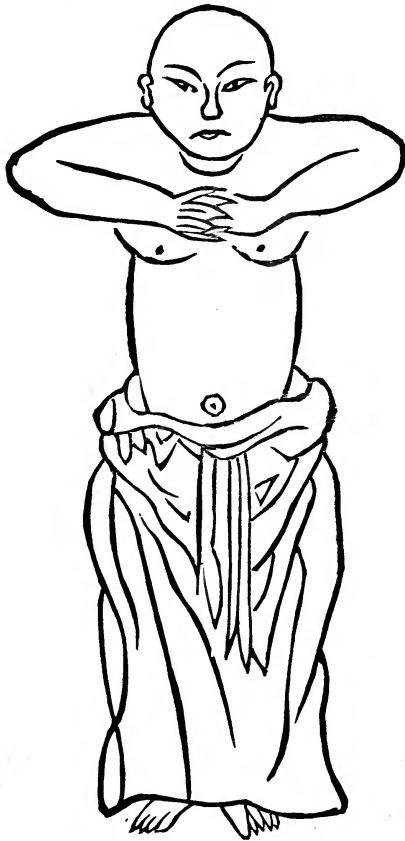
It will be observed that the cause of disease is invariably supposed to depend upon the presence of vitiated or depraved air having stealthily gained admittance. The air thus shut up causes obstruction. It is sometimes termed thievish or air deflected from its proper course. The Chinese proverb runs, avoid a draught of air as you would the point of an arrow.—It is recommended to rub the soles of the feet until hot and also to move each toe; this

measure being effectual in preserving and repairing the vital and animal spirits. The middle of the sole of the foot is supposed to be the outlet of a great many services of spirits and like mouths of rivers, the arteries and veins end there and therefore must be kept open.—It is advisable every time one awakes, to stretch one's self in bed, thus facilitating the course of the spirits and circulation. One ought not to sleep like a dead man (*i.e.*, not to lie on one's back), nor to let the hands rest on the breast or heart, so as to avoid dreams and nightmares. Once in bed to keep silence, to refrain from talking; the lungs are the most tender of the viscera and consequently placed uppermost and they serve for respiration and promotion of the voice. On taking any position in bed, they incline to rest upon that side; by talking the lungs are forced to raise themselves in part and by strongly heaving; shake the other noble internal parts. The voice comes from the lungs as the sound from a bell, if the bell be not hung, it is damaged by striking it to make it sound. Confucius never spoke after he was in bed; he made it a rule doubtless for this reason.—The Chinese have as a rule good teeth. The better classes use warm tea or water with which to cleanse them each morning and after meals. It is ordered to sleep with the head and face uncovered and with the mouth shut as it tends to keep the radical moisture from escaping and preserves the teeth. Early loss of teeth is caused by the air passing in and out between them; besides gross particles are inhaled which give rise to distempers.

The tan-t'ien is situated about $1\frac{1}{2}$ inches below the navel and is brought into exercise with the bow and arrow exercise. A man is said to be strong when this is in sufficient quantity.

The Twelve Positions.

- 1.—The First Aspect of Wei-to (a Deva or inhabitant of heaven, a deity of Hindoo mythology who protects the Buddhist religion, and three of the four continents into which the world is divided. It is the name of the Bodhisattwa (he who knows and feels) a general under the Four great kings who stands in the front hall of all Buddhist monasteries), offering the Pestle.



Stand upright ; form a ring with the hands and apply them to the heart ; fix the breath and gather in the spirit (energy) with a pure heart and respectful countenance. See No. 1.

2.—The Second Aspect of Wei-to.



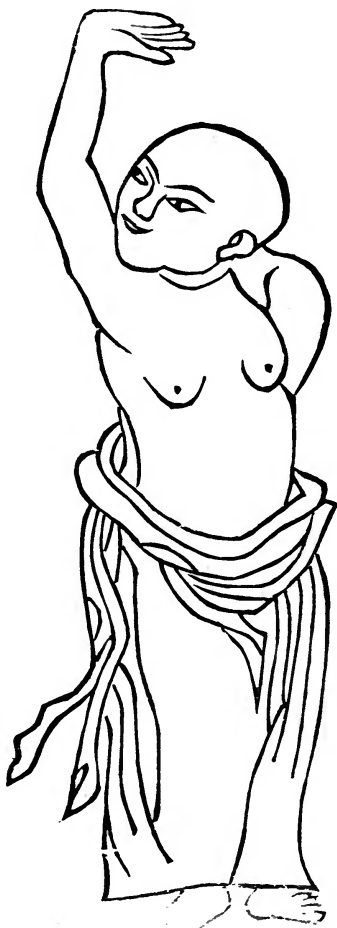
Apply the toes to the ground ; stretch out the arms horizontally, with quieted heart and silent breath, eyes wide open and mouth simple. See No. 2.

3.—The Third Aspect of Wei-to.



Support with the palms Heaven's door and look upward.
 The toes fix on the ground and stand upright.
 Let energy circulate to the legs and ribs to make them stand firm.
 Close firmly the jaws and do not let them loose.
 The tongue can produce saliva if it reach the palate.
 The heart will have peace if the breath by the nose be equalized.
 Let the two fists gradually return to their original place.
 Exert the strength as if about to carry heavy objects. See No. 3.

4.—Taking away a star and changing the Dipper for it.



Support heaven and cover the head with one hand.

Fix the eyes and look through the palms.

Exert the strength and turn back, on each side alike. See No. 4.

5.—Pulling Nine Oxen's tails backwards.



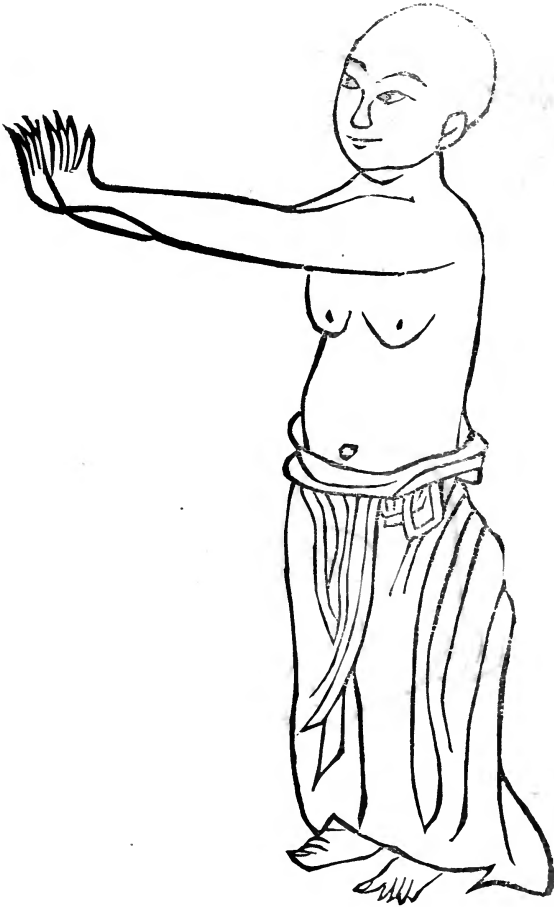
Stretch one leg backward, the other bend forward.

Let the small abdomen (below the navel) loosely revolve the breath

Exert the power in the two shoulders.

And fix the eyes on the fist. See No. 5.

6.—Pushing out the Claws and Extending the Wings.



Fix the body and let the eyes be angry.

Push the hands forward in front of the chest.

With strength turn back

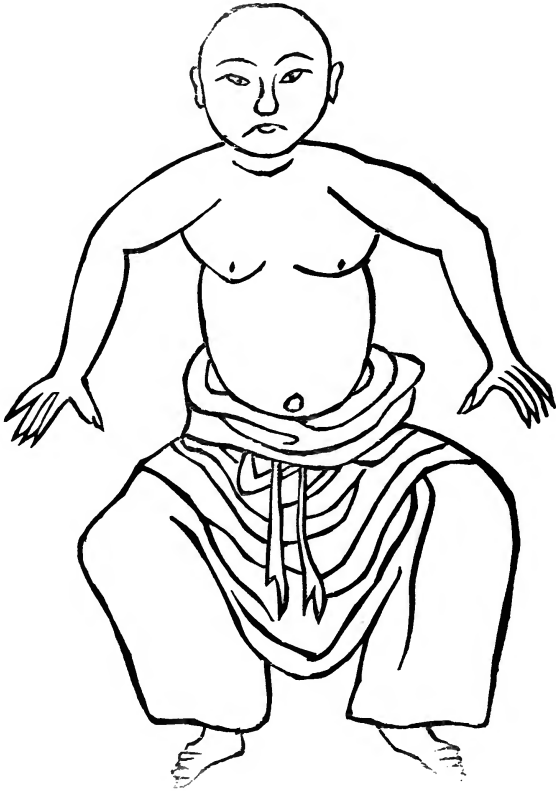
Seven times to complete the exercise. See No. 6.

7.—Nine Devils drawing a dagger.



Half turn the head and bend the arms.
 Enfold the vertex and the cervix.
 When turning back from the head.
 Don't object that the force is terrible.
 Set in alternate rotation.
 With body upright and pure breath. See No. 7.

8.—Three Plates falling on the ground.



The tongue firmly attached to the palate.
 Open the eyes and fix the breath.
 Standing with open feet in squatting form.
 The hands pressing forcibly as if seizing some thing.
 Turning the palms at the same time.
 A weight more than a thousand catties seeming.
 Open the eyes and shut the mouth.
 Standing upright, the feet not aslant. See No. 8.

9.—The Azure Dragon stretching its Claws.



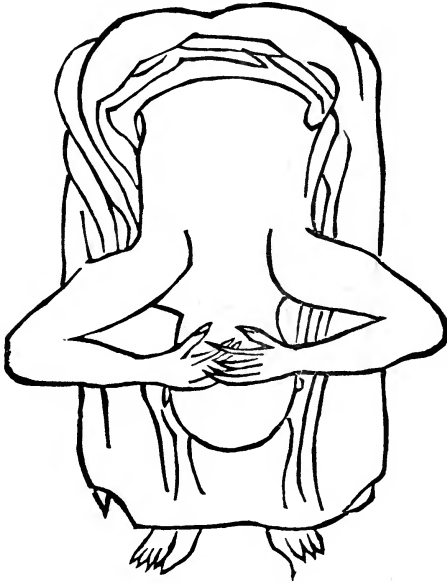
Azure Dragon stretching its claws.
 The left emerges from the right.
 The exerciser imitates it.
 Level the palms and deeply breathe.
 Exert the strength on the shoulders and back.
 Encircling around pass the knee.
 Fix the eyes on the level.
 The breath equalized, and the heart quiet. See No. 9.

10.—The Lying Tiger springing at his Food.



Standing with the feet apart as if the body would upset.
 Bending and stretching each leg alternately.
 Raise up the head that the breast may stretch forward,
 Flatten the back and let the loins be level as a flat smooth stone.
 Equalize the in-and-out-going breath by the nose.
 Let the tips of the fingers rest on the ground and raise the body.
 To vanquish the dragon and reduce the tiger, *i.e.*, the influence
 of the genii.
 To learn to obtain a true body and so protect one's health.
 See No. 10.

11.—Making a Bow.



Holding the head by the hands.

Bend the waist to between the knees.

Stretch the head to between the legs.

Close the jaws very tightly.

Cover up the ears to the sense of hearing as if something were inserted in them.

Arrange in a restful condition the original air.

Attach the tip of the tongue firmly to the palate.

And exert the force at the bending elbow. See No. 11.

12.—Wagging the Tail.



With upright legs and outstretched arms.
 Pushing the hands to the ground.
 Fix the eyes and raise the head.
 Settle the thoughts and think of nothing else.
 Raise the head and feet.
 One and twenty times.
 On each side stretching the arms.
 Take seven as the limit.
 Still more to perform the sitting kung.
 Bend one leg under the other and hang down the eyelids.
 Fix the mouth to the heart.
 Equalize the breath by the nose.
 When enter the state of quietsim, then arise.
 The exercise is then complete.

Examine these methods.
 There are 12 illustrations.
 From the time of the Five Kingdoms.
 Who has really learned this method?
 Tamo came from the West.
 Spread the doctrines at Shao-lin-sze.
 In the Sung there was Yueh-how.
 As an example.
 Can cure disease and lengthen life's span.
 These exercises are unique and incomparable. See No. 12.



The Nine Figures to Remove Disease and Lengthen Life.

- No. 1.—Place the three middle fingers of the two hands in the “hollow of the heart” (depression below the ensiform cartilage, the heart of good people being supposed to be in the centre) and beginning on the left side rub round 21 times.
- No. 2.—Ditto, but rub downwards to the high bone below the navel (pubic bone).
- No. 3.—Ditto, but at the pubic bone divide the hands and rub up to the “heart hollow” and bring the hands together again and the exercise is finished.
- No. 4.—Ditto, but rub straight down at once to the pubic bone 21 times.
- No. 5.—With the right hand rub from the left round the navel 21 times.
- No. 6.—Ditto, with the left hand from the right side 21 times.

No. 7.—Place the left hand on the left loin, the thumb to the front, the four remaining fingers behind gently nipping the part; use the three middle fingers of the right hand and place them below the left nipple and push down at once to the groin 21 times.

No. 8.—Ditto, on the right.

No. 9.—The rubbing finished. sit crosslegged, let the thumbs of the hands press the *Tse* furrows (*i.e.*, the base wrinkles of the 4th finger. The Chinese reckon the 12 “Earthly Branches” beginning at this point, then the corresponding wrinkles of the middle and index fingers, then the remaining two wrinkles on the forefinger with the apex, then the apices of the next three fingers and the three remaining wrinkles of the little finger) then flex the four fingers, keeping the fingers apart; press the two knees; bend also the toes; twist the thorax from the left to the front and from the right to the back, making in all 21 revolutions. When this is finished perform from the right side, in a similar manner, 21 times. If according to the foregoing method you wish the body directed to the left, rotate the chest and shoulders outside the level of the left knee and rest them upon the left knee, the right in like manner; then bend the back like a bow. Don’t twist the loins too much, nor too quickly, nor with too much force. The simple illustrations are omitted for want of space.

In rubbing the abdomen, collect the spirits, empty the heart of all worldly affairs, let the pillow not be too high—the mat must be level; lie flat on the back, the feet extended the same length; flex the fingers, gently rub the

abdomen—go through the eight figures one after the other; this constitutes one course, which is to be performed 7 times; then rise, sit and make 21 revolutions; in the morning, at noon and in the evening; the first and last must not be neglected on any account. At the first kung take two courses; after three days, each kung must consist of 5 courses and after another similar period each kung must comprise 7 courses. This is the rule for both sexes. In the parturient condition, the female is to intermit the exercises.

Another work, and the last we shall mention on this subject, is entitled *Fu-ch'i-chü-ping-t'u-shwo*, (服氣祛病圖說), which may thus be translated:—A Treatise, with plates, on Swallowing Air in the cure of Disease, published in 1846 and containing 64 illustrations. As active gymnastic exercises, not passive and contemplative, they might, with profit, be introduced into our schools and military academies. We give below the brief description of the figures and regret that our space prevents the insertion of the diagrams.

The following eleven rules are laid down for the regulation of this art.

1.—To swallow or gulp breath is of the first importance in the due performance of kung-fu. Gulping breath (air) is different from disciplining or refining it; for if the latter is not well performed phlegm may obstruct and the "fire" may not descend. But this is the easier and is free from any disadvantage. In gulping, one must stand erect, look level, open the mouth wide and as the true (original) air exists naturally in the body, so the air must be swallowed gently as if drinking tea. At first in swallowing there is no sound, later a certain sound is produced which goes straight to the tan t'ien, leading the "fire" to the original place. When the mouth is opened wide, it should not be too small, otherwise the constitution will be injured by the wind which is inhaled.

2.—Avoid hasty wind, violent rain, thunder and lightning; these are the anger of heaven and earth. Also dread impure and deflected air. Select a high, bright and clean room, not opposite to the wind.

3.—Thrice daily, dawn (5—7 a.m.), noon (11—1 p.m.), and twilight (5—7 p.m.) perform constantly these exercises without intermission. If business should interfere, then alter the time to either before or after the fixed period, say on rising and retiring independent of the hours, and for the midday exercises suit your own convenience. The kung must be performed on an empty stomach so that the air may freely circulate; if the stomach is full, the breath gets obstructed and injury may result. The sixty diagrams can be easily overtaken in half an hour. This is not a difficult task.

4.—In swallowing air, the head is not to be directed upwards lest the bodily heat should rush upwards; neither should it be directed downwards lest the breath sink. If, when fatigued, these exercises are performed, one will at once feel pleasant.

5.—No matter, whether one is ill or not, it is not necessary to take medicine, in case it should obstruct the breath. Even chronic bronchitis, dropsy and inability to swallow food, get well by the performance of these exercises. Three exercises daily must be gone through; neither more nor less will be found suitable. In exercising, the strength must not be over exerted, it must be done as it were of itself

6.—At the commencement of these exercises all drink and venery are to be avoided. Three months later this rule may be neglected. Weak persons should abstain from both of these, throughout their entire lives.

7.—These exercises may be performed by anyone, even women or children. If women practise them, they will have no difficult labours; their strength will be equal to that of men. The aged will become as strong as young men.

8.—At the commencement perform the “level frame position” by gulping the breath seven times; ten days after, add the first “military position” once on each side. Keep on practising in this manner for a month, *i.e.*, three times each ten days, thus performing the military position three times and gulping the air eighteen times. Ten days after these, perform thrice on each side the position of “resting on the knee” and together gulp six mouthfuls of air. Then change the level position into the “looking-moon” one, a form

of scooping up the moon (when reflected in water) omitting the two "expanding-breath" forms. Twenty days after this, (in two periods of ten) the exercise termed the *chan-hsiao* (the standing digesting) form is to be performed twice on each side with twelve gulps of breath. The exercises have now been performed for eighty days and forty-nine breaths have been swallowed. Hereafter the "beating" exercises are to be performed.

9.—In beating, make a bag with a double blue cloth, 18 or 19 inches in length and 3 or 4 inches in circumference, like a girdle, one end closed, the other open. Pack it firmly with grain, 8 or 9 inches deep, tie the open end tightly with a piece of rope and use the remaining half of the bag as a handle. The grain should weigh two catties. If the person be weak diminish the amount.

10.—In beating, first beat the left, then the right side of the body, and lastly the four surfaces of the hands and feet. Beat first from the inside of the left elbow down to the palm and then to the end of the middle finger. Then beat the outside in the same direction. Then beat from the left arm-pit down to the side of the fifth finger, and from the left shoulder down to the side of the thumb. After finishing beating the left upper limb, transfer the process to the left lower limb. First beat from the left ribs passing down the left side of the abdomen, then to the front of the leg to the knee, instep, dorsum of foot and left big toe. Then from the left axilla beat inclined to the left loin passing to the outer ankle and turn to the side of the small toe. Then from the end of the breast bone (sternum) to the left side of the abdomen, and from the part which lies between the ribs and abdomen pass horizontally to the right of the abdomen. Here change to the left hand in holding the bag and from the right side beat horizontally to the left of the body. Let the right hand cover and protect the secret parts and let the left hand begin beating from the "little abdomen" and the inside of the left leg, passing down to the ankle and side of the toe. Then hold the bag with the two hands and raise it up over the head beating the left part of the back twenty times; then hold the bag in the left hand and turn the hand and beat the underpart of the back passing gradually down to the end of the lumbar region, then turn the hand and beat the left leg, down to the calf and heel. After finishing the exercises on the left limbs, the right limbs are taken in

hand in a similar manner. The beating must be done closely from the upper to the lower part. No part is to be neglected nor any retrograde movement made. If a certain portion is neglected, it must not be repaired, the exercise must be steadily and continuously prosecuted. On beginning the beating one breath is first taken which makes altogether 16 mouthfuls of air, which, with the preceding 49, now reckons 65 in all. After one or two months of beating, add the seven positions of the "inspecting-hand" and take four mouthfuls of breath. After ten days more add the "side-lifting" position, and take six mouthfuls of breath, then add the "front-lifting" position and take three more mouthfuls. After ten days more perform the "Hsueh-kung standing" position and take three mouthfuls, and after another ten days exercise the "arranging-elbow" position and take six mouthfuls. Altogether we have now swallowed twenty-two mouthfuls of air and this added to the previous 65, makes a total of 87 mouthfuls. These are the first part of the exercises.

11.—Sixty-four diagrams are here described; they are only the first portion of the primary part of kung-fu. If we reckon all of them they exceed more than a thousand. In performing the first part all diseases will disappear and one's vitality will be two-fold augmented. There remain still the 2nd, 3rd and 4th parts, which will take two years to perform. Since completing the kung, the pulse has gathered to the head; the body will possess the strength of 1,000 catties, sufficient, as is recorded in the *I chin ching* to enable the fingers simultaneously to pass through the belly of an ox or cut off the head of an ox with the edge of the palm. The advantage accruing is even greater than this. If these 64 positions are continually performed, the kung-fuist will avoid disease and prolong his life. Speaking generally, diseases reside in the inner viscera and may be cured with medicine but those which exist in the muscles and blood vessels cannot be reached by the power of drugs. If one wishes to secure ease to the muscles and blood vessels and prevent the air and blood from offering obstruction, except by the exercise of these kung no effect will be produced. Many people have experienced the beneficial results derived from the performance of these exercises.

This method was obtained from the province of Kwei-chow; it was delivered orally and not by books and because this method is closely related to the *Tai-hsi-tao-yin* 胎息導引 (one of the

Tauist doctrines and practices referred to in several sections. in the work *Sheng-ming-kwei-chih*) the person does not desire to deliver it down [in print] nor to have his name become known. Notwithstanding this, the method is profitable for physical improvement and according to the oral explanations, figures have been drawn and explanations made, and the work is now published. Let everyone therefore accept the advantage.

Description of Diagrams.

THE LEVEL FRAME (平和架).—There are four “horse-riding” (騎馬式), forms under this position.

1.—Standing evenly and uprightly, separate the feet the width of the shoulders apart and keep the palms upward on the same level as the loins. Do not lean against anything.

2.—Turn the palms downwards, always on the same level as the loins.

3.—Rub evenly from the sides and make a circle as if rubbing the head.

4.—Then stretch the arms straight forward and erect the hands with the palms directed forward and fingers upwards on the same level as the nipple; take one breath, and wait a little, about the time of three respirations. Afterwards, after taking a breath, the eyes should be directed to the right, left, above and below, the time of three respirations being taken as the unit.

There are also two “looking-moon” (望月式), forms under this position.

1.—Let the left foot take a step horizontally to the side, bend the left knee, incline the left foot; keep both the right leg and foot straight. Lay the left hand on the upper aspect of the thigh, with the thumb directed backwards and wind the right hand round the back of the right ear and with the five fingers in a form as if holding a thing, the points of the fingers directed backwards like the claws of a vulture.

2.—Afterwards, raise the left hand up to the level of the eye, the fingers clenched so that the thumb shall be opposite the little finger, the second one, the fourth and the middle one projecting a little. Keep the palm—the heart of the hand—hollow, sufficient to contain the lid of a tea cup. First look at the height of the left hand, then turn the head even and take a breath. Again turn the head and look at the part between the thumb and forefinger. Repeat this on the right side; three times on each side, swallowing six mouthfuls of air.

There are two “expanding-breath” (舒氣式), forms under this position.

1.—The first resembles the first “horse-riding” form, except that the palms are even.

2.—The second resembles the last “horse-riding” form, except that the hands are turned and pushed to the front like the last of the “horse-riding” forms and no breath is taken.

PRELIMINARY MILITARY EXERCISES.—(武功頭), There are three forms under this position and seven diagrams.

1.—The left foot bent, the right foot straight, the remainder the same as the first “looking-moon” position and in addition with the face straight take a breath and turn the head to the left.

2.—Stretch out the left hand which was formerly laid on the leg straight to the left and keep the palm downwards.

3.—Turn the left hand back to the level of the breast and then stretch it out again and bring it back, repeating it two times.

4.—Turn over the hand on the breast with the thumb upwards and the other fingers downwards and the palm opposite the breast and take a breath.

5.—Turn the hand with the thumb downwards and the middle finger upwards and turn the head to the left.

6.—Stretch out the hand opposite to the breast and wind it round the ear, keep the palm directed upwards and extend it to the left.

7.—Turn it back from behind the ear and clench the fist in front of the breast, keep the outer part of the fist directed upwards, take a breath and then turn the head to the left. To be done on the right also, each side three times, altogether taking eighteen breaths.

THE "CIRCULATING OR INSPECTING-HAND"
POSITION (巡手).

Standing erect, keep the feet 15 or 16 inches apart; the elbows extended evenly forwards, the wrists straight and perpendicular opposite each other and the fingers separated.

THE "JADE GIRDLE" POSITION (玉帶).

Separate the palms, pressing them down behind the ears to the loins on the level of the navel; keep the tips of the fingers apart and corresponding to each other, and distant from the body three inches interlocking, as it were, the loins and take a breath.

THE "SUSPENDING-LOIN" POSITION (垂腰).

Apply the fists to the loins, turn the backs of the hands downward and full in front take a breath.

THE "HOLDING-UP ROBE" POSITION (提袍).

Open the fists, turn them from the underpart of the ribs, pronate the palms and stretch them forward evenly as if lifting something and full in front take a breath.

THE "TURBAN" POSITION (幞頭).

Separate the hands, turn them out from under the ribs to above the head to a distance of 7 or 8 inches between them and the head, direct the palms outwards, the fingers separated opposite each other with the thumb downwards on a level with the eyes.

THE "BRUSHING-FACE" POSITION (搔面).
There are two forms under this position.

1.—Keep the palms of the hands close together in front on a level with the chin, the two little fingers and elbows applied close together and raise them together over the forehead.

2.—Gradually bend the fingers in order to make hooks of them and then slowly clench the fists and place them under the chin; open them (the fists) again, bring the thumbs together, extend the hands and pass them over the forehead; also keep the two little fingers together and finally make the hands into fists and place them again under the chin. The wrists and elbows should be close together.

“COURT TABLET” POSITION (朝笏).

Pull the fists apart on a level with the shoulders, in a circular form as if enfolding things, the back of the hand directed upwards and the fists opposite each other, and apart 18 or 19 inches, and in front take a breath.

“SIDE-LIFTING” POSITION (偏提). There are three forms under this position.

1.—Standing aslant, the left foot bent, the right foot erect, interlock the hands and raise them with energy over the head.

2.—Bend the body gradually as if making a bow, as far as the instep of the foot, turn the palms and press downwards, afterwards interlock them again and raise them to the space between the knee and the chin, then all at once make a whirl, and straighten the body and loins.

3.—Separate the hands and let them circle round the ears, then clench the fists and bend the arms in a circular form; the two fists apart opposite each other 18 or 19 inches and the back of the hands kept upwards, take a breath. It is done in the same way on the right; thrice on each side, taking altogether six breaths.

“FRONT-LIFTING” POSITION (正提). There are three forms under this position.

1.—Standing erect, the feet 15 or 16 inches apart, interlock the hands and raise them over the head.

2.—Gradually bend the body as in the 2nd form of the “Side-lifting” position to the level of the loins. This is done in front, which is the only difference.

3.—This form is also the same as the 3rd of the “Side-lifting” position, except that it is performed thrice in front and one breath is taken each time.

THE POSITION OF “HSÜEH-KUNG STANDING” (薛公). Ten forms are given under this position.

1.—Open the fists, keep the fingers straight, then wind them round the ears and stop at a level with the breasts.

2.—Press downwards from the breasts to the navel without stopping until the navel is reached.

3.—Turn out the hands from the under part of the ribs, keep the palms directed upwards on a level with the shoulders, each hand even 4 or 5 inches apart from the head; the two thumbs in front of the shoulders, the other fingers extended behind the shoulders.

4.—Close the hands together even with the underpart of the chin; the two little fingers close together with the palms upwards and the wrists and elbows close together. For the first time pronate the palms, let the two little fingers be attached and stretch them upwards.

5.—And then raise them thus over the forehead.

6.—Gradually bend the fingers into the form of a hook, and form them into fists level with the chin.

7. Open the fists, the palms upwards and the thumbs close together. For the second time pronate the palms the thumbs close together and stretch them upwards.

8.—Raise the hands over the forehead, bring the two little fingers close together, afterwards bring them down to the level of the chin, clench them into fists, then open them as before, bring the two little fingers close together and the palms directed upward over the forehead.

9.—This form is exactly related to the last. For the 3rd time, pronate the palms, the two little fingers close together and stretch them upwards.

10.—Then lower the fingers, form them into fists, let them be evenly arranged and circularly as if enfolding things; the two fists 18 or 19 inches apart. One breath is then taken. This is to be performed three times, so three breaths should be taken.

THE “ARRANGING-ELBOW” POSITION (列肘).
There are three forms under this position.

1.—The left foot bent, the right foot straight, the right hand clenched and held in the left hand.

2.—Stretch out the left elbow to the left and draw it back immediately, then squat with the body, the left foot straight, the other bent; let the left hand still hold the right fist and raise the right elbow a little.

3.—Raise the body, with the left foot bent and the right foot straight; lean the body to the left, take a breath; raise the right elbow higher. Perform the same on the right side; on each side three times taking six inspirations. While the body is leaning, let the eyes look at a point six inches from the feet.

THE "RESTING-ON-THE KNEE" POSITION. (伏膝).

The left foot bent, the right foot straight, lay the right hand on the left leg over two inches from the knee with the left hand laid on the top of the right hand. Pronate the body sideways, let the face look evenly towards the left and take a breath. With the back bowed, the neck straight, look downwards at a point more than six inches from the feet. Do the same on the right, three times on each side and take six breaths.

THE "CHAN-HSIAO" POSITION (站消). Four forms are given under this position; the first two are termed the "cannon of the den;" the third the "cannon rushing against the sky" and the fourth the "cannon passing through the heart."

1.—The left foot bent, the right foot straight; let the palm of the left hand face downwards level with the breast, the thumb kept inwards; and the palm of the right hand directed upwards and level with the navel; place the little finger inwards and keep all the fingers apart.

2.—Pull the hands out horizontally, then clench them, let the left one be level with the breast eight or nine inches apart, the thumb kept inwards and the right fist level with the ribs over one inch apart; the thumb directed outwards, take a breath in front, then turn the head and look to the left.

3.—Open the left fist and whirl it, then make it into a fist again, stretch it perpendicularly on a level with the side of the forehead. Take a breath in front, turn the head and look at the space between the thumb and second finger of the left hand.

4.—Open the left fist and whirl it round the ear, then stretch the fist straight out towards the left, keeping the dorsum upwards. Turn the head and look to the left, and take one breath. Do the same on the right side, on each side three times, taking altogether eighteen breaths.

THE "GRAIN-BAG-BEATING" POSITION (打穀袋). There are 12 forms under this position. The first two are termed "cannon rushing against the sky" (衝天礮).

1.—The left foot bent, the right foot straight; hold the bag in the right hand, whirl the left from under the ribs, clench the fist, bend the elbow and extend it upwards, then take a breath.

2.—Hold the bag with the right hand, with it beat the left arm steadily down to the left palm and fingers several times. This is beating the inner part of the left arm.

RULE.—Always beat straight down—never backwards—nor return on any omitted part. It should be done at once.

3.—This is termed “cannon passing through the heart” (穿心礮). Open the left fist, whirl it round the ear, stretch the fist straight out to the left, keeping the dorsum upwards and take a breath. Holding the bag with the right hand, with it beat the arm steadily to the back of the hand and the tip of the middle finger. This is beating the outer part of the left arm.

4.—This is termed the “vulture-hand” (雕手). Whirl the left hand round and take the form of a “vulture-hand,” take a breath, then hold the bag with the right hand and with it beat from the left armpit steadily down to the side of the little finger. This is beating the under part of the left upper limb.

5.—This is termed the “minor cannon rushing against the sky” (小衝天礮). Whirl the left hand once, then raise the fist so as to assume the form of a “cannon rushing against the sky” only a little lower, and take a breath. Now the right hand beats with the bag from the left shoulder steadily down to the side of the thumb of the left hand. This is beating the upper part of the left upper limb.

6.—This and the following are both termed “carrying the tripod on the shoulder” (扛鼎). Whirl the left hand from under the ribs, clench the fist, stretch it straight upwards with energy, keeping the thumbs at the back part, then take a breath and look upward at the rising fist.

7.—Holding the bag with the right hand, beat with it from the left ribs steadily down to the front side of the left leg, knee, shinbone, instep of foot and toe. This is called beating the front part of the lower left limb.

8.—This is termed “coiling the elbow” (盤肘). Open the left fist and whirl it round the ear, then bend the elbow and clench the fist on a level with the breast, take a breath and raise the elbow a little. Now with the bag in the right hand beat steadily from the left armpit inclined to the left loin and to the outer ankle and the side of the little toe. This is beating the outer part of the lower left limb.

9.—This is termed the “vulture hand.” Open the left fist make a “vulture hand,” and whirl it round the ear and take a breath. Then holding the bag by the right hand beat from the end of the sternum down to the abdomen and from the space between the ribs and abdomen beat horizontally to the right side of abdomen; change hands with the bag and beat horizontally to the left of the abdomen. Protect the secret parts by covering them with the right hand and beat with the left hand beginning from the left side of the “little abdomen” steadily to the inner part of the left leg and left toe. If there be abdominal illness of any kind, it may be cured by beating several times. This is beating the inner part of the lower left limb.

10.—This and the next two are called “resting-on-the-knee.” The right foot bent, left foot straight, the left hand holding the bag press on the right in the middle of the leg, also the right hand pressing on the bag, then take a breath.

11.—Holding the bag with both hands, raise it over the head and beat the spine twenty times but do not beat the ridge of the spine.

12.—With the left foot stretched, the right foot bent, lay the right hand on the surface of the right leg; keep the thumb directed backwards, incline the body backwards and look on the left knee. The left hand holding the bag turn the hand back and beat the left part under the back consecutively to the loin, then return the hand and beat the left buttock, left leg, knee, calf down to the heel. This is beating the back part of the lower left limb. After having gone through the exercises on the left upper and lower limbs then transfer to the right upper and lower limbs, following the same method.

THE POSITION OF “SCOOPING THE MOON AT THE BOTTOM OF THE SEA” (海底撈月) has five forms.

1.—Lay the left hand on the surface of the leg and make the right into a “vulture hand” *i.e.* bringing the tips of the fingers together.

2.—Whirl the left hand round the ear and then stretch the palm out towards the left.

3.—Turn the hand with the back upwards.

4.—In such a way as to scoop the moon by bowing the head and bending the loins to scoop from left to right; then raise the body up.

5.—While scooping, assume “the looking-moon” manner and take a breath, then look at the interval between the thumb and the second finger of the left hand. The same should be done on the right, thrice on each side and altogether six breaths taken.

The above 64 diagrams are the first part of the exercises, embracing in all 87 breaths.



Physiology of Kung-fu.

The general principles of this art may be briefly and clearly expressed in the following quotation from one of their numerous works on the subject, and from one of the prefaces written in commendation of the system.

The Chinese acknowledge three principles or forces upon the regular movement of which the life of man depends—the vital spirits *Ching* (精), or organic forces produce the animal spirits *Chi* (氣), or forces, and from these two springs a finer sort, free from matter and designed for intellectual operations, termed *Shen* (神). The particles of the vital spirits glide over one another as the parts of water; growth and nourishment belong to them; the animal spirits put the internal and external senses in exercise; their particles are smaller than the vital and they move in every sense like particles of air. As it is not possible to subsist without these forces, care must be taken not to dissipate them by immoderate use of the pleasures of sense, by violent efforts of the body or by too great or too constant application of the forces or spirits. They have besides

two organic principles, from the union of which man is made which pervade all parts of the body, and upon the union of which life depends. The one is the *yang* or vital heat, or light, the positive or male principle; the other is the *yin*, radical moisture, darkness in nature, the negative element or the female principle. The body is divided into right and left, the pulse of each side governing its own side of the body. The interal parts are divided into the five viscera and six *fu* (or organs connected with the outer air) There are six which lodge the radical moisture and belong to the female principle and comprehend the heart, liver, left kidney, all situated on the left side, and the lungs, spleen and right kidney (otherwise called the "gate of life" but by other writers this latter expression is perhaps more correctly applied to the vagina) on the right. Those which contain the vital heat are on the left, the small intestines, pericardium, gall bladder and ureters; on the right the large intestines stomach and the three divisions of the trunk (altogether imaginary) certain relations are supposed to exist between these as for example—between the small intestines and heart, gall bladder and liver, ureters and left kidney, on the left side; and large intestines and lungs, stomach and spleen, three divisions and right kidney, on the right side. These organs contain the vital heat and radical moisture which by means of the spirits and blood go from these organs into all the other portions of the body. All the various members of the body, the diseases, the materia medica etc, are all arranged according to a well established and ancient relation between them and the 5 elements, 5 colours, 5 tastes, 5 points of the compass, etc. Each organ has a road or blood vessel proceeding to it and as there are 12 Chinese hours (each two of our hours) in a day, and as the blood and air make a circuit of the entire body in 24 hours, the blood remains in each organ two hours. There are therefore 12 roads or vessels and of course as many pulses, one for each vessel and organ. These pulses are subdivided into male and female according to the dual principle and this it is evident involves three double pulses on each side and thus the theory is elaborated. Still further divisions of the pulse on the right and left are into superficial, deep and intermediate according if the pressure of the finger is applied lightly, firmly or intermediately to indicate diseases of a superficial, deep or intermediate position. Numerous volumes in Chinese exist on the pulse alone on the skill of which subject the Chinese pride themselves as it is the

pivot upon which their whole system hangs. As an example take the pulse of the large intestines. It belongs to the male principle, is felt at the "foot" (cubit, the 3rd pulse position at the wrist in order reckoning from the base of the thumb backwards) on the right arm (the small intestinal pulse is felt at the same spot on the left arm). The blood flowing to the large intestines rises at the tips of the thumb and index finger, unites and flows up the back of the arm to the head, then down the face to the lungs and thence to the intestines; in the larynx it gives off two branches which run upwards to the ear and across to the mouth and terminate at each side of the nose. Deafness, ringing in the ears, pain behind the ears, and in the arms are owing to the large intestines. The blood resides in this viscus from 5 to 7 o'clock a.m.

Although the Chinese speak of blood moving forwards, they have never had a correct notion of the heart and circulation. With them it is the air either inside the blood or outside the vessels according to others, which presses the blood forwards.

At first the *yin* (earthly vapour) and *yang* (heavenly air) produced the root of man, the kidneys; and one or other of the 7 Ching (情)* (emotions or passions) injure the original air and so cause disease, and thus the circulating air of the entire body gets blocked up and the blood gets coagulated in heaps and then disease is produced; therefore in ancient times good men who understood the Great Reason (Tao) sought out clear methods by which to nourish the original air. Kung-fu was discovered in this way and as the bear carries his neck firmly and the birds use their wings, so the eyes and ears must be directed inwards and the air and blood be conducted to the joints to nourish them, and thus what is above will flow below and what is below will flow upwards and as the heavenly elements are themselves strong and fixed, so man must himself try to bring his body into the same condition, and as the heavenly bodies according to the Divine Law are always revolving, so must the air in our bodies. The creation of the great heaven must resemble the creation of the little heaven

* NOTE.—The 7 Ching are the following,—joy injures the heart; anger the liver; grief the lungs; doubt, the spleen; fear, kidneys; anxiety, the gall bladder; and sadness and crying, the spirit of the liver and the air of the lungs. MAYERS gives the seven conditions as:—1—Joy, 2—Anger, 3—Grief, 4—Fear, 5—Love, 6, Hatred, 7, Desire.

(the microcosm, man). The head is round resembling the arch of heaven and our feet are flat resembling the earth. (The Chinese saying is "Heaven is round, earth is flat" and the comparison of man to the great outside world is very common as for example because there are 360 degrees or days in the latter, there must be 360 bones in the former) Confucius said that "all the revolving changes do not surpass the four seasons."

In a small work by a native of Soochow named P'an-ü-wei (潘霽偉), *wei-sheng-i-chiu-cheng*, in the year 1858, the following prefatory remarks on kung-fu occur:—

Why do some men live, others die? Why are some diseases light, others severe? To answer these questions we must refer to the existence in sufficient or insufficient quantity of the original vital principle. The origin and foundation of the five viscera¹ depend upon and spring from the vital principle.² It is here where the *yin* and *yang* reside, and from which these male and female principles emanate, and whence proceeds the breath in expiration and to which it goes in inspiration. There is no fire nor oven, and yet the body in its furthest parts is kept quite warm; there is no water or reservoir, and yet the five viscera are kept moist.

All men must beware of admitting depraved air, as for example, heat, cold and such like into the five viscera and six *fu*³; the twelve arteries and veins, tendons, blood and flesh, otherwise if such poisonous air should get admittance, disease will be contracted.

The ancients used acupuncture and the moxa as remedies, afterwards they took stones and rubbed themselves in order to cause the blood to flow; and they also used friction to the skin and muscles with the hand to cure disease and cause the blood and air to move. They also used a more violent pressing and rubbing method over the affected part. They had also a spirit-drink mode. All these methods were designed to cause motion in the joints—to harmonize the blood and air so as to leave no vacuum and to cause the

1.—Heart, lungs, spleen, liver and kidneys, related to the Female Principle.

2.—The Taoists believe that the original source of Being and Life is situated in and comes from a point in the abdomen, called *tan-tien*, one inch below the navel. The Medical Faculty believe it is to be found in the lumbar vertebrae, at a point opposite the kidneys, immediately adjoining the side of the spinal column, opposite the "small heart" or supra-venal capsule—called also and on this account the *ming men* or "gate of life."

3.—Gall-bladder, stomach, large and small intestines, bladder and the three divisions, related to the Male Principle.

depraved air to escape and be quickly expelled, because only on its exit will the perfect and wholesome air be revived as before, circulate and so secure freedom from disease.

When disease is expelled great care must be taken with the *tan t'ien*, so that the original fire and water may coalesce and assist each other; the spirit of man will then wax greater and stronger and the bad air cannot enter. But one must not upon any account wait till disease has attacked the system and is unbearable. It will then be too late. True wisdom is to begin Kung-fu before the approach of the disease, and so prevent it. It is true the limit of our lives is fixed, but at the same time it is also true that by Kung-fu the body can be strengthened. This is therefore the object of this publication. The author has consulted the work of *Hsü-ming-feng* (徐鳴峯), of *Fheng-ch'eng* (豐城), and the various medical works. As all men have five senses¹ and four bodies,² so all require gymnastics, pressure and friction. Kung-fu divides itself into external actions and internal merit, each one chooses his own kind. The ancients divided actions into twelve kinds and wrote in poetry the method to be followed, in order that all might remember the rules laid down. All can do them, at all times, and every one can understand them quickly and efficaciously.

There is no necessity here for claptrap and useless nonsense, the true and important object is to drive away or ward off disease, and procure long life. Belief in this plan will bring merit out of it. The doctrines of Lau-tse (老子) C'h'ih-sung-tse,¹ (赤松子) and Chung-li-tse² (鍾離子) are not superior to the precepts of this book. If a person can perform daily once or twice the exercises herein prescribed, his body will become strong and elastic, and no matter how many kinds of diseases he may have, all will vanish and thus will the vital principle exist in adequate quantity and life consequently will be prolonged. This is surely good and on this account I have taken up my pen to write this preface.

1.—Eyes, ears, nose, mouth and eye-brows; all the 5 senses must be in the head, the heavenly part of man, and as high mandarins close to the Emperor.
2.—The two arms and two legs.

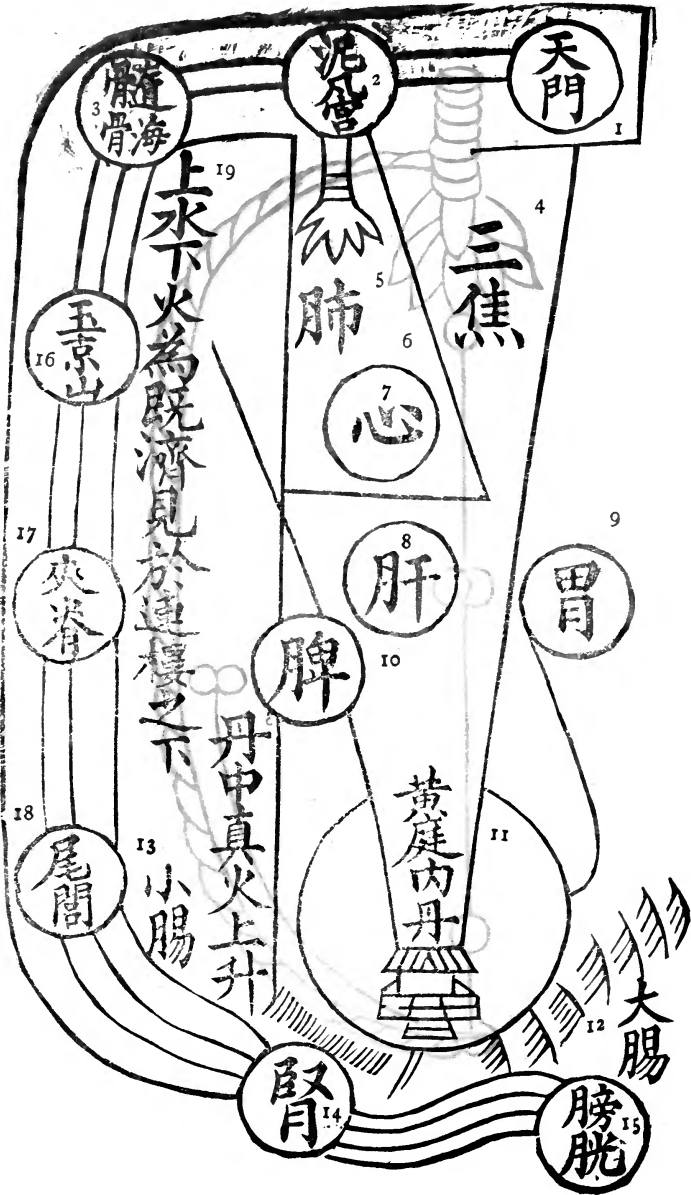
1.—The designation of a rain-priest in the time of Shen-nung, the divine husbandman (B.C., 2,737).

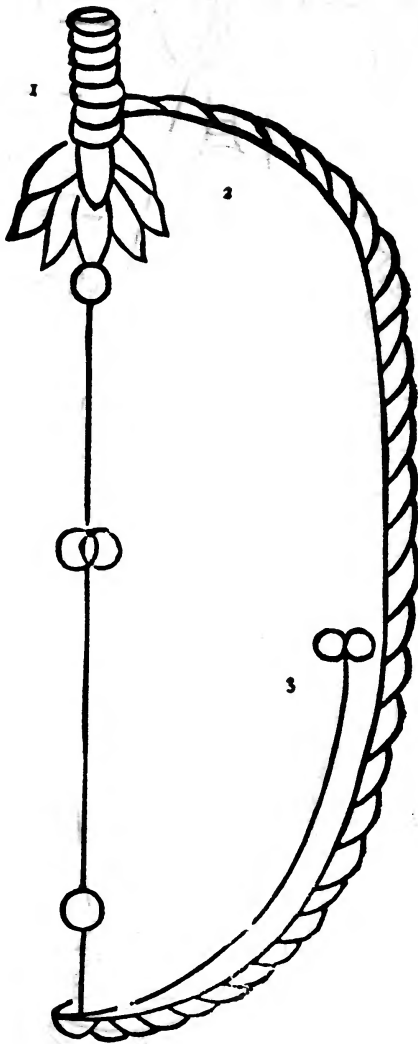
2.—The first and greatest of the Eight Immortals in the time of the Chow dynasty (B.C., 1122-255) when he attained to possession of the elixir of immortality.

Diagrams illustrating the Physiology of Kung-fu.

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- 1.—T'ien men (Heavenly door)=the brow.
 - 2.—Ni wan kung, Ni wan palace.
 - 3.—Sui hai kuh, the occiput, the marrow-sea, brain-sea.
 - 4.—San chiao, the three divisions or functional passages.
 - 5.—Fei, the lungs.
 - 6.—Hsin, the heart.
 - 7.—Hsin pau lo, the pericardium.
 - 8.—Kan, the liver.
 - 9.—Wei, the stomach.
 - 10.—P'i, the spleen.
 - 11.—Hwang t'ing tan t'ien—the inner tan of the yellow pavilion.
 - 12.—Ta chang, the large intestines.
 - 13.—Siao chang, the small intestines.
 - 14.—Shen, the kidneys.
 - 15.—P'ang kwang, the bladder.
 - 16.—Ü ching shan (pearly-elevated hill)=7th cervical vertebra.
 - 17.—Chia chi, the dorsal vertebra.
 - 18.—Wei lü, the os sacrum.
 - 19.—Shang shui hia hwo wei chi chi chien ü lien low chi hia.
Water above and fire below combine and are seen below
the connecting "upper story" *i.e.*, the tan t'ien below the
breast and epigastrium=the *low* or upper story according to
the Taoists.

Tan chung chen hwo shang sheng, the true fire in the tan t'ien
proceeds upwards.





It was intended in the sequel to describe the shampooing, rubbing, pressing and other processes, of the fraternity of barbers, for the cure of disease, the prolongation of life in the healthy, and the production of a sense of comfort and the removal of fatigue, etc., but the space to which this subject has already, unexpectedly and unfortunately attained, renders it necessary to pass over this part of Kung-fu. A small cheap, illustrated book in two volumes, *The Barber's Classic*, entitled *Ching-fah-chi-chih* (淨髮須知), or how to obtain clean hair, may be profitably consulted. The second volume treats, in part, of massage applied to the various parts of the body. It treats, too, of the acupuncture apertures, a knowledge of which is essential to the proper practice of the art. It speaks of 84,000 pores, of 10 *ching* and 15 *lo* (arterial vessels), and the merit accruing from the exercise of this method which is modified by certain climatic and physical conditions, such as the state of the weather, whether cold or hot, and the condition of the patient, whether fat or lean, etc. The sections embrace massage in general, and rubbing as applied to the apertures of the back and loins, the hands and arms, head and face, thorax and abdomen, and lower limbs.

On the streets of the Capital there is a class of Pressers whose art is known as *tien p'i* 點皮 (pressing the skin). The generic name or the class is *tui na* 推拿. For example: for the cure of pain of the temples, the part below the sternum is pressed; for the cure of cold and pain, the part below the ribs; for colic, the points of the fingers and lips; for headache, the shoulders; for toothache, the facial artery, shoulder and cleft of thumb and fore-finger; for cholera, the calf of the leg; for general discomfort, the blood vessels.

CONCLUSION.

A certain amount of mystery surrounds all the Taoist doctrines. Modern chemistry was derived from their alchemy; and the adoption of the movement cure is also traceable to the Taoists. The desire has been long expressed to know something of the extent, importance and rationale of this particular practice of the sect, which goes back to the earliest ages and is closely interwoven with the habits and ideas of the Chinese people of the present day.

The utmost confusion seems to exist regarding the character of Kung-fu. A distinguished Edinburgh graduate in medicine, in answer to enquiries about Kung-fu, wrote to my friend, the late Dr Roth of London, that it represented certain slips of paper printed with some religious sentences which people eat in the form of ashes, and enclosing two such slips of paper. This is confounding Kung-fu with healing by charms and the chanting of prayers, which is very prevalent in China. (See the writer's series of articles on Chinese Arts of Healing—*Chinese Recorder*). The late Dr. Porter Smith of Hankow described Kung-fu as a species of disciplinary calisthenics practised by Tauist priests. The writer has therefore attempted an exhaustive review of the practice of Kung-fu, and it is hoped that this contribution will now set all doubt at rest respecting this subject. He fears there will hardly be found a grain of truth and common sense in the whole subject to reward the labour and expense—by no means small—expended upon it. It required, too, a considerable amount of courage to undertake the publication of such a mass of rubbish. The reader, to whom the writer owes an apology, has no idea how much matter, only worthy of such a designation, has been discarded. The one gratification is alone left to him, viz:—That the subject has now been so exhaustively threshed out, that no subsequent enquirer need enter the field in the hope of finding anything new or important. And that as Cervantes, in his *Don Quixote*, hung his pen so high on the conclusion of that ever-memorable work, that nobody coming after him would venture to take it down, so he hopes that the same will be the case in regard to this work.

The illustrations of this subject which might have been reproduced, are endless. The reader will, it is feared, think that the limit in this particular has been greatly overstepped. The diseases, too, for which they are prescribed, are so much alike that one figure for each disease might have sufficed. On account of the space occupied by them, it was thought advisable to reduce them by one of the photographic processes, but the Publishers recommended them to be inserted in their entirety as facsimiles of Chinese illustrations, which may have a certain interest for some as indicating the state of the engraver and designer's art. The prescriptions, too, may afford those more medically inclined some amusement, and possibly also some instruction in the style of Chinese prescriptions: the drugs used, the mode of preparation, dosage, etc. The growing interest and importance of medical gym-

nastic exercises at the present day is one of the chief excuses for the preparation and publication of this paper, and it is hoped that its further examination has been rendered unnecessary. How far the writer has succeeded in accomplishing M.Dally's wish—that some expert would thoroughly investigate the subject of Kung-fu and inform the public what it contains—, is left to the reader to judge.

THE END.

ON THE POPULATION OF CHINA

BY

DR. DUDGEON.



Memorial presented by the officials of the Board of Revenue regarding the Population and Storage of Rice for the 12th year of Kwanghsü (1886): —

Your Servants find that during the 5th year of Kienlung (1741) an Imperial Edict was issued to all Governors-General and Governors of the different provinces, ordering them to send records of the population and the quantity of rice kept in the granaries of all the prefectures and districts, each winter, to your Servants' Board, in order to know whether the population and the storage of rice have increased or diminished, and that your Servants should put these statistics on one record for presentation to your Majesty at the end of the following year. This practice has now been so carried out for a long time. During the fourth month of the fortieth year of Kienlung (1776) an Imperial Edict was again promulgated calling upon all the Governors-General and Governors to inform their auditors to hand in the exact number of the population and the quantity of rice, because the auditors of the province of Chibli always made up their record by assuming, without going to the trouble of auditing them. And in the first

month of the fifty ninth year of Kienlung (1795), an Imperial Edict required that the affairs of the different provinces to be reported upon must be finished by the tenth month. The time has now arrived to send in the enumeration of the population and the quantity of rice in storage for the twelfth year of Kwanghsü (1886). Your Servants find that the numbers of the population and the quantity of rice in store of the provinces of Anhwei, Yünnan, Kwangsi, Kansuh, Sinchiang, Fühkien and T'aiwan (6 provinces) and the districts that belong to the prefecture of Panting (保定) in Chihli, and Chilin (吉林) (Kirin) Pa lu kwen (巴魯坤) and Wu lu mu chi (烏魯木齊) and the quantity of rice of Honan, Hupeh, Szechwen, Kwangtung, Kiangsu, and Kweichow (6 provinces) have not been put on record and sent to your Servants' Board. It is therefore necessary to inform the Governors-General of Chihli, Szechwen and Shenkan (Shensi and Kansuh) and the Governors of Anhwei, Yünnan, Kweichow, Hunan, Hupeh, Kwangtung, Kwangsi, Kansuh, Sinchiang, Fuhkien and T'aiwan and the General of Kirin to make out their records quickly and have them transmitted to your Servants' Board, and your Servants will present them to your Majesty at the next term.

The Governors-General and Governors, Fu yin (府尹) and Tu tung (都統) (civil and military Governors respectively whose jurisdiction is independent of the provincial Governor) and Generals of Fengt'ien, Shantung, Shansi, Honan, Kiangsu, Kiangsi, Chehkiang, Hupei, Hunan, Shensi, Szechwen, Kwangtung and Kweichow 13 provinces, with Cheng teh fu (承德府) in Jeho (熱河) (Jehol), have put on record the required statistics and forwarded them to your Servants' Board and your Servants find the exact population for the twelfth year of Kwanghsü to be 302,088,114, which compared with that of the 11th year

(295,880,706) gives an increase of 6,207,408 people, and it is explained in the records of the above high officers that this account is scrupulously exact and that no one is left out. And they have also sent the quantity of rice of Feng'tien, Shantung, Shansi, Honan, Chehkiang, Shensi (6 provinces) and the places which are included in the prefecture of *Cheng teh* in Jeho and your Servants find that the real quantity of rice remaining in the granaries for the 12th year is 2,232,173 piculs, 6 *tow* 55 *sheng*, 1 *ho* and 8 *shao* which compared with that of the previous year (2,229,873 piculs-2579) gives an increase of 2,300 piculs-3939. The quantity of rice of Kiangsi has not been put on record by your Servants for many years, because the quantities are not exact. On this occasion they also fail to be quite exact and are therefore omitted from the record. The record of the population of the province of Fuhkien for the 9th and the 11th years of Kwang hsü has been transmitted and ought to be written after the page on which the population of Fuhkien is stated. Your Servants have herein carefully prepared a yellow record on which the population and the quantity of rice stored in the granaries for the 12th year of Kwanghsü are put on record according to the records that are presented from the different provinces.

Those places that belong to the Pauting prefecture in the province of Chihli have not forwarded their population statistics and the quantity of rice from the 8th year of Hienfeng (1859.) to the 11th year of Kwanghsü and eleven *chou* (州) and *hsien* (縣) viz Hsien hsien 獻縣 etc. have not sent the quantity of rice of the 4th and 5th years of Hienfeng (1855 and 1856). The province of Kiangsu has not sent the quantity of rice from the 27th year of Taokwang (1848) to the 1st year of Hienfeng (1851); and the population and the quantity of rice from the 3^d year of Hienfeng

(1854) to the 12th year of T'ungchih (1874), and the quantity of rice from the 13th year of T'ungchih (1875) to the 9th year of Kwanghsü (1883) and of the 11th year of Kwanghsü (1885). The province of Anhwei has not sent the population and the quantity of rice from the 3^d year of Hienfeng (1854) to the 11th year of Kwanghsü (1885). The province of Kiangsi has not sent the population statistics and the quantity of rice stored of the 10th year of Hienfeng (1861) and the 7th year of Kwanghsü (1881) and the quantity of rice of these 42 *t'ing* (廳) *chow* and *hsien* viz. Ch'ing kiang (清江) etc. of the 9th year of Hienfeng (1860) and the quantity of rice of these 50 *t'ing*, *chow* and *hsien* viz. Kau an (高安) etc., of the 8th year of Hienfeng (1859) and the quantity of rice of these 19 *chow* and *hsien* viz. I ning (義甯) etc., of the 7th year of Hienfeng (1858) and the population and the quantity of rice of these 50 *t'ing chow* and *hsien* viz. Hsing tse (星子) etc., of the 7th year of Hienfeng (1858) and the population of these 40 *t'ing chow* and *hsien* viz. Fengsin (奉新) etc., of the 6th year of Hienfeng (1857). The province of Szechwen has not sent the quantity of rice of the 9th year of T'ungchih (1871) and the 7th to 11th year of Kwanghsü (1881-1885). The province of Fukkien has not sent the quantity of rice from the 6th year of T'ungchih (1868) to the 11th year of Kwanghsü (1885), and the population from the 7th year of Taokwang (1828) to the 3^d year of Hienfeng (1854), and the quantity of rice from the 4th to the 7th (1855-1858) and the population and the quantity of rice of the 9th (1860) and the quantity of rice from the 10th to the 3^d year of T'ungchih (1861-1865) and the population of the places belonging to the prefecture of T'aiwan from the 17th year of Kiaching (1713) to the 7th year of Hienfeng (1858) and the quantity of rice from the 19th year of Kiaching (1715) to the 3^d of Hienfeng (1854).

The province of Hupei has not sent the quantity of rice from the 2nd year of Hienfeng (1853) to the 11th of Kwanghsü (1885). The province of Hunan has not sent the population returns and the quantity of rice of the 2nd year of Hienfeng (1853) and the quantity of rice from the 3^d year of Hienfeng to the 11th year of Kwanghsü; and the quantity of rice of She tsang (社倉) from the 5th year to the 21st year of Taokwang (1826-1842). The province of Shensi, and *Pa li kwen Wu lu muchi* and some others, have not sent the population numbers and the quantity of rice in store from the 8th year of Hienfeng (1859) to the 9th year of Kwanghsü (1883). The province of Kwangtung has not sent the quantity of rice from the 4th year of Hienfeng (1855) to the 11th year of Kwanghsü, except the 6th year of Kwanghsü (1880). The province of Kwangsi has not sent the population figures and the amount of rice stored from the 7th year of Hienfeng (1858) to the 11th year of Kwanghsü; and the population and the quantity of rice of Yung an chow (永安州), of the 1st year of Hienfeng (1851) and Chuen chow (全州) and Yung an chow, of the 2nd, 3^d and 4th years, and 4 *chow* and *hsien* belonging to Chuen chow of the 5th year, and the quantity of rice of three districts viz. Hsing an (興安) etc. of the 5th year, and the population of the 20 *chow* and *hsien* belonging to Chuenchow, and the quantity of rice of the 30 *ting*, *chow* and *hsien* belonging to Yung an of the 6th year (all of Hienfeng 1851-62). The province of Yünnan has not sent the population statistics and the quantity of rice from the 7th year of Hienfeng (1858) to the 11th of Kwanghsü (1885). The province of Kweichow has not sent the population of the three prefectures Hsing i (興義), Tu yün 都勻 and Chen yuen 鎮遠 and 22 *ting* *chow* and *hsien* belonging to P'u an (普安) and 10 *Wei* (衛) belonging to Ku chow (古州) of the 1st year of

Hienfeng, and the population of the 2 prefectures of Tu yün and Chen yuen and 17 *t'ing chow* and *hsien* belonging to Pa chai (八寨) and the quantity of rice of the whole province of the 11th year of Hienfeng (1862), and the quantity of rice of the whole province and the population of the 18 *t'ing chow* and *hsien* belonging to Pa chai of the 10th year; and the population and the quantity of rice of the 9th year and the quantity of rice from the 5th to the 8th year, and the population of the 21 *t'ing chow* and *hsien* belonging to Pa-chai, of the 5th 6th and 8th years, and the population of the 18 *t'ing chow* and *hsien* belonging to Pa chai of the 7th year; and the population and the quantity of rice of the whole province of the 3^d year of T'ungchih (1865); and the quantity of rice of the whole province and the population of those *t'ing chow* and *hsien* that belong to the prefecture of Ta ting (大定) of the 4th year; and the population and the quantity of rice of the whole province from the 5th to the 8th and the quantity of rice of the whole province and the population of these three prefectures viz. Hsing i, Tu yün and Chen yuen and 27 *t'ing chow* and *hsien* belonging to Pa chai from the 9th to the 13th and the quantity of rice of the whole province from the 1st to the 11th year of Kwanghsü (1874-1885), and the population of the two prefectures of Tu yün and Chen yuen, and 16 *t'ing chow* and *hsien* belonging to Pa chai of the 1st year of Kwanghsü and that of the two prefectures of Tu yün and Chen yuen and 14 *t'ing chow* and *hsien* belonging to Pa chai of the 2nd and that of the two prefectures Tu yün, Chen yuen and 7 *t'ing chow* and *hsien* belonging to Pa chai, of the 3^d and 4th and that of the prefecture of Tu yün and 13 *t'ing chow* and *hsien* belonging to Pa chai of the 5th year of Kwanghsü.

No records have as yet been received from the above by your Servants' Board and your Servants' Board has been sending

despatches every year to the Governors-General and Governors urging them to forward speedily the required figures. Some have explained that they have not received the records from the auditors; others say that it is extremely difficult to get the exact accounts because of the rebels. They all, however, promise to send forward the records as soon as they have received the exact accounts. It is advisable, therefore, to order them to secure the true accounts and send them in different years and when they arrive at your Servants' Board, your Servants will put them on record at the next term and your Servants ask your Majesty whether the Governors-General and Governors should not send the names of the officers who are delaying to get the accounts forwarded to your Servants' Board so that we may consult and decide.

The Province of Fengt'ien (Shengking or Kwantung).

It is stated on the record by the *Fu yin* that Fengt'ien contains 2 *fu*, 5 *chow* 14 *hsien* and 4 *t'ing*. Its real population, including old and young, men and women, altogether amounts to 4,409,271 which, compared with that of the 11th year (4,368,872) shows an increase of 40,399 people. Its real rice storage is 415,980 piculs 3899, which compared with that of the previous year 389818 piculs 7069 gives an increase of 26161-683.

The Province of Chihli.

The population and the quantity of rice of the places included in the Pauting prefecture for the 12th year have not been sent to your Servants' Board, and the Governor-General should be ordered to obtain them quickly and send them without delay to your Servants' Board, and your Servants will put them on record at the next term. The population and the quantity of rice of the places

belonging to the *Cheng teh* prefecture of the 12th year have been forwarded by the General of Jeho. The real population of the 12th year is 725,625 which compared with that of the 11th year (725,375) shows an increase of 250 souls. The real quantity of rice of the 12th year is 9580 piculs 8189 which is identical with that of the previous year. The population and the quantity of rice of the places belonging to Pau ting fu have not been presented from the 8th year of Hienfeng (1859) to the 11th year of Kwanghsü, and the quantity of rice of the 11 *chow* and *hsien* that belong to *Hsien hsien*, of the 4th and 5th year of Hienfeng (1855-56) have also not been forwarded, and it has been stated by the Governor-General that these places had been destroyed by the rebels and that he will send a record to say whether or not there is any rice in the granary so soon as he is informed by the auditors, but as it has not yet come to hand he must be told to hurry up with the record as quickly as possible and when it arrives at your Servants' Board, your Servants will place what he says on the record of the next term submitted to your Majesty.

The Province of Shantung.

It is stated on the record by the Governor that this province contains 10 *fu*, 11 *chow*, 96 *hsien*, 4 *wei* and 1 *so* (所). Its real population is 36,631,308 which compared with that of the 11th year (36,545,704) gives an increase of 85,604. Its real rice storage is 319327 piculs 8797, shewing an increase of 572 piculs 3, over the previous year (318755-5797).

The Province of Shansi.

It is stated on the record by the Governor that Shansi contains 9 *fu*, 10 *chow*, 85 *hsien* and 4 *t'wan ts'ao* (團操). Its real population is 10,847,147 which, compared with that of the 11th

year (10,791,341) gives an augmentation of 55,806. Its real rice amount is 963,509-1682, shewing a decrease of 4021-0549 compared with the 1.th year (967,530-3231).

The Province of Honan.

It is stated on the record by the Governor that Honan contains 9 *fu*, 10 *chow*, 96 *hsien* and 1 *t'ing*. Its real population is 22,117,439 giving an increase of 403 mouths over the previous year (22,117-036). Its real rice storage amounts to 436123 piculs 6008 which is the same as the previous year.

The Province of Kiangsu.

It is stated on the record by the Governor that Kiangsu contains 4 *fu*, 5 *chow*, 30 *hsien* and 1 *t'ing*. Its real population is 21,346,809, which, compared with that of the 11th year (21,259,989) shows an increase of 86,910 people. Its rice account for this year is not recorded, and the same is true of the 27th year of Taokwang (1848) to the 1st year of Hien feng and its population and quantity of rice from the 3^d year of Hienfeng to the 12th year of T'ungchih (1874) and its rice from the 13th year of Hienfeng to the 9th year of Kwanghsü and the 11th year of Kwanghsü are all omitted and the Governor should be ordered to obtain the figures quickly and send them to your Servants' Board, and when they arrive at your Servants' Board, they will be put on record at the next term for your Majesty.

The Province of Kiangsi

It is stated on the record by the Governor that Kiangsi contains 14 *fu* 2 *chow* 76 *hsien* 2 *t'ing* 4 *wei* and 13 *so*. Its real population is 24,554,085 which compared with that of the 11th year (24,541,406) gives an increase of 12679 people. Its real rice amount is 430,721-0678, but it is explained on the record that

there are some places where the rice has been destroyed by rebels, and other places where a great quantity of rice has been given to soldiers for their food, and others again where the rice amount has not been audited. The Governor must be informed that the quantity of rice must be forthwith learnt and sent to your Servants' Board. Its population and rice amount for the 10th year of Hienfeng (1861) and the 7th year of Kwanghsü; the quantity of rice of these 42 *ling*, *chow*, *hsien* which belong to Ching kiang, of the 8th year of Kwanghsü and that of these 19 *chow*, *hsien* belonging to I ning of the 7th year, and the population and the quantity of rice of these 50 *ling*, *chow* and *hsien* belonging to Hsing tse of the 7th year, and the population of these 40 *ling*, *chow* and *hsien* belonging to Feng sin of the 6th year, are all yet unknown, the Governor must be ordered to ascertain speedily what is wanting and send the figures to your Servants' Board and when they arrive at your Servants' Board, they will be put on the record at the next term and submitted to your Majesty.

The Province of Chehkiang.

It is stated in the record by the Governor that this province contains 11 *fu* 1 *chow*, 75 *hsien* and 2 *ling*. Its real population is 11,691,255 which, compared with that of the 11th year (11,685,348) gives an increase of 5907 souls. Its real rice amount is 31823-1408 which shows an increase over the previous year (31755-2102) of 67-9306.

The Province of Hupei.

It is stated on the record by the Governor that Hupei contains 10 *fu*, 8 *chow*, 60 *hsien* and 10 *wei*. Its population is 33,682,193, which compared with that of the 11th year (33,600,490) gives an increase of 81,703. Its rice for this year and from the 2nd year of

Hienfeng (1853) to the 11th of Kwanghsü (1885) has not been put on record. It is necessary, therefore, to inform the Governor to quickly find out the amounts and transmit them to your Servants' Board, and when they arrive at your Servants' Board, they will be placed on the record of the next term for your Majesty.

The Province of Hunan.

It is stated on the record by the Governor that Hunan contains 9 *fu*, 7 *chow*, 64 *hsien*, 4 *ting* and 1 *wei*. Its real population is 21,005,952 which compared with that of the 11th year (21,005,171) shows an increase of 781. Its rice account for this year and its population and rice account of the 2nd year of Hienfeng (1853) and its rice of the 3^d year of Hienfeng to the 11th of Kwanghsü are wanting and the quantity of rice of the *Shetsang* of the 5th year to the 21st of Taokwang (1842) are also deficient. (Then follows the usual remark in the case of omission of statistics on the record).

The Province of Shensi.

This province is said by the Governor to contain 7 *fu*, 5 *chili chow* (直隸州) and 76 *hsien*. Its real population is 8,395,954, giving an increase of 118,937 people over the previous year (8,276,967). The rice account stands 55828-5535 being an increase of 483-6264 above that of the 11th year viz. 55344-9271. Its population and rice account of the 9th year of Kwanghsü (1883) are not given, with the usual remark added.

The Province of Szechwen.

The Governor-General of this province states that it contains 12 *fu*, 19 *chow* 112 *hsien* 10 *ting* and 1 *so*, with a population of 72,126,148 which, when compared with that of the 11th year (71,073,730) shows an increase of 1,052,418. The quantity of rice for this year as well as that of the 9th year of T'ungchih

(1871) and the 7th to the 11th year of Kwanghsü (1881-85) have failed to be forwarded to your Servants' Board, therefore etc.

The Province of Kwangtung (Canton).

The Governor of this province which contains 10 *fu*, 13 *chow*, 77 *hsien* and 5 *t'ing*, reports the real population to be 29,751,178, compared with that of the previous year (29,740,055) indicating an increase of 11,123. Its rice storage of this year and the 4th year of Hienfeng to the 11th year of Kwanghsü (1855-1885) except the 6th (1880) are omitted etc.

The Province of Kweichow.

It is stated on the record by the Governor-General that this province contains 12 *fu*, 12 *t'ing*, 13 *chow*, 2 *chow p'an* (州判) 32 *hsien* and 10 *wei*. Its exact population is 4,803,658. As the population for the 11th year has not been put on record, no comparison is possible. The quantity of rice for this year is also not given as well as the population of 3 *fu*, viz: Hsing i, Tu yün and Chen yuen and 22 *t'ing*, *chow* and *hsien* belonging to P'u an and 10 *wei* belonging to Kuchow of the 1st year of Hienfeng and 2 *fu* viz: Tu yün and Chen yuen and 17 *t'ing*, *chow* and *hsien* belonging to Pa chai and the rice of the whole province of the 11th year and the rice of the whole province and the population of 18 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 10th year, and the population and rice of the whole province of the 9th year, and the rice of the whole province of the 5th to the 8th year and the population of 21 *t'ing*, *chow* and *hsien* of the 5th 6th and 8th years and the population of 18 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 7th year, and also the population and rice of the whole province of the 3^d year and the 5th to the 8th year of T'ungchih, and the rice of the whole province and the

population of the *fu*, *t'ing*, *chow* and *hsien* which belong to *Tu ting* of the 4th year; and the rice of the whole province and the population of 3 *fu*, viz: Hsing i, Tu yun and Chen yuen and 27 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 9th to the 13th year, as will as the rice of the whole province of the 1st to the 11th year of Kwanghsü and the population of 2 *fu*, viz: Tu yün and Chen yuen and 16 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 1st year and that of 2 *fu*, viz: Tu yün and Chen yuen and 14 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 2nd year, and that of Tu yün and Chen yuen and 7 *t'ing*, *chow* and *hsien* belonging to Pa chai and that of *Tu yün fu* and 13 *t'ing*, *chow* and *hsien* belonging to Pa chai of the 5th year. [Then follows the usual order for the statistics to be forwarded etc.]

The Province of Fuhkien.

The Governor of this province states that there are 9 *fu*, 2 *chow* and 58 *hsien* with 1 *t'ing* within his jurisdiction, with a population in the 9th year of Kwanghsü (1883) of 23,113,439. That of the 11th year is 23,894,533. The population and rice for the present year are not given as well as the rice of the 6th year of T'ungchih to the 11th year of Kwanghsü (1868-1895) and also the population of the 7th year of Taokwang to the 3^d year of Hienfeng (1828-1854) and the rice of the 4th to the 7th year of Hienfeng (1854-58) and the population and rice of the 9th year and the population of the 10th year of Hienfeng to the 3^d of T'ungchih (1861-1865), and the population of the places which belong to the prefecture of T'aiwan of the 17th year of Kiaching (1813) to the 7th year of Hienfeng (1858) and the rice of these places of the 19th year of Kiaching (1815) to the 3^d of Hienfeng (1854.) [Then follows the usual form.]

Conclusion.

The population of the above 13 provinces, viz. Fengtien, Shantung, Shansi, Honan, Kiangsu, Kiangsi, Chehkiang, Hupei, Hunan, Shensi, Szechwen, Kwangtung and Kweichow and the places which belong to the prefecture of *Cheng teh* of Jeho, of the 12th year of Kwanghsü (1886) altogether, as stated on the records is 302,088,114, which compared with that of the 11th year (295,880,706) gives an increase of 6,207,408 inhabitants.

The rice of 6 provinces viz. Fengtien, Shantung, Shansi, Honan, Chehkiang and Shensi and the places belonging to *Cheng teh fu* of Jeho, of the 12th year of Kwanghsü (1886) amounts altogether to 223,217,365 compared with that of the 11th year (2,229,873,257) shewing an increase of 2,300,393. The quantity of rice of Kiangsi has not been recorded for many years because of its inexact nature and on this occasion also it is not quite correct, therefore it is not placed on this record by your Servants.

Kirin.

It is stated in the record by the General that Kirin contains Ninguta (甯古塔), Po to na (Petunè) 伯都納, *San Shing* (三姓) and four *ling*. Its real population for the 12th year of Kwanghsü is 447,858 and its real rice supply is 37,044,362. The records of the population and rice for the 13th year have not been recorded.

The population of the 13 provinces, exclusive of Cheng teh fu in Chihli is 301,362,489, or inclusive 302,088,114. For the 13th year (1887) the figures stand 303,241,969 shewing an increase over the previous year of 1,153,855. The population of the province of Fuhkien is not included in the totals for the 12th year as

Provinces	Fu	Chow	Chili chow	Hsien Ting	Twan Tsao	Wei So	Chow p'an	Population in 1886.	Population in 1885.	Increase of 1886 over 1885.	Population of the year 1887.	Increase of 1887 over 1886.
1. Feng Yien	2	5		14	4			6, 409, 271	4, 368, 872	40, 399	4, 437, 261	41, 999
Chibli	10							72, 025	725, 875	230	727, 442	1, 817
2. Shantung	10	11		96		4	1	36, 631, 308	36, 545, 704	85, 604	36, 644, 255	62, 947
3. Shansi	9	10		85				10, 847, 447	10, 791, 341	55, 806	10, 638, 401	188, 746
4. Honan	9	10		96	14			22, 117, 439	22, 117, 036	403	22, 117, 839	399
5. Kiangsu	4	5		30	1			21, 346, 899	21, 259, 989	86, 910	21, 408, 930	62, 031
6. Kiangsi	4	2		76	2	4	13	24, 554, 085	24, 541, 406	12, 679	24, 559, 327	5, 242
7. Chehkiang	11	1		75	2			11, 691, 255	11, 635, 348	5, 907	11, 703, 038	11, 783
8. Hupei	10	8		60		10		33, 682, 193	33, 600, 490	81, 703	33, 763, 437	81, 242
9. Hunan	9	7	5	64	4	1		21, 005, 952	21, 005, 171	781	21, 006, 368	416
10. Shensi	7			76				8, 395, 954	8, 246, 967	118, 937	8, 403, 818	7, 864
11. Szechwen	12	19		112	10	1		72, 126, 148	71, 073, 730	1, 052, 418	73, 178, 566	1, 053, 418
12. Kwangtung	10	13		77	5			29, 751, 178	29, 740, 055	11, 123	29, 762, 725	11, 547
13. Kweichow	12	13		32	12	10	2	4, 803, 658			4, 806, 572	2, 914
14. Fuhkien	9	2		58	1			24, 344, 810	23, 894, 533	450, 277		

presented to the Emperor, nor in the 13th year, as the Statistics forwarded to the Board do not refer to the years for which the record is drawn up. But as the memorials on the Population for 1886 and 1887 from the Board of Revenue, came into my hands, I have added the figures for Fuhkien for the 12th year of Kwangshü as they were supplied to the Board in the 13th year. This enables me to give the population of 14 provinces for the year 1886 as 325,707,299. The population of Fuhkien for the 9th year (1833) is already given as 23,113,439.

I leave the figures now presented to speak for themselves. They should be read in the light of the remarks made by the writer on the paper read by Mr. Popoff and already printed in the transactions of the Society. The latest statistics obtained by Mr Popoff refer to the year 1882 and include 11 provinces only. He had previously obtained an unofficial list of 10 provinces for 1879. Five of the eleven provinces were included in the list of 1879. The deficiencies in the number of provinces of the official list were made up by him from those of the unofficial list. In this way he arrived at the population of 5 more provinces. Three provinces remained of which the population could not be ascertained. Considering the devastation caused by the rebels in Anhwei, he estimates the population of that province at 16 millions less than the figures given for 1842 (36,596,988) and for Kwangsi the birthplace of the great rebellion, at 3 millions less than the figures for 1842 (8,121,327) Fuhkien being beyond the range of the devastations caused by the T'ai p'ings, he retains the population for 1842. I am now able to furnish him with the latest figures which do not materially differ from those given for 1842. The most remarkable thing about these statistics is, perhaps, the vast population of Szechwen, the garden of China, the largest province

of the Empire, and excepting Yunnan, twice the size of any other of the larger provinces, and four times that of Chehkiang. It has more than trebled its population in fifty years. Besides its enormous size and fertility, it must be noted that it did not suffer from the ravages of the rebels, and that at that time the people from the neighbouring provinces sought refuge here. I am informed that when Tsêng kwo fan was an Examiner in this province, he reported to the Throne, even at that time, its populousness as greatly in excess of anything to be found in other provinces. There can be no question of the vast population of this province. If we take a rough average of the 14 provinces, exclusive of Szechwen, we shall find about 20 millions for each province, which would add at least from 80 to 100 millions for the provinces whose records have not been forwarded. The statistics of these provinces are not to be found in the Board of Revenue, since they were destroyed by fire. But if the required records are annually furnished to the Board, there should not be any difficulty in presenting the figures to his Majesty. In the speech which I delivered at the adjourned discussion of the question of population, I stated that I held in my hands the returns for the whole Empire taken a few years previously, in which the entire population for China Proper including Manchuria is given as 215 millions. I disavowed all responsibility for their accuracy and characterized the returns as, in my opinion, a gross under-estimate, although presumably emanating from the same source as Mr. Popoff's statistics. I also on that occasion remarked that the statistics for the rest of the Empire, exclusive of China Proper, appeared to be even a grosser over-estimate, namely 39 millions, than the under-estimate of the 18 provinces. These statistics certainly afforded Mr. Jordan good grounds for his remark that "nothing better proved the fallacy of the Chinese census than a

comparison of the two lists (Dr. Dudgeon's and Mr. Popoff's) in question." Shortly after the discussion, further enquiries in the proper quarter regarding the controverted figures furnished privately by and handsomely paid for to, a subordinate officer of the Board of Revenue, gave good grounds for believing that the figures presented were radically inaccurate and designedly misleading, the population of China Proper, having been reduced with the connivance and by the sanction of the Board, by exactly one third, while the population North of the great wall seems to have been correspondingly increased. This mass of figures was furnished to one of the Foreign Representatives and by him to his government. When we remember that foreigners have always taken a great interest in the question of population—a fact which is known to the Chinese officials, it is presumed by the Chinese that such an interest could not be developed and maintained from purely statistical grounds, but that other and ulterior purposes of a commercial and missionary character were in view. Now the demand for greater facilities of inland trade and the propagation of religion would appear to the Chinese to have a close connexion with the question of the density of the population, and hence the attempt to deceive. In fact we have the best of grounds for stating that the request for statistics of the population of the Empire from this Foreign Legation was reported to the Board of Revenue and that after a long discussion the diminution by one third was agreed to and carried out. From this incident we may learn how puerile in many matters even so astute a people may be and how suspicious the Chinese officials are in their relations with foreigners and how they seek to neutralize any concessions which they may be obliged to make. They have overlooked a third alternative which a greatly enhanced population might have given them in

the eyes of foreigners, viz, a sense of their great strength to resist foreign aggression.

On the same occasion in question I stated that a reduction in 1886 in the population to the extent of over six millions had been approved by the Board of Revenue in order temporarily to mitigate taxation. Mr. Jordan stated that no general reduction of taxation of the nature described had taken place. The true reason, which was afterwards forthcoming, was that as the missionary question was giving uneasiness to the officials and missionaries were pouring into the country in large numbers and distributing themselves all over the Empire, the vast millions of China seemed to be the exciting cause of so much missionary enthusiasm. The officials of the Board of Revenue thought to check this zeal by the above considerable reduction of the population. In the following year as no abatement of missionary immigration seemed to follow, the figures were again added to the record.

On the same occasion I added "In conclusion I have now to present you with some statistics furnished me this afternoon by a high official of the Board of Revenue. When all the returns arrive I hope to present them to the Society" This paper is the fulfilment of that promise. The translation of the Memorial as presented to the Emperor by the Board of Revenue should convince any candid reader of the genuineness of these statistics, so far at least as they are known to and by the Board. Since the above was written, I have been placed in possession of the statistics submitted to the Throne for the 13th year of the present reign (1887) and I have consequently added the figures in the tabulated statement.

A MODERN CHINESE ANATOMIST.

BY JOHN DUDGEON, M.D., *Imperial Maritime Customs, Peking.*

Wang Ch'ing-jen (王清任), a native of *U-t'ien-hsien* (玉田縣), about 200 *li* (70 miles) to the east of Peking, published a book called *I-lin-kai-tso* (醫林改錯) in the 29th year of the reign Tao Kwang (道光) (1850). The work is in one small octavo volume, divided into two chapters, the first being anatomical, in which are pointed out, according to the writer's ideas, the mistakes and misapprehensions of the ancients, with his own views of the structure and functions of the body, and the second is taken up with a system of practical medicine founded upon his observations and consisting, for the most part, of the remedies which he or others found useful in various diseases. With the latter chapter we have now nothing to do, but the first is so interesting from a physiological point of view as presenting us with the ancient medical knowledge possessed by the Chinese with the writer's criticisms and his investigations into human anatomy exemplifying such a rare spirit of enquiry—a spirit altogether foreign to the Chinese mind. If such a man as Dr. Wang, of a truly enquiring and scientific turn of mind, had happened to come across a Western physician, medical missionary or any of our works (but unfortunately at that time none had been translated into Chinese. Dr. Hobson's anatomy was first published at Canton in 1851) he must have proved an apt pupil. He would have had his gropings after the truth directed, his false inferences corrected, and he would have produced a work which would have dethroned the *Nei-ching* (內經), the *Ling-shu* (靈樞) and *Su-wen* (素問), and all the successive medical writers who have followed so slavishly these ancient books long antecedent to our Christian era. As it is he exposes their errors and inconsistencies by quoting one against another, a style of writing of which he seems to be a perfect master, as far as his own partially enlightened knowledge can lead him. The spirit in which he follows out his investigations is to be highly commended; he is often right and justly severe upon his country's medical writers, but in many cases too the ancients are nearer the truth than he is. His fundamental error lies in mistaking the arteries for air vessels, an error certainly pardonable when we consider that up to the time of our own immortal Harvey some 300 years ago we ourselves did not know that the arteries contained blood and our name for these blood vessels still retains our earlier misconception, viz., *arteria* air vessels. But for this serious error he might have hit upon the true circulation of the blood. He never seems to have seen a divided artery and the spurting of the blood and an ordinary execution might have convinced him of his

error regarding the air vessels. He never seems to have noticed the different characters of the red and venous blood. On account of this blemish his new system of the body and its functions is as difficult to understand as that of *Hwang Ti* (黃帝) and *Chi Po* (岐伯) 2000 years before our era. His work, although known in this part of China by the literati, has not produced any effect upon their medical stereotyped ideas nor led so far as I know to further enquiry and investigation, but the work is useful as indicating his careful and numerous examinations, his unremitting research and general honesty and modesty and therefore is a pattern for future Chinese workers in this and other departments. With so many opportunities around the Chinese in the slaughtering of oxen, sheep, pigs, etc., on the streets, with the viscera, especially the heart and lungs everywhere exposed at the butchers' shops, with the country dotted over with graves, many of which are exposed by the ravages of the weather, dogs, pigs or wolves, or the exigencies of cultivation, the customs of the Mongols of leaving the bodies of their dead unburied to be devoured by wild beasts and birds, one might have imagined there was here a splendid field for anatomical research. With such opportunities in our country in all probability the passing of an Anatomy Bill over 60 years ago would never have been rendered necessary, because the dearth of bodies for dissection would in all probability never have been felt. We should not then have been punishable at one and the same time for not knowing our profession and for trying to learn it in the only effectual manner. Law, religion, filial piety and prejudice have put dissections out of this question in China. The principle in China is that the body received from one's parents should be kept complete and un mutilated. To allow it to be maimed or disfigured or they themselves to do so, except for the nourishment of these same parents as in the case of soup made from their flesh, is to slight and undervalue the gift of their parents and would be reckoned among the sins of filial impiety and deservedly punished, if not in this life, most certainly in the next.

After several prefaces by friends by way of introducing and commending his book, a practice everywhere common in China, and a picture of the author, the work begins by exposing the main errors of the ancients and so preparing the way for, and showing the importance of, his discoveries. To cure disease, he sets out by remarking, we must know the viscera. According to the ideas of curing disease, held by the ancients, discoursing on the viscera and origin of disease, the real *fons et origo mali* is completely lost sight of and notwithstanding one's ability, one cannot explain disease by reference to the viscera. Among those who have written on the viscera and have given delineations of them there is not a single point in which one agrees with the other. One author shows that the ancients among themselves differ widely and therefore that both cannot be true and his object is to point out their errors and

indicate what is true and therefore reliable. Then follow examples of the want of agreement among themselves. The ancients said, e.g., that the spleen is related to earth, that earth governs the immovable and therefore the spleen does not move and if it move there is no rest; how then at the same time do they say that when it hears a sound it moves. They also say when it moves it grinds the stomach and dissolves the food, but if it do not move then the food is not digested. So you have here the mistake of the spleen moving and not moving. The lungs again are said to be empty and to resemble a wasp's nest, that they have no openings below, that in inspiration they are full and in expiration empty while at the same time it is said the lungs have 24 openings, placed in rows and divided into sections and that they communicate with the air of the viscera. This relates to the error of the 24 openings. Regarding the kidneys there are said to be two, and the moving air in the middle of them is said to be the *ming-men* (命門), door of life, if so why do others say the left is the kidney and the right is the Door of Life. The two kidneys have one body and what reason is there for giving them two different names. If the moving air is the gate of life what is its nature? This is the mistake in regard to the kidneys. The liver is said to have two roads or blood vessels proceeding from the two sides of the ribs; one ascending to the head and eyes, the other going downwards, surrounding the *yin-chi* (陰器), genital organs or organs related to the dark or female principle in nature and thereafter descending to the big toe. If there are then two vessels, a right and a left, why is it said by others the liver is on the left side of the body and that the left ribs are related to the liver. There can therefore be only one vessel. Why in discoursing do they speak of right and left. How is this? (The Chinese are perfectly at sea in regard to the number, position and function of the various viscera.) The heart is the sovereign. The five functions of the brain are all said to be stored in the heart. But how about the spleen which, according to others, is the seat of the will, the kidney of ingenuity, the liver of policy, the gall bladder of determining, so that in this way all the viscera take part in the mental processes and yet some of the ancients say that the heart only is concerned about these things. Each part has an intellective apparatus and no one has condescended to tell us what is, or where it is stored. This is a sample of the unintelligible way in which they discourse upon the heart. The stomach is said to govern the digestion of water and the cereals. Others say that the movement of the spleen is the cause of digestion; the upper mouth of the stomach is the *pěn-měn* (賁門), cardiac orifice; food enter the stomach; the delicate air from the *pěn-měn* ascends and is relegated to the spleen and thence is dispersed to all the pulses. According to my idea these views have no reason on their side. The lower door of the stomach is the *yen-men* (幽門) (pylorus); this is the upper mouth of the small intestines.

The ancients discoursing on the small intestines considered its office that of receiving and storing and the digested matters issued therefrom, and the food entered the small intestines and became fæces; below in the *lan-mên* (關門) (ileo-cæcal valve,) that is, the lower door of the small intestines and the fine and coarse are here divided; the fæces went to the large intestines and passed out at the anus; the water to the bladder and became urine. According to this view the urine percolates out from the fæces, *fen* (糞), which would make the urine of a very fœtid odour; indeed people have used children's urine as a vehicle for the administration of medicines or people themselves have used their own urine to cure eye diseases; the taste is said to be saltish not fœtid; again if food and water unite together to form fæces, the latter should be very thin and we should have diarrhœa. Fowls and ducks have no separate urinary apparatus, food and water pass together. This condition of food and water going together in them is therefore all right; in horses and cows where there is the existence of the small convenience, *penis* (小便) this principle does not hold; in man it is still more so. As regards what the ancients say of the small intestines digesting food and water and passing out by the *lan-men* (關門) (ileo-cæcal valve), everybody is convulsed at the very idea. Such views do not need refutation. They have been a subject of ridicule all down the ages.

The pericardium is said to be a delicate tendon like silk fibres connecting the heart and lungs. Others say the yellow fat outside the heart is the pericardium. Others say the pericardium is the yellow fat below the heart, above the horizontal membrane (diaphragm) (膈膜) and below the vertical membrane (mediastinum). Others say it is in the centre of the sternum or thereabouts, having a name but without form. Although it is said to have a name and to be without substance, how is it said that the *shao-chueh-yin* (少厥陰脈) pulse is the *ching* (road or vessel) of the pericardium? So many have discoursed on the pericardium, what after all we would ask is it? How can it be so many different things?

Discoursing of the three divisions is a still greater subject for laughter. The *Ling-shu* (靈樞) (one of the oldest of the Chinese medicine books) says that the *shou-shao-yin* (手少陰) of the three *chiao* (or divisions of the body) (三焦) is above and the *tsu-tai-yang* (足太陽) three divisions are below. According to this view then there are two, three divisions. The Nanching (難經) in its 31st section which is wholly taken up with this subject, says that the upper *chiao* is above the stomach; it takes in but does not put out things; the middle *chiao* is placed at the central part of the stomach and its function is to dissolve the food and fluids; the lower *chiao* is below the umbilicus and separates the urine and fæces. It is also said that the three *chiao* is the road taken by the food and water, thus giving the three *chiao* a shape or body. The

Nanching also says that the space between the two kidneys is that where the air originates and is the root of the three divisions. In this sense, therefore, the three *chiao* have no form. So we are, according to the Nanching, that it has no form and that it has form and that there are two, three *chiao*s. *Wang-shu-ho* (王叔和) (a celebrated physician) speaks of the three divisions as having a name without a body thus following the Nanching. *Chen-wu-chae* (陳無擇) of the Sung dynasty (10th century) understood the omentum to be the three divisions (脂膜). *Yuen Chun-fu* (袁淳甫) says that the three divisions are the reddish coloured lining of the body (the mucus membrane). *U T'ien-min* (虞天民) points to the hollow in the chest as the three divisions. *Chin I-lung* (金一龍) says that in front are three *chiao* and behind are also three *chiao*. The ancients, therefore, are quite at sea about these three *chiao* of the body. The various ideas regarding these *san-chiao* cannot be calculated on the fingers by nipping the thumb. Whether it has a body or not you see, according to them is uncertain. Why do they say that the *ching* of the ring finger is the *ching* of the *shou-shao-yang* three *chiao*. There is here the very utmost confusion. Later writers have disputed and given the lie to these statements. The mistake goes back to its origin; when the source is wrong all else proceeding from it is wrong. I have always had a strong inclination for correcting errors but never having seen the viscera I got quite angry with myself. How could I bring out a work and myself never had seen the viscera. To produce such a book under such circumstances would have been foolish and like a man dreaming. If the doctors do not understand the viscera, they are like the blind groping their way along the street, so that no matter with what intelligence and diligence the medical art may be practised, what avails it? For ten years I have been daily engaged in correcting these errors and there has not been one single day that the subject has not occupied my thoughts. In the second year of the reign of Kia Ching (1798) I was thirty years old. Early in the 4th moon I was at Lan-chow (灤洲), at a place called *Tao-ti-chen* (稻地鎮), east of Peking when an epidemic of measles and severe dysentery was raging fiercely among children. Of nine or ten who took ill at least eight or nine died. The poor people wrapped up the bodies in mats and buried them quite superficially, according to the custom of the place in order that the dogs might tear them and eat them, with the idea that subsequent births might be spared to them. I went out daily and examined these dead bodies in the public burying place and saw daily over 100, and daily I rode past on horseback. At first from the bad odours of the place I held my nose but afterwards on account of the mistakes made by the ancients because they had not seen the viscera, I did not any longer think of the foetid odours but every morning went to the burial place and closely examined the viscera of the children, many of which I found exposed. The

dogs left chiefly the intestines and stomach but very few hearts and livers, so I examined first this and then that. In ten I found about three complete and for ten consecutive days I examined them. I thus saw about thirty perfect bodies and in this way I came to know and compared the various parts with the ancient drawings and found they did not agree. The number and position of the viscera did not at all coincide. There was one thing I failed to understand fully and that was the very thin partition called the diaphragm. I failed to see whether it was above or below the heart, whether even or inclined. It was thin and torn. In the 4th year of Kia King 1800, and the 6th moon I happened to be in *Feng-tien-fu* (奉天府) and had an opportunity of investigating this point. A woman 26 years of age was mad and had killed her husband and her father-in-law. She was tried and condemned and afterwards taken outside of the West Gate to be cut into 10,000 pieces. (The west of the provincial cities is invariably selected for executions because it is in the direction of the Western Heaven or Paradise of the Buddhists). I followed hoping to have my anatomical curiosity satisfied. I thought it was a splendid opportunity for examining the viscera. But upon reflexion I bethought myself that the culprit being a woman, it would be highly delicate and therefore inconvenient, when suddenly as I passed the executioner tore out the heart, liver and lungs before my very eyes and which I therefore saw plainly and this tallied in every respect with what I had formerly seen. At Peking in the reign of Kia King, in the year of the cycle *Keng-shên* (庚申) there was a man found guilty of killing his mother. He lived outside of the Hata Gate (哈嗒門) south of the bridge. I was allowed to visit the place and follow the prisoner. On arriving at the scene, although I saw the viscera, the diaphragm was unfortunately torn. In the 8th year of Tao Kwang 1828, the 5th moon and the 14th day there was a man to suffer *ling-chih* (凌遲) (the punishment of being cut into ten thousand pieces) and when I got to the place I could not get to the front to see the viscera. In the 9th year of the same reign 1829, the 12th moon and 13th day, in the evening, in the Anting Gate St. (安定門) in the *Pan-chang-rh lane* (板廠胡同) at the house of Mr. Hêng (恒宅) I was invited to attend one in the family who was ill. In the course of conversation we got on to the subject of the diaphragm. I said I had been examining this point for forty years and had not yet succeeded in investigating it thoroughly. Among those present during the conversation was one *Heng Ching-kung* (恒敬公) who had been an officer in Hami (哈密) and was in charge of soldiers leading them to Kashgar and had seen many executed and knew all about the midriff most minutely. I rejoiced when I heard this and questioned him carefully about it and seeing how interested I was he told me all most readily. I have been examining the viscera for 24 years now and this is the first opportunity I have had of hearing accurately about them, and

consequently I have been able to draw my diagrams. My idea is to publish them for the benefit of succeeding generations so that all may know this matter of the viscera. I fear that people succeeding me will not themselves examine the viscera; they will say that I have controverted the statements of the ancients and they will not be able to decide (which is right). They will condemn me for not agreeing with the ancients. But if I do not on this account publish my work, medical learners will go on for centuries perpetuating these errors of the ancients. I have thought of Hwang Ti (黃帝) who feared that the people would suffer from disease. We have the writers of the *Su-wên* (素問) and *Ling-shu*, but if they knew for certain, they could teach the people, but if what they knew was groundless, they should have further investigated the matters. Why if they themselves were ignorant, did they presume to teach others, and in this way injuring all who come after them? Afterwards the men of *Ch'in* and *Zueh* (秦越) made the book *Nanching* (3rd century B. C.) to explain the obscurity of the *Lu-wên* and *Ling-shu*. In the Ming dynasty in the early part of the 16th century *Chang Shih-hsien* (張世賢) published his work illustrated by diagrams and commentaries; he weighed the heart, liver and lungs, determining the weight of each and the length of the intestines, the capacity of the stomach, the number of *tow* and *sheng* (pints and gills) it can contain; his language looks very like the truth but really he had not seen the viscera; his statements are without proof, and were made with the intention of deceiving; he has in consequence obtained an empty reputation, and posterity reaps the disadvantage. If a man steal another's wealth, he is designated a thief; if he steal another's reputation is he not also a thief? For more than a thousand years it is not certain that there has been even one who knew these statements of the ancients to be errors. I have had these figures cut according to my ideas, not with the view of deciding that the ancients were wrong, neither that posterity may know me, and I don't care whether posterity blackguards me or not in consequence. My only desire is that the medical faculty should see the illustrations and then their minds will be clear in regard to the matter and their eyes when they see them will understand at a glance and they will know how to treat disease intelligently and will not resemble the ancients, following the cart rest. (In front a cart behind the rest), and their patients will not suffer injury from the ignorance of the faculty. This is what I earnestly look for. I hope for people who will understand that it was no easy matter for me to put out this book and will think of the condition of my heart in these circumstances. So much for the preface of the author.

To understand the viscera and their structure it is first necessary to know inspiration, expiration and the alimentary canal. The ancients called the part behind the tongue the *horc* (喉) larynx because it *waits* upon the inspiration and expiration of the air. The *how* comes from the *how* (候) of waiting.

This is the upper mouth of the lung vessel (trachea). Behind the larynx is the *yen* (咽) or gullet so called from the *yen* (嚥) of swallowing. By the gullet the food enters the stomach and so forms the upper mouth of the stomach vessels (*wei-kwan* 胃管). The *yen* (gullet) receives the food; the *how* (larynx) the air. For the last 4000 years this has been most surely believed. The book *Ling-shu* asserts this and no one has dared to correct or challenge the statement. All understand that what is swallowed enters the stomach but there is a serious misunderstanding about the larynx and inspiration and expiration, arising out of a want of knowledge and examination that the large faces of the two lobes of the lungs are turned to the back or spine; that above there are four apices or peaks which are directed to the chest and that below there is a small piece which also looks to the chest; that the lung vessel below divides into two branches (the right and left trachea) which enter the two lobes of the lungs; that each branch divides again into nine middle bifurcations and each of these again into nine little branches and these again into still more minute branches; that at the end of these minute divisions there are no openings; that in appearance they resemble the *chi-lin* (麒麟), a certain vegetable; that the outer skin (pleura) of the lungs has also no openings. Inside, the lungs contain light white froth. Below the lungs are no openings whatever, so the 24 holes of the ancients have no existence. The ancients said that in inspiration the lungs were filled and that in expiration they were empty. At present I need not minutely controvert this mistake. In inspiration the abdomen is enlarged and not the lungs; in expiration the abdomen becomes small and not the lungs. Inspiration, expiration, the expectoration of phlegm mucus, saliva and such like have nothing to do with the lungs.

Behind the lung vessel (trachea), in front of the stomach vessel (the oesophagus), on the right and left hollow spaces are the two roots of the air vessel, in appearance like tendons, the upper mouth is situated below the (*hwei-yen* 會厭) (epiglottis). On the left is the air door (*chi-mên* 氣門), on the right the right air door, and these are the vessels from which proceed the phlegm, mucus, saliva, etc.

The ancients considered cough, asthma, hooping cough as lung diseases, because they came from the chest. In treating these diseases which were owing to external causes, they used diaphoretics and so cured the malady; in treating the warm phlegm, they administered cool remedies and cured the disease; with inside inflammation, they used purgatives; in weakness of the air, they prescribed tonics; if the blood got obstructed, they used remedies to disperse it and seeing all these methods successful, they were naturally elated and left books on the subject stating that these were diseases of the lungs. In this way this belief became established; but the ancients were ignorant of

the fact that two air doors, a right and left, descend on each side half way down on the front of the lung vessel where they unite to form one trunk, like two branches uniting to form one stem, like a tendon, it proceeds downwards and enters the heart and again about the size of a writing pencil, emerging from the heart it turns to the left and proceeds to the back of the heart. On the left side of the lung vessel it passes the lungs and enters in front of the spine and proceeds downwards to the coccyx (the caudal extremity.) This is the *wei-tsung* vessel (胃總管) (the all defending vessel), popularly called the *yao* (腰) (lumbar) vessel. Within the abdomen there are two vessels, like tendons, the upper goes to the *c'hi-fu* (氣府) (air residence); *c'hi-fu*=to the great omentum or caul or cock's comb oil because it resembles the *han-ying* (鷄冠花) flower, so called from the cock's comb. The upper vessel here described may be the gastro-epiploic artery, coming from the coeliac axis or probably the superior mesenteric artery. The *c'hi-fu* covers and protects the small intestines. The small intestines lie horizontally in the *c'hi-fu*. Outside the small intestines and inside the *c'hi-fu* the original or constitutional air of man is stored and preserved. The original air is fire and this fire is the original air. This fire is the vital root of man's life. The food enters the stomach and small intestines and is dissolved by this original air. When this original air is sufficient digestion is easily performed and *vice versa* difficult. The above relates to the upper abdominal vessel. The lower or descending vessel on the other hand is connected probably with the male spermatic road and the female uterus. I took great pains to accurately observe this latter vessel. I was unable to satisfy myself that I understood it at all well, so I still remain in doubt but I hope some medical scholars who come after me, if they find a good opportunity will with diligence investigate this point and so fill up here my deficiency. This lower vessel is either the inferior mesenteric artery or spermatic arteries which rise from the aorta below the renal arteries.

From the *wei-tsung* vessel at the back of the heart are two vessels, like a tendon in size, which go to the two shoulders (the subclavian arteries); opposite the lumbar region there are also two vessels which enter the two kidneys (the renal arteries. Below the lumbar region are two vessels which go to the haunch (the iliac arteries.) Above the lumbar region immediately opposite the middle of the spine there are eleven short vessels* which connect with the back bone. This is the road the air and lymph juices take. If the air be sufficient the fire increases and the juices become thick; the thick is called phlegm (痰). If the air is weak the heat is diminished and it cannot boil the juices which therefore remain thin and watery and are called thin or

* These are without doubt the intercostal arteries, branches of the descending aorta. They are usually ten in number on each side. In the diagram they leave the vessel between the subclavian to the renal arteries. If the superior intercostal were not a branch of the subclavian, our author's number would be correct.

imperfect phlegm (yin 飲). Inside the vessel it is borne up by the air, passes upwards, crosses the heart in front of the lung vessel and in the middle of the air vessel and obtains egress by the right and left air door. The phlegm, juices, saliva, etc., are therefore matters belonging to the root air vessels, *i.e.*, the carotids of our author. The ancients were therefore undoubtedly wrong in asserting that these things belonged to and issue from the lungs because they did not know that in front of the lung vessel there are air vessels which unite. They knew that the phlegm, etc., came from the chest, and so supposed they proceeded from the lungs, never having seen any true diagrams of the viscera nor having personally examined them. Whether we regard the function of the hand grasping things, the feet walking, the head turning, the body rotating, going forwards or backwards, all depend upon this air. When we inspire the air we fill the *c'hi-fu* (air residence), when the *c'hi-fu* is full the abdomen enlarges. In expiration on the other hand the *c'hi-fu* becomes empty, and the abdomen consequently becomes small, therefore the *wei-tsung* vessel (abdominal aorta) is an air vessel and contains no blood. If there were blood in the *c'hi-fu* it would find exit with the air in expiration and there would of necessity be hæmoptysis and discoloured phlegm; and if the blood proceeded downwards we should have bloody stools and hæmaturia. The *wei-tsung* vessel connects in front with a tendon-like vessel. This is the *jung-tsung* (榮總管) vessel, the veins of our author, a blood vessel containing blood and in length like the *wei-tsung* vessel. The blood in this vessel nourishes the *hsieh-fu* (血府) (blood receptacle.) The blood in this vessel flows into the *hsieh-fu*, which is below the chest and forms one piece of the *k'o-moh* or diaphragm, in thickness like paper but very strong. Its front length is on a line with the concavity of the mouth of the heart (the hollow below the breast bone) and goes from the two sides of the ribs to the upper part of the lumbar region straight but inclined, in front high, behind low; the base is like a pond in the earth, inside it stores blood which is dissolved from the delicate juices. This is the blood residence. The juices will be discussed when we come to speak of the juice door of the stomach. I before spoke of the epiglottis as the white piece behind the tongue which covers the right and left air doors and the door of the larynx.

The organ that receives what is swallowed in birds is called *su* (嗉), in quadrupeds *tu* (肚), in man *wei* (胃). The ancients pictured the stomach with the upper mouth above and called it *pên mên* (贛門) and the lower mouth as the *yen mên* (幽門). They spoke therefore of two mouths or doors, an upper and a lower but they did not know that the stomach has three doors. They drew it vertically, whereas it is not only horizontal but it is placed in a flat position with one side up; the *pen-mên* is directed to the back, the base towards the abdomen, the lower mouth *yen-mên* is also at the upper part on

the right side and is directed to the spine. About an inch to the left of the *yen-mên* there is another door called the *chin-mên* (津門) juice above the *chin* door is the *chin-kwan* (津管). This is the road by which the delicate juice and watery juice comes out of stomach, but it is difficult to investigate this matter of the juice vessel because above it there is the *tsung-ti* (總才) pancreas* which covers it. The *tsung-ti* is popularly called *i-tse* (胰子). The body of the *tsung-ti* is on the right of the *pen-mên* and left of the *yen-mên*, and completely covers the *chin-mên*. Below the *tsung-ti* and connected with the *c'hi-fu* in front are the small intestines; behind it the *c'hi-fu* connects with the large intestines; above the stomach it connects with the liver and the liver connects with the spine. These are all situated below the diaphragm and the *tsung-ti* connects with the body of the stomach, liver, small and large intestines. Food enters the stomach; the chyme flows first out of the *chin-mên* and enters the *chin-kwan* and outside an inch or more this vessel divides into three divisions, the delicate chyle enters the marrow residence (*sui-fu* 髓府) and forms marrow; the thicker sort goes by the upper branch and along with the blood enters the *hsieh-fu* and is converted into blood, the watery juice goes by the lower division and from the centre of the liver passes over to the spleen. In the centre of the spleen there is a vessel which resembles a *ling-lung* (玲瓏) and is called *lung-kwan* (瓏管), a vessel resembling a gem with interspaces, the whole in the form of a dragon. The watery portion in this vessel divides into two sides and enters the outgoing water road, which road resembles a fish net, *ü-wang* (魚網), and is popularly called *wang-yen* (油網). The water percolates through the water road and enters the bladder and becomes urine. This part is indeed difficult to investigate. In the second year of Kia Ching 1798, when I investigated the viscera there were found bells full of water and some without water, and as I could not examine this point fully, so I cannot speak of it with certainty. Sometime afterwards I happened to be attending some patients with diseases of a very chronic character, who died; some of them drank much water, some little and some none at all, so that afterwards there was water still in the abdomen and although according to my earlier investigations of the outgoing water road I seemed to have reason on my side, yet I cannot definitely say it is so. Afterwards I compared it with animals and on killing them after they had drunk water, the bells of the *wang-yen* contained water, and if for three or four days they were not fed they had no water bells and so I came to the conclusion that water issued out of the water way. I have said above that food and water enter the stomach;

* The Chinese medical works do not acknowledge the existence of the pancreas as a viscus and on account of its absence our European physicians in their translations have taken the term (總才).

(By the way is not 甜肉 Sweet Flesh used by the modern medical translator, even as 關油 was the ancient medical term? the literal rendering here (thick oil) is somewhat obscure, yet we take it that these characters represented the pancreas itself irrespective of conveying any very distinctive meaning).—(Ed.)

the coarse parts of the food remain in the stomach, the chyle and watery juice flows out of the *chin-měn*; the opening would allow the juice to pass and also watery rice, and it is in this way that the *chin-měn*, although it is as large as a tendon, the body of the stomach at this place is very thick and compresses the opening all round so that water can pass but not food. Inside the stomach about a line elsewhere said to be an inch to the left of the *chin-měn* there is a tubercle, of the size of a date called *cho-shih* (遮食). Its function is to obstruct the food until the juices have run out and afterwards the dry food is dissolved and enters the small intestines and becomes fæces. But how do the small intestines dissolve the food and form fæces? It is because outside the small bowels there is the *c'hi-fu* which surrounds and embraces them and outside the bowels and inside the *c'hi-fu* there is stored up the primordial air which is a food dissolver, after which it enters the large intestines and goes out by the seat *anus* (肛門).

(To be continued)



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A MODERN CHINESE ANATOMIST.

BY JOHN DUDGEON, M.D., *Imperial Maritime Customs, Peking.*

(Continued.)

Discourse on the Brain Marrow.

Man's power of contrivance and memory lie not in the heart but in the brain. I have no wish to assert this doctrine and even if I do I know that nobody will believe me. If I do not, however, speak there are many diseases whose origin cannot be known, so I cannot but speak out. Not only do the medical books assert that memory and mind come from the heart but the learned, in treating of reason, virtue and conscience, all say that intelligence and memory are located in the heart, because at the beginning people did not know what the heart governed; they knew that it lay in the chest; they did not know that at the two sides of the larynx and gullet there are two air vessels, which at the front of the lungs unite to form one vessel which enters the heart; then goes out of the left side of the heart, passes the lungs and enters the spine. This is the *wei-tsung* vessel. In front it connects with the *chi-fu* and spermatic road; behind with the spine; above with the two shoulders; in the middle with the two kidneys, and below with the two lower extremities. This is the vessel that preserves the original or vital air and juices. This air goes out and in the heart; how then can the heart produce mind and store up memory? Why do I say that these mental qualities are in the brain, because food and water produce air and blood which grows the flesh; the pure delicate juice is converted into marrow which advances by the spine and so up to the brain and therefore is called *nao-sui* 腦髓 (brain marrow). That which contains the brain marrow is called the *sui-hai* 髓海 (the marrow sea); the top bone is called the *t'ien-ling-kei* 天靈蓋 (the cranium); the two ears communicate with the brain; the sounds we hear go to the brain. When the brain air is weak the brain is small; the brain and

ear air fail to connect, so there is resulting deafness arising from weakness; if anything obstructs the road between the ear and brain then there is complete deafness. The two eyes grow out from the brain; the two optic cords, like threads, are produced from the brain, so that things seen go to the brain. The pupil (*tung-jen* 瞳人) is of a white colour, because the brain juice fills it below and is called the brain juice entering the eye.* The nose also communicates with the brain and so odours go to the brain. If the brain suffers by either wind or heat from the nose the mucus and fœtid secretion flow out, and this is called brain fistula (*nao-lou* 腦漏). When we look at a little child at birth whose brain is not completely formed, the anterior fontanelle (*hsing-mên* 顛門) is weak; the eyes do not move actively; the ear does not hear; the nose does not smell; the tongue does not speak. After a year the brain begins to develop; the fontanelle fills up; the ear hears a little; the eyes move a little intelligently; the nose smells a little and knows the difference between what is fragrant and disagreeable; the tongue can speak one or two words. Advancing up to three or four years of age the brain becomes full; the fontanelle becomes completely closed; the ears can hear; the eyes can move and see; the nose can distinguish smells; the tongue can speak, and that children have no memory is because their brains are not completely formed. Old people's memory fails because the brain becomes hollow, in other words the brain matter becomes less. Li Shih-chên (李時珍) says that the brain is the residence of the original spirit; Chin Chêng-hsi (金正希) says that man's memory lies in his brain; Wang Jin-an (汪詡菴) says that when one wishes to remember or recall a past action he shuts his eyes, throws up his head and thinks; all which proves, in my opinion, that memory is located in the brain. If the brain is deprived for any period say two hours of air, there is not only no mind but there is death during that period; if one is half an hour without air one is dead for the same period; so there is epilepsy, which is caused by the original air not reaching the brain for that period; in convulsions the patient is alive, but the brain is dead; he is alive because the abdomen contains air and therefore the four extremities move. The brain is dead when it is deprived of air and therefore the ear is deaf, the eyes turn up like a dead person; there is a scream emitted before the convulsive attack, because there is no air in the brain and the chest air is confined and does not go out and in harmoniously, and being compressed there is the loud scream. During the convulsion there is a low groaning in the chest, because the saliva (*chin-ye* 津液) is in the air vessels; the mind of the brain cannot control the swal-

* This is doubtless the aqueous humour of the anterior chamber of the eye called white, much in the same way as they say *pai-k'ai-shui* (白開水), meaning white or clear boiling water. The Chinese idea is similar to our own and that of the Hebrews—the pupil or little man of the eye. How comes the curious expression 'apple of the eye' which seems devoid of any meaning? What more appropriate than the pupil of the eye.

lowing or vomiting of the saliva and so it remains stored up in the air vessels and this causes this peculiar sound called *lu-lu* (鹿 漚). After the convulsion there is headache and drowsiness, which although the air now circulates in the brain, is insufficient; in the child that is long ill the original air is weak and thus they are subject to convulsions. Grown up people are sometimes suddenly deprived of their senses (as in apoplexy for example); this is because the brain has no air, so the affected person does not recognise anything and is like a dead person. According to these investigations, does it not prove that the intelligence of man is situated in the brain?

Discourse on the Air, Blood and Pulse.

In regard to the nature of the pulse, what I inform posterity is the truth; if there are those who speak or write not according to what they know, or believe and assert themselves to be genii and do not conscientiously discourse of things, they must suffer punishments at the hands of Heaven. The *c'hi-fu* stores air; the *hsieh-fu* stores blood; the air from the *c'hi-fu* which comes from the *wei-tsung* vessel passes through the whole body whence the name; the *jung-tsung* (榮總管) vessel from the *hsieh-fu* travels all through the body and hence its name. The *wei-tsung* vessel is thick and coarse; it lies in front of the spine, connects with it and is distributed to the head, face and four extremities. That which lies close to the tendons and bones throughout the body is the air vessel. The *jung-tsung* vessel is thin. Lautse says in the *Tao-teh-king*, man's blood is the *jung*, the air is the *wei*. The *Nei-ching* says when the *wei* does not move the five viscera are not pervious and delicate and lies in front of and communicates with the *wei-tsung* vessel and is distributed to the head, face and four extremities and lies close to the skin and muscles and out of which arise the blood vessels of the whole body. The air in the *c'hi-fu* goes out and in. The exit and ingress are the expiration and inspiration; the eyes see, the ears hear, the head rotates, the body moves, the hand grasps, the feet walk, are one and all owing to the *ling-chi* (靈機) pressing the air to circulate; it percolates out of the vessel and grows the flesh; the air vessels lie near the tendons and bones and therefore concealed in the inside and so difficult to see; the blood vessels lie near the skin and flesh and appear externally and are therefore easily discernible. The air moves in the air vessels and thus the vessels move; the blood vessels store the blood and do not move. When the vessels of the head, face and limbs are pressed, they pulsate; this is owing to the air not to the blood. In the hollow called the *tai-yang* (太陽 the temple), behind the superciliary ridge, there is only skin and bone, little flesh, and hence the air pulsating is distinctly felt in the head and face air vessel. In the foot between the large and second toe there is a pulse on account of there being little flesh there and

the skin connects with the bone and communicates with the two air vessels of the foot. In the two hands above the transverse wrinkles on the high bone (on the radius at the wrist), the flesh is small and the skin lies on the bone and so it pulsates and connects with the two air vessels of the arm. The air vessels are large and small, straight and crooked; every person is not the same; below the elbow, near the carpus, the flesh is thick, the superficial air vessels are short; if the flesh be thin the vessels appear long. For example if we come under the influence of the external air and it enters the vessels, these vessels become large, and on pressure they feel high or elevated; if cold gets admittance the *chin-ye* coagulates and then the air becomes obstructed and the pulse necessarily slow; if fire (inflammation) enters the *chi-kwan* the pulse moves quickly; if a person is robust the *thievish* or deflected air from the outside excessive, the air in the vessels great, the pulse becomes very strong. On the other hand if man is weak, the perfect or original air insufficient and the air in the vessels inadequate, then the pulse becomes small and without strength; if a person is sick for a long time, and there is no hope of recovery, the original air little, the air travels to the head and upper extremities but does not descend to the lower parts so that there is no pulse in the face of the foot; if the pulse in the air vessels of two wrists is small like a thread or a very little movement or no movement or intermittent it indicates that the air is nearly exhausted. The air vessels in man therefore from birth to death are all different; they are large, small, straight or crooked. Their length or shortness varies according to the thickness or thinness of the flesh at the wrist. If you press it you will find whether it is large or small by its being weak or strong. When it pulsates quickly and slowly it is owing to fire and cold respectively.

What I have said above relates to the pulse, although I have not once mentioned the word (*i.e.* in the Chinese text), only spoken of movement, because the ancients did not know that there were right and left air doors, air and blood residences, *wei* and *jung-tzung* vessels, a *chin-mên* and *chin-kwan*, the *tsung-ti* covering the food and the *lung* (隴管) or exit water vessel. All these parts are in the abdomen and have their functions, of which the ancients were altogether ignorant. The ancients discoursed on the viscera and pericardium but did not know what they were, neither did they determine the *ching-lo* (經絡) and the *san-chiao* (三焦) three divisions and they could not tell whether the *ching-lo* were air or blood vessels. In discoursing on the pulse they said it was the 'blood residence' and communicated with the whole body, so that according to them the pulse vessels are blood vessels and contain air and blood circulating round and round. According to the ancients blood-flowing-discourse, if the blood of one part can flow to another part, the other part must have a hole or

receptacle for receiving it, but if there be a hollow empty place anywhere then the blood is insufficient, and if there be no empty place whither does the blood flow? The ancients did not know that the pulse was the air vessels, although they discoursed on a great variety of pulses and their positions in which every man was different. They said there were 27 characters or sorts and I dare not say they were wrong in their doctrine of the pulse, not because they have not a leg to stand upon (in Chinese no footing for their views) but because posterity in their treatment of disease would have no doctrine of the pulse to go upon. By feeling the pulse and knowing whether a person is going to live or die is easy, but to decide on the disease is difficult. In curing disease according to important methods the difference between blood and air must be distinguished, whether it is derived from without or set up from within and wish to know at the very beginning, if the disease can injure the individual, what things cannot injure the viscera cannot injure the tendons, and bones cannot injure the skin and flesh; these things that injure must be either blood or air; we cannot escape from these two causes. The air is either weak or strong (*hsü* 虛 or *shih* 實); the latter is the deflected or outside air, the former is its own original weakness. If the air is weak it must be of the order of the hemiplegic diseases, of which there are forty different sorts; of infantile convulsions there are twenty sorts which all belong to the weak diseases. According as diseases arise from weakness of air, our blood is either *kwei* 血虧 (little or impoverished) or *ü* (瘀), *i.e.* coagulated and must be owing to some cause; the former is owing to hæmoptysis, or spitting coloured phlegm coloured with blood, or hæmaturia, or bloody stools, or injury somewhere and blood escapes, or menorrhagia (*p'eng-low* 崩漏), or post partum hæmorrhage and much blood is lost and so greatly injured. These are blood *kwei* diseases. Of diseases depending on the blood *ü* we have further on mentioned fifty sorts, but if the blood in the 'blood residence' is coagulated and not movable and therefore difficult to distinguish the blood in the 'blood residence' and coagulated blood as for example in diseases that are feverish for half the afternoon and still worse during the first part of the night; the morning lighter and in the forenoon no fever, this is owing to be coagulated blood in the 'blood residence.' When the coagulated blood becomes lighter the diseases do not divide into four portions and the feverishness comes at one time before and after sunset and still lighter only at one time, both inside and outside are hot. After mid-day the body is cold and there is a short period of heat. This condition is owing to insufficiency of the air and ginseng and *hwang-chi* 黃芪 (*astragalus hwang-chi*) must be used, if at sunrise the body is not hot and then hot for a little, ginseng and *fu-tse* 附子 (tuberous roots of *Aconitum Fischeri*) are the remedies and they must not all be mixed up together.

Discourse on the absence of Blood in the Heart.

I have a friend called Hsieuh Wên-hwang (薛文煌), whose designation is Lang Chai (朗齋), a native of T'ung-chow, who has also studied medicine. Before proceeding to Shantung in the 2nd moon of the 10th year of Tao-kwang, 1830, he came to pay me a parting visit and we talked upon the root and origin of the blood of man. The ancients said the heart produces blood and the spleen moves and directs the blood and others state the opposite, but who knows which is correct? According to my idea neither is correct. I say that the blood is the delicate juice which enters the 'blood residence' where it is converted into blood. The heart is simply the out and ingoing air road and there is no blood inside it. *Lang Chai* opposed my view. He said the hearts of animals contained blood, why is it that man's contains none? I replied by asking him what animals' hearts contained blood? And he replied that in ancient prescriptions there is mentioned the *sui-sin-tan* (遂心丹), pills taken to cure madness. These pills are made of a species of *Wickstræmia* (*kan-sui* 甘遂) ground to powder and mixed with pig's heart's blood and thereof the pills are made, and is this not proof that the pig's heart contains blood? I replied that this was an error of the ancients; it was pig's blood but not out of the heart. When the heart is cut with a knife the blood in the heart comes from the cut walls of the chest, and if the heart be not cut there is no blood within it. I have seen numerous cases of this. I have seen an enormous number of sheep killed; they cut the neck and not the heart (as in the pig.) The sheep's heart contained no blood. He said if you do not cut the heart how is it the sheep dies so quickly? I replied, the blood in the chest walls is great and flows out rapidly at the moment of cutting and afterwards all the (systemic) blood of the body flows to the walls of the chest and afterwards it flows slowly. When the blood has all flowed out the air is dispersed, and the animal dies. For example two persons fight, one injures the other, and loses much blood; the air is dispersed and the blood flows away in quantity. The injured person goes into convulsions, which the ancients called *pò-shang-fêng* (破傷風), lacerated wound air = traumatic tetanus, and they used the *san-fêng* (散風) to cure it, and the person died all the more rapidly. The ancients therefore in trying to cure one killed two; they killed the injured person and the injurer was killed in consequence. If they had understood the doctrine of the dispersing of the air and blood they would not have had recourse to the *san-fêng* remedy but to *hwang-chi* and *tang-shen*, the root of an umbellifer (党參) as tonics to the air, and if they had cured the injured individual they would have saved two lives. When *Lang Chai* heard this he nodded his head and departed.

Preface to his Prescriptions.

I have not discoursed on the *San-chiau*, the *three divisions*, because I do not believe in such. On the outside the body is divided into the head, face and four extremities and the blood vessels of the whole body are inside. The diaphragm divides the trunk into an upper and lower portion; above is the heart, lung, larynx, pharynx and 'right and left air doors'; all the remainder are situated below the midriff. This book is not a complete one for the cure of disease. For diseases one had better consult *Wang-k'en-tang's* (王肯堂) work entitled *Ch'ing-chi-chun-sh'eng* (證治準繩), and if you wish to consult prescriptions the reader should look into *Chow-t'ing* (周定) and *Wang-chu-sun's* (王朱繡) *P'u-chi-fang* (普濟方).

If you want to investigate the nature and properties of drugs take *Li-shih-chên's Pen-t'sao* (Great Herbal). These three books are the origin and root of the medical faculty. One must read them and remember them. Outside these works now specified there is the *I-tsung-chin-chien* (醫宗金鑑) of our dynasty; the rationale given of disease and its prescriptions are good, and *Wu-yen-k'o's* (吳又可) book on Epidemic Fevers, and as for the remaining celebrated doctors, although they have not seen man's viscera, their methods of producing diaphoresis and their tonic and cathartic prescriptions produce good results.

Although I have written this book I cannot say that I have produced a work. My sole object has been to correct some errors of the ancients, and I have noted a number of prescriptions in the latter half of my book in order that a little of the order of medicine may be understood. My book is not in any sense complete. If persons do not read and study books and think by reading mine to have sufficient knowledge, that is not my fault but their own.

Explanation of the Diagrams.

The first twelve illustrations are those given by the ancients. Our author gives thirteen of his own.

According to the ancients the lungs have six lobes and two small ears or lobules, in all eight; that the large intestines have the *lan-mên* (ileo cæcal valve) above and the *kang-mên* (anus) below; that the stomach has the *pên-men* (cardiac orifice) above and the *yen-men* (pylorus) below; that the small intestines have the pylorus above and the *lan-mên* below; that the mouth of the bladder is the meatus urinarius (*niao-k'ung* 溺孔); that the gall bladder is situated in the short lobe of the liver and that the liver has three lobes on the left and four on the right, in all seven; that there are the three chiao, or divisions—upper, middle and lower; that the pericardium surrounds the heart and that out of the heart issue three pairs, *san-man* (vessels?) one each going to the kidneys, the liver and the spleen.

I saw them thus as the result of examining a great many viscera:—The two vessels called the ‘right and left air doors’ unite to form one vessel which enters the heart and from the left side turns horizontally, and behind connects with the *wei-tsung* vessel (the all embracing or protecting vessel). The heart is placed below the air vessel, not below the lung vessel. The heart and the lobes of the lungs above are on the same level. The lung vessel divides into two branches which enter the two lobes of the lungs and go to the very bottom of them, and these vessels have joints (cartilaginous rings). The lungs contain very light white mucus or froth like bean curd. The large faces of the two large lobes are directed backwards; the small face is directed to the chest; above are four peaks (apices), also directed to the chest; below there is a small piece, also directed to the chest. The outer skin of the lungs has no openings; there are, therefore, not twenty-four holes for the passage of the air as the ancients say.

Above the *k'o-moh* diaphragm are only the lungs, heart and the two air doors right and left and nothing else. Above the diaphragm the chest is full of blood and hence called *hsieh-fu*, the ‘blood reservoir.’ All other things are below the diaphragm. The diaphragm is the partition between things above and below.

The liver has four lobes. The gall bladder is situated below the second lobe on the right side (*Lobus Quadratus*.)

The *tsung-ti* lies above the stomach, the liver is above the *tsung-ti*. The large face is directed upwards; behind it is connected into the spine. The body of the liver is solid and strong and cannot be compared with the intestines, stomach and bladder and therefore cannot contain blood (the ancients say the liver stores blood).

The upper mouth of the stomach is called the *pěn-men* and lies right in the middle of the upper part of this organ; the *zen-měn* lies also at the upper part of the stomach but on the right side. An inch to the left of the *yen-měn* is the *chin-měn*; inside the stomach to the left of the *chin-měn* is a tubercle called the *cho-shih*; on the outside of the stomach on the left of the *chin-měn* is the *tsung-ti* and the liver is attached to it above. The stomach lies in the abdomen, lying quite flat in the lung direction; the upper mouth is directed to the back, the lower mouth to the right; its base is directed to the abdomen and is connected with the outgoing water road.

In the middle of the spleen is a vessel called the *lung* vessel (a perforated gem in the form of a dragon), full of perforations which permits of water passing freely out, hence called *lung-kwan*. The vessels of the spleen and stomach enter together the spleen, in the middle is the *lung* vessel. I have in addition drawn the *lung* vessel, because it is the outgoing water road, in order that the student may clearly understand it. The *lung* vessel divides on

both sides into outgoing water roads; the water percolates from the heart (spleen?) and enters the bladder and becomes urine. In the middle of the outgoing water vessels there are *returning* (curious expression!) blood vessels, the remainder are all water vessels.

The *c'hi-fu* popularly called *chi-kwan-yen* (雞冠油 cock's comb oil) covers by its lower border the small intestines. Inside the *c'hi-fu* and outside the small intestines is stored the original or primordial air of man (*tan-tien 丹田*). This original air is the solvent of the food (by entering the spleen and causing it to move on the stomach); man's vital force is here conserved.

The upper mouth of the large intestines is the lower mouth of the small intestines, and is called *lan-měn* (ileo-cæcal valve) and the lower door of the large bowels is called *kang-měn* (*anus*.)

The bladder has a lower but no upper mouth and the lower door is connected with the *ching 莖* (penis). The lower opening of the seminal road *ching-tao* (精道) enters the *ching* (莖). The seminal road in the female is called the uterus. The seminal road connects above with the *wei-tsung* vessel and the spine.

In the hollow of the two kidneys are two air vessels connected with the two sides of the *wei-tsung-kwan*. The body of the kidney is solid and strong and inside are no openings and therefore cannot store semen as the ancients said.

The white piece at the back of the tongue is called *hwei-yen* and covers right and left air doors' and the *how-měn* (larynx).

The *wei-tsung* vessel connects with the vessel coming out of the left side of the heart. This is the *wei-tsung* vessel, that is, air vessel and popularly called *yao* (lumbar) vessel (descending aorta). The slender vessel is the *jung-tsung* vessel which is a blood vessel. This *jung-tsung* vessel at the curvature (of the aorta) enters the *hsieh-fu*. The upper of the two middle branches connects with the *c'hi-fu*, the lower with the seminal road. At the upper part there are two vessels going to the right and left arms. Other two vessels right and left, enter the kidneys; the two lower ones the lower extremities, The eleven short vessels enter the spine.

The ancients said that the *ching-lo* were blood vessels, that in the outside of each viscus there were two roots; except the bladder which had four branches. I saw in the course of my examinations over 100 viscera and I found no such vessels emerging from them and so I have drawn the diagrams exhibiting this.

Remarks.—The fundamental error as already noted, into which our author falls, is his mistaking the arteries for air vessels. What he therefore calls his 'right and left air doors' are nothing else than the right and left common carotids which arise from the arch of the aorta, the right springing from the *arteria innominata* and the left direct from the transverse portion of the arch

of the aorta. According to Wang's view these two vessels unite with the trachea between them to form one vessel which enters the heart; this is the aorta which issues out of the left ventricles or as he says the left side of the heart and inclines horizontally backwards and unites with the *wei-tsung* vessel which is the descending aorta. This is the term for the arteries in general and has precisely the same meaning as originally attached to artery, viz., air vessel. He does not explain how the vessel entering the heart and rising from it must be the same. He could not have confounded the pulmonary artery and aorta. His description clearly points to the aorta as entering and leaving the heart.

By the lung vessel is meant the trachea. In many Chinese drawings the trachea is made to enter the heart, instead of the lungs. Mr. Wang is perfectly correct in his view of the lung vessel and the name he gives it indicates this. It divides into two branches which enter and proceed to the bottom by the lungs. He is particular on this last point for an obvious reason.

If we include the large vessels springing out of the heart, he is not far wrong in saying that the heart and upper border of the lungs are on the same level. He speaks of six lobes between the two lungs. The lungs we know have only five lobes, the right three and left two. He is right when he says that the pulmonary pleura have no holes. One of the most serious mistakes committed by the ancients was in the matter of these holes which permitted the air to circulate all over the body. He is right in saying that the liver has four lobes. He speaks of five but it is more to bring the number into harmony with the five fissures, five vessels and five ligaments, for the *lobulus caudatus* is hardly worthy of the name and at best is but the tail of the lobus.

In this we have perhaps an instance of our own addiction to the power of numbers.

The *tsung-ti* is the pancreas and may properly be said to lie above the stomach. On opening the abdomen if the liver be raised and the lesser omentum removed a part of the pancreas is seen along the lesser or upper curvature of the stomach.

The pylorus in the rough drawing is placed at the bottom of the descending portion of the duodenum, thus including the upper portion of the small intestines in the stomach. The *cho-shih* would thus become the pylorus or rather the circular or crescentic folds formed by the reduplication of the mucus membranes. The *chin-mên* becomes then from its location in the drawing either the hepatic or cystic duct formed by the union of the two common bile ducts which is made to enter the stomach on the right upper aspect and this again with the duct of the pancreas before entering the small bowel. The pancreas is not represented here with any duct and the *chin* (saliva) vessel appears to come from (or in his sense) to proceed to the gall bladder or liver. The

lung vessel certainly refers to the hilus or vertical fissure dividing the internal surface of the spleen, indicated by a fissure running through the whole length of the organ. The drawing, however, of this vessel illustrates roughly the areolar framework of the organ with dense meshes of tissues. The explanation perhaps of the expression that from this *lung* vessel exit-water-courses proceed four in number one each side, may be considered the four branches into which the splenic artery divides, which enter the hilus of the organ and ramify through its substance. Each branch of the artery runs in the transverse axis of the organ from within outwards and gives off smaller branches. These branches in the absence of any knowledge of the arterial circulation may be considered as the exit-water-courses. The same remarks would of course hold good as applied to the veins. In the drawing which is, of course, of the roughest description, the water courses have closed ends towards the central vessel and open ends towards the circumference which seems absurd. The soft white semi-fluid albuminous substance contained in the capsules might suggest the organ as engaged in separating the water. It is altogether impossible to understand how the water percolates out of the heart and enters the bladder and becomes urine, unless we suppose by the heart that blood is meant or that the *lung* vessel, the splenic artery, connects with the descending aorta which springs out of the heart. This latter is the most natural explanation, the former pre-supposes a knowledge of physiology which the Chinese to this day do not possess. The intermediary organs—the kidneys, are of course left out of the calculation. In the diagram of the bladder no ureters are indicated.

The *c'hi-fu* is a thing of our author's own creation; it may refer to the great omentum or the mesentery, more properly the latter from the description of its appearance and from the fact that it is attached to the posterior wall of the abdomen, the place which the Chinese assume to be the origin of the primordial air.

The two air vessels of the kidneys are the renal arteries, which arise from the sides of the aorta—the author's *wei-tsung* vessel. The drawing represents them in a curved manner instead of proceeding as the renal arteries do at nearly a right angle from the aorta.

The right and left air doors are, as already stated, the common carotid arteries supposed by our author to be air vessels; the epiglottis is said to cover the two doors and also the *how* door, which is of course the known and always recognised opening to the lung vessel or trachea. There is great confusion in China regarding the *how*, whether it should be applied to the larynx or to the pharynx.

The *wei-tsung* vessel (carotid arteries) unites with the vessel coming out of the left side of the heart, that is, the aorta. It is carried to the left in an

arched form and there are two vessels, one on the right and one on the left that connect with the arms; these are the subclavian arteries. The slender or thin and delicate vessel adjoining the aorta, drawn on the left side of the diagram, is the *jung-tsung* vessel, which is a blood vessel. Particular notice is taken of this fact that this vessel contains blood. The term is applied to the veins and here refers to the inferior *vena cava*. This vessel enters the blood receptacle called *hsieh-fu*, which according to our ideas should be the right auricle. From the right side of this vessel proceed two vessels, the upper one connects with the *c'hi-fu*, most probably the superior mesenteric, the lower with the seminal road, most likely the spermatic arteries. The eleven short vessels which connect with the spine are the intercostals. The spinal arteries do not rise directly from the descending aorta. The descending *wei-tsung* vessel is an air vessel and popularly called the lumbar vessel; this is the descending aorta. On the left of the illustration below are two vessels which connect with the two kidneys; these are the renal arteries, the two lower ones connect with the lower extremities; these are the right and left common iliac arteries. The description of the diaphragm is tolerably correct. He makes it the *hsieh-fu*, or blood residence, holding blood on its upper surface because of its shape and probably because the blood vessels pass through it. Ignorant of the true use of the arteries, it was necessary to create some such blood reservoir. Properly speaking this blood receptacle should be the right auricle of the heart.

Our author differs from the ancients in giving the stomach three instead of two doors. His description of the position of the stomach is substantially correct. He puts the *pylorus* down in the duodenum and so brings in his third door or opening. Our so-called pylorus, according to his diagram, is the *chin-mên*. He states correctly that the *yen-mên* is situated at the upper and right side of the stomach which hardly tallies with its position in his diagram. He has completely inverted the uses of his *chin-mên* and *chin-kwan* by which he thinks the juices of the stomach proceed *from* instead of their carrying juices to the alimentary canal. The division of the *chin-kwan* outside the *chin-mên* into three divisions makes it apparent that by the *chin-mên* he means the common opening of the pancreatic and bile ducts and the three ducts of which he speaks are doubtless those of the pancreas, common bile and cystic ducts. This part was rendered difficult of investigation by reason of the pancreas covering the *chin-mên*, a part of which requires to be removed to expose the opening of its duct. Were it not that this description is so minute, one would suppose that he had transposed the characters *chin* and *yen*. From the juice coming out of the stomach, one part goes to form marrow, one part to be converted into blood and the watery juice goes to the lower division and from the centre of the liver passes over to the spleen. The *wang-yen* is doubtless

the great omentum with its cribriform appearance, giving it the character of a fish net, through which the water is supposed to percolate. Were it not that he speaks of it as a vessel, the passing from the liver to the spleen probably refers to the lesser or gastrohepatic omentum.

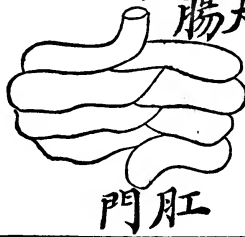
From its connections the pancreas may with truth be called the *tsung-ti'* the body that unites and suspends all. The duodenum being the widest and most fixed parts of the small intestines, it may seem to be but a prolongation of the still more dilated part called by us the stomach, although the thickened ring of the pylorus, making this the narrowest part of the whole alimentary canal, ought to have suggested some more rational limit to the stomach. A desire to be different from the ancients may have impelled him to this. The three divisions into which the *chin-kwan* divide may be pancreatic, hepatic and cystic ducts; this is on the supposition that the *chin-mên* is the mark of the pancreatic duct. This explanation it is difficult to reconcile with the description and drawing. What is meant by the lower division entering the liver and from the centre of the liver passing over to the spleen is difficult to say, unless the *chin-kwan* be the hepatic and cystic ducts.



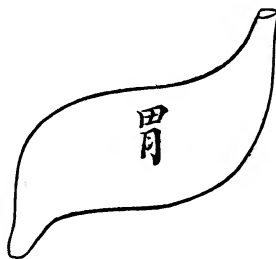
肺六葉兩
耳凡八葉



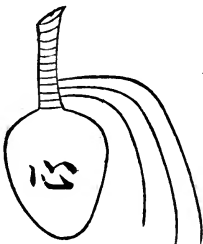
蘭門
大腸



賁門

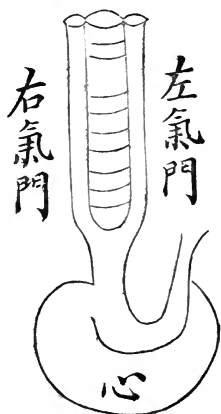


幽門



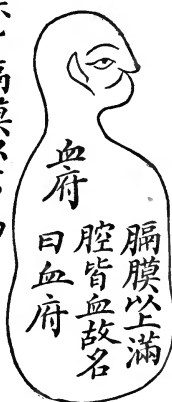
左氣門右氣門兩管歸中一管入心
由心左轉出橫行後接衛總管

心長在氣管之下
非在肺管之下心與
肺葉上稜齊



膈膜以上僅止肺心
左右氣門餘無他物

其餘皆膈膜以下物
人身膈膜是上下界物



肺管至肺分兩枝入
肺兩葉直貫到底
底皆有節

兩大葉大面向
背小面向胸上有四
尖向胸下二小片亦向胸



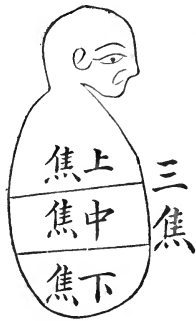
肺內所存皆輕浮
白沫如豆腐沫有
形無體

肺外皮寔無透
竅亦無行氣
之二十四孔

肝四葉
胆附于
肝右邊
第二葉



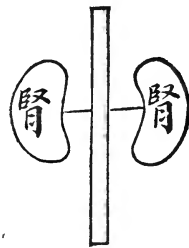
總提長于胃上肝又
長于總提之上大面
向上後連于脊肝
體堅寔非腸胃膀
胱可比絕不能藏血



胆附于肝之短葉

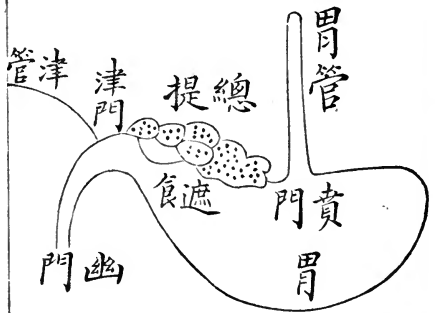


肝左三葉右四葉凡七葉



胃府之體質上口
 賁門在胃上正中
 下口幽門亦在胃上
 偏右幽門之左寸許
 至津門胃內津門之
 左有疙瘩如東名
 遮食胃外津門左
 名總提肝連于其
 上

氣府俗名鷄冠油
 下稜抱小腸氣府內
 小腸外乃存元氣之
 所元氣化食人身生
 命之源全在于此

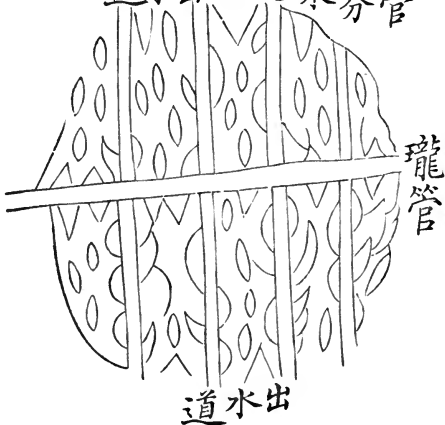


胃在腹是
 平鋪臥長
 上口向脊
 下口向在
 底向腹連
 出水道



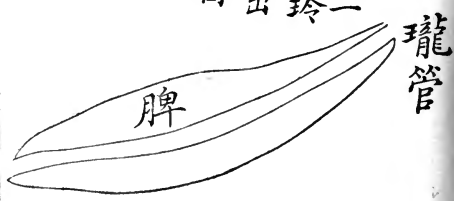
此係小腸外有氣府之色

中是瓏管
 水由瓏管分
 流兩邊出水
 道由出水道
 滲出心膀
 胱為尿管



水道中
 有回血管
 其餘皆係
 水管

胃中有一
 管體像玲
 瓏易于出
 水故名曰
 玲瓏



脾之長短與胃
 相入于脾

[From "The China Medical Missionary Journal," June, 1895.]

A CHAPTER IN CHINESE SURGERY.

BY J. DUDGEON, ESQ., M.D.

The Golden Mirror of Medicine describes briefly eight manual methods for the treatment of fractures of the bones, injury to the sinews, dislocations, etc. These are the *moh* (摸) or feeling method, the *chieh* (接) or uniting method, the *twan* (端) or supporting method, the *t'i* (提) or elevating method, the *an-moh* (按摩) or pressing and rubbing method, and the *t'ui-na* (推拿) or the method of pushing and taking hold of (so as to place it in position.) These various hand methods may fail or require to be supplemented by apparatus. Ten different forms are given by which the broken may be joined, the slanting made straight, the elevated made even, the depressed raised, the dangerous made benign and peaceful, the severe made light, together with the administration of medicine and a nourishing diet.

1. The first is termed *kwo-shai* (裹帘) by the use of bandages of white cloth; the length and breadth according to necessity.

2. The *Chen-ting* (振艇) or use of splints; length $1\frac{1}{2}$ feet; in roundness the size of a cash or like the baker's roller (*mien-chang*.) The blood and air at the part of injury have collected, and the parts are in consequence painful, swollen and hard; if beaten, above and below, once on each side the air and blood will be dispersed and the symptoms will diminish. The principle of the method is this. The head is bandaged tightly, and the soles of the feet are clapped to disperse the blood in the heart and cause the air of the viscera to circulate and expel the superfluous blood from the heart, and thus the nausea ceases and the body becomes comfortable; but if notwithstanding this the patient remains unconscious, and the phlegm in the throat resembles the sound of sawing wood and the body becomes rigid and there is froth in the mouth, the case is hopeless.

3. The *P'i-chien* (披肩) or shoulder cap is prepared of ox-hide; in length 5 inches, breadth 3 inches, with two holes at the two ends, to be tightly bound to the injured part with cotton string; the patient to recline. This leather cap is softer and more movable than the wooden splints. Having used the various manual manipulations necessary to restore the injured part to its original position afterwards take bandages and fasten the leather cap to the shoulder. Then take a board on which to rest the hands, over two feet long and three or four inches broad, with ropes passed through at the two ends; and suspend it and let the patient prostrate himself in it so that the

shoulder may hang down. Continue this practice for seven days, and if the parts have recovered, the bandages may be removed; if not they must still be worn, and if not continued a permanent defect will be the result.

4. *Suspension* (攀索) from a rope from a high place; the rope to be grasped by the hands.

5. Three *bricks* (疊板) are to be used for each foot, upon which the feet are to be placed. This is to cure injury of the thorax, abdomen, axillae and ribs from whatever cause the injury may have been inflicted. The chest has become depressed and must be elevated. The patient first takes hold of the ropes, standing on the bricks, and must fix the loins. Then one brick is removed from each side; the patient straightening his body and fixing the thorax. This is to be repeated three times, when the feet will have reached the ground and the air will have circulated and the superfluous air dissipated; the depressed will have become elevated, the bent will have become straight. Then use the bamboo screen with which he is to be enveloped and eight broad bandages with which he is to be bandaged, and everything is to be made proper and suitable. He then ought to recline on his back, and when sleeping ought not to lie either face downwards or on one side, and a pillow ought to be placed under the loins, and all movements to the right or left forbidden.

6. *The Communicating Board* (通木.) Take a piece of wood, three inches in breadth, two in thickness and the length from the loins to an inch above the shoulder; it is even on the outside, but hollow on the inside towards the spine with which in its hollows and elevations it must agree. It is perforated by five series of apertures. The diagram will illustrate its mode of application better than any description. It is so bandaged that the wood is kept from moving, and so advantage to the injured part secured. Soft cotton wool is applied to the side in contact with the body to prevent pain. In the case of injury of the spine, the joints laid open, or the bones elevated,—and as a result spinal deformity—the patient is to lie on his face, and another person is to stand on his shoulders, and the surgeon must closely examine the deformity and decide on the use of the light or heavy plan, whether to use the *twan* or supporting plan, or the *t'ui-na* the pushing and laying hold of, or the *an-moh* or the kneading to make the fissures unite; and then afterwards use the piece of wood as above described.

7. *Loin Pillars* (腰柱.) Take four pieces of wood like flat runner poles (used for carrying things) one inch broad and half inch thick; the length according to the injured part; holes to be made through them on the sides at the two ends, and cords passed through uniting them all together. In cases of injury to the lumbar spine, whether of the bones, sinews, or flesh, such as dislocation and curvature, a medicinal powder mixed with vinegar is first applied, then the pillars are applied quite straight on the two sides of the spine; a mattress of

artemisia is made to cover the pillars, in order to exclude wind and perspiration, and over all a broad bandage is wound round the body and drawn tightly, and the necessary medicine administered.

8. The *Bamboo Screen* (竹籬), in size according to the injured part, no matter where. The manual method must first be employed, then the bandages, and last of all the screen, and thus correct what is uneven or movable.

9. The *Deal Paling* (杉籬) is an auxiliary application. The length, breadth, bent or straight, projecting or depressed condition, must first be examined, then this wooden apparatus prepared; the number of pieces required must be calculated, and the order of their application remembered; holes at the two ends of each require to be made, through which cords are passed, with which they are tied together like a fence, and hence the name. They must not be so closely placed as in the screen. The fence is to be placed outside the screen and tied tightly with cords, and outside this again other cords must be used, with which to give strength and fixity and to prevent the joints now brought together from getting displaced. The screen alone, it is feared, may not give the necessary and required strength and fixity, hence this fence is recommended, that the parts may unite strongly.

10. The *Knee Cap* (抱膝) is made with the object of enveloping the patella. It consists of a bamboo circle with four feet. A piece of bamboo is taken and bent into a circular form and wound round with hempen thread, of which also the feet are made. White cloth bandages are employed and wound round the hoop and feet, and although inconvenient for the knee it gives no pain or trouble. The patella covers the ends of the two bones—femur and tibia; it is naturally very movable, and if injured it leaves its place, being displaced to one or other side; and although it can be replaced by the manual method, in walking, standing and the like, it is liable to return to its displaced position, hence the necessity for the enveloping plan to make it strong, and consequently prevent it from leaving its proper place, and thus prevent any limping defect which otherwise would be sure to arise. The apparatus as figured is placed on the knee, the loop keeps the cap in its place, and bandages are then employed to tighten and secure it firmly.

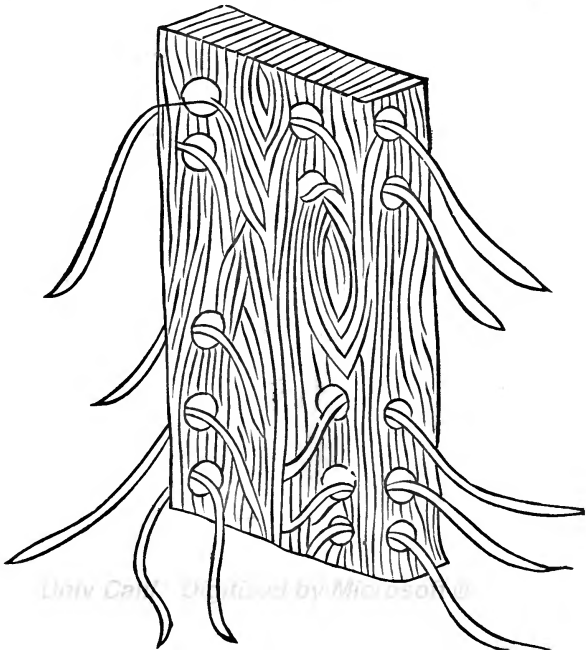


FOURTH AND FIFTH METHODS. *Suspension and Pile of Bricks.*

See page 60.



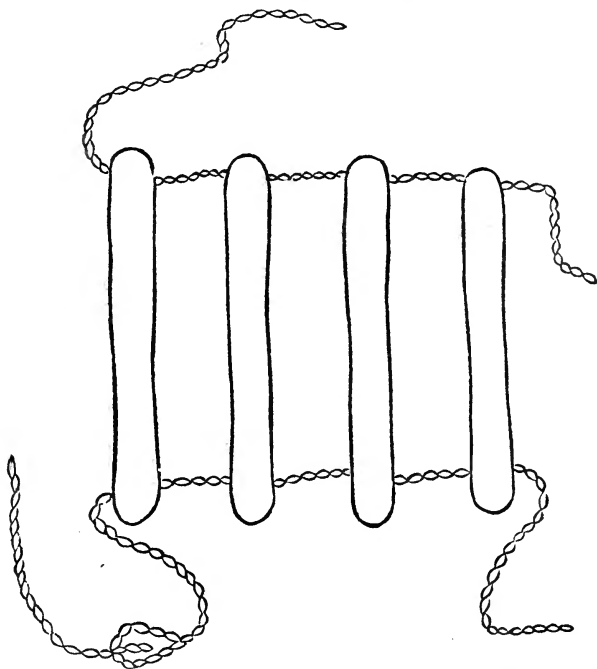
SIXTH METHOD. *Communicating Board.* See page 61.



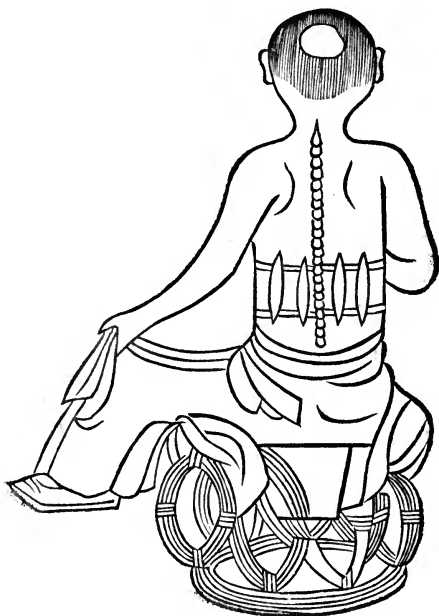


Communicating Board. Front View. See page 61.





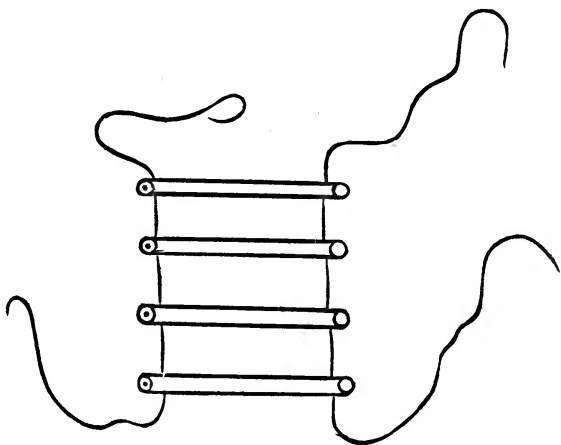
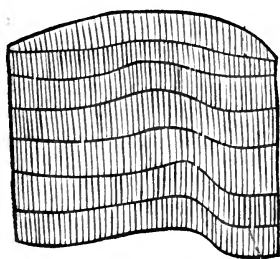
Loin Pillars. Back View. See page 61.



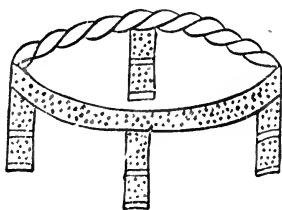


EIGHTH METHOD. *The Bamboo Screen.* See page 61.

NINTH METHOD. *The Deal Paling.* See page 61.



TENTH METHOD. *The Knee Cap.* See page 62.



The Knee Cap in use. See page 62.



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