

Continuity and Change in *Dao Yin*: Comparing and Contrasting the Therapeutic Exercises in *Yin Shu* (*The Book of Pulling*, c. 2nd Century BCE) and *Zhu Bing Yuan Hou Lun* (*Treatise on the Origins and Manifestations of Various Diseases*, 610 CE)

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Abstract

The manuscript *Yin Shu* (*The Book of Pulling*), excavated from Zhangjiaoshan Han Tomb No. 247, is the earliest surviving text on therapeutic exercise known as *Dao Yin* (lit. guiding and pulling). Discovered in 1983, this *Dao Yin* text, together with the drawings of 44 figures performing “guiding and pulling” exercises found in the Mawangdui Han Tomb in 1974, are of great significance to the study of the early history of *Dao Yin*. Prior to these discoveries, researchers into *Dao Yin* relied mainly on material found in the *Dao Zang* (*the Daoist Canon*), compiled in 1145. This led to their conclusion that *Dao Yin* was essentially Daoist. The development of *Dao Yin* reached its zenith during the Sui Dynasty (581–618 CE), when it became one of the three medical departments at the imperial medical education institution. As part of the medical reform of the second Sui Emperor, Yang Di, *Dao Yin* became the treatment of choice, and the employment of a large number of *Dao Yin* specialists to the Sui court transformed the state medical service. The compilation of *Zhu Bing Yuan Hou Lun* (*Treatise on the Origins and Manifestations of Various Diseases*) under Yang Di’s decree, incorporated an abundance of resources on *Dao Yin*, enabling physicians to potentially “prescribe” *Dao Yin* to their patients. Situating both *Yin Shu* and *Zhu Bing Yuan Hou Lun* in their social and historical contexts, this article analyses their editorial treatments, examines their different objectives, styles, and readerships, and compares the various exercises described in the two texts. It emphasizes the fact that over a period of nearly a thousand years, from the late Warring States (475–221 BCE) to the Sui and Tang periods, *Dao Yin* was an important medical practice, culminating in its institutionalization by the Sui government.

Keywords: *Dao Yin*; Early and medieval Chinese medicine; Therapeutic exercise; *Yin Shu*; *Zhu Bing Yuan Hou Lun*

1 Introduction

Dao Yin (導引), literally meaning “guiding and pulling,” is a form of physical exercise incorporating breathing, self-massage, visualization, incantation, and other techniques. The definition and understanding of *Dao Yin* differ according to contexts and historical periods. One definition, from 7th-century Chinese medical text

Zhu Bing Yuan Hou Lun (《諸病源候論》 *Treatise on the Origins and Manifestations of Various Diseases*), describes *Dao Yin* as a means to “pull out the pathogenic qi hidden in the aging body and in response to this pulling, the pathogenic qi is drawn out; thus the name *Dao Yin*.”¹ English translations include terms such as “gymnastics”, “callisthenics”, “healing exercise” and “therapeutic exercise”.

In her 1989 article, *Gymnastics: the Ancient Tradition*, French sinologist Catherine Despeux says:

“Among the earliest documents on gymnastics there are the short commentary to the pictures of the *Dao Yin Tu* and certain recently discovered texts on bamboo slips (see *Wenwu* 1985). The latter were unearthed in Jiangling in Hunan, but they have not been studied yet. One of the more extensive early sources is a medical text dating from the Sui dynasty. Except for these, all the texts that deal with gymnastics in this early period have been transmitted in the Daoist Canon, which was only edited in the Ming dynasty (1368–1644 CE).”²

These three *Dao Yin* sources, which have never been part of the *Dao Zang* collection, are the *Dao Yin Tu* (《導引圖》 *Drawing of Guiding and Pulling*), an excavated

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manuscript found in Mawangdui Han Tomb in 1974, the *Yin Shu* (《引書》 *the Book of Pulling*) another excavated manuscript found in Zhangjiashan Han Tomb in 1983 and the aforementioned *Zhu Bing Yuan Hou Lun*, a state-sponsored medical text of the Sui dynasty (581–618 CE). Each source gives evidence of the “non-Daoist” aspects of *Dao Yin* and is, therefore, invaluable. Before these Han manuscripts were excavated, *Dao Yin* was generally considered to belong first and foremost to Daoist traditions, a misconception still deeply rooted in academia, and particularly in Western scholarship, where most of the works on *Dao Yin* were written by Daoist or pro-Daoist scholars.³ Such bias can be traced back as far as the 18th century, when *Dao Yin* was first introduced to the West by the Jesuits, who described *Dao Yin* as Laozi’s kung-fu (Cong-fou des Bonzes Tao-sée).⁴ Hence the considerable academic value of *Dao Yin Tu* and *Yin Shu*, which prove the popularity of *Dao Yin* among the Han nobles, predating the establishment of organized Daoist communities such as the *Tian Shi Dao* (天師道 Way of the Celestial Masters) during the second century CE.

Another important early *Dao Yin* text mentioned by Despeux is *Zhu Bing Yuan Hou Lun*, which was compiled in 610 CE under the decree of the second Emperor of the Sui dynasty, *Yang Di* [隋煬帝 (r. 604–618)]. Its significance lies in the naming, describing, and classifying of all medical disorders known in early seventh-century China. This in itself is a remarkable medical innovation, especially when we consider that the earliest European texts on nosology, a branch of medicine dealing with the classification of diseases, such as “Nouvelles classes des maladies dans un ordre semblable à celui des botanistes” (1734) by François Boissier de Sauvages de Lacroix (1706–1767) and “Genera Morborum” (1763) by Swedish naturalist Carl Linnaeus (1707–1778), were not to appear for another thousand years.^{5,6}

A striking feature of *Zhu Bing Yuan Hou Lun* is the inclusion of *Yang Sheng* (養生) practices, an important component of which is *Dao Yin*. The term *Yang Sheng* was understood very differently by different people during the Warring States, Qin and Han periods (481 BCE–220 CE); however, by the fourth century CE, when Zhang Zhan (張湛 fl. 350–400 CE), an aristocrat of northern descent living in Jiankang [建康 (modern-day Nanjing)], compiled *Yang Sheng Yao Ji* (《養生要集》 *Essential Compendium on Nourishing Life*) “to help his fellow aristocrats stay healthy and live moderately,”⁷ the association of *Yang Sheng* with bodily practices would have been well established. These self-cultivation practices include breathing exercises, *Dao Yin*, diet, meditation and visualization, sexual hygiene, and other preventative health practices.³ In *Zhu Bing Yuan Hou Lun*, we can find an abundant resource of *Yang Sheng* materials drawing from various texts such as *Yang Sheng Yao Ji*, and in particular from the following two source materials: *Yang Sheng Fang* (《養生方》 *Yang Sheng Recipes*)

and *Yang Sheng Fang Dao Yin Fa* (《養生方導引法》 *The Yang Sheng Recipes: The Dao Yin Methods*). The former offers advice on lifestyles such as diet, sleep, and personal hygiene. The latter gives *Dao Yin* instructions such as treatments for various diseases.

This paper analyses and compares the *Dao Yin* material in the Han excavated manuscript *Yin Shu* with that in the 7th-century medical text *Zhu Bing Yuan Hou Lun*, situating both texts in their social and historical contexts. It investigates the contexts of their production, their writing and editorial styles and their function as well as giving examples of exercises found in both texts. The paper demonstrates that *Dao Yin* exercise was an integral part of medical knowledge and practice from the Han period, and was originally connected with the longevity and immortality practices of the *Xian* (仙transcendent) cult, which emerged around the late third century BCE. By the time of the Sui dynasty, *Dao Yin* was officially endorsed as a medical treatment and elevated to be the main component of state medicine, with the largest department in the imperial medical academy dedicated to its teaching and learning. It was also systematically incorporated into the state-sponsored medical text, *Zhu Bing Yuan Hou Lun*.

2 *Yin Shu* (The Book of Pulling)

Written on approximately 113 bamboo slips with 4,000 graphs in total, *Yin Shu* was buried, along with another medical manuscript, *Mai Shu* (《脈書》 *The Book of Channels*), in a tomb at the Zhangjiashan burial site in Hubei. It is not known who was buried in this tomb. According to Gao Dalun (高大倫), the occupant was likely to be a low-ranking official who was buried in 186 BCE during the reign of Empress Lü Zhi (呂雉 r. 187–180 BCE), the consort of Gao Zu (高祖 r. 202–195 BCE) who founded the Han dynasty.⁸ At this time the harsh law codes of the Qin (221–206 BCE) had been abolished and the milder edicts of the Han (202 BCE–220 CE) introduced, moving toward a more Confucian style of governing. As Unschuld remarks, “This is no longer the small feudal state and principality of the waning Zhou period, but rather the Confucian-Legalist administration system of the united empire.”⁹ A new medical paradigm, based on philosophical concepts such as qi, yin-yang and the five agents, began to emerge, as if reflecting the new unified and centralized political state. Representations of the body, the state and the cosmos were indicative of new ideas of correspondence between microcosm (the body and the state) and macrocosm (the cosmos).¹⁰

This new medical paradigm, described as a “medicine of systematic correspondence,” became increasingly systematized and standardized toward the end of the Han dynasty, and is represented by medical texts such as *Huang Di Nei Jing* (《黃帝內經》 *The Yellow Emperor’s Inner Classic*) and *Nan Jing* (《難經》 *The*



Figure 1 *Yin Shu* strip no. 1 (source from: Lo 2014¹³: 3).

Classic of Difficult Issues).⁹ At the same time, excavated medical texts in various early Han tombs are noticeably heterogeneous and less sophisticated. They demonstrate that ancestral and demonological concepts of illness prevalent during the Shang and Zhou dynasties (ca. 1600–256 BCE) had begun to yield their dominant position to the new medical paradigm whereby an illness was seen to have a “natural” cause.^{11,12} Excavated texts such as *Yin Shu* offer a window into this transitional period between the old and the new worlds of medicine, resonating with what was happening socially and politically.

Yin Shu is the first extant text focusing solely on *Dao Yin*, offering a comprehensive step-by-step guide to physical exercise for the educated Han nobility. Whereas most excavated manuscripts were untitled and only given names by modern archaeologists or conservation

committees, *Yin Shu* is named with the two characters, *Yin* (引) and *Shu* (書), which were written on the back of the manuscript’s first slip (Fig. 1).

According to *Shuo Wen Jie Zi* (《說文解字》 *Explaining Simple and Analysing Compound Characters*), the earliest extant dictionary compiled in the first century CE, *Dao* (導) was described as *Yin* (引), as in “opening a bow.”¹⁴ By the late Han, the two words had become cognate, with *yin* seeming to define the quality of guidance inherent in *Dao*, understood as a form of pulling. Thus *Yin Shu* would have been an appropriate title for a manuscript dedicated to *Dao Yin* exercise.

Both *Dao Yin Tu*, a drawing of 44 illustrations of human figures performing specific bodily movements, and *Yin Shu*, which describes in detail more than 100 *Dao Yin* exercises, demonstrate the popularity of this form of exercise among Chu elites in the Warring States and early imperial periods. As Harper observed, these literate elites had the time and money to engage in the pursuit of longevity and immortality practices and were “significant participants in the culture of secrecy and privileged knowledge.”¹² Those who passed on such knowledge and techniques were the so-called *Fang Shi* (方士 Masters of Formulas) who were specialists in “natural philosophy and occult knowledge.”^{12,15}

Sima Qian (司馬遷 ca. 145–86 BCE) first uses the title *Fang Shi* for those who arrived at the court of the First Emperor of the Qin dynasty (r. 221–210 BCE) with techniques for the way of *Xian*, of releasing the form and interacting with ghosts and spirits.¹⁶ Sima Qian describes these technical experts as followers of Zou Yan (騶衍 ca. 305–240 BCE), who was reputed to have developed a theory of cosmogony, using yin-yang and the Wuxing (five phases) in order to explain the cyclical changes in nature and to predict the political fortunes of rulers.¹⁶ Sivin stresses that the term *Fang Shi* was never used as a self-referent and was often derogatory.¹⁷ Nevertheless, some *Fang Shi* with expertise in medical knowledge and *Yang Sheng* techniques attracted Han nobles, who became their patrons. While *Fang Shi* is an eclectic term referring to a range of specialists in technical arts, *Yi* (醫) was a more specific title for physicians, although in *Huang Di Nei Jing*, the term *Fang Shi* also appears as a reference to physicians.¹⁸ Therefore, in some contexts, the terms *Fang Shi* and *Yi* would have been synonymous and interchangeable.

2.1 The structure of the text *Yin Shu* (The Book of Pulling)

Yin Shu can be divided into three parts. The first part deals with daily and year-round health care, including personal hygiene, diet, sleep, and sexual behavior. The second part, the main bulk of the manuscript, contains 41 sets of exercises, of which 37 are perfectly preserved. The third part outlines the etiology and prevention of certain diseases.

2.1.1 The first part of *Yin Shu*

The opening of *Yin Shu* evokes a legendary figure Pengzu (彭祖) who was known for his longevity through the practice of *Dao Yin* and sexual techniques:

"春產，夏長，秋收，冬藏，此彭祖之道也。"

(English translation:

"In the spring generate, in the summer grow, in the autumn harvest, in the winter preserve, this is the way of Pengzu."¹³)

The text goes on to describe the kind of regimen one should follow according to the season. "The way of Pengzu" in *Yin Shu* echoes the writing of *Zhuang Zi* (《莊子》 *Zhuang Zi*), a Warring States text attributed to the philosopher Zhuang Zhou (莊周 370–287 BCE) where the earliest recorded instance of the term *Dao Yin* appears:

"吹胸呼吸，吐故納新，熊經鳥伸，為壽而已矣。此道引之士，養形之人，彭祖壽考者之所好也。"

(English translation:

"The acts of exhaling and inhaling, breathing out the old and breathing in the new, hanging like a bear and stretching like a bird are simply methods for achieving longevity. These are what practitioners of *Dao Yin*, people who 'nourish their form' and pursue longevity like Pengzu, like to do."¹⁹)

The authors of this *Zhuang Zi* chapter, writing in the context of advising rulers on effective government, were critical of those *Dao Yin* practitioners who followed the way of Pengzu and whose priority was to nourish their physical bodies. They, on the other hand, emphasized the importance of nourishing the spirit *Yang Shen* (養神) and would probably not have approved of the kind of bodily practices advocated in *Yin Shu*.

Sensitive to the fact that the term *Yang Sheng* did not appear in any of the Mawangdui medical manuscripts, Harper is reluctant to use the term to describe the type of bodily practices described in these manuscripts. He prefers to use the term "macrobiotic hygiene." Harper also objects to the assumption that bodily self-cultivation practices depicted in these Han excavated manuscripts must be Daoist or belong to Daoism:

"The scholarly convention is to treat the complex ideas associated with both macrobiotic hygiene and the belief in *Xian* as aspects of a belief system loosely called Daoist.... The Mawangdui and Zhangjiaoshan macrobiotic hygiene texts are evidence enough that macrobiotic hygiene did not originate in so-called Daoist philosophy.... In short, efforts to understand the development of ideas concerning macrobiotic hygiene and the *Xian* cult are not well served by a too easy use of the label Daoism."¹²

Although little is known about the early formation of the *Xian* cult, it had become prominent by the late third century BCE. Harper argues that "eremitism, shamanic religion, and ideas about flight to spirit paradises each played a role, as did new ideas about a drug of deathlessness and alchemical elixirs which began to circulate in the third century BCE."¹² Various ancient figures, depicted

by Han and later writers as *Xian* have been portrayed as masters of *Dao Yin*, the most prominent of whom is Pengzu, evidenced in both *Yin Shu* and *Zhuang Zi*.

Two *Dao Yin*-related texts are listed in the *Shen Xian* (神仙spirit transcendence) subcategory under the *Fang Ji* (方技recipes and techniques) section of *Han Shu Yi Wen Zhi* (《漢書藝文志》 *The Bibliographic Treatise in the Book of Han*): *Huang Di Za Zi Bu Yin* (《黃帝雜子步引》 *The Yellow Emperor's Miscellaneous Walking and Pulling Exercises*) and *Huang Di Qi Bo An Mo* (《黃帝岐伯按摩》 *Massage and Therapeutic Exercises of the Yellow Emperor and Qi Bo*).²⁰ Together with the other three subcategories: *Yi Jing* (《醫經》 *Medical Classics*), *Jing Fang* (《經方》 *Canonical Recipes*), and *Fang Zhong* (《房中》 *Sexual Cultivation*), the texts listed in the *Fang Ji* represent early Chinese medical literature.

2.1.2 The second part of *Yin Shu*

The second part of *Yin Shu*, which contains 41 sets of exercises, can be further divided into two sections. The first section, headed by black dots on the slips, describes and names physical exercises. For example:

● 舉胛交股更上更下三十曰交股 ● 伸胛屈指三十曰尺蠖

[English translation:

"Raise the lower leg to cross the thigh, alternately raise and lower again thirty times. This is called 'Crossing the Thigh'. Extend the lower leg curling the toes thirty times. This is called the 'Inch Worm' (Strip no. 8)]."¹³ (Fig. 2)

● 以足摩胛陰陽各三十而更 ● 正伸兩足三十曰引陽筋

[English translation:

"Massage the lower leg with the foot, thirty times on the yin aspect and thirty times on the yang aspect, alternating. Extend the two feet out straight thirty times. This is called 'Pulling the yang Muscles' (Strip no. 11)]."¹³ (Fig. 3)

Terms such as yin, yang, and qi (but not the five agents) appear in *Yin Shu*, demonstrating how the instruction of *Dao Yin* was already employing the new technical language in vogue at that time.

The second section first names an illness before describing an appropriate exercise. For example:

● 引內瘳危坐口尻左手撫項右手撫左手上扼（？）俯極因徐縱而精响之端仰而已定 ● 又復之五而...

[English translation:

"Pulling inner exhaustion. Sit tall (on the haunches), X the buttocks, with the left-hand stroke the neck, with the right hand stroking the left hand, raise (the yoke). Bend forward as far as possible, then slow down, loosen up and concentrate exclusively on exhaling warm breath. Straighten up, raise the head and stop. Settle down, then repeat five times (Strip no. 29)]."¹³ (Fig. 4)

Exercises in *Yin Shu* fall into three main categories: physical movement, breathing exercises, and self-massage. Certain exercises are to be repeated up to as many as a thousand times, and in one example 4000 times, a day. Lo, who has analyzed *Yin Shu* and translated it into



Figure 2 Yin Shu Strip no. 8(source from: Lo 2014:13).

English, argues that the types of illnesses treated with *Dao Yin* in *Yin Shu* loosely match those associated with each of the 11 *Mai* (脈channels/vessels) described in *Mai Shu*.²¹ This is significant, as Lo's observation supports the hypothesis advanced by Shen Shou (沈寿), who suggests that the eleven columns of *Dao Yin Tu* correspond



Figure 3 Yin Shu Strip no. 11(source from: Lo 2014:19).

to the 11 channels described in both Mawangdui and Zhangjiashan tomb texts.²²

As part of the burial goods, *Yin Shu* was intended for use by the tomb's occupant. Lo notes that,

"... the symptoms, although roughly grouped as ailments of the ankle or back, are randomly ordered and



Figure 4 Yin Shu Strip no. 29 (source from: Lo 2014¹³: 39).

do not follow the neat head-to-toe format we have seen in other Chu texts. And unlike the *Wu Shi Er Bing Fang* (《五十二病方》) *Formulas for Fifty-two Diseases* which we saw provided contents lists matching signs of illness to specific sets of remedies, *Yin Shu* lacks an effective searching device.¹²³

Not having an easy way to locate a particular illness or apply the recommended exercise makes the text hard to use as a quick reference manual. By contrast, the innovative classification of *Dao Yin* exercises in *Zhu Bing Yuan Hou Lun* greatly enhanced their accessibility.

2.1.3 The third part of *Yin Shu*

The third part of *Yin Shu* describes the etiology of diseases and ways of maintaining good health. For example, it talks about the relationship between disease and social class:

"The reason that the nobility get illness is that they do not harmonise their joys and passions. If they are joyful then the yang qi is in excess. If they are angry then the yin qi is in excess...The reason that lowly people become ill is exhaustion from their labour, hunger and thirst; when the hundred sweats cease, they plunge themselves into water and then lie down in a cold and empty place. They do not know to put on more clothes and so they become ill from it. Also they do not know to expel air and breathe out (dry breath) to get rid of it. On account of this they have many illnesses and die easily."¹³

To summarize, *Yin Shu* testifies to the popularity of *Dao Yin* among the Han elites who had the time and money to engage themselves in various bodily practices. They learned the techniques from experts, generally referred to as *Fang Shi*, who were associated with the *Xian* cult of longevity and immortality practices. *Fang Shi* were not Daoists, nor were the Han elites. Therefore, it would be inappropriate to describe these exercises as "Daoist." In fact they were discredited by the authors of *Zhuang Zi*, which is often regarded as a Daoist text.

Being a tomb text, *Yin Shu* lacks a reliable searching device, which makes it hard to locate a specific exercise for a specific disease. Nevertheless, the material copied by the copyist of *Yin Shu* would have been conceived by those with a certain level of expertise, and would still be useful as a year-round health manual in the households of Han elites.

Several exercises from *Yin Shu* are found in *Zhu Bing Yuan Hou Lun*, a text compiled more than 800 years later, demonstrating some continuity in the tradition, albeit in different social and political contexts and for a different purpose and readership.

3 *Zhu Bing Yuan Hou Lun* (Treatise on the Origins and Manifestations of Various Diseases)

The Sui dynasty (581–618 CE), unified China after nearly four centuries of political fragmentation following the fall of the Han dynasty in 220 CE, and despite being short-lived, left an indelible mark in Chinese history. Two emperors span the Sui dynasty: *Wen Di* (隋文帝 [r.581–604]) and *Yang Di*. For almost 300 years, between the collapse of the Western Jin dynasty in 316 CE and the founding of the Sui dynasty, various non-Chinese nomadic groups dominated the political scene in northern China. Despite their *Xian Bei* (鮮卑) roots, both emperors of Sui dynasty regarded themselves as descendants of Han Chinese and promoted Chinese culture throughout their territory. Many of Wendi's

policies followed the old systems of the Han and Wei (魏 [220–266]) empires, adopting much of the “sinicized” policy of Emperor *Xiao Wen* of the Northern Wei (北魏孝文帝 [r. 471–499]). The aim was to create a single unified empire dominated by Chinese culture, Chinese systems of thought, art, law, and political organization, using the Chinese written language. Chen argues that in order to gain political legitimacy, the Sui and Tang rulers claimed to have been Han Chinese all along.²⁴ Thus medical knowledge and practice associated with the “medicine of systematic correspondence” during the Han dynasty and epitomized by medical texts such as the *Huang Di Nei Jing*, were advocated and supported during the Sui.

Significant among Sui reforms was the establishment of the Imperial Medical Office (太醫署) and with it a state-sponsored medical education system. Table 1 shows staffing levels at the Imperial Medical Office according to *Sui Shu* (《隋書》 *The Book of Sui*)²⁵.

Another set of data in *Tang Liu Dian* (《唐六典》 *The Six Statutes of the Tang Dynasty*), records the positions and numbers of staff and students at the Imperial Medical Office when it was handed over to the Tang sovereign (Table 2)²⁶.

The two sets of data reflect staffing levels during the reigns of the two emperors. *Sui Shu* suggests initial staffing levels at the Imperial Medical Office when first established by the hard-working, diligent and extremely frugal *Wen Di*; whereas *Tang Liu Dian* shows the changes that took place under the reign of *Yang Di*, who was renowned for his extravagance and aversion to criticism.

According to *Tang Liu Dian*, the *An Mo* Erudites were responsible for teaching *An Mo* students breathing exercises and *Dao Yin* in order to get rid of eight types of illness; namely diseases associated with wind, cold, summer heat, damp, hunger, overeating, over-exertion, and over-indulgence.²⁶ The term *An Mo*, often problematically translated as massage, was used interchangeably with *Dao Yin* during the Sui and Tang period. In fact, most historical texts containing instructions for *An Mo* techniques, are essentially *Dao Yin* exercises with self-massage as an important component. Therefore, these *An Mo* experts were not doctors who practised “massage” the way we understand nowadays but rather *Dao Yin* practitioners.³

Not only were there a large number of *Dao Yin* specialists at the department of *An Mo* during *Yang Di*’s reign, but a comparable initiative was responsible for a similar expansion at the Palace Medical Service (尚藥局), whose main responsibility was to provide medical care to the emperor and the imperial family. After the Palace Medical Service was placed under the Department of Palace Attendance (殿內省) in 607, over 200 people were employed at the Palace Medical Service, including 120 *An Mo* Masters.²⁶ These *An Mo* Masters were, in many ways, assistants to the *An Mo* Erudites. Had *Yang*

Di ordered the recruitment of 20 *An Mo* Erudites with 120 *An Mo* Masters at the Imperial Medical Office, and another 120 *An Mo* Masters at the Palace Medical Service while other staffing levels were disproportionately low in comparison, nobody would have argued with him.

While it was *Wen Di* who first established the three specialized medical departments, we can confidently assert that *Yang Di* had a particular vision of medical care which emphasized the role of *Dao Yin*. One of the reasons for *Yang Di*’s radical medical reform lies in his “southernisation.” Having spent most of his adult life in the south, his access to books on a wide variety of subjects would have enabled him to gain knowledge in medicine and *Yang Sheng*, both of which were intertwined with southern religious communities such as the *Shangqing* School (上清派) and the *Tiantai* School (天台派), two religious sects with which he had a deep association. *Yang Di* also had an enthusiasm for occultism and would actively seek out people with unusual abilities, bringing them to his court. All these influences could have contributed to his vision of creating a new state medical service with *Dao Yin* at its core.

Although we do not have evidence to suggest that *Yang Di*’s initiative extended beyond the Sui’s capitals, it is reasonable to deduce that his intention was to transform contemporary medical knowledge and practice by creating a new medical discourse, which would ultimately affect not only everyone within Sui empire but others further afield. Had *Yang Di*’s medical reform survived, the history of medicine in China would have been very different! Yet, the legacy of his vision is embodied and preserved in *Zhu Bing Yuan Hou Lun*.

As a text on nosology, *Zhu Bing Yuan Hou Lun* could simply have categorized individual diseases, without including any therapy, let alone *Yang Sheng* and/or *Dao Yin* instructions. It was on *Yang Di*’s order, however, that their insertion was carried out. *Yang Di* achieved two medical innovations in this state-sponsored medical text—the production of the first ever encyclopedic medical text on nosology in China and, possibly, in the world, and the creation of a new medical discourse elevating

Table 1 Staffing levels at the Imperial Medical Office according to *Sui Shu*

Job title (Chinese)	Job title (English)	No. of staff
太醫令	Imperial Physician	2
太醫丞	Aide to the Imperial Physician	2
主藥	Pharmacist	2
醫師	Master Physician	200
藥園師	Herbalist	2
醫博士	Erudite of Medicine	2
醫助教	Assistant of Medicine	2
按摩博士	Erudite of <i>An Mo</i>	2
咒禁博士	Erudite of Incantation and Interdiction	2
Total		216

Table 2 Staffing levels at the Imperial Medical Office according to *Tang Liu Dian*

Job titles (Chinese)	Job titles (English)	No. of staff and students
太醫令	Imperial Physician	2
太醫丞	Aide to the Imperial Physician	2
醫監	Medical Supervisor	5
醫正	Principal Practitioner	10
醫師	Master Physician	200
藥園師	Herbalist	2
藥生	Student herbalists	8
醫博士	Erudite of Medicine	2
醫助教	Assistant of Medicine	0
醫生	Student of Medicine	120
按摩博士	Erudite of <i>An Mo</i>	20
按摩師	<i>Amno</i> Master	120
按摩生	Student of <i>An Mo</i>	100
咒禁博士	Erudite of Incantation and Interdiction	1
Total		592

Dao Yin to its prominent position as the main medical therapy of the state medical service.

3.1 The structure of the text *Zhu Bing Yuan Hou Lun*

Two fundamental concepts in *Zhu Bing Yuan Hou Lun* are central to the formation of the text—*Bing* (病), meaning disease, illness or disorder, and *Hou* (候), which can be translated as manifestation, sign, syndrome or symptom. *Zhu Bing Yuan Hou Lun* is organized on two levels—that of *Bing*, which functions as a larger “disorder” category, and that of *Hou*, which functions as an individual disease. The *Bing* category, identifying illness as separate from the sufferer, runs contrary to the central premise of Chinese medicine, that it is the patient, not just the disease, that is being treated. Thus, the process described in *Zhu Bing Yuan Hou Lun*, of identifying different “disorders” and their various “signs” and “symptoms,” has a modern ring to it, anticipating the extensive specialization of modern Western medicine.

According to Ding Guangdi's edition of *Zhu Bing Yuan Hou Lun*, there are a total of 1739 *Hou*, under 71 *Bing* in 50 scrolls.¹ *Dao Yin* exercises are prescribed for 110 out of 1739 *Hou* – about 6% of the *Hou* in *Zhu Bing Yuan Hou Lun*. However, these 110 *Hou* appear in 50 of the 71 *Bing*. By this measure, *Dao Yin* exercises are prescribed for over two-thirds of disorders in *Zhu Bing Yuan Hou Lun*. It is notable that many of the *Dao Yin* instructions appear at the beginning of each category, and the first *Hou* often bears the same name as the disorder itself. For example, the first *Hou* in the “Disorder of Deficiency Exhaustion” (虛勞病) is named “Symptoms of Deficiency Exhaustion” (虛勞候), and gives a general introduction to the whole *Bing* (disorder). Twelve *Dao Yin* exercises are recommended for the conditions described in this *Hou*. The fact that

Dao Yin exercises appear in many of the introductory disease sections is significant, as they could potentially address all diseases in those categories, and therefore be relevant for two-thirds of all 1739 sets of signs and symptoms.

Table 3 shows the 50 *Bing* (disorders) categories in *Zhu Bing Yuan Hou Lun* for which *Dao Yin* exercises are prescribed, together with the numbers of exercises in each category, and whether or not the exercises appear in the first *Hou*.

Despeux makes the following observations about *Dao Yin* exercises in the Sui and Tang period:

“The texts refer to gymnastics especially in connection with problems of the arms and legs, with muscle tensions, rheumatism, locomotive troubles, paralyses, and so on. All these, in large part, belong to a group of ailments classified traditionally as “disorder caused by wind”. In the same group one finds also digestive troubles, psychosomatic disorders, weakness in the circulation of the blood, body fluids or respiratory symptoms. On the other hand, fevers, epidemics, and the various disorders related to the seven orifices (ears, eyes, nose, mouth etc.) are only occasionally mentioned as responding to gymnastics therapy.”²

Lo notes similar types of illnesses which were treated by moxibustion, a form of heat therapy in which dried plant materials called “moxa” are burned on particular points of the body. Examining the moxibustion charts in the Dunhuang manuscripts of the Tang period found in a Buddhist cave on the Silk Road, Lo observes that:

"For treatment of those non-fatal, non-contagious chronic illnesses, predominantly associated with pain, digestion and external attack by wind and cold, moxibustion and *Dao Yin* must have provided a practical and accessible form of home remedy, especially for those with no access or money to pay professional physicians."²⁷

Thus, for both Despeux and Lo, *Dao Yin* exercises are most effective in treating locomotive muscular conditions, gastrointestinal disorders, pain, and sensory disturbance. However, examination of the diseases in *Zhu Bing Yuan Hou Lun* treated by *Dao Yin* exercises suggests that the picture is a more complex one. While some of the 50 disorder categories for which *Dao Yin* exercises are prescribed fit easily into the curative descriptions mentioned above, others are harder to classify. Disorders such as *Gu* (蠱poison), *Zhu* (注infixation, lit. residence), *Shi* (尸corpse), malignancy stroke, and sudden turmoil, do not seem to fit neatly into the aforementioned categories. For example, the diseases of *Zhu* are often contagious but can be treated by *Dao Yin*. There is also an acute illness with a sudden uprising qi for which a *Dao Yin* remedy is recommended.¹

It is interesting to note that *Dao Yin* is perceived as a practical, flexible, and accessible form of home remedy, in contrast to the effort made by the Sui government, demonstrated clearly in *Zhu Bing Yuan Hou Lun*, to formalize and standardize *Dao Yin* exercises.

Table 3 The 50 *Bing* categories in *Zhu Bing Yuan Hou Lun* (Treatise on the Origins and Manifestations of Various Diseases) for which *Dao Yin* exercises are prescribed, together with the number of exercises in each category and whether the *Dao Yin* instructions appear in the first *Hou* of a particular *Bing* category

No.	Name of disorders (in Chinese)	Name of disorders (in English)	No. of <i>Dao Yin</i> exercises	<i>Dao Yin</i> in the first <i>Hou</i>
1.	風病	Wind Disorder	65	13th
2.	虛勞病	Disorder of Deficiency Exhaustion	41	✓
3.	腰背病	Disorder of Lumbar Region	11	✓
4.	消渴病	Disorder of Wasting & Thirsting	2	✓
5.	傷寒病	Disorder of Cold-damage	2	✓
6.	時氣病	Seasonal Disorder	1	✓
7.	溫病	Warm Disorder	3	✓
8.	疫癘病	Epidemic Pestilential Disorder	2	✓
9.	冷熱病	Cold and Hot Disorder	9	✓
10.	氣病	Disorder of Qi	8	✓
11.	腳氣病	Disorder of Leg-qi	5	✓
12.	咳嗽病	Cough Disorder	3	10th
13.	淋病	<i>Lin</i> (Painful Urinary Dribbling) Disorder	5	✓
14.	小便病	Disorder of Bladder Movements	3	2nd
15.	大便病	Disorder of Bowel Movements	3	✓
16.	五臟六腑病	Disorder of Five <i>Zang</i> and Six <i>Fu</i>	11	✓
17.	腹痛病	Disorder of Abdominal Pain	11	✓
18.	心腹痛病	Disorder of Pain in the Heart Region	2	✓
19.	痢病	Dysentery Disorder	1	✓
20.	九蟲病	Disorder of Nine Worms	2	2nd
21.	積聚病	Disorder of Aggregation and Accumulation	7	✓
22.	癥瘕病	Disorder of Abdominal Mass	1	2nd
23.	疝病	Disorder of Bulging Disorder	3	2nd
24.	痰飲病	Phlegm-rheum Disorder	3	✓
25.	癰病	Disorder of Ensnared Lumps	1	✓
26.	舌噎病	Disorder of Block and Choke	1	2nd
27.	脾胃病	Disorder of Spleen and Stomach	1	2nd
28.	嘔噦病	Retching Disorder	3	4th
29.	宿食不消病	Disorder of Indigestion	9	✓
30.	水腫病	Disorder of Water Swelling	5	✓
31.	霍亂病	Disorder of Sudden Turmoil	12	22nd
32.	中惡病	Disorder of Malignity Stroke	1	8th
33.	尸病	Disorder of Corpse	1	7th
34.	注病	Disorder of Infestation/Residence	2	✓
35.	蠱毒病	Disorder of Gu Poison	3	✓
36.	血病	Blood Disorder	1	✓
37.	毛髮病	Hair Disorder	7	✓
38.	目病	Eye Disorder	8	7th
39.	鼻病	Nose Disorder	4	✓
40.	耳病	Ear Disorder	2	✓
41.	牙齒病	Teeth Disorder	3	3rd
42.	唇口病	Disorder of Lips and Mouth	1	✓
43.	咽喉心胸病	Disorder of Throat, Heart and Chest	3	✓
44.	癭瘤等病	Disorder of Goitres and Tumors of the Neck	3	11th
45.	癰疽病	Disorder of Abscess and Swelling	2	15th
46.	癰病	Disorder of Chronic Sore	2	34th
47.	痔病	Disorder of Hemorrhoid	4	✓
48.	瘡病	Disorder of Sore	2	3rd
49.	腕傷病	Disorder of Injury of Wrist	5	3rd
50.	婦人雜病	Women's Miscellaneous Disorder	2	133rd
		Total	292	

3.2 The editorial intention of the Text

The style of writing is lucid as well as formal in *Zhu Bing Yuan Hou Lun*, as might be expected from an official medical text. The etiology of an illness is described, together with its symptoms, and, often, its pulse. Where there are instructions for *Yang Sheng* and/or *Dao Yin* exercises, they are preceded by a standard phrase:

"其湯熨針石，別有正方，補養宣導，今附於後。"

(English translation:

"The orthodox prescriptions for decoction, hot compress, needles and *bian*-stones are given elsewhere. The *Yang Sheng* supplementation and *Dao Yin* instructions are now attached here below.")

Here is an example of a disease entry entitled "Symptoms of lopsidedness caused by wind":

"偏風者，風邪偏客於身一邊也。人體有偏虛者，風邪乘虛而傷之，故為偏風也。其狀，或不知痛癢，或緩

縱，或痺痛是也。其湯熨針石，別有正方，補養宣導，今附於後。《養生方·導引法》云：一手長舒，令掌仰，一手捉頰，挽之向外，一時極勢二七。左右亦然。手不動，兩向側極勢，急挽之，二七。去頸骨急強，頭風腦旋，喉痺，膊內冷注，偏風。”

[English translation:

"Lopsidedness caused by wind is when pathogenic *wind* is lodged on one side of the body. When the body is deficient on one side, pathogenic *wind* takes advantage of this and causes injury; hence a lopsidedness caused by wind. The signs are: an inability to feel pain, itch, being sluggish and lacking control, or having *Bi* pain. The orthodox prescriptions for decoction, hot compress, needles and *bian*-stones are given elsewhere. The *Yang Sheng* supplementation and *Dao Yin* instructions are now attached here below.

The *Yang Sheng fang Dao Yin Fa* says, "Stretch one arm out fully, palm facing up. The other hand holds your chin and pulls it out. Extend the posture to its limit for a while, twice seven times, doing the same on both left and right. Then, keeping the hand in place, try to turn your head to both sides as much as possible whilst holding (your chin) tightly twice seven times. This gets rid of tension and stiffness in the neck, *head-wind*, dizziness, *throat-bi*, a cold sensation in the shoulders, and lopsidedness caused by wind.""]¹

Notice that the last sentence describes the curative benefits of the exercise. The compilers of *Zhu Bing Yuan Hou Lun* seem to have followed the clue and inserted the same exercise into other relevant disease entries:

- Symptoms of head-spin caused by wind 風頭眩候
- Symptoms of cold residence 冷注候
- Symptoms of throat-*bi* 喉痺候

Unlike other *Dao Yin*-related materials, such as the ones recorded in *Yang Sheng Fang Dao Yin Fa*, whose exercise instructions tend to precede descriptions of their curative benefits, a new classification of exercises, in accordance with the etiology and symptoms of a given condition in *Zhu Bing Yuan Hou Lun*, created a new medical discourse and thereby put *Yang Di*'s vision of medicine and health into practice. The new nomenclature of medical disorders gave doctors at court greater expertise and ease of access to various *Yang Sheng* and *Dao Yin* instructions, enabling them both to diagnose the illness, and determine which *Yang Sheng* instructions and/or *Dao Yin* exercises would be appropriate to prescribe.

Five types of exercises appear in *Zhu Bing Yuan Hou Lun*:

1. physical movement
2. breathing exercises
3. self-massage
4. visualization
5. incantation.

These are frequently combined to form one particular exercise. For example, physical movement is often

combined with specific breathing techniques, or visualization with self-massage. Visualization and incantations, absent in *Yin Shu*, are important components of the *Dao Yin* repertoire in *Zhu Bing Yuan Hou Lun*. For example, the treatment for "Symptoms of falling hair and beard, and baldness," is to comb the hair while reciting an incantation, to be carried out with the assistance of a servant.¹ This image of luxury epitomizes the literate elites from genteel families who were able to pay attention to their health and physical well-being. We can imagine them performing these incantations, invoking heavenly deities such as the Queen Mother of the West, a Daoist deity, in order to cure sickness and extend their lifespan. Such incantations also bear witness to the appropriation of religious practices by the state into the Sui's official medical system.

Zhu Bing Yuan Hou Lun would have also been used for pedagogical purposes, having been written from a doctor's perspective by medical officials at *Yang Di*'s court, at a time when the department of *An Mo* was at its largest. A standardized textbook on *Dao Yin* would have been required both as a teaching aid and for examinations.

The standardization of *Dao Yin* by the state had a regulatory function, ensuring the subordinate position of other healing practices performed by Daoists, Buddhists, or members of local cults. As *Dao Yin* was already popular as part of a regimen and as a household treatment among the elites, and among various religious communities as part of spiritual and religious training, the state was able to appropriate certain techniques, and patronize certain people, making exclusive claims to authority on *Dao Yin*.

4 *Dao Yin* exercises in *Yin Shu* and *Zhu Bing Yuan Hou Lun*

Several *Dao Yin* exercises in *Yin Shu* are found in *Zhu Bing Yuan Hou Lun*. For example, "clacking teeth" is recommended for toothache in both texts:

"黨以涿齒，令人不齩。其齩也，益涿之。"

[English translation:

"On waking knocking the teeth prevents tooth decay; if there is tooth decay knock

them more (*Yin Shu* Strip no. 98)."]¹³

"東向坐，不息四通，上下涿齒三十六下。治齒痛。"

[English translation:

"Sit facing east, hold your breath four times, and clack together your teeth, up and down, thirty-six times. This cures toothache (*Zhu Bing Yuan Hou Lun*, Juan 29 Teeth Disorder, section 3: Symptom of Toothache)."]¹

This technique, appropriated by Daoists, later became a method of expelling ghosts, and as such it also appears in *Zhu Bing Yuan Hou Lun*:

"《養生方》云：《上清真人訣》曰：夜行常涿齒，殺鬼邪。"

[English translation:

"The *Yang Sheng Fang* says, 'The Formula of the Perfected of the Great Clarity says, 'When walking in the night, always clack your teeth together. This kills ghost' (Juan 2 Wind Disorder, section 47: Symptoms of ghost deviance)." ¹

An instruction in *Yin Shu* for "Pulling Pain in the Eye," is to "rub the two hands together until the fingers are hot, and press on both eyes, stopping after ten times (Strip no. 91)." ¹³ This closely resembles the recommendation in *Zhu Bing Yuan Hou Lun* for curing "Poor Vision," that is, "Rub both hands together to make them hot, and press them against your eyes. Do this three times (Juan 28 Eye Disorder, section 12: Symptom of Poor Vision)" ¹

Yin Shu instructs those suffering from back pain to "lean forwards and backwards with the feet apart, touching the hands to the floor. Stop after ten times (Strip no. 50)." ¹³ *Zhu Bing Yuan Hou Lun*'s similar strategy for "Symptoms of Lumbar Pain, Inability to Bend Forwards or Backwards," is to "stretch out both legs, grab your toes, five on each foot, with both hands. Do this seven times." ¹

For throat-*bi* (blockage), *Yin Shu* suggests one should "stroke the chest, lift the chin, enclosing the top teeth within the bottom, vigorously look up three times and stop (Strip no. 83)." ¹³ For the same disease, *Zhu Bing Yuan Hou Lun* advises one to "hold the chin, pull it out and extend the posture to its limit for a while, twice seven times." ¹

Various breathing techniques are common to both *Yin Shu* and *Zhu Bing Yuan Hou Lun*. For example, terms such as *Wu Xi* (毋息 do not breathe) and *Bi Xi* (閉息 hold the breath) are used in *Yin Shu*; whereas terms such as *Bu Xi* (不息 do not breathe) and *Bi Qi* (閉氣 hold the breath) appear more than sixty times in *Zhu Bing Yuan Hou Lun*. The idea of *Yan Qi* (咽氣 swallowing qi) is also present in both texts. Other technical terms, such as *Ji Zhi* (極之) and *Ji Yi* (極已), often translated as "as much as possible" or "as far as possible," feature in many *Dao Yin* instructions in *Yin Shu*, while the very similar term *Ji Shi* (極勢 extreme posture, i.e., extending the posture as much as possible) also appears frequently in *Zhu Bing Yuan Hou Lun*.

From these examples, we can surmise that some *Dao Yin* exercises, as well as certain technical terms, had been passed down from the Han to the Sui. Adopted and adapted by different authors and compilers, they eventually found their way into the state-sponsored medical text of the Sui court.

5 Conclusion

Yin Shu tells us that during the Qin and early Han periods *Dao Yin* was popular among the nobles of the southern Chu state as a way to maintain their health and prolong their lives. Furthermore, *Yin Shu* was closely associated with the longevity and immortality practices of the *Xian* cult which swept through late third century

BCE elite society. In particular, *Yin Shu* advocates the way of Peng Zu, which was criticized by the type of Daoists represented by the authors of *Zhuang Zi*. Being a tomb text, *Yin Shu* lacks a reliable searching device which makes it hard to locate a certain exercise for a particular disease.

The new classification of exercises in *Zhu Bing Yuan Hou Lun*, in accordance with the etiology and symptoms of a given condition, represents a significant advance in the development of *Dao Yin* during the Sui, as it greatly enhanced the accessibility of the exercises for physicians, enabling them first to identify the patient's illness and then to prescribe appropriate exercises as treatment. The inclusion of *Dao Yin* in *Zhu Bing Yuan Hou Lun* was, in many ways, a concrete example of the second Sui Emperor's radical medical reform, establishing *Dao Yin* exercise as the main component of state medicine and thus creating a distinct medical system with a greater emphasis on non-drug-based therapy.

While *Dao Yin* exercises in both *Yin Shu* and *Zhu Bing Yuan Hou Lun* are for the cure and prevention of disease, they were written for different readerships. Most of *Yin Shu*'s readers were Han dignitaries and nobles, while those of *Zhu Bing Yuan Hou Lun* were physicians and medical students. The transmission of medical knowledge had evolved from "secret or semi-secret transmission" during the Warring States, Qin and Han periods, via family-oriented transmission during the Six Dynasties, to the medical school system of the Sui and Tang periods. Apart from several *Dao Yin* exercises in *Zhu Bing Yuan Hou Lun* which can be traced to their Daoist origins, the majority of the exercises in both texts can hardly be interpreted as Daoist. The rich *Dao Yin* materials in both texts demonstrate clearly that *Dao Yin* had always been an integral part of medical knowledge and practice in early and medieval China.

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