TO BRING ORDER OUT OF CHAOS:
LITERATI MEDICINE OF THE JIN DYNASTY (1115-1234)

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ABSTRACT

This is a study of literati medicine of the Jin dynasty (1115-1234) and how physicians born or active during this period extended and refined the Confucian cosmological paradigm through the process of normal scientific development while embedding a socio-political discourse into their medical texts. Literati medicine is defined as a textual tradition composed by those educated for success on the civil service examinations, but who turned to the study of medicine as opportunities for government service waned. The Jin is recognized as the dominant East Asian regional power in the twelfth century, surrounded by tributary states, and the narrative of its history is reinterpreted in part as a response to environmental challenges perceived by the literati as a threat to the Jin’s legitimacy. An alternative model of the trajectory of early Chinese medical development is proposed in order to contextualize the works of the middle period, which argues the classical medical canon promulgated by Northern Song dynasty (960-1127) officials represents their idealized conception of elite Tang dynasty (618-907) medicine rather than genuine Han dynasty (206 BC-221) medicine. The contributions of Jin literati physicians towards the application of orthodox theories to disease mechanisms and treatment strategies, the refinement of tongue and pulse diagnosis, the categorization of the materia medica together with a revised understanding of the key functions of medicinals, dosage and ingredient modifications of classical formulas, and the promotion of contemporary prescriptions, are detailed. In conclusion, a new periodization for intellectual history identified as the Period of the Four Great Masters (c.1000-1400) is proposed that describes the shift from the public to the private sphere as literati continued to fulfill their moral obligation to perpetuate Confucian civilization.
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- Qin 秦 dynasty (221-206 BC)
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*Three Kingdoms Period* (220-280)
- Jin 晉 dynasty (265-420)
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MAPS OF EAST ASIA

Major Land Features of East Asia

Major Water Features of East Asia
An important scholarly goal is to provide as much transparency as possible to the evidence used to support historical arguments. Thus for this study, many passages from primary source texts are presented in Chinese characters first, followed by this author’s original translations. These are block indented, single spaced, with the characters arranged in the same order as the English language text: left to right, top to bottom. No punctuation is used in the Chinese passages since it was absent from the original texts. However, spaces separating groups of characters indicate how the text is being interpreted, and that grouping is always maintained by starting a new line rather than breaking the group apart. Within translated passages, the use of square brackets around words or phrases (e.g., [the emperor]) indicate that they were added by the author to improve the clarity of the translation, but have no direct equivalent in the original passage. These additions are often necessary to bridge the chasm between the structure of classical Chinese and modern English. Shorter passages, book titles, chapter or essay titles, proper names, and other terms, are rendered using the Chinese normative transcription system Hanyu Pinyin 漢語拼音, although tone marks are omitted. This is followed by the characters the first time they appear in a chapter, plus parenthetically an English language translation. For example: boluan fanzheng 撥亂反正 (to bring order out of chaos).

Subsequently, only the Pinyin and/or translation are used for brevity. Proper names are not italicized, and according to tradition all Chinese names indicate the family or surname first. For example: Liu Wansu (surname: Liu; personal name: Wansu). Book titles are capitalized, but chapter or essay titles are not, to help readers distinguish between the two. Jurchen, Khitan, and Mongol, are used to represent the indigenous terms for self-reference, instead of Nuzhen, Qidan, or Menggu, which are the Chinese phonetic versions.

A variety of textual sources were used in the research for this study on Jin literati medicine and often more than one version of a primary source was examined. Many of the sources are readily available as reprints from China. Although they retain the original structure of the source texts, they are usually rendered in the modern simplified characters and include punctuation inserted by the editors as a reading aid. Other sources use the traditional Chinese characters, and still others remain in the original unpunctuated format. A few of the texts are also available translated into English, especially the early classics. The author of this study decided to render all characters in their traditional form.
when copied from simplified editions to better approximate the structure and appearance of the original sources. Although this can create some minor discrepancies, as many simplified characters were also used in the original texts, it is valuable for maintaining a consistent format. The original appearance of the text is retained whenever known. A valuable resource for this endeavor was a digitized version of the original woodblock prints of the medical collection from the *Siku Quanshu* (Complete Collection in Four Treasuries), first published in 1782 and republished by Wuhan University Publishing House in 1998, which provided the author with some of the most authentic examples of the original appearance of these medical texts. Another valuable research tool was the Chinese Text Project, which maintains an online search engine for classical Chinese literature (ctext.org). In the notes, electronic citations include section and subsection titles in Chinese, not only for transparency in research methods, but also to hold these still academically suspect resources to a higher standard. All citations of medical texts, both electronic as well as reprints, were checked and verified by this author in editions from the *Siku Quanshu*.

For the purpose of providing a convenient reference for an English speaking and reading audience, all dates are rendered in the modern Gregorian calendar. However, dates after the year 1 appear without any appellation (e.g., AD or CE), whereas dates before the year 1 include the appellation BC. Several abbreviations appear before given dates: “circa” for estimated dates (e.g., c.500 BC); “reigned” for reign dates of emperors and kings (e.g., r.1115-1123); “died” for when only dates of death are known (e.g., d.1626); and “flourished” for when only dates of activity are known (e.g., fl.1213-1231). Dates for the reign periods of rulers are based on the table included in the Chinese-English dictionary by R.H. Mathews (1931). Months are rendered according to how they appear in the source texts that used the lunar calendar, such that the first month of a year corresponds to the first month of spring and not the first month in the Western calendar, which would be January. Although this can create slight temporal confusion, it is done for academic transparency and textual consistency.

It has become a common practice in Western studies of Chinese medicine to leave the terms *yin* 陰 (shady side of a mountain, dark force, part of the metaphysical duality of complimentary opposites), *yang* 陽 (sunny side of a mountain, bright force, etc.), and *qi* 氣 (energy, vital force, breath, the manifestation of all things), untranslated, unitalicized, and often capitalized, with the justification that these terms have no simple target word
for which to serve in translation, and that they are now so widely known in the West that
they have been adopted into the English language. Although the first part of the argument
has merit, the second part is not persuasive. While some claim these terms are now part
of the English language, the term wuxing 五行 (five elemental-phases) remains part of
the Chinese language, but these terms are all conceptually intertwined. Furthermore, the
majority of people who have not studied Eastern philosophy have at best only a partial
understanding of terms like yin, yang, qi, and wuxing, concepts that together form the
basis of the classical cosmological paradigm. Therefore, all of these Chinese language
terms are rendered in Pinyin, complete with italics.

The names of Chinese medicinals are rendered with the Pinyin first, followed by
the Chinese characters, and in parentheses: either the binomial scientific name (genus &
specific epithet) in italics with the authority when only one species is preferred, or the
genus alone when more than one species from the same genus may be substituted,
followed by the part of the plant or animal used, in Latin. For example: guizhi 桂枝
(Cinnamomum cassia Blume, Ramulus), commonly known as cinnamon twigs. This
provides the necessary information to identify these medicinals in a format consistent
with the modern professional literature for those involved with the clinical practice of
Chinese medicine. Where illustrative, a translation of the literal name of the medicinal
may also be provided. The common name of some medicinals is occasionally used, such
as cinnamon, ginger, and jujube. When dosages are included for medicinal formulas they
are rendered as they appear in the source texts. The most commonly used measurements
during the Jin were liang 两 and qian 钱 (1 liang is equal to 10 qian). While an exact
metric equivalent is difficult to establish with certainty since these measurements
changed over time, for a general guide: 1 liang is about 30 grams and 1 qian is about 3
grams. As for other measurements: both 1 zi 字 (¼ qian or ~0.75 grams) and 1 fen 分 (1/10
qian or ~0.3 grams) are less than 1 gram, while 1 zhu 銖 (~1 ¼ grams) is slightly more,
with 24 zhu equal to 1 liang; 1 jin 斤 (~480 grams) is equal to 16 liang; 1 sheng 升 is a
liquid volume measure equal to about 1 jin in weight; 1 sheng also equals 10 ge 合 (so 1
ge is ~48 grams); it is unclear what measure 1 chi 尺 represents as a medicinal dosage, as
this usually refers to a unit of length equal to 10 cun 寸 (proportional inches), but from
context it appears to be similar to 1 sheng or jin.
Similarly, acupuncture needling locations are rendered with the Pinyin first, followed by the Chinese characters, and in parentheses: the modern identifier using abbreviations for the organ-channel with a number based on a series indicating the directional flow of the channels, plus a literal translation. For example: taichong 太沖 (LR-3, great surging). The following abbreviations are used for the twelve primary organ-channels: lung-LU, large intestine-LI, stomach-ST, spleen-SP, heart-HT, small intestine-SI, urinary bladder-UB, kidney-KD, pericardium-PC, sanjiao 三焦 (triple warmer, three burners)-SJ, gall bladder-GB, and liver-LR. Other channels are not abbreviated. This also provides the most relevant information for those involved with the clinical practice of acupuncture. However, it is important to add that this is a historical study and is not meant to provide medical advice or treatment guidelines, for which one should consult a qualified practitioner.

The maps included in this study only identify general regions, places, and geographic features, to serve as a visual aid for the narrative. They are not meant to be cartographically precise. No borders are depicted as these were in flux. Elevations are generalized: green is low, brown is medium, and white is high. Blue indicates rivers, lakes, and seas. Stars indicate the capitals of the Jin and its tributary states. Dots indicate cities, towns, or villages. Triangles indicate sacred mountains.

The study of classical Chinese and its translation into the modern English language is universally acknowledged as difficult. A scholarly debate has been ongoing regarding how to render Chinese medicine’s professional nomenclature in English, with some in favor of a standardized approach while others favor more flexibility. Those in favor of standardization attempt to mimic modern technical vocabularies to conform to Western notions of science, but this obscures the historical sources behind a modern construct. In contrast, flexibility is inherent in the classical use of characters and necessary for interpreting the archaic grammar structures. An effort was made by this author to understand the thinking of the author on their own terms and to consider the historical and cultural context of their works while translating this material, being careful to avoid purposefully inserting my own bias without sound justification. Such an endeavor is sure to encounter problems, and so this author takes full responsibility for any and all mistakes.
INTRODUCTION

This study on Jin 金 dynasty (1115-1234) literati medicine makes several key contributions to the historiography of East Asia. By focusing on a Chinese dynasty that has remained peripheral to discussions on Chinese history it supports a broader perspective on East Asian history and the multiculturalism of the period. By integrating medical, environmental, and political history, it provides fresh insights into the motivations of not only literati doctors, but also Confucian elites, government officials, emperors, and khans, which should compel historians to examine similar evidence from other centuries. By providing a new contextualized definition of literati medicine, it traces the origins of the discipline, explains how it flourished in the twelfth century, and how it had an enduring impact on subsequent generations. Together, these contributions advance the study of East Asian history.

Several arguments are proposed and supported in this study of Jin literati medicine, but foremost is that “literati medicine” is a valid framework for analyzing the extant medical literature of this period. Other scholars argue that it was not until the Yuan 元 dynasty (1260-1368) that the maturation of ruyi 儒醫 (Confucian physicians, literati medicine) occurred (Brook, T., 2010; Bol, P.K., 2008; Furth, C., 2006, 1999; Hymes, R.P., 1987). An assumption of these studies is that inclusion among the elites of society was dependent upon attainment of the jinshi 進士 (advanced scholar) degree, qualifying the recipient for service as a high government official. Nonetheless, Robert P. Hymes (1987), who first championed this argument, references a statement made by the Northern Song 北宋 dynasty (960-1126) scholar Fan Zhongyan 范仲淹 (989-1052) that evidences the growing acceptance of medicine as an acceptable path for the literati during this period: “given that [high office] is unattainable, none can fulfill so well as a good doctor the desire to save the people and benefit the world (trans. Hymes, p.43-44).” Moreover, Chang Woei Ong (2008) argues that the Jin-Yuan period redefined the literati, such that inclusion among society’s intellectual elite was no longer dependent upon jinshi degree achievement or even government service, because both of these paths were strictly limited by the Jurchen and Mongol courts. This loss of privileged status led to boundary crossing, with literati often seeking careers in medicine or the military for which alternative examinations and degrees had been implemented, or taking low positions in the bureaucracy as clerks. Due to a poverty of options, many literati even chose to chushi 仕途.
出世 (leave the world), as with the Quanzhen 全真 (Complete Truth) Daoist tradition founded by Wang Zhe 王喆 (1113-1170) during the Jin, seeking metaphorical seclusion or hermitage and extricating themselves from the responsibility of public service. However, these scholars still tried to jingshi 經世 (order the world) from within the private sphere. Therefore, limiting the definition of literati medicine to books produced by jinshi degree holders is problematic and must be rejected.

This study defines literati medicine as a textual tradition composed by people who were educated for success on the civil service examinations and turned to the study of medicine. This trend emerged in the late Northern Song and flourished during the Jin, such that by the Yuan it had already become an established field. From their textual legacy it is evident that Jin physicians were members of the educated elite who were gewu zhizhi 格物致知 (investigating things & extending knowledge) and conducting kaoju 考據 (textual critique) or kaozheng 考證 (textual analysis, testing of a diagnosis) of the available corpus of classical medical literature. Furthermore, their efforts to boluan fanzheng 撥亂反正 (bring order out of chaos) extended from the individual bingren 病人 (sick person, patient), to zhongguo 中國 (the central state), to Tianxia 天下 (all under Heaven, the known universe), as evidenced by an embedded socio-political discourse in their extant writings. It is precisely these characteristics that define the field of literati medicine.

As ruyí matured, these physicians gained the authority to question the classical tradition, the audacity to recommend improvements, and the cleverness to adapt existing structures and institutions to serve new goals. No longer content to merely comment on the classics, Jin dynasty physicians dared to add their own contributions to the medical corpus, citing the precedent of Wang Bing 王冰 (c.762) who inserted several chapters into the most sacred of the Han medical classics: Huangdi Neijing 黃帝內經 (Yellow Emperor’s Inner Classic). The result of their efforts included a growing consensus on the relative accuracy of diagnostic methods and the efficacy of different treatment strategies from both classical and contemporary medical literature. Although only a few literati doctors of the Jin are identified with certainty, their prolific production of medical texts suggests a vibrant elite culture buying and reading these texts. It is envisaged that many Jin elites used the remedies from these books on their families, friends, servants, or an even wider patient population. These texts further evidence literati engagement in
vigorous debates with their peers about the current state of medical, social, political, and environmental affairs, and thus they were fully participating in elite society. This advances the discussion about Jin medical texts beyond simplistic arguments regarding how one doctor thought all disease was from heat, another doctor preferred purgatives, while still another emphasized tonics, towards a more nuanced argument about how literati physicians interpreted health and disease as part of a broader cosmological framework.

The idea that medical discourse can be understood simultaneously as a political discourse is not new, but it has not been rigorously applied as an analytical model to the study of medical texts. Nathan Sivin (1995) traces this idea back to the beginning of imperial history, arguing that “in China ideas of Nature [or the Cosmos], state, and the body were so interdependent that they are best considered a single complex (p.5),” with the emperor serving as the mediator of cosmic, governmental, and medical forces. Looking at late imperial history, Anne D. Birdwhistell (1995) examined the writings of the philosopher Li Yong 李顒 (1627-1705) and argues he used medicine as a metaphor to frame his ideas. Birdwhistell states that for Li: “the patient was both society (the sociopolitical order) and individual persons as moral-social selves (p.3),” and that philosophical teaching was medicine “to treat the illnesses of individuals and society (p.6).” In a study on the impact of Confucianism on medical ethics, Guo Jiaojiang (1995) argues that the Confucian tradition’s teachings on ethics and morality are inseparable from politics, and that this applied equally to medical ethics, which should be adapted to serve political needs. Therefore, this research builds on this logic by applying it to medical texts of the Jin dynasty to demonstrate a flourishing culture of literati medicine.

This research reveals that Jin physicians were all loyal subjects who were offering advice on the perceived imbalances of Tianxia (all under Heaven). Their concerns included both the socio-political climate and the forces of nature that were believed to reflect Heaven’s temperament concerning the activities of mankind in general, the imperial court more narrowly, and the emperor, or Tianzi 天子 (Son of Heaven), in particular. Ong (2008) also found that loyalty to the current dynasty was a prominent theme among Jin literati, as revealed in the writings of Zhang Jian 張健 (d.1175) and Yang Tingxiu 楊庭秀 (d.1215), and this same loyalty is evident in the writings of Jin literati physicians. It was believed that Heaven’s discontent was expressed through earthquakes, droughts, floods, and disease epidemics, all of which were recorded by
officials and included in the dynastic histories under the heading: wuxing 五行 (five elemental-phases). Medicine was an ideal medium for this discourse because the professional nomenclature in many instances mirrored the political. As the medical profession came to be accepted among the Confucian elite it provided a new forum for discussing socio-political issues. This was a sophisticated endeavor of using medical treatises as vehicles for social discourse while simultaneously being engaged in normal scientific development. This is yet another distinguishing feature of Jin literati medicine.

This study confirms Jin elites participated in the study of medicine to strengthen the existing orthodoxy, and were extending and refining existing theories as part of their commitment to the perpetuation of Confucian civilization. That orthodoxy was founded on a cosmology based on yin 阴 and yang 陽, the complementary yet opposing forces that are integral to the qi 气 (energy or manifestation) of the wanwu 萬物 (myriad things) and the generation of the wuxing (five elemental-phases). “Normal scientific development” was defined by Thomas Kuhn (1996) as “an enterprise that…aims to refine, extend, and articulate a paradigm that is already in existence (p.122),” as opposed to the “scientific revolution,” which seeks to replace the existing paradigm with a new one that better explains observed phenomenon. A recent trend in Chinese historical scholarship is characterized by the work of Benjamin A. Elman (2002, 2005), who challenges the Eurocentric teleological argument of European “success” and non-European “failure” in scientific development based on the 17th century Protestant-based scientific revolution. Elman points to the application of the concept gewu zhizhi in literati medicine, whereby physicians were conducting objective studies of the natural world, and argues against the idea the literati were only engaged in subjective and idealized approaches. Similarly, Christopher Cullen (1990) studied the writings of Song Yingxing 宋應星 (1587-1665), who was perhaps the first scholar to systematically apply natural philosophy to technology, and concludes that Song’s insights preclude the argument that the theories of qi and wuxing were impediments to scientific inquiry. Nathan Sivin (2000) argues that the study of Chinese medical history no longer needs to be limited by a positivist comparison with Western science with the intention of answering the question of why Chinese development stagnated, and from a belief that one universal system of science is the ultimate goal. Sivin challenges scholars to ask questions about the relationships between medicine and society, about the internal and external sources for new ideas and innovations, about foreign influences on medical development, and more. Thus this study
of Jin medicine will begin to answer some of these questions and further our understanding of science in China.

This study challenges other trends in conventional Chinese historiography. Most fundamentally, it challenges the historical narrative that the legitimate sequence of dynastic succession proceeded from the Song 宋 (960-1279) dynasty to the Yuan 元 dynasty (1260-1368). Instead, this study adopts a Jin-centric approach to situate this dynasty firmly between the other two: Northern Song, to Jin, to Yuan. This relegates the Southern Song, or Nansong 南宋 dynasty (1127-1279) as it will be referred to in this study, to the periphery as just one of several tributary states that recognized the suzerainty of the Da Jin 大金 (Great Jin dynasty) during the twelfth century. Prefacing the current dynasty’s name with da 大 (great, large, big, grand) was a long standing tradition that served to pay homage to the reigning Son of Heaven, and is directly relevant to the study of Jin literati medicine. Keeping with the Jin-centric approach, and since an analysis of Jin medical texts requires an understanding of the Confucian cosmological paradigm, the five phase periodization used for this study echoes the cosmological debates of Jin literati physicians and government officials. Many of the arguments made regarding the contributions of Jin physicians in this study require a Jin-centric point of view, for absent the contextualization of the authors as loyal subjects of a Chinese dynastic state that rules over all under Heaven, the deeper meaning of these texts is lost.

This research further contributes to our understanding of the historiographically neglected Jin dynasty. As Hoyt C. Tillman and Stephen H. West (1995), as well as Herbert Franke and Chan Hok-lam (1997), have all pointed out: knowledge of the Jin has been limited foremost by a lack of sources. However, neither of their edited studies of the Jin included any reference to medicine. Both Tillman and Peter K. Bol (1995, 2008) directly argue against the conventional view that Jin literati were outside the Confucian tradition and that the Jin was an intellectual “dark age,” and instead show how Han literati culture flourished. This study of Jin medicine lends further support to their arguments, using a rich collection of primary sources. It is further argued that the subjects of Jin considered their dynasty to have received the mandate of Heaven after conquering the Central Plains and establishing an empire that was surrounded by the tributary state triad of the Nansong, which governed the economically prosperous region south of the Yangzi River, the Xixia 西夏 (c.1030-1230), which governed the overland trade routes in
the rugged desert regions beyond the mountain passes to the northwest, and the Gaoli 高麗 (918-1392), which governed the Korean Peninsula in the northeast and provided a buffer to Japan during the Heian 平安 (794-1185) and Kamakura 鎌倉 (1185-1333) periods. Therefore, the Jin was the dominant East Asian regional power during the twelfth century.

In some of the earliest English language studies of the Jin dynasty, Jing-shen Tao (1970; 1974; 1976) discussed the assimilation, amalgamation, and acculturation of northern nomadic and semi-nomadic peoples into Chinese civilization. Tao called this process “Sinicization” and concluded that the Jurchen achieved almost complete assimilation. Notably, medicine is absent from Tao’s study of the Jin. He disputed earlier scholars like Owen Lattimore (1962), who described the Jin as a “marginal society” that never fully achieved “fusion” with Chinese society. However, Tao still adopted the identification of the Jin as a foreign “conquest dynasty” as proposed by Karl A. Wittfogel and Feng Chia-sheng (1946). Wittfogel and Feng argued none of the major conquest dynasties that they identified achieved full absorption into Chinese society, with all of them maintaining a dual structure to preserve their distinct ethnic and cultural identity. Using anthropological theories of the 1930s, they asserted that the realization of total cultural absorption or social fusion depends upon “the complete amalgamation of the two societies involved (p.5)” so that no cultural differences continue to exist. Such an absolute standard is untenable. P.K. Bol (1987) later questioned the analytic value of Sinicization as argued by Tao because it blurs the distinction between adopting institutions and ethnic transformation. Bol argues that one can maintain their foreign ethnic minority identity while still adopting institutions and participating in the majority culture to maintain civil order. In his study of the Qing 清 dynasty (1636-1911), Mark C. Elliot (2001) challenges the assumptions that early and late Manchu identities should have remained constant, and further argues that such identities are based on a “false dichotomy” of Manchu or Chinese, but not both. This study supports the position that the Jurchen became fully integrated into Chinese society and yet were able to maintain their ethnic identity, which changed over time as they merged with the society they governed.

Periodization has been an ongoing subject of scholarly discourse among historians of China, and yet no one has put forth any arguments for inclusion of the Jin. Paul Jakov Smith (2003) argues for the periodization of the Song-Yuan-Ming Transition for understanding China’s middle period, and although he marks the beginning of this time
frame with the Jurchen invasion, he does not include the Jin dynasty in his arguments. Even in his study on Eurasian transformations from the 10th to the 13th century, wherein Smith (2004) argues that the rapid evolution of the great steppe empires shaped the identity of elites and stimulated the rise of Neo-Confucian orthodoxy that allowed them to adapt to Mongol rule and perpetuate their influence into later imperial China, he does not consider the role of Han elites under the Jin. Similarly, Richard Von Glahn (2003) states that the time frame of 1100-1400 remains a “black hole” that has not been meaningfully linked to any period, in part due to the ambiguous place of the Yuan in Chinese history. However, Von Glahn’s failure to consider the place of the Jin makes it even more ambiguous. Anne Gerritsen (2007) also took up the issue and concludes “that the Southern Song and Yuan dynasties can be regarded as one continuous period (p.18),” followed by a relatively short disruption and the establishment of the centralist policies of the Ming 明 dynasty (1368-1644). Once again, the Jin does not figure in her periodization.

This study on Chinese medicine during the Jin sheds light on this darkness and helps to resolve this ambiguity regarding the place of the Jin dynasty in Chinese history, which was the dominant East Asian regional power of the twelfth century.

The periodization of the 119 years of the Jin has also been variously interpreted. Chan Hok-lam (1984) proposes five phases of the Jin. His first phase has no clear beginning but includes state expansion under the chieftains leading to the founding of the dynasty in 1115. His second phase (1115-1150) is characterized by “dual administration” when both Chinese and Jurchen systems of government co-existed. His third phase (1123-1161) saw increased Sinicization while the fourth phase (1161-1189) witnessed a nativist revival. Chan’s fifth and last phase (1190-1234) saw both restoration and decline. Tillman and West (1995) propose that the “High Jin” was limited to 1165-1206, following the peace treaty with the Nansong and with little time to flourish, while Bol (1995) argues it was even shorter and did not begin until 1190. An alternative periodization was proposed by Tillman (1995) who uses the location of the central capital, which he also corresponds to increasing Sinicization as the court moved towards the Central Plains, to describe three phases of the Jin: 1115-53 with the capital at Shangjing 上京 (near modern Harbin, Heilongjiang province); 1153-1214 with the capital at Yanjing 燕京 (near modern Beijing, Hebei province); and 1214-1234 with the capital at Bianjing 汴京 (near modern Kaifeng, Henan province). A problem with these “Sinicization” models is that they assume the Jin was not a “real” Chinese dynasty,
remaining in a perpetual process of “becoming” without ever “being.” This is the kind of thinking that has relegated the Jin to the periphery of Chinese history despite its profound influence on the course of human events.

This study adopts a different periodization using the wuxing (five elemental-phases) of wood, fire, earth, metal, and water, aligned with the reign periods of the ten Jin emperors in five pairs. Analogous to the seasonal cycles, the first phase of wood (1115-1135) represents the spring of early state formation, the second phase of fire (1135-1161) represents the summer of empire building, the third phase of earth (1161-1209) represents the long summer of stability at the center of this dynasty, the fourth phase of metal (1209-1224) represents the fall and fracturing of the state under increasing outside pressures, and the fifth phase of water (1224-1234) represents the winter of disintegration and destruction as the Mongol Horde washed over the Central Plains. This model is used to best understand the minds of Jin dynasty physicians, philosophers, poets, and politicians, for whom the natural order of the world was dependent upon the cycles of the wuxing. The concept of a “High Jin’ is rejected because it assumes that cultural developments are dependent upon relative political stability, whereas instability and crisis served to spur creative endeavors perhaps even more than stability during the Jin, with important literary works in medicine produced throughout the rise and fall of the dynasty.

The developments in Jin medicine were enabled by the political and cultural transformations that occurred during the “Tang-Song Transition.” Dieter Kuhn (2009) described this transition as “the most decisive rupture in the history of imperial China (p.1),” as leadership went from an aristocracy to a meritocracy based on the civil service examination system. In her study of the Song civil service examinations, Hilde De Weerdt (2007) found that between the years 1000 and 1250 the numbers of participating scholars increased from 20,000 to 400,000. From this milieu, a new class of social elites emerged who dominated the elite literate tradition of medicine. Since the number of qualified candidates for official posts grew rapidly, but the number of posts available remained relatively stable, it was incumbent upon these literati to seek alternative professions worthy of their status. Many became teachers to help prepare the next generation of examinees, while others chose the study of medicine.

One of the most influential decisions by the Northern Song government for the Jin medical field was the publication and dissemination of numerous classical medical texts by the Xiaozheng Yishu Ju 校正醫書局 (Bureau for Revising Medical Texts). These
texts provided scholars with an authoritative body of literature on par with the Confucian canon, which further supported the establishment of an imperial examination in medicine based on the study of these texts. Although the Han Chinese were discriminated against in both the Jin and Yuan dynasties, with all examinations suspended during the Yuan until 1315, many of the political and social institutions continued to exist. Robert P. Hymes and Conrad Schirokauer (1993) argue that Song officials were engaged in a struggle between arbitrary imperial and routine bureaucratic power, as well as between state activism and pacifism, which resulted in a diversity of solutions of how best to “order the world”. Under foreign rulers during both the Jin and Yuan, Han elites were forced to find alternatives to government service, but they never abandoned the call to offer diagnoses of current political and social pathologies and to suggest treatments. This was one of the driving forces behind the maturation of literati medicine.

Several literati physicians who were active during the Jin and Yuan are frequently referenced in medical works of the Late Imperial era, as well as in modern studies of Chinese medical history, yet their contributions remain poorly understood. Several of these ruyi have been collectively referred to as the sidajia 四大家 (four great masters), and although most modern scholars assume these four to be Liu Wansu 劉完素 (1120-1200), Zhang Congzheng 張從正 (1156-1228), Li Dongyuan 李東垣 (1189-1251), and Zhu Danxi 朱丹溪 (1280-1358), such assumptions are problematic. This study argues that the concept of the sidajia was a literary trope identifying different phases of elite engagement with a diversity of cultural pursuits. This process began in the Northern Song with the “four masters” of the branch of Confucian philosophy self-identified as the daoxtue 道學 (learning of the Way), sometimes referred to in the West as Neo-Confucianism: Zhou Dunyi 周敦頤 (1017-1073), Zhang Zai 張載 (1020-1077), Cheng Hao 程頤 (1032-1085), and Cheng Yi 程頣 (1033-1107). This was followed by the “four masters” of literati medicine during the Jin and Yuan, and then by the “four masters” of literati landscape painting during the Yuan. The latter are sometimes identified as: Huang Gongwang 黃公望 (1269-1354), Wu Zhen 吳鎮 (1280-1354), Ni Zan 倪瓚 (c.1301-1374), and Wang Meng 王蒙 (1308-1385). However, one should not believe that there were only four accomplished masters in each of these fields during these periods, but should recognize this as a metaphor for the cultural trends among the literati who were
increasingly excluded from government service. This broader trend is herein identified as the *Period of the Four Great Masters* (c.1000-1400).

Within the narrower field of medical history, studies of Jin medicine from the 1970’s and 1980’s are severely limited in scope and depth of analysis. A concise German language study of the Jin-Yuan masters was published in 1970 by Jutta Rall entitled *Die vier grossen Medizinschulen der Mongolenzeit: Stand und Entwicklung der chinesischen Medizin in der Chin-und Yüan-ziet*. According to reviewers Ilza Vieth (1974) and the C.R.B. (1972) of the *Bulletin of the School of Oriental and African Studies*, the first half of the 114 pages were dedicated to general Chinese medical, philosophical, social, and political history, the last chapters discussed Late Imperial influences, and the remainder that discussed the “four masters” (identified as Liu, Zhang, Li, & Zhu) concluded they were folk healers of low status, bounded by traditional dogma, whose works were of little importance to medical development. Such conclusions are not unusual in that era of Chinese medical historiography, and are similar to those of Paul Unschuld (1985) or Manfred Porkert and Christian Ullmann (1982), who measured Chinese medical development by the yardstick of modern scientific medicine. These scholars argue that after medicine’s formative years (c.500 BC-500) there was intellectual stagnancy (c.500-1500) that lasted until the arrival of Western learning. Regarding the “four theoreticians” of what Unschuld identifies as the Song-Jin-Yuan period, he at least avoids narrow limitations and briefly discusses the contributions of Liu Wansu, Zhang Yuansu 張元素 (c.1140-1220), Zhang Congzheng, Li Dongyuan, and Wang Haogu 王好古 (c.1210-1310). However, Unschuld concludes that their reductionist arguments only contributed to intellectual fragmentation. In contrast, this author argues that instead of a “Golden Age” of Chinese medicine prior to the year 500, there was a long period of slow and incremental development; instead of a thousand years of intellectual stagnancy c.500-1500, there was a “Golden Age” characterized by the extension and refinement of the classical cosmological paradigm to medicine; and although it exceeds the scope of this study, instead of being saved by the West after c.1500, Chinese medicine’s continued progress and very existence was threatened with destruction. Therefore, these early studies are no longer relevant to current medical historiography.

There are also several Chinese language studies of Jin and Yuan medicine. For instance, Fang Yonglai 方永來 (1982) published the *Jin Yuan Sidajia zhi Yixue Heliupai 金元四大家之醫學和流派* (Currents of Medical Learning of the Four Great Masters of
the Jin and Yuan Dynasties) wherein he focused on the medical ideas of Liu Wansu, Zhang Congzheng, Zhang Yuansu, Li Dongyuan, and Zhu Danxi, differentiating the approaches of using warm tonics versus strong purgatives and classical versus contemporary formulas. Fang’s concise summary of these physicians is followed by more lengthy discussions of their influence on Ming and Qing dynasty schools. Fang proposed two currents of learning: the Hejian 河間 branch that began with Liu and was transmitted to Zhang Congzheng, Zhu Danxi, as well as others; and the Yishui 易水 branch that began with Zhang Yuansu and was transmitted to Li Dongyuan, Wang Haogu, Luo Tianyi 羅天益 (c.1220-1300), and others. However, this simplistic model fails to adequately account for the close similarities between Liu Wansu and Zhang Yuansu, or the stark differences between Liu and Zhang Congzheng, or even the close association between Li and Zhu.

Over a decade later, Gao Wei 高伟 (1994) published his Jin Yuan Yixue Renwu 金元医学人物 (People that Studied Medicine during the Jin and Yuan Dynasties), which was a compilation of biographical information on people associated with medicine during these two dynasties. Gao identified a total of 90 people associated with medicine who were either active during the Jin (50) or born during the Jin and active in the Yuan (40). Among those active during the Jin, 9 (18%) were specifically identified as being ru 儒 (Confucians, literati), and 15 (30%) worked for the government as taiyi 太醫 (grand physicians), which implies they passed the medical examinations. This study demonstrated significant and growing literati engagement in medicine during the Jin that continued to increase in the Yuan.

More recent Chinese language studies include the Jin Yuan Yixue Pingxi 金元医学评析 (Critical Analysis of Jin Yuan Medical Studies) by Ding Guangdi 丁光迪 (1999), which provides greater insights and considers the role of all the Jin literati physicians whose works are extant, as well as several Yuan doctors. Ding argues that they represent a major transformation in medicine by bringing together earlier ideas from over a thousand years of dynastic history, and subsequently influencing later periods up to the 20th century with their profound innovations and theoretical discussions. Ding closely examined the similarities and differences in their works as part of a dynamic tradition that was likened to the Hundred Philosophers Period (c.550-233 BC), arguing for two models of the four masters: the four masters of the Jin (identified as Liu, Zhang, Zhang, & Li), all
of whom were northerners in conflict with the south; and the four masters of the Jin and Yuan (identified as Liu, Zhang, Li, & Zhu), representing a merging of northern and southern currents. Although the former list provides an alternative to the latter, both of these lists still promote narrow limitations and fail to account for all the various incarnations of the “four masters.” Ding also compares the Jin Yuan *sidajia* to the *Tang Song Badajia* (Eight Great [Literary] Masters of the Tang & Song Dynasties), which was a text compiled during the late imperial era and included the works of scholars like Han Yu 韓愈 (768-824), Ouyang Xiu 歐陽修 (1007-1072), Wang Anshi 王安石 (1021-1086), and Su Shi 蘇軾 (1037-1101) and his sons, because of the enduring influence of their ideas during subsequent dynasties. However, Ding still does not relate them to any of the other groups of four masters from the Song or Yuan. Ding concludes that the later preference for the Jin Yuan *sidajia* model was in part because they represented a balance between the methods of draining and attacking versus nourishing and supplementing. Ding’s work represents the pinnacle of Chinese language studies on the subject.

Still, the Jin and its medicine are often overlooked. An even more recent Chinese language study by Huang Zhirong 黃芝蓉 and Hou Guohong 候國洪 (2002) identified four reasons why literati studied medicine, which included: the fundamental theories shared by Confucian literature and medicine; classical analogies between good doctors and good officials; medicine’s fulfillment of the Confucian ethical requirements of filial piety and public service; and that literati and doctors both considered *yangsheng* 養生 (nurturing life, self-cultivation) and *baojian* 保健 (preserving health) as fundamental to their life and purpose. However, this study failed to adequately consider the role of Jin physicians within the larger framework of literati medicine, and did not discuss any Jin physicians in support of their arguments.

Recent English language studies on Jin medicine also remain severely limited. In a compilation entitled *Chinese Medicine and Healing: An Illustrated History* (2013), the editors T.J. Hinrichs and Linda L. Barnes named chapter four “The Song and Jin Periods,” but within this section there actually is no substantive discussion of the contributions to medicine by Jin dynasty physicians. Instead, the only reference to the four masters (identified as Liu, Zhang, Li, & Zhu) is by Angela Ki Che Leung in a discussion of Yuan medicine wherein she argues these four doctors were revisionists of
Song medicine who “brought the medical body into correspondence with neo-Confucian metaphysics (p.147).” These conclusions are distinct from an earlier study by Leung (2003) wherein she argues the four masters (identified as Liu, Zhang, Li, & Zhu) were remarkable for their renewed frameworks for transmission of medical learning through lineages, rather than for the substance of their learning, suggesting their ideas demonstrated loyalty to the classical tradition and were critical of the Song tradition. The major transformations in medicine that occurred during the Northern Song were detailed by Asaf Goldschmidt (2009), but the subsequent changes in the Jin, Southern Song, and Yuan, as well as the works of the four masters (identified as Liu, Zhang, Li, & Zhu), are only briefly mentioned in his study. While P.K. Bol (2008) is convinced of a thriving literati culture in the Jin and Yuan, he states that “my impression is that Neo-Confucian thinkers were not themselves writing medical treatises (p.175).” In making this argument, Bol cites the work of Charollete Furth (2006) who studied the works of Zhu Danxi whom she concludes was the only follower of daoxue among the four masters (identified as Liu, Zhang, Li, & Zhu), who were remarkable for their revisionist perspectives challenging Northern Song orthodoxy. A similar argument is made by Timothy Brook (2010) who remarks that in the Ming becoming a doctor was a respected choice for a scholar who didn’t earn an official post, which had become increasingly common during the Yuan, and was comparable to studying Confucianism because first one studied the early classics and then the works of the four masters. Here Brook agrees with an earlier study by Furth (1999) wherein she described the influence of the four masters, and specifically Zhu Danxi, on the development of medicine for women’s diseases. All of these authors are in agreement with an even earlier study by Robert P. Hymes (1987), who argues that elites did not fully participate in the field of medicine until the Yuan dynasty. However, Hymes also leaves out the Jin from his analysis. Finally, in a study of epidemics and the geographic imagination by Marta E. Hanson (2011), she describes how the four masters (identified as Liu, Zhang, Li, & Zhu) of the Jin-Yuan period critiqued jingfang (canonical formulas) and moved towards shifang (contemporary formulas) while launching sweeping criticisms of the Song medical orthodoxy. Hanson acknowledges that the practices of the northern Jin masters were broader than the styles their successors credited them with, and adds that the only southerner among them (Zhu Danxi) was more of a synthesizer than an innovator who was important in the transmission of northern learning to the south. Despite these efforts, current understanding of Jin literati medicine
remains superficial and is consistently limited to the same four doctors (only three of which were active in the Jin), and often framed as a reaction against orthodoxy, which it was not.

The structure of this study includes a narrative of the political and environmental history of the Jin at the beginning of each chapter, followed by an examination of the Jin literati doctors who were active during that phase. This juxtaposition is necessary to contextualize the medical and social discourse as a reaction to current events. Although each physician and their works are dealt with individually, it becomes apparent how they drew on the developments of their predecessors and teachers while influencing their followers and disciples. The end of each chapter includes a summary. There are also several tables and maps at the beginning of this study and eight appendices at the end for reference.

Chapter one details the origins and rise of the Jin dynasty, their wars with the Liao and Northern Song prompted by climactic stress, and the recognition of Jin suzerainty by the tributary states of Nansong, Xixia, and Gaoli. In order to contextualize later developments, this is followed by a review of medicine prior to the Jin, including the publication and dissemination of the classical medical canon and early historiography. This is followed by an analysis of these texts that challenges the standard narrative regarding the antiquity of the Han medical classics. It is argued that the extant canon of classical medical texts promulgated by the Northern Song at best represents an idealized conception of elite Tang 唐 dynasty (618-907) medicine by Song medical officials.

Chapter two details the expansion of the Jin empire and the relocation of the central capital to the geographic center of their domain, together with a comprehensive adoption of Chinese institutions. Environmental stress coupled with political ideology that identified a wuxing imbalance contributed to ongoing military conflict between the Jin and Nansong. Medicine during the early Jin was focused on the shanghan 傷寒 (cold damage) tradition. Literati doctors carefully studied and applied the formulas and strategies detailed in the classical texts, continuing the momentum of late Northern Song ruyi. Efforts were made to integrate the theories of Confucian cosmology with classical and contemporary methods of diagnosis and treatment, and combined with observations of patient responses, identify the most efficacious prescriptions and develop standards of care. As for socio-political discourse, physicians expressed concern over Jurchen customs.
and identified an excess of fire and deficiency of water as the principle cause of disharmony, which served as a metaphor for the conflict between the Jin and Nansong.

Chapter three details the five decades of relative peace and political stability during the middle of the dynasty during which the Jin continued to enjoy recognition of their suzerainty by the surrounding tributary states. This period saw the revitalization of both Jurchen military culture and Confucian learning, but suffered through many earthquakes and other environmental challenges. In response, the emperor and his court convened a special council to consider *wuxing* theory as it applies to dynastic succession and the appropriate elemental-phase that the dynasty should invoke to restore balance to all under Heaven. In medicine during the middle Jin, literati physicians continued to express concern over the *wuxing* imbalances. This further reveals that the court was dominated by a peace faction that advocated non-violent succession to the Song via the generative sequence of the *wuxing* and suppressed the war faction that promoted succession through the conquest sequence. Doctors further promoted innovations in pulse diagnosis, the materia medica genre of literature, and the use of contemporary prescriptions alongside classical formulas.

Chapter four details the fracturing of the empire as the Jin became engaged in wars on three fronts with the Nansong, Xixia, and the Mongols, amidst an environmental and economic crisis. In response, the emperor again convened a special council to reconsider the question of *wuxing* legitimacy, which was again dominated by the peace faction. Growing threats on their borders, coupled with a devastating flood near the capital, forced the Jin rulers to move the capital south into the Central Plains and abandon the Jurchen homelands in the far northeast. In medicine during the later Jin, the response was to recommend driving out the unwelcome guests using the three methods of purgation to expel invaders from the three regions of the physical and political body.

Chapter five details the destruction of the Jin empire as it slowly succumbed to unremitting assaults by the Mongols and the Nansong, as well as the increasingly cold and icy climate. Having established lineages of medical learning and transmission, the developmental trajectory in medicine during and after the fall of the Jin continued into the interregnum that preceded the rise of the Yuan dynasty. Following the devastation, some literati doctors still loyal to the Jin advocated for tonification of the central organs as a call for a dynastic resurgence. They introduced the concepts of *yin* fire and *yin* poison as metaphors for the dark forces of the Mongols, Nansong, and other warlords who arose in the political vacuum. This final phase saw the first attempt at synthesis of
Jin learning, most successfully in the materia medica genre of literature, while the last of the literati physicians born during the Jin shifted his loyalties to the new rulers of the Central Plains.

The conclusion summarizes the arguments supported in this study and briefly examines the legacy of Jin literati medicine. Various physicians continued the trends begun earlier while working towards a synthesis of Jin medical learning. The various formations of the *sidajia* during the subsequent dynasties and periods are detailed, evidencing the fluidity of the concept and its use as a literary trope. The spread of Jin and Yuan learning to Japan in the 15\textsuperscript{th} and 16\textsuperscript{th} centuries to establish the Li-Zhu school is also noted. Although many later scholars admired the works of the *sidajia*, the Qing also witnessed challenges to their ideas as some called for a return to the essence of Han learning. This literary trope was even revived in the early 20\textsuperscript{th} century. Finally, a review of the *sidajia* of Yuan landscape painting is provided in support of the novel concept of the *Period of the Four Great Masters* (c.1000-1400).

*Classical cosmology in early dynastic history*

To understand both the political and medical discourse embedded in the writings of Jin dynasty literati doctors one must first understand the classical cosmological paradigm. This paradigm evolved slowly over many centuries and was gradually refined and extended to explain the myriad of observed phenomenon. As is true of any complex theoretical system, the details of this paradigm were often debated and contested by various philosophers and naturalists. This paradigm is grounded in the theory of *yin* and *yang*, the complementary yet opposing forces that generate the *wuxing* (five elemental-phases). Furthermore, one must be aware of how centuries of debates transpired over the proper sequence of the *wuxing* and its application to philosophy, medicine, dynastic succession, and the legitimacy of a ruler. This is no easy task. Although this paradigm is composed of intelligible ideas that are internally consistent, its seeming simplicity leads to great complexity, and following the logic of these arguments often proves difficult. Yet if one fails to first grasp the basic concepts inherent to this paradigm, then making
sense of both the socio-political discourse and the contributions to normal scientific
development by Jin physicians becomes an impossible task.

This cosmological paradigm attempts to explain everything in the universe,
comparable to the way modern physicists seek to unite all knowledge with a theory of
everything using mathematics. To make such a complex task simpler, the ancient Chinese
philosophers used metaphors, such as the dark and sunny side of a mountain (yin yang).
The foundational theory of yin and yang does not merely set up two opposites, but a
process of cyclical transformations, as the sun moves across the sky and the shadows
follow, day after day, year after year. Thus yang became associated with brightness,
warmth, and activity, and yin with darkness, cold, and stillness. Chinese scholars
experienced the reproduction of the warmth of a sunrise and the coolness of the night and
used this data, in combination with countless other observations, to support the theory
that the world operates within the dynamic tension of opposite yet complementary forces.
Within this metaphorical model, all phenomenon can be classified as being either more
yin or more yang, with accommodations for varying degrees, with terms such as: taiyang
太陽 (greater yang), taiyin 太陰 (greater yin), shaoyang 少陽 (lesser yang), shaoyin 少陰
(lesser yin), yang zhongzi yin 陽中之陰 (yang within yin), and yin zhongzi yang 陰中
之陽 (yin within yang). These ideas are further dependent upon contextualization, for
example: Heaven, or the sky, is yang when compared to the earth, which is yin. Clouds in
the sky are yin within yang when compared to the open sky, but clouds are yang within
yin when compared to the oceans as part of the greater hydrological cycle. Therefore,
these categories are relative rather than absolute.

Although this basic dualistic model was helpful, it failed to provide sufficient
differentiation of the myriad phenomenon that can be observed, and so the wuxing model
was developed in conjunction with yin and yang. The term wuxing can function both like
a noun (five elements, five core constituents of matter and energy) and a verb (five
phases, five actions, five movements). Just like the yin yang model, all things can be
classified within the rubric of the five elemental-phases. The wuxing are: mu 木 (wood),
huo 火 (fire), tu 土 (earth), jin 金 (metal), and shui 水 (water). These classifications
function as a taxonomic system, but unlike Western scientific taxonomy that focuses on
biological organisms (e.g., single & multi-cellular organisms, plants & animals,
invertebrates & vertebrates), classical Chinese taxonomy was applied to all known
phenomena, referred to as the *wanwu* 萬物 (10,000 or myriad things). These things include: colors, directions, climactic factors, organs, tissues, body fluids, emotions, and human affairs, to name but a few. However, these models are dynamic as well as static. Just like *yin* can transform into *yang* and back again, the elemental phases also represent cyclical changes, such as the change of seasons, life processes, and the change of rulers and dynasties through history.

The theory of *wuxing* was inseparable from the world view of literate elites in early Chinese history and was used to explain dynastic succession. One of the best known passages from early literature that uses the *wuxing* in the realm of political science is found in the *Shiji* 史記 (Historical Records, c.100 BC) by the Grand Historian Sima Qian 司馬遷 (145-86 BC):

秦始皇既并天下而帝 或曰 黃帝得土德 黃龍地蜒見 夏得木德 青龍止於郊 草木暢茂 殷得金德 銀自山溢 周得火德 有赤鳥之符 今秦變周 水德之時

After Qin Shihuang (r.221-210 BC) had already unified all under Heaven and proclaimed himself the emperor, someone said: Huangdi (c.3000-2000 BC) attained the power of earth and the yellow dragon and earthworms appeared; the Xia (c.2000-1500) attained the power of wood and the green dragon stopped at the outskirts of the city and the plants and trees flourished; Yin (or Shang 商, c.1500-1000 BC) attained the power of metal and silver overflowed from the mountains; the Zhou (c.1000-220 BC) attained the power of fire and there was the symbol of the red bird. Now Zhou has transformed into Qin (221-206 BC) and it is time for the power of water.

Sima Qian used what today is commonly referred to as the *ke* 克 (regulation, control, restraining, subduing) sequence of the *wuxing*. This sequence is one of the two primary cycles that again invokes the opposite yet complementary relationship of *yin* and *yang*, the other being the *sheng* 生 (generative, creating, promoting) sequence. Sima applies this logic to explain how these dynasties formed a natural progression from the time of the legendary first emperor to the first emperor of Qin, as one dynasty was conquered by the next according to the *ke* sequence: earth, wood, metal, fire, and water (土木金火水). Extending this logic to the Han 漢 dynasty (206 BC-221) that followed Qin, and during which this passage was written, the Han should have once again obtained the power of earth. Implicit in these arguments was that the Han would one day be conquered by wood, and this prospect was no doubt easier for an emperor to accept within a historical context.
rather than its relevance to his own reign. So it is not surprising that this otherwise simple passage set off a vigorous political debate.

Sima Qian was not the first to make this argument. A very similar passage is found in the *Lushi Chunqiu* 呂氏春秋 (Master Lu’s Spring & Autumn Annals) by Lu Buwei 呂不韋 (c.247-239 BC), which predates the founding of the Qin. This appears to have served as the inspiration for the previous passage from the *Shiji*, and the first emperor of Qin was no doubt aware of these ideas when he invoked the power of water upon ascension to the throne. Most of the original passage on the succession of *diwang* 帝王 (imperial rulers) was simply repeated by Sima Qian, but Lu Buwei began by remarking that Heaven will first manifest an auspicious sign to the people. After repeating the conquest of early dynasties and powers, he concluded:

代火者必將水 天且先見水氣勝 水氣勝 故其色尚黑 其事則水
水氣至而不知 數備 將徙于土
Replacing fire will inevitably be water. Heaven will moreover manifest that water qi will conquer. Since water qi will conquer, therefore its color shall be black and its duty will then be to water. When the water qi will arrive cannot be known, and after numerous preparations it shall move on to earth. ²

Thus Qin Shihuang 秦始皇 (r.221-209 BC), with the support and advice of his officials, claimed the power of water to signal the end of the Zhou and legitimate his mandate to rule Tianxia 天下 (all under Heaven).

It is essentially impossible to date the origins of *yin yang* and *wuxing* theory. The earliest evidence is archeological. At the burial site of the shaman-chieftain of Xishuipo 西水坡 (c.3000 BC), discovered in northeastern Henan province, the human remains are flanked by what appears to be images of a dragon to his right and a tiger to his left made from clam shells, with his head oriented to the south (Underhill, A.P., & Habu, J., 2006). This imagery places the power of the qinglong 青龍 (green dragon) in the east and the baihu 白虎 (white tiger) in the west. These two creatures became integrated into *wuxing* cosmology with the addition of the black tortoise in the north, the red phoenix in the south, and with man at the center, as in the burial at Xishuipo. Those same two creatures depicted at the burial site were later invoked in the names of classical medical prescriptions, further evidencing the evolution of their importance in classical cosmology.
Other evidence of these theories dates back to the origins of writing itself. The 1899 discovery of the *jiagu* 甲骨 (oracle bones) in the ruins of the ancient Shang dynasty capital city of Yin (Henan province), provides another glimpse into ancient cosmology. These relics of an ancient divination method and early script were first identified by a Qing official who realized the historical significance of an ingredient in his medicinal formula, because they were being sold to pharmacies as *longgu* 龍骨 (dragon bones) by the farmers who were digging them up in their fields. Originally, “dragon bones” were most likely dinosaur fossils dug up when plowing agricultural fields. Based on the translations of the inscriptions by David Keightley (2000; 2006), it is known that the Shang believed in a supreme deity (Di 帝) who presided over Heaven, another deity of Earth (Tu 土), and many lesser powers or deities in their service: wind, rain, clouds, thunder, mountains, rivers, etc. This provides another glimpse of a binary world view (*yang-yin*, Heaven-Earth, Di-Tu) with its myriad correspondences.

The Shang believed that these powers of Heaven and Earth could benefit or harm the people by directly impacting their subsistence strategies or causing disease, so divinations and sacrifices to these deities and powers were performed to maintain the health of the entire community. For example; “(We) make burnt offering (to) Di’s emissary, Wind, one bovine (trans. Keightley, 2000, p.5)” is an inscription that further illustrates the concept of *feng* 風 (wind) as a potentially harmful influence, which dominated early Chinese medical theory. The inscriptions identify other causes of illness, including angry ancestors or those in the center being maligned by the powers of the four directions. The socio-political importance of the *sifang* 四方 (four directions), which surround the center as the “fifth direction”, is an important theme in the early literature of China and was revisited by Jin physicians. This not only evidences an early incarnation of the *wuxing*, but also another medical connection. One of the early graphs used to represent the powers of the four directions (folios) evolved into the character *wu* 巫 (spirit medium or shaman), which was subsequently incorporated as the lower radical in the early rendering of the character *yi* 医 (medicine or physician), which was later substituted with *you* 西 (10th Earthly branch, image of a [medicinal] wine jug): *yi* 醫. The inclusion of one of the ten Heavenly stems and twelve Earthly branches used in calendrical cycles for the latter rendering of “medicine” echoes the intellectual trends evident in the supplemental chapters of the *Huangdi Neijing* (Yellow Emperor’s Inner Classic) by the
Tang dynasty physician Wang Bing 王冰 (c.762). These trends were predicated on the belief that the natural world can be understood if studied closely in order to identify the cyclical patterns. Thus from its earliest inception, the wuxing was integral to cosmological, political, and medical theory.

These early interconnections between medicine, divination, and spiritual and political leadership, is further evident in the Lushi Chunqiu, wherein Wupeng 巫彭 (Shaman Peng) of the Shang dynasty is credited with the invention of medicine. After listing the contributions of many of the early founders of civilization, such as the invention of the calendar, archery, clothing, and wine, it states:

巫彭作醫 巫咸作筮 此二十官者 聲人之所以治天下也
Wupeng created medicine and Wuxian created divination. As for these twelve officials, they are the sages that brought order to all under Heaven.  

Thus medicine was identified as an essential tool of governance, and early political leaders were given the responsibility to maintain the health of those they governed. The character zhi 治 (to order, govern, manage) is used in a political context to describe the process of governance and the maintenance of social order, whereas in medicine it is used to describe the treatment of disease. Therefore, the emperor and his officials bring order to the world, while physicians bring order to the body.

Although his writings are no longer extant, the formalization of yin yang and wuxing theory is often credited to the intellectual tradition of Zou Yan 騶衍 (c.300 BC). This process is again directly tied to the formation of states and the legitimation of political authority, as evidenced in the following passage from Sima Qian’s Shiji:

自齊威宣之時 騶子之徒論著終始五德之運 及秦帝而齊人奏之 故始皇采用之
From [the state of] Qi during the time of Weixuan (Powerful Declarations), a disciple of master Zou [Yan] discussed all aspects of the wude zhi yun 五德之運 (movements of the five elemental-powers). Reaching to [the time of] the emperor of Qin, the people of Qi memorialized him and therefore, the first emperor chose to make use of this. 

The reference to the “movements of the five powers” is significant because it helps to show the fluidity of the early terminology, its association with political power and Confucian morality, and the common use of the terms wuyun 五運 (five elemental-
movements), *wude* 五德 (five elemental-powers), and *deyun* 德運 (movement of the [five] elemental-powers), as equivalents for the term *wuxing* in texts from later periods.

An early excavated text entitled *Wuxing* 五行 (Five Conducts) further evidences the early evolution of the concept. This text was discovered in 1973 at the Mawangdui 馬王堆 site (Hunan province) and dated to the late Han dynasty, and found again in 1992 at the Guodian 郭店 site (Hubei province) and dated even earlier to the fourth century BC. Scott Cook (2000) translates the title of this essay as the “five conducts” due to the text’s focus on elucidating moral behavior and proper conduct, a central theme in Confucian learning. The five conducts discussed are *ren* 仁 (humanity, benevolence), *yi* 義 (righteousness, propriety), *li* 禮 (ritual, etiquette), *zhi* 知 (knowledge, wisdom), and *sheng* 聖 (sagacity, spirituality). According to this text, all five of these conducts together comprise *de* 德 (virtue, moral force, elemental-power), and attaining *de* is the goal of a *junzi* 君子 (nobleman, gentleman). Thus the proper order of the universe included the proper conduct of the individual. Therefore, the violation of these moral principles had the effect of disrupting the cosmological balance, leading to illness. It is in this context that the emperors must be exemplars of morality to be legitimate rulers of all under Heaven.

Perhaps the earliest literary reference in the received canon to the term *wuxing* comes from the *Liji* 礼記 (Book of Rites), a classic of Chinese history and philosophy attributed to the early Zhou dynasty (c.1000-220 BC). Although the term *wuxing* is discussed, details on its composition and actions are lacking. Yet it is evident that the *wuxing* was a key component of the classical Chinese cosmological paradigm from this point forward in recorded history:

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故人者 其天地之德 陰陽之交 鬼神之會 五行之秀氣也
故天秉陽 垂日星 地秉陰 竅於山川 播五行於四時 和而後月生也
Therefore in regards to mankind, he is the power of Heaven and Earth, is the product of *yin* and *yang*, is the union of ghosts and spirits, and is the elegant *qi* of the *wuxing*. Therefore Heaven controls *yang* and dangles the sun and stars; Earth controls *yin* and opens into the mountains and streams. The *wuxing* is germinated from the four seasons, and when they are harmonious then afterwards the lunar [cycles] are generated.
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Thus all of the key components of the paradigm are brought together, including *qi* (energy, breath, vital force, the manifestation of things). Another early example from the *Liji* equates the *wuxing* to proper conduct for both the health of the individual and the health of the state:

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貴賤明 隆殺辨 和樂而不流 弟長而無違 安燕而不亂
此五行者 足以正身安國矣 彼國安而天下安
故曰吾觀於鄉而知王道之易易也
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The noble and base are enlightened, the aggrandized and weakened are distinguished, the harmonious and happy don’t degenerate, juniors and seniors have not lost [their proper relationship], and when [the state of] Yan is secured there is no chaos. As for these *wuxing*, they are sufficient to rectify the body and secure the state. When the other states are secure then all under Heaven will be secure. Therefore it is said: I may observe from the countryside and know all the simple changes of the king’s *dao* (way, moral path).

This passage brings in another key term, the *dao* (way, moral path), which is a broad concept used by both secular Confucians and religious Daoists as a metaphor for maintaining harmony between the forces of *yin* and *yang* and the cycles of the *wuxing*. Even before the unification of China under the Qin and Han dynasties at the dawn of the Imperial Era (c.221 BC-1911), this paradigm was poised to influence both political and medical theory for the next two thousand years. However, this was not two millennia of intellectual stagnancy, because the theory and application of the *wuxing* concept remained an ongoing source of scholarly debate, contestation, and negotiation.

The *wuxing* also appeared in early military literature. A text attributed to the *Warring States Period* (c.500-220 BC) that was in wide circulation during China’s middle period as a result of its inclusion among the *Wujing Qishu* (The Seven Military Classics [of Ancient China]) was the *Taigong Liutao* (The Six Stratagems of Taigong). The *Wujing Qishu* was required reading for the civil service examination in military affairs that was implemented by the court of the Northern Song and continued to be offered during the Jin. Since the Jurchen came from a martial culture, it is likely that many Jin officials had read the *Taigong Liutao*, including the following passage from the chapter on the *wuyin* (five sounds). In this section, the Martial King of Zhou (r.1122-1115 BC) asked Taigong about using these sounds, which correspond to the *wuxing*, to determine victory and defeat of their armies. Taigong replied:
五行之神 道之常也 可以知敵 金木水火土 各以其勝 攻之
The spirit of the wuxing is the perpetual dao. [Through them] one can understand their enemy. Metal, wood, water, fire, and earth, each according to their sheng (conquest) [sequence] and attack accordingly.  

Based on this context, a reader would assume this sequence of the five phases, metal, wood, water, fire, and earth (金木水火土), was listed according to the sheng (conquest, to defeat, to surpass, victory) sequence, also known as the ke (subduing, restraining) cycle. This same sequence of elements also appears in other early texts, such as the Wenzi 文子 (The Literary Master), attributed to Laozi 老子 (c.500 BC), which states:

十二月運行 周而復始 金木水火土 其勢相害 其道相待
The twelve months are in constant motion, they cycle around and return to the beginning. Metal, wood, water, fire, and earth, their momentum mutually harms, their dao mutually serves.

The Wenzi may be using the term hai 害 (harm, injure, destroy) in a similar way to how Taigong used the term sheng (conquest), and thus both texts would be suggesting a conquest rather than generative sequence. However, the reference to the progression of the months, like the seasons, would invoke the generative cycle. Later in the same passage, the sequence is repeated after mentioning the seasons, which further suggests the order was deliberate rather than random, but it still does not shed any light on the significance of the order given:

故陰陽四時 金木水火土 同道而異理 萬物同情而異形
Therefore yin and yang, the four seasons, metal, wood, water, fire, and earth, [they are part of] the same dao but have different li (principles, structures). The myriad things have the same qing (condition) but different xing (physical forms).

In another early history of uncertain date, the Yue Jueshu 越絕書 (Lost Book of Yue), the sequence of metal, wood, water, fire, earth (金木水火土) is again associated with the conquest sequence. The frequency of these examples suggests the conquest versus generative sequences had yet to reach a broad consensus among early philosophers. In a conversation with the King of Yue (southern China) about good and bad omens, the royal advisor Jini 計倪 tells the king:
Yin and yang and the myriad things each have their interconnections. [Such as] the sun and moon, the celestial bodies, punishments and power, the transformation of good and bad fortune, and metal, wood, water, fire, and earth, replaced through conquest.

However, this same sequence (金木水火土) also appears in the Daoist classic the Huainanzi 淮南子 (Master of Huainan, c.139 BC) wherein the context suggests this sequence is actually the generative rather than the conquest sequence:

So they are clearly arranged by their nature: metal, wood, water, fire, and earth, and thus are established in a father and son relationship and become a family.

Therefore by the Han dynasty, there were evidently alternative interpretations of the proper generative and conquest sequences of the five elemental-phases being promulgated by various authors. Even in the seminal medical classic the Huangdi Neijing (Yellow Emperor’s Inner Classic), different treatises expound different theories on the wuxing and their correspondences. This is not unexpected given our current understanding of this classic as a compilation of diverse texts by various authors over time.

The taxonomic assignment of phenomenon to each of the wuxing is detailed in the Huangdi Neijing, perhaps more so than in any other classical text. Even as the importance of the wuxing in political theories of dynastic legitimation decreased in the later period of Chinese history, it remained a constant in medical discourse. The Huangdi Neijing is traditionally divided into two sections, the Suwen 素問 (Basic Questions) and the Lingshu 靈樞 (Divine Pivot), each of which is composed of 81 chapters or essays. In chapter four of the first section, entitled jingui zhenyan lun 金匱真言論 (treatise on the true words from the golden cabinet), it begins with each of the five directions and then lists various correspondences, including the wuxing. Although other chapters and later sources provide some alternative correspondences as would be expected of any evolving scientific paradigm, this passage still exemplifies the system:
In the eastern direction is the color *qing* (green, blue-green, cyan, azure, blue), entering [the body] it travels to the liver, it opens into the eyes, stores its essence in the liver, its illnesses come forth when frightened or alarmed, its flavor is sour, its classified under plants and [the elemental-phase of] wood, its domesticated animal is chicken, its grain is wheat, as for its correspondence regarding the four seasons, above it is considered the *Suixing* (Jupiter, annual star), thus the spring *qi* resides in the head, its sound is *jue* (3rd in the pentatonic scale), its number is 8, thus one knows its illness resides in the sinews, and its odor is that of urine.

In the southern direction is the red color, entering [the body] it travels to the heart, it opens into the ears, stores its essence in the heart, therefore its illnesses reside in the five *zang* (solid organs), its flavor is bitter, its classification as [the elemental-phase of] fire, its domesticated animal is sheep, its grain is broomcorn (glutinous) millet, as for its correspondence regarding the four seasons, above it is considered to be *Yinghuoxing* (Mars, dazzling deluder star), thus one knows its illness resides in the vessels, its sound is *zheng* (5th in the pentatonic scale), its number is 7, and its odor is burnt.

In the central region is the color yellow, entering [the body] it travels to the spleen, it opens into the mouth, stores its essence in the spleen, therefore its illnesses reside in the root of the tongue, its flavor is sweet, its classification is [the elemental-phase of] earth, its domesticated animal is the cow, its grain is *ji* (millet), as for its correspondence regarding the four seasons, above it is considered to be *Zhenxing* (Saturn, guarding star), thus one knows its illnesses reside in the muscles, its sound is *gong* (1st note in the pentatonic scale), its number is 5, and its odor is fragrant.

In the western direction is the white color, entering [the body] it travels to the lung, it opens into the nose, stores its essence in the lung, thus its illnesses reside in the upper back, its taste is acrid, its classification is [the elemental-phase of] metal, its domesticated animal is the horse, its grain is rice, as for its correspondence regarding the four seasons, above it is considered to be *Taibaixing* (Venus, great white star), thus one knows its illnesses reside in the skin and hair, its sound is *shang* (2nd note of the pentatonic scale), its number is 9, and its odor is fishy.
In the northern direction is the black color, entering [the body] it travels to the kidneys, opens into the two yin (urethra & anus), stores its essence in the kidneys, thus its illnesses reside in the waterways, its flavor is salty, its classification is [the elemental-phase of] water, its domesticated animal is swine, its grain is the legumes, as for its correspondence regarding the four seasons, above it is considered to be Chenxing (Mercury, star of the dragon year), thus one knows its illnesses resides in the bones, its sound is yu (4th in the pentatonic scale), its number is 6, and its odor is rotten.

Additionally, the specific sequence of the wuxing from the Taigong Liutao (金木水火土) appears four times in the Huangdi Neijing, thrice in the Suwen and once in the Lingshu. However, in these instances the significance of the sequence is even more ambiguous. It is presented in diverse discussions of pulse diagnosis (Suwen 13), yearly and monthly cycles (Suwen 22 & 71), and human abilities (Lingshu 64), compared to other sections where the more common generative and conquest sequences are described.

Those familiar with wuxing theory as part of Chinese medicine today might be puzzled by both the terminology and the sequences described in the early literature. In modern classrooms the instructor would describe the two basic sequences as the sheng (generating) and ke (restraining). The generative cycle follows the sequence wood, fire, earth, metal, water (木火土金水), while the restraining or conquest sequence is as described by Sima Qian: earth, wood, metal, fire, water (土木金火水). The generative sequence has the greatest consensus in the classical literature (excluding the Huainanzi passage), while the conquest cycle was evidently more contested. In the medical classics, the use of the character sheng 勝 is actually more common than ke 克 when referring to this sequence, but because the former term is homophonous with the term for the generative sequence, it makes verbal instruction confusing.

Actually the term ke appears to have originally meant something different. This is illustrated in a passage from the Chunqiu Fanlu 春秋繁露 (Numerous Revelations of the Spring & Autumn) by Dong Zhongshu 董仲舒 (179-104 BC), one of the scholars associated with the promotion of Confucianism as the state ideology during the early or Western Han dynasty (206 BC-25). In a chapter entitled wuxing zhi yi 五行之義 (the
meaning of the five elemental-phases), Dong first tries to explain the basics of the theory by elucidating the generative cycle:

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天有五行 一曰木 二曰火 三曰土 四曰金 五曰水
木 五行之始也 水 五行之終也 土 五行之中也
此其天次之序也 木生火 火生土 土生金 金生水 水生木 此其父子也
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Heaven has the *wuxing*: the first is called wood, the second is called fire, the third is called earth, the fourth is called metal, and the fifth is called water. As for wood, it is the beginning of the *wuxing*; as for water, it is the end of the *wuxing*; as for earth, it is the center of the *wuxing*. This is their Heavenly ordained sequence. Wood generates fire, fire generates earth, earth generates metal, metal generates water, and water generates wood. This is their father and son [relationship].

Thus the generative cycle is presented as the natural order of the universe, proceeding from father to son, just as would the ideal of imperial succession within a dynastic period according to the rule of primogeniture. Of course, this father-son relationship is different than that from the *Huainanzi*. Notably, the paternal emphasis gets softened in later medical writings that instead invoke the mother-son relationship. Although the Western mind sees such things as procreation and dynastic succession as strictly linear progressions, the Chinese scholar also saw these things as cyclical. Once Dong laid out the basics, he provides an example of how these elemental-phases interact in a “real-world” scenario:

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是故木已生而火養之 金已死而水藏之 火樂木而養以陽 水克金而喪以陰
土之事火竭其忠 故五行者 乃孝子忠臣之行也
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So therefore if wood is already generating then fire will be nurtured by it, if metal is already dying then water will store it, and if fire is engendered by wood then it will nurture its *yang*, and if water *ke* (restrains, subdues) metal then it will deplete its *yin*, and earth’s duty to fire is to exhaust its devotion. Therefore regarding the *wuxing*, it is only the actions of filial sons and devoted officials.

This passage illustrates both the significance of the *wuxing* model on the socio-political environment, which could be used as a moral compass for filial sons and devoted officials, as well as how the use of the term *ke* indicates how *qi* is transferred via the generative sequence, with the son (water) draining energy from or subduing the father (metal), rather than describing the conquest sequence. In the above example, since wood is flourishing it generates more fire via the father-son relationship, but it then becomes earth’s duty to keep that energy circulating by exhausting the surplus, still within the generative cycle. The only conquest cycle alluded to is metal’s desire to control the
flourishing wood, but its energies are redirected to water again via the generative sequence. Therefore  葵 originally meant the process of the son subduing the father, or the child subduing the parent.

It should be noted that these passages by Dong Zhongshu regarding the wuxing are the subject of an academic debate. Gary Arbuckle (1993; 1995) has championed the argument that Dong did not employ the wuxing as part of his cosmology, building on the works of Japanese and Chinese scholars from the 1950s and 1960s. He disputes the claim that Dong was instrumental in integrating yin yang and wuxing theory into mainstream Confucianism based on “negative evidence,” because the relevant material from the Chunqiu Fanlu appears nowhere else in the corpus of early Chinese literature where Dong’s ideas have been revisited, or where the wuxing was subsequently expounded upon. Arbuckle thus states that those passages discussing the wuxing attributed to Dong must be apocryphal. Even Arbuckle admits that negative evidence is not by itself absolute proof, while more important for this discussion is that these ideas were clearly in circulation during his lifetime. What is indisputable is the centrality of wuxing theory to medicine, morality, and dynastic succession and legitimation among later Confucian scholars.

Another landmark medical text attributed to the Han dynasty, the Nanjing 難經 (Classic of Difficulties), also presents the earlier wuxing sequence (金木水火土) associated with conquest. However, it immediately explains the conquest relationship according to the more common order, as though seeking to make the correction when discussing the seventy-fifth difficult issue:

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金木水火土 當更相平 東方木也 西方金也 木欲實 金當平之
火欲實 水當平之 土欲實 木當平之 金欲實 火當平之 水欲實
土當平之
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Metal, wood, water, fire, and earth, they should mutually promote balance. The eastern direction is wood; the western direction is metal; [and so on]. If wood wants to be full, metal should balance it; if fire wants to be full, water should balance it; if earth wants to be full, wood should balance it; if metal wants to be full, fire should balance it; and if water wants to be full, earth should balance it. 15

The Chunqiu Fanlu by Dong Zhongshu continues to explain yin yang and wuxing theory in another passage entitled wuxing xiangsheng 五刑相生 (mutual generation of the five punishments):
天地之气 合而为一 分为阴阳 判为四时 列为五行 行者行也 其行不同 故谓之五行 五行者 五官也 比相生而间相胜也 故为治
逆之则乱 顺之则治

As for the qi of Heaven and Earth, uniting it becomes one, dividing it becomes yin and yang, discriminating it becomes the four seasons, arranging it becomes the wuxing (five elemental-phases). As for the xing (elemental phases), these xing, their xing is not the same, therefore they are called the five xing. As for the wuxing, they are the five guan (officials, sense organs); one can compare their mutual generation and identify their mutual conquest. Therefore it is considered ordered. If you rebel against it then there is chaos, if you follow it then there is order.

The importance of getting the sequence correct is emphasized by his use of the terms luan 乱 (chaos, turmoil) and zhi 治 (order, regulation), both of which are found throughout classical medical and political literature in regards to the health or sickness of a body or a state. Good governance and good health both require order, while chaos brings disease and rebellion.

This assignment of official duties is another key concept for understanding how the wuxing influenced government. In another section entitled the wuxing xiangsheng 五行相胜 (mutual conquest of the wuxing), Dong further describes the type of guan (officials) or governmental departments each element represents, as well as the same conquest sequence described in the Nanjing above. Regarding the officials, Dong states:

木者司農也 火者司馬也 土者君之官也 金者司徒也 水者司寇也
Wood is the ministry of agriculture, fire is the ministry of war, earth is the palace of the ruler, metal is the ministry of education, and water is the ministry of criminal justice.

Notable is the assignment of earth to the palace of the ruler, because earth represents the center of Tianxia 天下 (all under Heaven), which was the place from which the emperor ruled the four directions. Also the assignment of fire to the ministry of war might explain why so many founding emperors preferred to invoke the power of fire as they came to the throne through force of arms. This can be both compared and contrasted with chapter eight of the Huangdi Neijing Suwen (Yellow Emperor’s Inner Classic, Basic Questions). This chapter assigns the various zangfu (solid & hollow organs), each of which also corresponds to an elemental-phase, to official posts in the body’s internal government:
The heart is the office of the sovereign, spiritual enlightenment emanates from herein. The lungs are the office of the minister and assistant, governance and regulation emanates from herein. The liver is the office of the military general, planning and consideration emanates from herein. The gallbladder is the office of justice, decision making and judgment emanates from herein. Tanzhong (ren-17, the middle of the chest, corresponds to the pericardium) is the office of official envoys, happiness and enjoyment emanates from herein. The spleen and stomach are the office of depositories and granaries, the five flavors emanates from herein. The large intestine is the office of the transmission of the dao (way, moral path, roads, transportation routes), transformational change emanates from herein. The small intestine is the office of enduring prosperity, the transformation of things emanates from herein. The kidneys are the office of composing strength, skill and ability emanates from herein. The sanjiao (three burners) is the office of execution and drainage, the water pathways emanates from herein. The urinary bladder is the office of the prefectural capitals, the bodily fluids are stored herein, the energy is transformed and then able to exit. Regarding these twelve officials, they cannot fail to work together. Therefore governance that is intelligent results in all under [Heaven] being peaceful so as to nourish life and achieve longevity.

The most significant discrepancy between the two models is that in the Neijing the ruler is associated with the heart, and therefore the fire element. This may further explain why so many emperors preferred the power of fire. Taken together, these passages demonstrate the interconnectedness of the cosmological, political, and medical forces for Chinese scholars, where the body is a microcosm of the state, and the state is a microcosm of the universe.

In another example of early wuxing theory from the Baihu Tongde Lun 白虎通德論 (Treatise on the White Tiger Transmissions of Virtue, c.79-92) by the later or Eastern Han (25-221) historian Ban Gu 班固 (32-92), the chapter on the wuxing begins by stating:

五行者 何謂也 何謂金木水火土也
As for the wuxing, what are they called? They are called metal, wood, water, fire, and earth.
Thus Ban Gu opens the discussion by presenting this same sequence (金木水火土), but then adds:

The *Shangshu* (Esteemed Book) [said:] the first is called water, the second is called fire, the third is called wood, the fourth is called metal, and the fifth is called earth.  

This actually gives us yet another alternative (水火木金土) to the previously described sequences, one which Song philosophers will discuss. Immediately following this, Ban Gu provides a description of each of the five phases one by one, and follows this with still another sequence: water, wood, fire, metal, and earth (水木火金土). This latter sequence is invoked in other texts as well when making the correspondences with the four cardinal directions (water-north, wood-east, fire-south, metal-west), and the center (earth). The location of earth in the center and not being directly associated with one of the four seasons, but with the change of seasons, and even with the emperor, elevated the earth elemental-phase to prominence in many philosopher’s minds, and this continued reverence will be further evident in the cosmological debates by Jin dynasty officials as well as in Jin medical writings. The root of this can be further traced as Ban Gu continues:

The *Leji* (Happy Records) said: spring is birth (wood), summer is growth (fire), fall is reaping (metal), and winter is storage (water). The reason earth does not have a named season is that *di* (Earth, e.g., Heaven & Earth) and *tu* (earth, e.g., the soil) are alternative names. Compared to the [other phases of the] wuxing it is the most revered, and therefore doesn’t itself occupy a government office. The *Yuanming Bao* (Source of one’s Budding Fate) said: earth is considered the place where the dao resides, therefore the great don’t prepare for the change and the person governed [by earth] will not be appointed to government office [for they will be the ruler].

Although one might argue over the addition of the last bracketed phrase that suggests the earth person will be the ruler, it is known that government service was the highest ideal of a Confucian scholar, and so becoming the ruler is a logical explanation for why the most revered scholar who embodied the dao did not earn an official post.

Returning to the proper generative and conquest sequences and their applicability to dynastic succession, ruler succession, and moral conduct, Ban Gu explains:
五行所以更王何 以其轉相生 故有終始也
木生火 火生土 土生金 金生水 水生木
How does the wuxing influence kingship? It is by means of the cycles of mutual
generation. Therefore, [the reigns of kings] have ending and beginnings. Wood
generates fire, fire generates earth, earth generates metal, metal generates water,
and water generates wood.  

In this passage Ban Gu is arguing that once a dynasty is established, the successive reigns
within that era follow the generation sequence, whereas the conquering by another
dynasty follows the conquest sequence. Thus both the generative and conquest cycles are
at work simultaneously on a micro and macro level. Like Dong Zhongshu, Ban Gu
provides an illustrative example:

Thus when wood is king, fire appears, earth dies, metal is imprisoned, and water
comes to rest. The king who conquers old age, death, and imprisonment is
therefore the king who is at rest. What are the mutual influences of fire on a
[wood] king? They consider knowledge to be a vassal and earth is that which dies.
The child takes revenge on behalf of the father. The son of the wuxing (fire is the
son of wood) carefully proceeds and things return to the mother. Wood is king
and fire appears, metal is completed, for it is fire [that completes?] metal. Metal
generates water, and water extinguishes fire, fulfilling its principle; fire generates
earth, there is earth and then it harms water. None are able to resist.

Although passages like this are often difficult to follow, the crux of the argument is that
when one element is dominant, the others must fulfill their role relative to the dominant
phase. In this example wood is dominant, and so “fire appears” due to the generative
sequence, “earth dies” due to the conquest sequence, “metal is imprisoned” because it is
destined to conquer wood, and “water comes to rest” because its offspring wood is
currently flourishing independent of the parents generative energies. Ban Gu goes on to
explain further the conquest sequence:

As for the mutual harm caused by the wuxing, it is the nature of Heaven and Earth. The
many conquer the few so therefore water conquers fire; the essence conquers
the strong so therefore fire conquers metal; the hard conquers the soft so therefore
metal conquers wood; the concentrated conquers the scattered so therefore wood conquers earth; the full conquers the empty so therefore earth conquers water. 

Fire is yang; it is the ruler of appearance; water is yin, it is the vassal of meaning.

Here again is the same sequence presented by Dong Zhongshu, although this passage adds on that extra phrase about fire being associated with rulers and water with vassals.

Ban Gu concludes this discussion by presenting the etiology and pathophysiology of dynastic succession:

How is it that a vassal conquers their ruler? This is called the ruler being without the dao. Therefore, he causes the many to have their yin harmed, just like King Zhou.

King Zhou 纣王 (r.1154-1122 BC) was the last ruler of the Shang dynasty, an alleged tyrant who lost the Tianming 天命 (mandate of Heaven) to the Martial King of Zhou 周武王 (r.1122-1115 BC) who then founded the Zhou dynasty. This is the other key to legitimate dynastic succession, which is that the previous ruler must lose the mandate of Heaven. Heaven often makes this known through the occurrence of natural disasters and disease epidemics, signaling the need for dynastic and elemental change.

The application of wuxing theory to dynastic succession became confounded by the machinations of philosophers and the arbitrary powers of the emperor. Based on the earlier quoted passage by Sima Qian, the dynasty that followed the Qin was supposed to obtain the power of earth, but the story quickly becomes problematic. This is illustrated in the Han Shu 漢書 (History of the [early] Han dynasty, 82) by Ban Gu:

When [Han] Gaozu (r.206-179 BC) ascended to the throne, he placed in the ancestral hall a sacrifice and then he had wu (shamans, spirit mediums) from [the states of] Qin, Jin, Liang, and Chu [perform rituals], and the world worshipped Heaven and Earth with a combination of sacrificial acts. The whole thing was remarkable. Henceforth it was promulgated that the Han dynasty was a continuation of [legendary sage king] Yao’s legacy and once the power of his enthronement flourished it was decided a snake would serve as their sign, red flags and banners were raised, they merged with the power of fire, the natural correspondence, and they obtained unification with Heaven.
To try and explain how the Han once more obtained the power of fire, it appears Ban Gu used the generative sequence instead of the conquest, and left out the Qin dynasty whose legitimacy was thereby challenged along with the model of Sima Qian. Ban Gu explains:

漢高祖皇帝著紀 伐秦繼周 木生火 故為火德 天下號曰漢
Emperor Han Gaozu altered the records; he deleted the Qin and succeeded the Zhou. Wood generates fire, therefore; [the Han dynasty] achieved the power of fire and all under Heaven was called Han.  

Thus the Zhou, previously associated with the power of fire, became associated with wood so that a proper sequence could be manufactured that allowed the Han to claim the fire power. This likely involved restructuring the sequence to begin with Huangdi as earth, proceed to the dynasties of Xia as metal, Shang as water, and Zhou as wood, culminating with the fire of Han according to the generative, rather than the conquest, sequence.

But that is not the end of this story. In another text called the Dongguan Han Ji (Records of the Eastern Watch of the Han Dynasty) that was compiled under the direction of Ban Gu as a biography of Guang Wudi (r.25-58), the following story about the Han founder appears:

自漢草創德運 未有所定 高祖因秦 以十月為正 以漢水德
立北畤而祠黑帝 至孝文 賈誼 公孫臣以為秦水德 漢當為土德
至孝武 倪寬 司馬遷猶從土德
Naturally the Han inscribed it was inaugurated with the deyun (power of the [five] elemental-movements), but right from the very beginning the suitable color had not yet been decided. Gaozu (r.206-179 BC) followed the Qin dynasty and used the tenth month to become rectified so that the Han dynasty had the power of water, and he performed the northern sacrifice and worshiped the Black Emperor. Reaching [the time of] the filial Wen[di] (r.179-156 BC), Jiayi (200-168 BC) and minister Gongsun, they assigned the Qin dynasty the power of water and the Han dynasty accordingly was assigned earth power. Reaching [to the time of] the filial Wu[di] (r.140-86 BC), Ni Kuan (c.80 BC) and Sima Qian (145-86 BC), they continued to pass on the earth power.  

Here the argument is that the Han was originally in possession of the power of water, but only because later emperors and scholars changed the sequence was the Han supposedly assigned to the power of earth. This logic similarly seems to argue against the legitimacy of the Qin dynasty, which was passed over so that the Han could assume the water power. But then this text adds:
From the time [Wudi] ascended to the throne, records of diagrams and prophecies rejected the *wuyun* (five elemental-movements) and the Han dynasty was assigned fire power. [Once it was] completely *cang* (dark blue-green) [but then] the Han [became] red, water generated fire, red replaced *cang*.

This passage suggests the emperors became fed up with these arguments and asserted their own elemental preferences, using whatever explanation they wanted to support their decision. There is no other reference to “water generating fire” found in the early Chinese literature, with the only exception that those three characters, *shui sheng huo* 水生火, do appear together in the *Huainanzi*, which stated:

金壯土老水生火囚木死
When metal is strong, earth is old, water is generated, fire is imprisoned, and wood dies.

Here we see the same logic applied as that used by Ban Gu, and not a new variation that allows for a generative relationship between water and fire. The only meaningful explanations provided for the emperor’s choices are also given in the *Dongguan Han Ji*, which first stated:

圖讖著伊堯赤帝之子 俱與後稷並 受命而為王
The diagrams and prophecies stipulate the [the sage king] Yao was the son of the Red Emperor, who entirely took part in the emperor Ji (God of grains) merger, received the mandate and became king. The Han dynasty’s Liu family ancestors were Yao, so they appropriately commanded the villages to sacrifice to emperor Yao so he can join Heaven and [to perform] ancestral sacrifices to Gaozu so he can join Shangdi (Lord on High).

Thus Han Gaozu proclaimed the imperial line was descended from the legendary sage king Yao, whose association with the fire element is derived from the color of his father, the Red Emperor. But more importantly, perhaps:

高祖自感赤龍火德承運而起
Gaozu had a personal fondness for red dragons and the power of fire when he accepted the [the mandate of Heaven] and arose [to become the first emperor of the Han dynasty].
This association with fire and fondness for red dragons is further explained in the *Lunheng* (Measured Discussions, c.80), attributed to Wang Chong 王充 (c.27-97), in a section entitled *qiguai* 奇怪 (strange tales):

讖書又言 堯母慶都野出 赤龍感己 遂生堯 高祖本紀言
劉媪嘗息大澤之陂 夢與神遇 是時雷電晦冥 太公往視
見蛟龍於上 已而有身 遂生高祖

*The Book of Prophecies* also said: [legendary sage king] Yao’s mother was celebrating out in the open fields where a red dragon was affectionate towards her and subsequently Yao was born. *The Basic Records of Gaozu* said: old woman Liu had stopped to take rest by a large pond and dreamed she was visited by a spirit. At the time there was thunder and lightning in the deep darkness and her great grandfather went to investigate and saw the *jiaolong* (dragon that controls rains and floods) up above. After that [old woman Liu] was with child and subsequently Gaozu was born.

Although these passages are clearly meant to be parallel and establish a connection between the miraculous births of their emperors, and thereby even strengthen the fire power association, it also echoes the stories of claims to the power of water (e.g., rains & floods) described in the *Dongguan Han Ji*. Thus from the time of the early Han, scholars argued over whether the proper elemental-phase of their dynasty was earth (based on the conquest sequence and the legitimacy of the Qin dynasty), water (based on the illegitimacy of the Qin), or fire (based on the generative sequence or the preferences of the founding emperor). This parallels the *wuxing* debates at the court of the Jin dynasty.

The controversy over the *wuxing* and the legitimacy of dynastic succession continued during the interregnum between the early and later Han dynasties. The usurper-reformer Wang Mang 王莽 (r.9-23), styled Jujun 巨君, formulated his vision of a Xin 新 (New) dynasty using the *wuxing*. In the *Han Shu* by Ban Gu, there is a biography of Wang which states:

於是新皇帝立登車 之漢氏高廟受命 受命之日丁卯也 丁火漢氏之德也
卯 劉姓所以為字也 明漢劉火德盡 而傳於新室也

Thereupon the emperor of the Xin dynasty mounted his chariot and went to the Han family imperial ancestral shrine to receive his mandate. The day he received the mandate was the *dingmao* [year, or the fourth year of the 60 day cycle]. Both *ding* (4th Heavenly stem) and fire are powers of the Han clan, while [the character] *mao* (4th Earthly branch) is a component of the character Liu [of the imperial surname]. The brightness of the Han dynasty’s and the Liu family’s power of fire is exhausted, but it is transmitted to the House of the Xin dynasty.
Thus Wang Mang also claimed the power of fire, and as such even argued his “New”
dynasty was the legitimate successor to the Han by virtue of this shared elemental-phase,
as opposed to a new phase based on either the generative or conquest sequence. However,
in another section of the *Han Shu* discussing Wang Mang, Ban Gu provides another
possible explanation:

漢氏平帝末年 火德銷盡 土德當代 皇天眷然 去漢與新
During the final years of the Han clan’s Pingdi (r.1-6), the power of fire was
completely exhausted, the power of earth was properly substituted, the emperor of
Heaven was justly concerned, [and the mandate of Heaven] left the Han and was
given to the Xin.  

This passage still implies that the reign of Wang Mang was simply a continuation of the
Han dynasty, but that a change of elemental powers from fire to earth via the generative
sequence preceded his ascension. This change was what differentiated the early from the
later Han, and this was what was “new” about Wang Mang’s reign. Since Sima Qian and
others believed that earth was the proper phase for the Han from the dynasty’s inception
following the conquest of Qin, this explanation would have been embraced by similarly
oriented scholars.

It is worth noting an interesting medical contribution that was made by Wang
Mang in the year 16. The following passage was recorded in the *Han Shu*:

王孫慶捕得 莽使太醫 尚方與巧屠共刳剝之 量度五藏 以竹筳導其脈
知所終始 云可以治病
[When the rebel leader] Wang Sunqing was captured, [Wang] Mang gave
instructions to his imperial physicians of esteemed prescriptions, giving them the
opportunity to slaughter [Sunqing] publicly and to cut him open and peel back his
skin, to measure and evaluate his five *zang* (solid organs), to use bamboo poles to
follow his vessels so as to know where they end and begin. [Wang Mang] said the
[knowledge gleaned from this dissection] could be used in the treatment of
disease.  

While detractors of Chinese medicine often suggest its theories are based on a lack of
understanding of human anatomy due to Confucian prohibitions on dissections, here is
early evidence that such anatomical studies did in fact occur.

Wang Mang’s reign was later determined to be illegitimate by his conqueror,
Guang Wudi 光武帝 (Brilliant Martial Emperor, r.25-58), and so of course the power of
fire needed to be revitalized and continued under new auspices. Details of this exchange
of power are further found in the *Jin Louzi* (Master of the Golden Pavilion) by Liang Yuandi (r.552), written during the Age of Division (316-581). This speaks not to the historical authenticity of the events described, but more so to the continued significance of *wuxing* imagery in claiming imperial legitimacy. This text begins with the story of Guang Wudi’s ascension in the chapter *xingwang* (becoming king), which states:

漢世祖文叔 建平元年十二月甲子夜生於武帝故宮 有赤光照室 影如五麟七鳳

When during the Han era ancestor Wenshu, in the first year of the Jianping reign period (6 BC), in the twelfth month on the evening of the *jiazi* [first year of the 60-year cycle], gave birth to [Guang] Wudi in the imperial palace, the room became illuminated with a red light and there were images resembling five unicorns and seven phoenixes.

This is another story of miraculous birth, although it does strain credibility slightly less than dragon impregnations, and is complete with fire element correspondences (red lights & phoenixes). The story continues:

更始起兵 退还陵 远望舍內火 光赫然屬天 夢乘赤龍登天上 珠陛玉闥

When he started to raise an army he returned to Chunling (Spring Hill) and gazing far into the distance a *she* (house, or a unit of distance equal to about 30 miles) [he saw] an internal fire, its rays of light so brilliant they belonged to Heaven. He dreamed he was riding a red dragon and ascending upwards to Heaven, to pearl steps and a jade gateway, and thereupon took his three thousand men and defeated Wang Mang’s millions and then ascended to the throne.

Once more the red dragon appears and metaphorically carries Guang Wudi to victory despite being severely outnumbered, thereby demonstrating his mandate to rule with the renewed power of reestablished fire. This significance of these symbolic images of fire and legitimacy are echoed in the *Hou Han Shu* (History of the Later Han), which adds to the story a conversation between the emperor and a minister on that fateful day:

光武曰 我昨夜夢乘赤龍上天 覺悟 心中動悸

Guang Wu[di] said: Last night I dreamed I rode a red dragon up to Heaven, I was completely aware and my heart was struck by palpitations. This caused [minister] Yi to bow down on a mat in formal obeisance and congratulate him saying: this is the *Tianming* (mandate of Heaven) revealed by the essential spirit.
The Han dynasty finally came to an end amidst rebellions and internal turmoil. At that time the notorious general Cao Cao 曹操 (155-220) was able to influence the young emperor and secure greater and greater power with his armies in northern China. However, he was not able to secure the south where his rivals Liu Bei 劉備 (161-223) and Sun Quan 孫權 (r.222-252) founded their own kingdoms of Shu Han 蜀漢 (200-263) and Wu 吳 (222-277), respectively. Cao Cao became the founder of the Wei 魏 dynasty (220-265), thus this era is referred to as the *Three Kingdoms Period* (c.220-265). Cao Cao became posthumously known as emperor Wendi 文帝 (r.220-227), but his reign name was Huangchu 黃初 (Yellow Beginning). The significance of his reign title was directly tied to the *wuxing* and the generative sequence for garnering imperial legitimacy, as revealed in the *Tongdian* 通典 (Canon of Transmission), an encyclopedic work by the Tang official Du You 杜佑 (735-812):

> 後魏初為土德，言繼黃帝之後也，故數用五，服尚黃

After the Wei dynasty assumed the power of earth, they said they were following after Huangdi. Therefore, they used the number five and their clothing was predominantly yellow.

Since both the Early and Later Han claimed the power of fire, the Wei claimed earth according to the generative sequence. However, the debate over the proper sequence was still far from over. During the Wei dynasty, the *Kongzi Jiayu* 孔子家語 (Sayings from the Confucian School) was compiled by Wang Su 王肅 (195-256), and in the chapter on the *wudi* 五帝 (five emperors), Wang expounds on the importance of the *wuxing* to the reigns of these legendary sage rulers:

> 古之王者，易代而改號。取法五行，五行更王，終始相生，亦象其義

As for the kings of antiquity, as each generation changed they changed their sign, and the selection method was the *wuxing*. The *wuxing* changed the kings from beginning to end [of a dynastic period] by mutual generation, and this also manifested their righteousness.

Although initially this appears to be an argument in favor of using the generative sequence for dynastic succession, it actually goes on to explain that the proper use of this
sequence is for the succession of rulers within a dynastic period, not the change of dynasties. As Wang explains:

故其為明王者 而死配五行 是以太皞配木 炎帝配火 黃帝配土 少皞配金 顓頊配水
Therefore, those who are considered enlightened rulers, they rigidly aligned with the wuxing, such that Taihao (a.k.a., Fuxi, the father of civilization, r.2852-2737 BC) aligned with wood, Yandi (a.k.a., Shennong, the father of agriculture, r.2737-2697 BC) aligned with fire, Huangdi (r.2697-2597 BC) aligned with earth, Shaohao (son of Huangdi, r.2597-2513 BC) aligned with metal, and Zhuanxu (grandson of Huangdi, r.2513-2435 BC) aligned with water.

All of these rulers are considered part of a single, albeit legendary, dynastic period spanning four centuries. Although no specific familial relationship between the first three rulers is suggested, the third ruler, Huangdi, passed on the kingdom to his son, who then passed it on to his son. Therefore within this period the sequence of reign periods followed the generative sequence. Wang Su may have decided that there was confusion on this matter when one looks at the second reign title of the second Wei emperor, Mingdi 文帝 (r.227-240), whose reign period (233-237) name Qinglong 青龍 (Green Dragon) evokes the power of wood. Since the Wei succeeded the Han via the generative sequence, Mingdi may have assumed that Wei rulers succeeded each other via the conquest sequence, yet Wang is arguing that this is the opposite of the natural order.

The wuxing continued to be invoked for dynastic legitimacy after the Three Kingdoms Period. This phase ended with the unification of the Central Plains under the Jin 晉 dynasty (265-420), traditionally divided into the Western Jin (265-316) and the Eastern Jin (316-420). In the Taiping Yulan 太平御覽 (Imperial Readings of the Taiping Era) compiled by Li Fan 李昉 (925-996) between 977 and 983 during the early Northern Song (960-1126), it states:

漢火德王 魏土德王 火伏而土興也 土上出金 魏滅而晉興也
The Han ruled with the power of fire and the Wei ruled with the power of earth. Fire declined and earth flourished. When earth was ascendant it put forth metal and the Wei was extinguished and the Jin flourished.

Here again the generative cycle was used to explain this dynastic sequence from earth, to fire, to metal. The Eastern Jin further marked the beginning of the Age of Division (c.304-589), when numerous kingdoms vied for supremacy until the reunification of the
Central Plains under the Sui 隋 dynasty (581-618). The Tongdian again provides details on the continued use of the wuxing in establishing legitimacy for this dynasty:

隋文帝即位 薪改後周制度 乃下詔曰 宣尼制法 損益可知 朕受天命
赤雀來儀 五德相生 並宜火色
When Sui Wendi (r.581-605) succeeded to the throne, he wanted the change to follow from the Later Zhou (557-581) dynastic institution and so he issued an imperial decree that said: announcing the institutional laws and understanding the risks and benefits, I have received the Tianming (mandate of Heaven), a red bird has made an appearance, the five powers mutually generate. Therefore, it is appropriate that [the power of] fire appears. 

Once more, the power of fire was invoked by a founding emperor. The relatively short 24 year reign of the Sui was followed by the 289 years of relative stability under the Tang 唐 dynasty (618-907), which once more used the generative sequence to support their ascension. According to the Tongdian: Da Tang tude 大唐土德 (the Great Tang had the power of earth). However, the debate over legitimate succession according to the wuxing was revived by the founder of the Northern Song dynasty, who once again claimed the power of fire.

Confucian cosmology in middle dynastic history

The Northern Song experienced a flourishing of intellectual discourse among the emerging gentry class. This group of scholars devoted themselves to Confucian learning and moral conduct to aid in the ordering of society. The highest goal of most literati was to hold a government office, but competition for these positions was fierce since the availability of official posts did not increase anywhere near the rate of growth of jinshi (advanced scholar) degree holders, or the population as a whole. This was of course a problem of their own making, in that they encouraged self-cultivation through education, which increased the pool of candidates, but they still conservatively valued a small and limited bureaucracy. As members of the elite, they also served as local community leaders and were expected to be exemplars of civilized conduct and facilitate conflict
resolution. However, those who were not born into wealthy families also had to support themselves financially. This necessitated that these learned men find some other worthwhile career than government service. Many of them served as teachers to aid the next generation as they prepared for the examinations, and many of these scholars developed their own interpretations of the classical canon. Parallel to the trends in Jin literati medicine, this led to a new wave of literature that sought to reinterpret ancient texts to refine and extend the classical paradigm while making it relevant to the perceived needs of the time. This process led to the formalization of the classical paradigm into an orthodox Confucian cosmology.

The intellectual movement that began during the Northern Song had a far reaching and long lasting impact on Chinese civilization. Emperor Lizong (r.1225-1264) of the Nansong (Southern Song dynasty, 1127-1279) promoted this revised cosmology, which was based primarily on the synthetic approach of Zhu Xi (1130-1200), in an attempt to bolster his failing state. Although this effort failed to save them from the Mongol onslaught, Zhu Xi’s interpretations became the state orthodoxy in the late imperial era and thus were required reading for the civil service examinations. However, during the Northern Song and Jin dynasties, the literary field was dynamic. Those early Song scholars that Zhu Xi most admired became part of his own constructed lineage and were subsequently referred to as the sijia 四家 (four masters) of the branch of Confucianism self-identified as the daoxtue 道學 (study of the Way or moral path). Thanks to Zhu, these “four masters” were popularly known as: Zhou Dunyi 周敦頤 (1017-1073), the brothers Cheng Hao 程顥 (1032-1085) and Cheng Yi 程頤 (1033-1107), and Zhang Zai 張載 (1020-1077). In the Zhuzi Yulei 朱子语类 (Master Zhu’s Words Categorized), in an essay entitled Kong Meng Zhou Cheng Zhang zi 孔孟周程張子 (the masters Confucius, Mencius, Zhou [Dunyi], [the two brothers] Cheng, and Zhang [Zai]), Zhu Xi concludes:

今且須看 孔孟程張 四家文字
Now more than ever one should read Kong (Confucius), Meng (Mencius), the Cheng [brothers], and Zhang [Zai], the sijia (four masters) of literature. 46

Even though he references six masters in the title and just four in the above passage, Zhu Xi wrote extensively on the teachings of each of the “four masters” of the Northern Song,
while also expounding upon many more of the early classics besides the *Lunyu* (Analects of Confucius) and the *Mengzi* (Book of Mencius). Thus from its inception, the term *sijia* (four masters) is used as a literary trope to identify a developmental phase of intellectual history. It was not meant to be a numerically limiting identifier. This is important in understanding the use of the term in regards to medicine during the Jin dynasty, as well as landscape painting during the Yuan.

Zhu Xi himself not only expounded on the historical precedents of using the *wuxing* for dynastic legitimacy, but even challenged the Song’s adoption of the power of fire. In the *Zhuzi Yulei*, he first explains the sequence that preceded the Song’s rise to power:

唐用土德 後梁繼之以金 及至後唐 又自以為唐之後 復用土德 而不繼梁 後晉以金繼土 後漢以水 後周以木 本朝以火

The Tang dynasty used the power of earth, the Later Liang dynasty (907-923) followed this and took up [the power of] metal. Arriving at the Later Tang (923-936), they also considered themselves to follow the [former] Tang and returned to the power of earth, and didn’t follow the [metal phase of the Later] Liang. The Later Jin (936-946) used metal to follow earth, and the Later Han (947-950) used water, the Later Zhou (951-960) used wood, and the current dynasty (Song) used fire.

This passage illustrates the chaotic nature of the period following the fall of the Tang, commonly referred to as the *Five Dynasties Period* (902-979), with several short-lived dynasties following one after another in quick succession. This explanation of their respective elemental-phases using primarily the generation sequence was important to legitimize the Song’s adoption of fire. However, Zhu Xi then challenges this decision:

至引太祖初生時 胞衣如菡萏 遍體如真金色 以為此真土德之瑞 一時煞爭議 後來卒用火德 此等皆沒理會

When it reached the time of the birth of [Song] Taizu (r.960-976), the placental afterbirth was like a lotus blossom and all over his body was the genuine color of gold, and this was considered a truly auspicious sign of the power of earth. But after a while this became controversial, and later it was suddenly changed to use the power of fire. This classification made absolutely no sense at all. 
Although Zhu Xi made this challenge late in the dynasty, it is further evidence that debate over the proper wuxing power continued throughout China’s middle period. This same debate occurred among scholars in the north under the Jin dynasty, who were also struggling with these concepts of dynastic legitimacy. Remarkably, the reference to the phrase *zhen jinse* 真金色 (genuine color of metal or gold) supporting the identification of the earth phase, which corresponds to the color yellow, parallels a debate over the Jin dynasty’s invoking of the metal phase and the color white, supporting the argument by this author that the Jin was the first and only dynasty to use one of the wuxing for their title. Looking back to the Northern Song philosophers who would have had the greatest influence on Jin Confucians, it is clear that the vibrant intellectual discourse included the wuxing and its place in the new Confucian cosmology.

Zhou Dunyi was the earliest of these Song masters, and like many scholars before he discussed the wuxing in his own attempt to refine the classical cosmological paradigm. He was born in southern Hunan province, and held a number of official posts from 1040 to 1072 before he retired just a year before dying from illness. The two major philosophical works Zhou wrote were the *Taiji Tushuo* 太極圖說 (Diagram of the Great Ultimate Explained, c.1060) and the *Yi Tongshu* 易通書 (Expounding on the Book of Changes), which were edited and published by his students. He also composed several short essays and poems. In the *Yi Tongshu*, Zhou expounds upon his moral theories grounded in the virtue of *cheng* 誠 (sincerity), which he believed served as the foundation for all ethics (Huang, S., 1999).

In the *Taiji Tu* 太極圖 (Diagram of the Supreme Ultimate), Zhou provided a visual representation of his cosmology (see figure 1), beginning with the often quoted phrase: *wuji er taiji* 無極而太極 (absolutely nothing and then the great ultimate). This statement on the origins of the universe is essentially a “big bang” theory that argues: out of nothingness came somethingness. This somethingness then divided into complementary and opposing forces of *yin* and *yang*, often referred to by scholars as the liangyi 兩儀 (duality of existence), followed by a further sub-division into the wuxing. Zhou explains:
Zhou argues that fire and water are the original elemental-phases that are derived from the theory of reversibility: when a phenomenon reaches the extreme of yin or yang, a state of near purity, the dynamic forces that bind yin and yang together become unstable, causing a drastic counterbalancing shift towards the opposite extreme. One might imagine the combustive power of rocket fuel composed of hydrogen and oxygen, which produces water vapor after exploding. Zhou thus explains this sequence of the wuxing (水火木金土) by stating the first two elements, water and fire, are the original physical manifestation of yin and yang, examples of relatively pure matter and energy, and from these are derived the second set of elemental pairs, wood and metal. Since yang represents expansion and yin represents contraction, wood, which includes all plants and trees and is the only “living” thing among the five phases, is derived from fire and yang; while metal, which includes all rocks, stones, and gems that are dense and hard masses, are derived from water and yin. This describes a simple taxonomy of organic and inorganic matter. Earth then becomes the arena where these dynamic forces operate and the balancing point between their extremes. The importance of qi (energy, but also matter) as the manifestation of all things yin and yang based upon their li (organizing principle) becomes a central theme of Song Confucianism.

The Taiji Tu treatise goes on to describe the standard generating sequence (木火土金水), and then Zhou uses the wuxing to make a non-controversial political statement:

As for the solitary man, if he obtains his refinement and is the most divine then that which is called [the benti (original state of being represented by the empty circle)] of man consequently comes into existence. Thus, appearance is what is
made from *yin* and spirit is what comes forth from *yang*. As for the *wuxing* (five natures), it is the *de* (power, virtue) of the [wuxing (five elemental-phases)].

The solitary man is the emperor, and his maintaining the Heavenly mandate to rule is predicated on his moral actions being in harmony with the *wuxing*. If he is refined it will result in the harmonious balance of these natural forces, returning to the original state of being. Thus for scholars of the Song and Jin dynasty, the centrality of *wuxing* theory to the legitimacy of political rule remained constant.

The conquest sequence is not discussed in the *Taiji Tu*, but in both this text and the *Taiji Tushou*, Zhou Dunyi takes up the question of the significance of the sequence mentioned earlier by Ban Gu in the *Baihu Tongde Lun*, which quoted the *Shangshu*. Zhou argues that this earlier sequence is better explained through his theories of the original generation, and then suggests a way the two sequences, the standard generative cycle (木火土金水) and the alternative sequence (水火木金土), can be rectified:

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然五行者 质具於地 而气行於天者也
以质而语其生之序 则曰 水火木金土 而水木阳也 火金阴也
以气而语其行之序 则曰 木火土金水 而木火阳也 金水阴也
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Thus as for the *wuxing*, their nature and abilities are from the Earth but their qi and movements are from Heaven. If one uses their nature in order to speak about their sequence of generation, then it is said: water, fire, wood, metal, and earth. In this case water and wood are *yang*, fire and metal are *yin*. If one uses their abilities in order to speak about their sequence of movements, then it is said: wood, fire, earth, metal, water. In this case wood and fire are *yang*, metal and water are *yin*.

Zhou argues that if you analyze the *wuxing* according to their Earthly nature then one can discuss their creation from nothingness into the physical manifestation of fire and water, and only then preceding to the creation of metal and wood. However, if one intends to analyze their abilities to mutually generate and perpetuate the Heavenly cycles of nature (such as the seasons), then one uses the standard sequence. Rectifying these debates was an essential foundation for constructing the new Confucian cosmology.

Zhang Zai also entered the *wuxing* discussion. He was born in the Northern Song capital at Bianjing (Henan province), but was orphaned at an early age leading to a life of poverty. At age 21, he wrote a letter requesting to become a soldier to general Fan Zhongyan (989-1052) who had just led a successful campaign against the Khitan empire in the northeast, earning Fan a high official post. However, Fan identified Zhang’s
literary potential and persuaded him to pursue a formal education. In 1057, Zhang passed the *jinshi* examination and was appointed to Hebei province. While serving there he often gave lectures on the Confucian classics, but after he criticized the reforms of Wang Anshi (1021-1086) he lost his post.

In his scholarly works, Zhang tried to reconcile both the *wuxing* and the *yin yang* model with his theories on *qi*. For Zhang, all observed or experienced phenomenon are *qi*, including the dynamic forces governing these other models. Yet at the same time, the very existence of *qi* is dependent upon these other forces. In the *Zhang Zai Ji* (Collected Works of Zhang Zai) he states:

> Water and fire are *qi*, therefore flames go up and moistness descends together with the rising and falling of *yin* and *yang*. Earth does not [rise or fall] but regulates [these actions]. Wood and metal are the flowers and fruits of the earth. Their nature has aspects of water and fire.  

Zhang is building on the ideas of Zhou Dunyi regarding the generation of the *wuxing*. He adds that all of these concepts, not just water and fire, are forms of *qi*. Because *yang* *qi* becomes fire, fire behaves according to *yang*, and because *yin* *qi* becomes water, water behaves according to *yin*. Furthermore, Zhang argues that while these first two elemental- phases are generated directly from *yin* and *yang* at the moment of creation, the latter two are products of the earth, still representing the organic and inorganic substances. This reinforces the role of earth governing the center, and acting as a pivot between Heavenly and Earthly forces. Zhang continues:

> Therefore regarding wood’s becoming a material thing, if the water is clear then it is generated (water generates wood), fire ignites and does not depart (wood generates fire). [Wood] is the fleeting flowering of all that the earth possesses from the interactions of water and fire. As for metal’s becoming a material thing, it obtains the essence of fire from the dryness of earth and obtains the essence of water from the moistness of water [or earth?]. Therefore water and fire mutually receive but do not mutually harm, and are the ebb and flow of melting but not squandering. [Metal] is the essential repletion of all that earth possesses from within the boundaries of water of fire.
Zhang is reinforcing the idea of earth being at the center of the generation of wood and metal, with the interactions of water and fire providing the qi. Since these passages present as parallels, the substitution of tu (earth) for shui (water) in this passage makes much more sense, suggesting this was a transcribing error. Zhang concludes this passage with further emphasis on the importance of the earth to the process of generation and transformation:

土者物之所以成始而成終也 地之質也 化之終也 水火之所以升降
物兼體而不遺者也

As for tu (earth), it is the means by which material things achieve a beginning and an end, it is the substance of di (earth), it is the culmination of transformation, it is the means by which water and fire rise and fall. [Earth is why] things both have a structure and do not lose it. 59

Here Zhang equates the transformational power of the earth phase (tu) as the basis for the manifestation of things on the planet earth (di).

Zhang goes on to argue that qi is what manifests based upon the design of the tianli 天理 (Heaven’s organizing principle), and further that all the observable changes are transformations of qi, not the creation or destruction of qi. Or in other words: matter and energy can be neither created nor destroyed, only transformed. The similarities between Zhang’s theories and the laws of conservation of energy in the modern Western scientific paradigm are often pointed to excitedly by those wishing to validate the Confucian cosmological paradigm by demonstrating its consistency with the norms of an authoritative model. Of course, the similarities do not stop at the first law of thermodynamics, for yin yang dualism also predicts the transfer of energy from high concentrations to low, and that a temperature of absolute zero cannot exist in a world composed of complementary forces. Yin yang theory further predicts that for every action there is an equal an opposite reaction, that force (yang) will follow the path of least resistance (yin), and that energy (qi) is equal to mass (yin) multiplied by the speed of light squared (yang), just as force (qi) is equal to mass (yin) times acceleration (yang).

The two Cheng brothers, both of whom studied for a while under Zhou Dunyi, also added to the wuxing conversation. Both of the Cheng brothers were born near Luoyang (Henan province), and in 1057, Cheng Hao obtained the jinshi degree at age twenty-five. Cheng Hao also came into conflict with the reform policies of Wang Anshi in 1070, which led to his ouster from official service until 1085 when a new emperor
began his reign. However, soon after his reappointment he died at the age of fifty-three. In 1059, Cheng Yi obtained the *jinshi* degree at the age of twenty-six, but unlike his brother he repeatedly declined official appointments. Finally in 1086 he took a post lecturing the emperor on Confucian morality and soon developed many admirers, but after less than two years his critique of government policies led to his dismissal. As a result, his teachings were prohibited and his books were destroyed. Cheng Yi was finally pardoned in 1106, a year before his death. In the *Henan Chengshi Yishu* (Posthumous writings of the Cheng masters of Henan), in an essay entitled *Liu yuancheng shoubian* (compilation of Liu’s original endeavors), the Cheng brothers sought to clarify the meaning of the term *ke* 克 (subduing, restraining) with this explanation:

或曰 凡物之生 各隨氣勝處化 曰何以見 曰如木之生 根既長大 根却無處去 曰克也 曰既克 則是土化為木矣 曰不是化 只是克

[Liu Mu 劉牧 (1011-1064)] once said: ordinarily when things are generated, each follows the *qi* and conquers the place of transformation. [Someone] asked how this manifests, and he said: it is like when wood (a tree) is generated, when the roots have already grown long and large, the roots then have no place to go. This is called *ke* (subduing, restraining). If we say [the tree] has already been restrained then this is earth transforming into wood. If we say [earth] has not [yet] transformed, then only is this *ke*.

Here the term is equated with not just the conquest cycle, but the actual process of conquest, as opposed to the generation cycle as Dong Zhongshu argued during the early Han. This passage argues that when an elemental-phase is in a state of repletion it will take over another phase according to the conquest sequence, and that the process of taking over is *ke*. Once a phase has taken over and the transformation is complete then there is no longer the action of *ke*, for conquest has already been achieved.

The Cheng brothers also applied the *wuxing* model to discuss politics. As this same passage continues, they bring up the role of kingship as an illustrative example:

五行 只古人說迭王字說盡了 只是箇盛衰自然之理也
人多言五行無土不得 木得土方能生火 火得土方能生金 故土寄王於四時 某以為不然 木生火 火生土 土生金 金生水 水生木 只是迭盛也

[Applying] the *wuxing*, only the ancient people explained repeatedly the succession of rulers and explained it exhaustively. Only by [the *wuxing*] did [kings] flourish and decline according to their innate *li* (organizing principle).
Many people say the wuxing can never be without the earth, for when wood obtains tufang (the method or direction of the earth elemental-phase) it is able to generate fire, and when fire obtains tufang it is able to generate metal, and therefore the earth depends upon rule by the four seasons. I do not consider that this so. Wood generates fire, fire generates earth, earth generates metal, metal generates water, and water generates wood. Only by this do [kings] repeatedly flourish.

Several themes are evident here. The Cheng brothers were also renowned for their promotion of the theory of li (organizing principle) as the guiding force behind qi (the manifestation of all things). Further, it reiterates the belief that the rise and fall of kings, like the four seasons, progresses according to the principles of the wuxing. Although the generative sequence is specifically detailed, it remains unclear if this sequence describes the rise and fall of kings within a dynasty, or the rise and fall of dynasties. The Cheng’s reference to the tufang 土方 (direction of the earth phase) implies a model with earth in the center and the other four phases, which correspond with a cardinal direction and a season, arrayed around the central and pivotal earth phase. This emphasis on earth may also be a reference to the imperial center from which the four directions of all under Heaven are governed. Because of concerns over the rectification of numbers, such as four seasons with five phases, this passage may be referring to contemporaries of the Cheng brothers who were arguing for the elimination of the earth from the cosmological paradigm of elemental-phases. However, it would continue to be part of the Heaven and Earth duality. It appears the Cheng’s were opposed to such a liberal doctrine, instead conservatively promoting the classical generation sequence of the five elemental-phases.

Another famous philosopher of the Northern Song was Shao Yong 邵雍 (1011-1077), whose ideas were sufficiently diverse from that of the “four masters” that it is not surprising he was excluded from the group. He was born in Fanyang 範陽 (Hebei province), but moved south with his father when he was still young to Anhui province where he studied the Confucian classics under a local magistrate. Shao later moved to the cultural center of Luoyang and began calling himself Anle Xiansheng 安樂先生 (Mister Peace and Happiness). After his death, he was granted the title Kangjie 康節 (one who supported the health of moral integrity). Shao Yong sought to rectify existing theories with his numerological vision of the universe that emphasized the bagua 八卦 (eight trigrams) and its generation of the sixty-four hexagrams in the Yijing 易經 (Classic of
Changes). Shao is further noted for his circular arrangement of the sixty-four hexagrams in the \textit{xian Tian tu} 先天圖 (diagram of Heaven’s advancement). In his writings, he makes references to the works of Zhou Dunyi, as well as expanding upon the subdivisions of \textit{yin} and \textit{yang} while providing alternative interpretations of their generation of the elemental-phases. However, Shao Yong prefers only four phases. His ideas evidence the ongoing debate over the structure and order of the universe by Song philosophers, and the diversity of arguments about the \textit{wuxing}. This is evident in the following example from the \textit{Guanwu Neipian} 觀物內篇 (Inner Writings on Observing Things):

\begin{quote}
動之大者謂之太陽 動之小者謂之少陽
靜之大者謂之太陰 靜之小者謂之少陰
太陽為日 太陰為月 少陽為星 少陰為辰 日月星辰交 而天之體盡之矣
\end{quote}

Big movements are called \textit{taiyang}; small movements are called \textit{shaoyang}; big (absolute) stillness is called \textit{taiyin}; small (relative) stillness is called \textit{shaoyin}. \textit{Taiyang} is the sun; \textit{taiyin} is the moon; \textit{shaoyang} are the stars; \textit{shaoyin} are the planets. The interactions of the sun, moon, stars, and planets comprise the entire physical matter of Heaven.

In addition to describing the subdivisions of \textit{yin} and \textit{yang}, Shao Yong is also referencing the \textit{wuxing} and making remarkable astronomical observations. The only logical translation of the term \textit{chen} 辰 is the planets. The combined term \textit{xingchen} 星辰 refers to all celestial bodies, thus when differentiating \textit{yin} and \textit{yang}, he uses the \textit{xing} to refer to what today are called stars and \textit{chen} to what today are called planets or similar objects. These latter celestial bodies are associated directly with the \textit{wuxing}: \textit{Shuixing} 水星 (Mercury, Star of Water), \textit{Jinxing} 金星 (Venus, Star of Metal), \textit{Huoxing} 火星 (Mars, Star of Fire), \textit{Muxing} 木星 (Jupiter, Star of Wood), and \textit{Tuxing} 土星 (Saturn, Star of Earth). What is remarkable is that Shao Yong identified the shared characteristics of the sun and the other stars in the galaxy, as well as the shared characteristics of the moon and the planets closest to us in our solar system. Although the moon and planets move faster and shine brighter in the sky than the stars, they were identified as \textit{yin}, suggesting it was known that the sun and stars emitted light (\textit{yang}) whereas the moon and planets reflected that light (\textit{yin}).

The interconnections between astronomy and divination have a long history as well. Christopher Cullen (2011) studied the \textit{Wuxing Zhan} 五星占 (Five Celestial-bodies Divination), which was another of the excavated texts from Mawangdui, and found that
its purpose was “to enable the user to predict forthcoming major military and political events in the human world from observations of how the planets behave in the sky (p.223).” It was based on both careful observations recorded and accumulated over many generations as well as predictions of how the planets ought to move according to cosmological theories. Thus it was not meant to simply predict that motion the way modern astronomers would, but described an idealized norm from which any derivations provided divinatory value. This text used the original names for the planets just like those that appeared in chapter four of the Suwen, which were classified according to the five phases and the five directions, and further relied upon yin yang theory for explanations of observed phenomenon. The Wuxing Zhan identifies Mercury as Chenxing 辰星 (as opposed to the binome xingchen 星辰 used by Shao Yong for all celestial bodies), Venus as Taibai 太白 (Great White), Mars as Yinghuo 赧惑 (Dazzling Deluder), Jupiter as Suixing 岁星 (Annual Star), and Saturn as Zhenxing 填星 (Garrison Star, or Tianxing 填星: Full Star), which are all names used in other early sources as well.

Shao Yong continues to explain his ideas on the relationship between the differentiations of yin and yang and the production of the elemental-phases as the above passage continues:

静之大者謂之太柔 靜之小者謂之少柔
動之大者謂之太剛 動之小謂之少剛
太柔為水 太剛為火 少柔為土 少剛為石 為地之四象
太極分而為兩儀 兩儀分而為四象 天之四象與地之四象合而為八卦
八卦即為天地之四象
Big (absolute) stillness is called tairou (greater softness); small (relative) stillness is called shaorou (lesser softness); big movements are called taigang (greater hardness); small movements are called shaogang (lesser hardness). Greater softness becomes water; greater hardness becomes fire; lesser softness becomes earth; lesser hardness becomes stone. Shui (water), huo (fire), tu (earth), and shi (stone), these are considered the four divisions of di (earth). The taiji divides and becomes the liangyi (the duality of existence: Heaven & Earth, yin & yang). The liangyi divides and becomes the four divisions (water, fire, earth, stone). The four divisions of Heaven merge with the four divisions of Earth and become the bagua (eight trigrams). The bagua are defined as the four divisions of Heaven and [the four divisions of] Earth. 54

On the one hand, Shao Yong is refining some of the ideas shared by other Song thinkers by aligning the generation of water and fire with specific subdivisions of yin and yang.
However, instead of eliminating earth the way the Cheng brothers suggested some scholars were proposing, Yong eliminates wood and substitutes stone for metal, and thus aligns the four subdivisions of yin and yang with four elemental-phases: water, fire, earth, and stone (水火土石), with taiyin, taiyang, shaoyin, and shaoyang, respectively. This completes his numerological model of one changes into two, two doubles into four, four doubles into eight, and eight transforms into the sixty-four hexagrams of the Yijing (Classic of Changes). It seems five was inconsistent with Shao Yong’s interpretation of the paradigm.

One of the last of the Northern Song philosophers was Hu Hong 胡宏 (1105-1155), who is credited with the transmission of the Cheng brother’s teachings to Zhu Xi, but was also excluded from the group of four masters. His father, Hu Anguo 胡安國 (1074-1138), was a famous Confucian scholar from Fujian province who later moved to Hubei. When the Jurchen armies drove the Song court south and turned his home into a borderland, his family fled south to Hunan province when Hong was around the age of 20. The plight to the region is detailed by Ruth Mostern (2008), who examined how Huainan (the region south of the Huai river that served as the border between the Song and Jin) went from a region of thriving agriculture, dense population, and a prosperous economy that regularly produced a trade surplus in grain, tea, salt, silk, and textiles during the Northern Song, to a frontier border region in the twelfth century struggling to meet its tax obligations. During the war with the Jin, numerous battles laid waste to the region and the population plummeted by 95% in the west, and 34% in the east. This crisis informed Hu’s world view.

Hu Hong’s father was known for his commentary on the Spring & Autumn Annals, which became the orthodox interpretation until the fall of the Ming. According to Hans van Ess (2010), an explicit aim of Hu’s commentary was rangyi 援夷 (to expel the barbarians), leading the Qing to exclude this interpretation from the civil service examination because of their identity as relatives of the Jurchen and inheritors of the Jin mandate. This negative attitude towards the Jurchen is evident in the Hu Hong Ji 胡宏集 (Collected Works of Hu Hong), as in the opening line of his essay entitled Zhongyuan 中原 (Central Plains):
Hu Hong said: the Central Plains were without the dao of the Central Plains and thereafter the yidi 夷狄 (barbarians of the east and north, the Jurchen) entered the Central Plains. If the dao returns to the Central Plains then the yidi will go back to their place.

This statement thus equates the legitimacy of rule in the Central Plains with the dao, and thus Hu is arguing that the Song had lost their mandate to the northern barbarians when they lost control over the center. Like other Confucians, Hu uses historical precedents to support his argument in this same essay:

The method of fengjian (enfeoffment, feudalism, the few ruling the many) originated during a time of severe hardship. A group of strong men were able to set it up by themselves. The method started with Huangdi and was completed because of the efforts of Yao, Shun, and Yu, of the Xia dynasty. Reaching [the time of] Jie (r.1818-1766 BC, the last ruler of the Xia) there was chaos, then Chengtang (first ruler of the Shang) rose to power and repaired it, and all under Heaven again became secure. Reaching [the time of] Zhou (the last ruler of the Shang), once more there was chaos, then King Wen and King Wu (first rulers of the Zhou dynasty) rose to power and repaired it, and all under Heaven again became secure. Reaching [the time of] King You (r.781-770, last ruler of the Western Zhou), once more there was chaos, [but] together with [the reign of King] Huan (r.719-696) and the advancement of literature, they were unable to make repairs and also [were unable] to benefit or break it. Therefore, all under Heaven repeatedly was unable to set things right. Proceeding to [the time of] the first emperor of Qin, the dykes burst upon it. Therefore, all under Heaven had great chaos; there were disputes over succession leading to the fall of the Qin dynasty, just like quickly turning something over in the hands.

Hu Hong is citing the repeated cycles of dynastic succession in the Central Plains, and how, when the region was plunged into chaos, it took a strong ruler to establish order and security. Writing at a similarly chaotic time in the Central Plains, the intention of this passage seems clear. Like Sima Qian before him, Hu appears to associate the Qin dynasty with the water phase by referencing the bursting of the dykes that caused a flood, which wiped clean the chaos of the Warring States Period at the end of the Zhou. Since water is supposed to conquer fire, just like the Qin replaced the Zhou, Hu appears to believe that the Song was falling and that the Jin dynasty represented the water phase, which would
last for only a short period and be followed by the subsequent stability of the earth phase and a new “Han” dynasty.

Therefore, the Jin dynasty was heir to a long tradition of constructing, extending, and refining the classical cosmological paradigm. This paradigm was based on the theories of *yin* and *yang* or the *liangyi* (duality of existence), the duality of *li* (organizing principle) and *qi* (energy, the manifestation of things), and the *wuxing* (five elemental-phases). Moreover, Jin scholars inherited the practice of using these concepts to explain all observable natural phenomena and processes, including the moral and physical health of mankind and the legitimacy of an emperor and his dynasty. They further inherited the practice of engaging in social discourse through the production of texts. A meaningful analysis of Jin literati medicine proceeds from an understanding of Confucian cosmology.
CHAPTER 1
WOOD, 1115-1135

The elemental-phase of wood corresponds to spring, new beginnings, the eastern direction, and to the formative phase of an emerging state. The origins of the Jin 金 dynasty (1115-1234) are traced back to the far northeast of Asia, in the vast region surrounding the Sungari River. This is the ancient homeland of the Jurchen people, modern day Manchuria. Jurchen, the indigenous term of self-identification, was originally rendered in Chinese as Zhulizhen 朱理真 (Vermillion Patterned Truth), later corrupted to Nuzhen 女真 (Female Truth). The acceptance of the latter rendering by the Jurchen themselves is perhaps due to perceptions of the status of women in steppe society, which were not constrained by Chinese patriarchal culture. The Jurchen were a Tungusic people descended from the Wuji 勿吉 tribes, of which there were seven. According to the Jin Shi 金史 (History of the Jin Dynasty), which was compiled by imperial order in 1344 during the subsequent Yuan 元 dynasty (1260-1368) under the supervision of the Mongol official Tuo Tuo 脫脫 (1313-1355) and hereafter referred to as the History of the Jin, the two closest ancestors were the Limo 栗末 (Chestnut Branch) and Heishui 黑水 (Black Water) tribes. Like many groups of people considered to be barbarians, the Jurchen were further divided by the Chinese into the sheng 生 (raw or savage) that lived in northern Manchuria and were the progenitors of the Jin dynasty, and the shu 熟 (cooked or civilized) that lived around the Liaodong Peninsula under the direct administration of the Liao 遼 dynasty (907-1125). The Liao was founded by the semi-nomadic Khitan peoples whose authority stretched around Bohai Bay, reaching into Jurchen territory in the northeast and into Hebei province in the southwest along the border of the Northern Song 北宋 dynasty (960-1126). This was the political world into which the Jin was born.

Prior to the twelfth century, the Jurchen did not have their own script for writing their language, but developed one in 1119 that used both Chinese characters and elements of the Khitan script. The Khitan, rendered as Qidan 契丹 (Carved Cinnabar) by the Chinese, also adopted Chinese customs and forms of government, and were offering tribute to the Sui 隋 dynasty (581-618) as early as 590, and later assisted the Tang 唐 dynasty (618-907) against the An Lushan Rebellion in 755. After the establishment of the
Northern Song, an offer of peace was sent to Liao in 974, borders were agreed to in 977, but conflicts continued between the Liao and Song until 1005 over control of 16 prefectures or commanderies in the northeast that were once part of the Tang empire. “Khitan” was the source of the word “Cathay,” which became a common term of reference for northern China among international traders during the eleventh century. Karl A. Wittfogel and Feng Chia-sheng (1946) detailed the transformation of the term Khitāy (Qiā, Qatā) to Cathay, which later made its way into European writings as a synonym for China. They further detailed how Moslem historians of Central Asia also used the term Cathay to refer to the Jurchen (Djerdja) and the Jin dynasty, which was meant to distinguish northern from southern China. Wittfogel and Feng also revealed that the Altaic word ordo (orda, orda), referring to the camp of the elite cavalry guard of the Khitan emperor, is the root of the word “horde” that describes the terrifying effectiveness of steppe cavalries. Rendered phonetically in Chinese as woluduo 株魯朵, it became part of the vocabularies of invaded European countries as horda, hord, and horde.

The Khitan script was itself an amalgamation of foreign influences. Feng Chia-sheng (1948) further found that the Liao Shi 營史 (History of the Liao Dynasty) stated the Khitan script was invented in 920 based on elements of the Uighur script, prior to which it is likely literate elites relied upon Chinese or Turkic writing systems. The Uighurs are a Turkic people who lived farther to the northwest of Gansu and Qinghai in what today is called Xinjiang province, or the Uighur Autonomous Region of Central Asia. The Uighurs had also come to the aid of the Tang dynasty during the An Lushan Rebellion (755). After being dispersed by the armies of the Tang, they built up the Huihe 回絳 dynasty (c.800-1200) or khanate, which governed key sections of the overland trade routes to the west often called the “Silk Road.” However, despite the claims of the Liao Shi, Feng’s analysis of the Khitan script reveals it is modeled more closely on the Chinese writing system. The Khitan script includes the more common “larger script” modeled on Chinese characters, and the “smaller script” that forms a phonetic alphabet. The Jurchen later borrowed elements from the Khitan script when creating their own system, beginning with the “larger script” in 1119 that perpetuated the Chinese influence, and adding a “smaller script” of their own in 1138, although the Khitan script continued to be used by Jurchen who were already familiar with the system.

A similar process of writing acquisition happened with the Xixia 西夏 dynasty (c.1000-1227) along the western border of the Liao and Song. The Xixia was founded by
the Tangut people in Gansu and Ningxia provinces by rulers who had been referred to by the Northern Song as the kings of Xia since 967. They paid tribute to both the Liao and Song for many years, but in 1038 the new ruler declared himself emperor of the Da Xia 大夏 (Great Xia dynasty), sparking a war with the Song. Michael C. McGrath (2008) found that in its early years the Xixia had engaged in regular border raids to extract political and economic concessions from the Chinese, but after a series of military victories between 1038-1044 against the much larger Song army they were able to negotiate a favorable treaty that created a new title for their ruler and regular tribute payments by the Song to the Xixia to maintain the peace. That tribute included 255,000 units each of silver, silk, and tea, annually. The Xixia then started a decade of war with the Liao (1044-1054), followed by sporadic conflicts with the Song between 1096 and 1119. Luc Kwanten (1989) describes the Tangut script used by the Xixia dynasty for two centuries as having all the appearances of being one of the most difficult and complicated writing systems ever devised. Like many languages of East Asia, including Korean and Japanese, the Tangut script is modeled on the Chinese system, but the pictographs used by the Xixia are exceedingly more complex than their Chinese counterparts. Luc adds that it has a cumbersome internal logic, plus the fact that it is a dead language that hasn’t been used for 750 years and was only recently discovered without any primers makes character analysis extremely difficult. He contrasts the Tangut with the Jurchen script that survived the fall of the Jin, continued to develop by blending elements from the Mongol script, and finally transformed into the Manchu script used during the Qing 清 dynasty (1636-1911).

The Manchu considered themselves to be the descendants of the Jurchen. The Manchu arose from three successive generations of tribal chieftains from the clan of Aisin Gioro: Nurhaci (d.1626), Hong Taiji (d.1643), & Dorgon (d.1650), and the name “Aisin” means gold (Chinese: Jin 金) in reference to their Jurchen origins. Like the Jurchen, the Manchu engaged in agriculture, hunting, and trade. William T. Rowe (2009) found that Nurhaci created a confederation of tribes he referred to as the Jurchen, created a written Manchu language based on the Jurchen script in 1599, and created the organizational institution of the “banners” in 1615 that included soldiers & their dependents. Huang Pei (1990) argues the banners were based on the traditional Jurchen organizational system, and that the Manchu inherited many other cultural elements from a branch of the Jurchen known by the Yuan as the Shuitata 水達達 (Water Tartars).
Nurhaci even declared the founding of the Hou Jin 後金 (Later Jin dynasty) in 1616, but after Hong Taiji breached the Great Wall he changed the name to the Da Qing 大清 (Great Qing) in 1636.

The *wuxing* was likely invoked for this decision, as this name is both homophonous with and contains the radical for the color *qing* 青 (blue-green, cyan, azure, of nature), which corresponds to the wood phase and the eastern direction where they originated. Mark C. Elliot (2001) argues Qing rule depended as much on maintaining distinctions between Manchu and Han, the conqueror versus the conquered, as on acceptance of Chinese political norms. This was accomplished in part through the organization of the banners around the central capital: “Placing the yellow banners in the north, the white in the east, the red in the west, and the blue in the south was an auspicious arrangement that ensured the proper correspondence of extinguishing and generating elements (Elliot, M.C., 2001, p.102).” Elliot suggests the arrangement was not perfect because of the substitution of blue for black, which was done because a black banner was difficult for the army to see at night, and the absence of the wood phase that was instead represented by the Green Standard Army, which was composed primarily of Han soldiers. However, from a conqueror’s perspective and orthodox *wuxing* theory, it was perfect. The arrangement of the first four banners around the center placed each of them according to the conquest sequence, which inferred that the center, normally corresponding to the earth phase, was occupied by its conqueror, wood. Furthermore, by assigning the largest Han regiment to the color of the wood phase it reinforced their subjugation to the Manchu.

The Jin dynasty has been identified by scholars as part of a distinct phase in the political development of the peoples originating to the north of the Zhongyuan 中原 (Central Plains) of China. This broad region, often referred to as Inner Asia, included the provinces of Heilongjiang, Jilin, Liaoning, and Mongolia. In his study of Inner Asian state formation, Nicolo Di Cosmo (1999) identified the Jurchen Jin as a “dual administration” empire, along with the Khitan Liao and Tangut Xixia, which he argues were a transition between the trade and tribute empires that came before, and the direct taxation empires of those that came afterwards. Chan Hok-lam (1984; 1992) alternatively describes the Jin’s “dual administration” system as being composed of a Chinese-style system to rule the Chinese population, and the Jurchen tribal system to rule their own people, called the *mengan mouke* 猛安謀克 (valiant security & strategic regulation). It
was composed of privileged chiefs in charge of 1000-3000 households (mengan) or 100-300 households (mouke) who served as commanders in combat and civil administrators in peacetime. The mengan mouke system was the predecessor to the Manchu banners. Jing-shen Tao (1976) found that Jurchen warriors were all mounted and each came to battle supported by their own assistant and extra horses, and that all adult males served as soldiers when called upon for warfare in lieu of paying taxes. They also engaged in regular circle hunting exercises called dawei (surround & strike) as part of their military training. Chan argues the dual administration system was eventually replaced with the Chinese system in the mid-twelfth century, but it is probable the mengan mouke system continued informally within the social hierarchy of the Jurchen minority and the Jin military.

Scholars have also tried to explain the rapid evolution of these northern dynasties. Di Cosmo (1999) argues persuasively for a “response to crisis” explanation for Inner Asian state formation. This begins with a fragile economy vulnerable to climactic variations whose nomadic existence produced scant surplus. This created inter-tribal subsistence violence leading to militarization of the whole society, which in turn reduced economic production and increased pressure to extract external resources. As the crisis expanded it required a temporary leader that transformed a relatively egalitarian society into a hierarchical one with centralized and aristocratic political power that had to redistribute its revenues. Expanding redistribution networks required evermore resources to maintain loyalty, which was gained through territorial expansion, which in turn maintained the militarization of the society and entrenched the leadership. This model is intriguing, but fails to consider the findings of J. Tao (1976) that the Jurchen were primarily a sedentary population engaged in both herding and agriculture and were thus capable of generating a surplus to protect themselves from climactic variations. However, this model becomes tenable if the changes in climate are more severe, enduring, and widespread.

It is important to consider the role of the climate in history. A recent study by David D. Zhang, Jane Zhang, Harry F. Lee, and He Yuan-qing (2007) identified the crises that both the Jin and later the Mongols were responding to by correlating climate change with war frequency in eastern China over the last millennium (1000-1911), specifically focusing on the Central Plains and its periphery. Their study found a significant correlation between warfare frequency and the cooling phases of temperature
oscillation cycles. They suggest that the cooling climate negatively impacted agricultural production leading to conflicts over resources, while in a Malthusian twist, food surpluses in warming phases promoted population growth that in turn increased the pressure during the cooling phases when resources were scarce. The study identified warming phases that spanned 1000-1109, 1153-1193, 1303-1333, and cooling phases that spanned 1110-1152 and 1194-1302. These phases correspond closely to the findings of this study of the Jin, with the first cooling phase occurring during the period of Jin state formation and expansion, followed by a warming phase during the period of greatest internal stability and prosperity, and a second cooling phase during the period of Mongol incursions preceding the fall of the Jin.

Describing climactic variations occurring a thousand years ago is necessarily fraught with pitfalls and alternative models have been asserted. Dieter Kuhn (2009) describes a “3rd Little Ice Age” (c.1000-1200) which prompted further southward migration even before the fall of the Northern Song. This “Little Ice Age” overlaps with the two warming phases and one cooling phase described above. Timothy Brook (2010) describes another “Little Ice Age” in China (c.1270-1644) during the Yuan and Ming dynasty (1368-1644), which included nine “sloughs” or 3-7 year periods of natural disasters: droughts, floods, locusts, earthquakes, epidemics, and famine. This period spans seven different warming and cooling phases in the study by Zhang et al., and these climactic variations may better explain the nine sloughs than a single cold phase. In a study on China’s environmental history, Robert B. Marks (2012) describes an even broader warming phase from 500-1000 followed by a cooling phase from 1000-1800. Although these periodizations are somewhat inconsistent, these scholars all agree on the importance of the climate on the course of human events.

The changing climate directly influenced the Jurchen’s ability to control the extraction and distribution of local resources. Although it exceeds the scope of the climate study by Zhang, et.al., (2007), we may reasonably assume that there was another cooling phase (c.950-1000) that preceded the first warming phase (1000-1109) they identified, with food scarcity driving regional conflicts. J. Tao (1976) found that the Khitan first subdued the Jurchen militarily in 903 as part of their initial empire building phase, and the Jurchen began sending tribute missions to the Liao in 927 signifying their role as a vassal. However, the Jurchen started conducting raids in 973 and 975 leading to punitive expeditions by the Liao in 985-986. After that the Jurchen began to pay an
annual tribute to the Liao of 10,000 horses. During this same period the Jurchen were in conflict with the Liao over their tribute missions to the Northern Song and their goal of dominating regional trade. In 961 the Jurchen sent horses as tribute to the Northern Song, and in 963 the Song emperor exempted those in Shandong province from taxation in exchange for arranging a water crossing from the Liaodong peninsula of horses from the Jurchen. The water crossing was necessary to circumvent the Liao, but once they discovered the arrangement the Liao was able to cut off this trade route in 991.

Like many of the regions peripheral to the Central Plains that formed the heartland of the Song empire, the northeast was rich in natural resources prized by the Chinese, including *dansha* 丹砂 (cinnabar), also known as *zhusha* 朱砂 (vermillion sand), the mineral ore from which is derived the brilliant red ink used by the emperor, and the source of *shuiyin* 水銀 (liquid silver), or *gong* 汞 (mercury), the compound believed by many to hold the key to immortality. The original Chinese names for both the Jurchen and the Khitan may have been based on their close association with the cinnabar trade. The very first entry of a medicinal in the seminal text *Shennong Bencao* 神農本草 (Divine Farmer’s Materia Medica, c.100), the earliest of the received texts of this genre that was preserved by the Daoist alchemist Tao Hongjing 陶弘景 (452-536), is cinnabar. From this entry its perceived value is evident:

> 丹砂味甘微寒 主身體五藏百病 養精神安魂魄益氣明目 殺精魅邪惡鬼 久服通神明不老 化為汞 生山谷
> Cinnabar’s flavor is sweet and it is slightly cold. It governs the entire body and the hundred diseases. It nurtures the essential spirit, calms the *hun* (ethereal soul) and *po* (corporeal soul), benefits the *qi*, and brightens the eyes. It kills the *jingmei* (essence goblins), those evil and wretched ghosts. Taken for a long time it transmits spiritual enlightenment and one does not grow old. It transforms to become mercury. It is generated in the mountains and valleys. ²

The Northern Song dynasty’s imperially promoted *Jingshi Zhenglei Daguan Bencao* 經史證類大觀本草 (Materia Medica of the Daguan Era, Classified & Verified from the Classics & Histories) compiled by Tang Shenwei 唐慎薇 in 1108, hereafter referred to as the *Daguan Bencao*, in its entry on cinnabar (see figure 2) added:

> 今出辰州錦州者 藥用最良
> Today it comes from Chenzhou (Hunan) and Jinzhuo (Liaoning), and the medicinal functions [of cinnabar from these regions] are the best. ³
The identification of the specific territories from where medicinals were harvested actually represents a significant advancement in Chinese medicine, since the overwhelming majority of medicinals listed in the Shennong Bencao only provide the most rudimentary of details on their place of origin. The most frequently occurring phrases include that a substance grows in *shangu* 山谷 (mountains & valleys), *chuanze* 川澤 (rivers & ponds), *chuangu* 川谷 (rivers & valleys), *chize* 池澤 (pools & ponds), *tianye* 田野 (fields & plains), or *daopang* 道旁 (beside the road). However, such generalities are only minimally useful in locating a substance in a region as vast as East Asia. Later texts, like the Daguan Bencao, refer for the first time to specific regions and describe the relative qualities of their products.

Most scholars who study Jin dynasty literati conclude that one of their foremost intellectual influences was Su Shi 蘇軾 (1036-1101), also known as Su Dongpo 蘇東坡 (Tao, J., 1976; Cahill, J., 1977; Bol, P.K., 1987, 1995, 2008; Tillman, H.C., 1992, 1995; Franke, H., & Chan, H., 1997; Liu, S., 2010). Su Shi’s ideas were emphasized in the Zhuru Mingdao Ji 諸儒鳴道集 (Records of Various Confucians Propagating the Dao) that was compiled during the Jin, and which Hoyt C. Tillman (1992) concludes was an important source book for the transmission of Northern Song learning to the Jin. Su Shi applied himself to both technical and cultural pursuits and even added his name to a book on medicine. A formulary called the *Su Shen Liangfang* 蘇沈良方 (Su [Shi] & Shen [Kuo]’s Excellent Prescriptions) was published in 1075, and although Su is credited with contributing to the work, the prescriptions are likely those of the physician and polymath Shen Kuo 沈括 (1030-1095). Huang Zhirong and Hou Guohong (2002) point to Su Shi’s involvement with this text as an important example of literati involvement with medicine during the Northern Song. The work evidences influence from several classical texts and its formulas are consistent with orthodox methods of construction using primarily common plant based medicinals. Perhaps most striking is the lengthy discussion in the first *juan* 卷 (scroll, section, fascicle) entitled *lian dansha fa* 鍊丹砂法 (method of refining cinnabar), and later in the text its use in prescriptions. The first essay covers the production of mercury from the raw ore and some general guidelines on its use for a
wide variety of problems, but later in the text it describes the formula *Yinyang Ersheng San* 陰陽二勝散 (*Yin & Yang Two Conquerors Powder*) for the treatment of chronic anxiety causing stomach trouble and childhood frightful vomiting that uses just two substances: *hao liuhuang* 好硫磺 (pure sulphur) and *shuiyin* 水銀 (liquid mercury). The use of a pure mercury compound on a child might indeed have resulted in irreversible damage to the brain and nervous system, which appeared to resolve the anxiety. However, the adverse effects of mercury must have been increasingly well known since it was rarely if ever used by Jin literati doctors. The *Su Shen Liangfang* may be the earliest textual example of literati medicine, defined broadly as medical books written by someone educated for success in the civil service examinations and intended for private and unofficial use. Although it does not appear to have been very influential in the field of clinical practice, it certainly provided further legitimation to the pursuit of medical studies for Jin literati.

Among other valued trade items the Jurchen could supply were furs, horses, falcons and hawks, grain and livestock, pearls and gold, as well as important medicinals including *baishao* 白芍 (*Paeonia lactiflora* Pall., Radix), and most importantly, *renshen* 人參 (*Panax ginseng* C.A. Mey, Radix) (see figure 3). The best quality of *renshen*, or ginseng, was called *liaoshen* 遼參 due to its origins in Liaoning province in the heart of Khitan and later Jurchen controlled territories. In the *Mingyi Bielu* 名醫別錄 (Miscellaneous Records of Famous Physicians), a commentary on the *Shennong Bencao*, Tao Hongjing stated:

> 生上黨及遼東 二月四月八月上旬
> 採根竹刀刮暴 乾無令見風
> [Ginseng] grows [in the region] from Shangdang (Shanxi, Hebei) to Liaodong (Liaoning, Jilin). The best time [to harvest] is in the second, fourth, and eighth month. When plucking the root use a bamboo knife and scrape it vigorously. Dry it without exposing it to wind.  

This makes the prime growing region for ginseng an area that stretches across the northern border of the Central Plains and around Bohai Bay.
This was frequently disputed territory between the Chinese and the northern steppe peoples, including the Khitan and the Jurchen. The area was also abundant in other important medicinal herbs such as *fangfeng* (Ledebouriellae Radix), which is described as resembling the appearance of ginseng. The *Daguan Bencao* further adds that ginseng was offered as tribute from the Xinluo (Silla) dynasty (658-935) and the Gaoli (Goryeo) dynasty (918-1241) on the Korean Peninsula. Gaoli became a tributary state of Liao, Song, and Jin, and was conquered by the Mongols in 1241, but managed to extricate itself from direct Yuan control and revive the dynasty until 1392. Medicinals such as *renshen*, *baishao*, and *fangfeng* were indispensable to the pharmacies of both Song and Jin physicians.

The wealth provided by the ginseng and medicinal herb trade gave the Jurchen, like other steppe peoples before and after, access to Chinese technical knowledge. Mark Elvin (1973) argues that the Song economy’s success in generating enough capital to support such a large population, and revenue to maintain an enormous standing army and the annual tribute payments to its neighbors, was due to an economic and technological revolution that spanned the years 700 to 1100. This included improved milling that allowed for a shift from millet to wheat in the north; the development of wet-rice agriculture in the south contributing to massive population migration; improved soil preparation using new tools and fertilizers; new seed strains with higher yields and better drought resistance; better hydraulic and irrigation methods; and woodblock printing and movable type, which helped disseminate all of the new technical knowledge. Trade enabled the transfer of not only material goods but also state institutions and industrial techniques, including developments in iron and steel manufacturing for mass production of weapons and the use of gunpowder, to the Khitan, the Jurchen, and then on to the Mongols. W.T. Rowe (2009) also found that Nurhaci and the Manchu enjoyed a ginseng monopoly that had tipped the trade balance with the Ming in their favor, supporting his armies. Since the richest iron and coal deposits were located in the north, this gave the steppe people easier access and control over these vital resources. Thus the Song lost their advantage in military technology, while their cavalry was already at a severe disadvantage. The Song routinely relied upon trade with northerners to obtain cavalry horses for their army. However, those same peoples kept the best horses for themselves and traded inferior horses to the Song. In the Song, the popular slang for soldiers was *chilao* (naked old ones), while a popular proverb asserted that one should not use...
good iron for nails or good men for soldiers (Kaplan, E.H., 1970). In contrast, the Jurchen army was equipped with a vigorous martial spirit, state of the art weaponry, and the finest cavalry horses.

In addition to trade, the Jin achieved a strategic advantage over both the Khitan and Chinese. The Jurchen were aware of Khitan battle tactics, which relied on mounted archers that could move swiftly and deliver long range attacks (Elvin, M., 1973). The Khitan lines were divided by skill level, with the most skillful given the heaviest armor and kept in the rear, the medium skilled and armored were in the middle, and the least skilled and unarmored cavalry were in the front. The Jurchen were also aware of Chinese tactics, which relied on a massive number of armored foot soldiers, many wielding long-range crossbows that could halt the advance of the Khitan’s unarmored lead cavalry units. However, while the Song was effective in holding fixed positions they couldn’t move quick enough to mount an effective counter-attack. The Jurchen response was to charge the enemy lines, Khitan or Song, with heavily armored mounted halberdiers, allowing their lightly armored mounted archers to follow closely behind and to rapidly shift positions while firing over the front lines at supporting units. This tactical adaptation gave the Jurchen a decisive advantage on the battlefield.

The climate not only influenced agriculture, but was perceived as an indicator of the temperament of Heaven and a commentary on the actions of mankind. One of the early stories of conflict recorded in the *History of the Jin* illustrates the importance of celestial signs to the people of the time when interpreting events:

穆宗攻阿疏日辰巳間 忽暴雨昏曀 雷電環阿疏所居 是夕有臣火聲如雷 墜阿疏城中 遂攻下之

During the day [Liao] Muzong (r.951-958) attacked [the Jurchen rebel] Ashu, there was a sudden torrential rain, the sky became obscured behind the clouds, and thunder and lightning surrounded the place where Ashu was residing. That evening he was with his officials when a [ball of] fire that sounded like thunder fell right into the city where Ashu was, and thereupon [Ashu] attacked and destroyed the [Liao army].

After this military success, the Liao was later able to capture the rebel Ashu and hold him prisoner in an attempt to gain leverage in the negotiations with the raw Jurchen. However, an aggressive Jurchen chief named Aguda阿骨打 of the Wanyan完顏 clan demanded Ashu be released or they would use force to secure his freedom. The Liao
emperor sent an army to deal with the irksome chief, but it was destroyed by Aguda whose reputation grew rapidly among the Jurchen.

Although the trade wars continued between the raw Jurchen and the Liao, the cooked Jurchen continued to formally pay tribute to the Liao, and the Liao emperor continued to make visits to the frontiers of his empire. Both Wittfogel and Feng (1946) and H. Bielenstein (2005) identified a Khitan imperial tradition of fishing trips when local chiefs were invited to a banquet during which it was customary for the emperor to ask the chiefs to dance before him as a ceremonial expression of their submission.

Against the advice of his officials, in the second month of 1112 the last Liao emperor Tianzu 天祚 (r.1101-1119) was holding such a banquet at his favorite fishing grounds along the Sungari River where he became quite intoxicated and then climbed atop his chariot and ordered the various chiefs in attendance to dance before him. Most of them obliged, but when it was time for the chief of the raw Jurchen Wanyan Aguda to dance, he refused. The emperor repeatedly ordered him to dance, and Aguda continued to refuse, humiliating the emperor and signaling the end of Liao influence over the Jurchen.

Wanyan Aguda thereafter became the leader of the Jurchen rebellion begun by his grandfather, and in 1115 declared the founding of the Da Jin 大金 (Great Jin), becoming emperor Min旻 (r.1115-1123), posthumously given the title Taizu 太祖 (Grand Progenitor), the standard Chinese title for a dynastic founder. Chan Hok-lam (1984) reported that in founding the dynasty, Aguda followed the advice of a Han librarian and jinshi 进士 (advanced scholar) named Yang Pu 楊朴 who had passed the highest level of the civil service examination under the Liao dynasty. Aguda consulted with Yang in order to gain legitimacy through conformity with Chinese state customs to elevate themselves from a barbaric to a civilized people. Thus from its conception the Jin was a Chinese dynasty. J. Tao (1976) found that when Wanyan Aguda became emperor in 1115, he displayed nine farming implements at his coronation ceremony, indicating he was taking control over good farmland and an agricultural society, and found evidence the Jurchen already had a sedentary lifestyle and built walled towns at that time just like the Han Chinese in the Central Plains.

The birth of Wanyan Aguda, or Taizu, was described in the History of the Jin as an auspicious event appropriate for a dynastic founder, and from these origins the importance of celestial events in establishing imperial legitimacy is evident:
During the time of Liao Daozong (r.1055-1101) there was a five colored cloud formation that often came from the east, it was large and resembled the shape of a two thousand hu (ancient measure for grain) round granary. The [Liao’s] Department of Heaven’s Kong Zhihe secretly spoke to someone saying: its descent is a sign that a unique person will be born, he will accomplish remarkable deeds. Heaven has made this appearance as a sign and no person has the strength to be able to overcome. During the xianyong (widespread harmony) reign period (1066-1074) in the fourth year of wuchen (1069) on the first day of the seventh month, Taizu was born. When he was young and playing with the other children his strength was more than twice that of the others and his whole bearing was sturdy. Shizu (Aguda’s father) was especially fond of him.

The five colored cloud blowing westwards that portends the birth of Taizu is the first allusion to the cosmic forces that grant any ruler his mandate, a sign that was allegedly identified by a Liao official in charge of interpreting such phenomenon. That Taizu was the strongest among his peers further legitimized his mandate within the martial culture of the Jurchen. The development of his martial abilities was further described in the History of the Jin:

At ten years of age, [Taizu] was fond of bows and arrows and although he was just a child he was already good at archery. One day a Liao envoy was seated inside the palace and he turned to look at Taizu holding a bow and arrow in his hand. He told him to shoot at a flock of birds and [Taizu] launched three [arrows] in succession and each struck [a bird]. The Liao envoy was amazed and said: what an extraordinary boy!

The origins of the dynastic title Jin 金 (metal or gold) remains a point of contention among modern scholars. According to both Herbert Franke (1997) and Hok-lam Chan (1997; 1991; 1984), the title was derived from the name of a river known to the Jurchen as Alcun, which means “gold.” However, they disagree over exactly which river was given this name. Franke states it was the Yalu and Chan identifies it as branch of the Sungari. Both scholars agree that in either case the river bed was a source of gold, hence the name “Alcun,” but Franke identifies its Chinese name as Ashuhuo 阿术火, while Chan identifies it as Achuhu 阿出渦. These scholars further agree that the Khitan people
adopted their place of origin around the Liao River into their dynastic title, suggesting a
parallel process informed the Jurchen decision. Both Franke and Chan appear to be
referencing the following passage found in the *History of the Jin* in the section on *dili* 地
理 (geography):

上京路 即海古之地 金之舊土也 國言金曰 按出虎 以按出虎水源於此
故名金源 建國之號蓋取諸此 國初稱為內地
The circuit of Shangjing (upper capital, near modern Harbin, in northern Jilin or
southern Heilongjiang) is an ancient place near the sea. In the past this area
produced *jin* (metal or gold). The kingdom was named *Jin* (Metal or Gold) for the
*Anchuhu* (Push out the Tiger) [River] because the waters of *Anchuhu* are a source
of this [metal]. Therefore, [this area] was known as the source of the *Jin* and in
founding the kingdom it was given a name that encompasses all of the various
[types of metal]. From the beginning of the kingdom [this area] was referred to as
the *Neidi* (Inner Lands). 10

This passage provides yet another name for the river, *Anchuhu* 按出虎, which is
phonetically similar to those identified by Franke and Chan but uses entirely different
characters to render the indigenous name of Alcun. The reference to Shangjing supports
the identification of this river as a branch of the Sungari, as opposed to the Yalu that was
located near the circuit of the eastern capital at Liaoyang. Although their homeland
produced precious metals, this does not negate the importance of the *wuxing* 五行 (five
elemental-phases) in such a decision, since that would only be further justification for
choosing metal as the appropriate elemental power for the dynasty. This particular
account of history was also written long after the event in an apparent attempt to justify
the title, which brings into question its authenticity. The more significant reason for
choosing this name is found in *History of the Jin* when it chronicles the life of Taizu and
describes the events surrounding the establishment of the dynasty:

收國元年正月壬申朔 羣臣奉上尊號 是日 即皇帝位 遼以賓鐵為號
取其堅也 賓鐵雖堅 終亦變壞 唯金不變不壞 金之色白 完顏部色尚白
於是國號大金 改元收國
In the first year of the first month of the *Shouguo* (Assimilating the States) reign
period (1115-1117) in the beginning of *renshen* (1115), a group of officials
offered up an honorific title, and that day the emperor was enthroned. The Liao
used the object of iron for their sign, chosen for its strength. The object of iron,
although strong, in the end it also becomes corroded. Only *jin* (gold or the metal
elemental-phase) does not change and does not corrode. The color of *jin* is white
and the color of the Wanyan clan is also white. Therefore the name of the state is the Great Jin and the reign period is Shouguo.\(^{11}\)

If it were not for the invocation of the appropriate color of the metal phase, this passage might support the argument that the decision was based on the local resources alone, but that is not the case. As Hok-lam Chan (1984) points out, the Liao’s association with iron had been used by some to support their identification with the water elemental-phase, because of its black color, although Chan rejects the claim that it was intentionally associated with the wuxing. In a later study, Chan (1991) argues that the reference to the dynastic title of the Liao being associated with iron was an error, since “Liao” referred to the river and its environs, while “iron” actually referred to the indigenous meaning of the term for self-identification: Khitan. Nonetheless, asserting that the color white is the appropriate color for both metal and the Wanyan clan makes it apparent that the Great Jin was identifying itself with the metal of the wuxing, and therefore claiming its place within Confucian civilization. Although the pure metal of gold is yellow, the raw ore can show a variety of colors depending on what other elements or metals it combines with, and it should be acknowledged that this author does not know if the actual color of the gold alloy being extracted from that region during the eleventh and twelfth centuries was more white or yellow, the reality of which would have a significant bearing on the debate. Furthermore, the Changbaishan 長白山 (Forever White Mountain) in Liaoning province, which was named for its snow covered peaks, was considered to be a sacred protector by the Jin. This further invokes the metal phase both in the color of the snow and composition of the mountain. In contrast, the Khitan Liao believed their spirits were protected by the god of the sacred Black Mountain. Therefore, this author argues that the Jin was the first and only Chinese dynasty to be named for one of the five elemental-phases, and started the late imperial trend of naming dynasties for concepts rather than clans or places.

In Chinese wuxing cosmology, metal is also symbolic of weapons and war, as revealed in a passage from chapter eighty of the Huangdi Neijing Suwen 黃帝內經素問 (Yellow Emperor’s Inner Classic, Basic Questions), wherein it discusses dream diagnosis using the correspondences of the lung with metal:

\[
\text{是以肺氣虛則使人夢見白物 見人斬血藉藉 得其時則夢見兵戰}
\]

So if the lung qi is deficient then it causes a person to dream of seeing white things or seeing a person beheaded as punishment and the blood running
recklessly. When it is during its season (e.g., autumn) then one dreams of seeing soldiers in battle.  

Although for the Han the color white was associated with mourning and funerary ritual, the Jurchen, like other steppe cultures, considered white to be an auspicious color. Thus the color white became the imperial color of the Jin. The Jurchen also practiced the gashing of their foreheads before battle or in mourning so as to “cry blood”, embracing the corresponding emotional state of sadness or grief, again making the metal phase the most emblematic of their culture.

The conceptual problems with the Jin dynasty’s invocation of metal as their elemental-power would have been immediately apparent to many Chinese scholars of the day. According to the generation sequence: metal generates water. Therefore, in accordance with the many scholars who argued for the use of the generative sequence in dynastic succession, the Jin was not only incapable of replacing the Liao, but had already been defeated. The very suggestion that the wuxing cycle should move backwards from water to metal would have been rejected as absurd by anyone familiar with the paradigm. Furthermore, the Song dynasty had invoked the power of fire, and according to the conquest sequence: fire conquers metal. Thus in the alliance between Song (fire) and Jin (metal) to conquer the Liao (water), although water conquers fire, fire conquers metal; so in helping the Song overcome their adversary, the Jin would be setting themselves up for a future defeat. Although modern people might think this whole discussion is absurd, it is clear that a thousand years ago this matter was deemed of critical importance. The appropriate elemental-phase became the subject of vigorous debates in the Jin court during the middle of their reign in an effort to correct the cosmological imbalances that threatened their imperial mandate.

Following Taizu’s founding of the Jin dynasty, Heaven began offering up auspicious signs confirming its legitimacy. According to the History of the Jin:

收國元年 上在寧江州有光正圓 自空而墜 八月己卯 黃龍見空中
In the first year of the Shouguo reign period (1115), high above Ningjiang province (Jilin) a radiance that was perfectly round dropped down from the sky. In the eighth month [of that year] a yellow dragon appeared in the sky.  

This was the first of thirteen recorded incidences when dragons were sighted during the Jin (see figure 4), several of which were yellow dragons corresponding to the earth phase, which may also have contributed to later discussions regarding the wuxing and dynastic
legitimacy. Exactly what the glowing sphere that plunged to the earth really was remains a mystery, but it was certainly interpreted as a good omen as opposed to later celestial events that expressed Heaven’s discontent. This environmental event and many other natural occurrences were recorded in the section of the *History of the Jin* entitled *wuxing* (the five elemental-phases [& climactic history]), and the significance of these events is made clear in the introductory remarks to that chapter:

五行之精氣，在天為五緯，在地為五材，在人為五常及五事。五緯志諸天文，歷代皆然。五行在地，性情在人。休咎各以其類為感應於兩間者。歷代又有五行志焉。

As for the essential *qi* of the *wuxing*, when it resides in Heaven it becomes the *wuwei* (five cosmic regions), when it resides in Earth it becomes the *wucai* (five resources), and when it resides in mankind it becomes the *wuchang* (five constants or five virtues of Confucianism) and thence the *wushi* (five duties). The *wuwei* are recorded in the various patterns of Heaven and each successive generation finds this to be so. Its form and structure resides in Earth, its nature and temperament resides in mankind. For good and bad fortune they each can be categorized, and it is found they correspond to what is between the two (*yin* & *yang*, Heaven & Earth). Successive generations have also recorded the *wuxing*.14

This passage later turns specifically to the Jin:

金世未能一天下，天文災祥猶有星野之說。五行休咎見於國內者，不得他諉。乃彙其史氏所書，仍前史法，作五行志。

During the Jin era none were able to unify all under Heaven. The patterns of Heaven, disasters and good fortunes, were provided celestial explanations. The breaks in the *wuxing* were blamed for manifestations within the kingdom, but were not excuses. Thereafter [these events were] collected by historians in their books. Continuing to use the methods of earlier historians we have composed these records of the *wuxing*.15

From these remarks it is evident that the *wuxing* section of the *History of the Jin* transcends a mere recording of the weather. It was believed that natural disasters were
expressions of Heaven’s discontent with the actions of mankind, especially the emperor, or Tianzi 天子 (Son of Heaven). Just as in medicine, internal disharmonies are revealed through signs and symptoms manifested externally. These signs must be carefully read by physicians or officials in order to diagnose the problem and formulate strategies to bring order out of chaos. Therefore, these records are an important tool for historians to understand the minds of Jin literati.

It was during Taizu’s second reign period (1117-1123), entitled Tianfu 天輔 (Heaven’s Assistance), that the Jin forged an alliance with the Northern Song against the Liao. The Song emperor Huizong 徽宗 (r.1100-1126) was criticized by his own officials for squandering the state’s resources and being distracted from his primary duty of maintaining order within Tianxia 天下 (all under Heaven). Huizong was accused of pursuing his creative interests while deferring matters of state to the eunuch Tongguan 童關 (1054-1126). The eunuch dismissed warnings from the kingdom of Gaoli that the raw Jurchen, who were rebelling against the Liao, were too aggressive to be trusted. It was this eunuch who first tried in 1118 to broker an alliance to help them conquer the Liao and finally regain the lost 16 prefectures in the northeast that had once been part of the Tang empire. Those territories were located south of the “Great Wall,” which had traditionally served as the border between the center and the north, but repeated Song military campaigns had failed to reclaim the region. Peter Lorge (2008) details how in 993 the Song began construction of the “Great Ditch” (993-1004) along the Song-Liao border in Hebei province. Although the emperor was concerned that it made them appear weak and defensive, the ditch had immediate benefits, including: improved troop and supply transportation, improved irrigation and agricultural output in the region, and a barrier to Liao border incursions. As a result, the ditches and canals were gradually expanded. Ironically, the Khitans perceived this as an offensive escalation to better position the Song army for a future invasion, and so they entered into peace negotiations that led to the Treaty of Chanyuan 澶淵 in 1005. Under the terms of the treaty the Song officially ceded the 16 prefectures to the Liao along with annual tribute payments of 100,000 units of silver and 200,000 units of silk, which was raised in 1042 to 200,000 of silver and 300,000 of silk. Yet many at the Song court still coveted this region. Don J. Wyatt (2008) and other scholars argue that the Treaty of Chanyuan was the most
celebrated act of diplomacy in China’s middle period because it allowed for over a century of peaceful foreign relations.

When the time for war returned, possibly instigated by a climactic cooling phase that caused resource depletion and increased competition, the Song seemed too eager to reclaim their prize. Yet it was the Jin who took the initiative in 1119 and began the war with the Liao. Taizu himself led the army that sacked the Liao’s eastern capital in 1120, giving the Jin added leverage in the negotiations with the eunuch Tongguan. The final agreement included provisions for the return of the 16 prefectures to the Song, who would pay the Jin the same annual tribute they had been paying the Liao, as well as recognize diplomatic equality between the two monarchs. Having reached this agreement, the Jin and Song launched a two pronged attack against the Liao in 1122, with the Jin armies sweeping westwards, first taking the central capital and then the western capital.

Taizu died on this campaign in 1123 and was succeeded by Wuqimai 吳乞買, who took the dragon throne as emperor Cheng 晟 (r.1123-1135), posthumously known as Taizong 太宗 (Great Ancestor), the standard Chinese title for the second dynastic ruler. Although the Xixia had initially supported the Liao with military forces against the Jurchen, in 1124 they submitted to Taizong and began sending regular tribute missions to the Jin. Meanwhile, the large and well supplied Song army suffered heavy losses and its attacks were ineffectual against the Liao’s southern capital at Yanjing 燕京 (Hebei province), just beyond the Great Ditch. The Song attack soon lost its momentum and they sent an envoy to the Jin armies requesting their help. In 1125, the Jin army marched south and crushed the southern capital, looted the city, and captured the last Liao emperor who died in their custody. Only then did the Jin pull their forces back to allow the remnants of the Song army to occupy their long cherished prize. Although the region was decimated by the warfare, for a brief time the Song could celebrate the reunification of the 16 prefectures so long sought after, swelling the borders of their empire to the farthest extent in its history. The Jin also celebrated their diplomatic equality with the Song and their growing empire that stretched across northeast Asia and was ruled from Taizong’s capital Huangdizhai 皇帝寨 (Emperor’s Fortress, later renamed Shangjing 上京) just north of the Sungari River. Remnants of the Liao court fled westwards to Central Asia where they set up the Kara-Khitan kingdom, known to the Chinese as the Western Liao 西遼 (1124-1218), surviving nearly another century until they were absorbed into the Mongol Empire.
To accomplish this fleeting victory the Song government had conscripted massive numbers of able bodied men for the regular army in preparation for the combined attack on the Liao in 1122. Many of these men died in the battle or remained posted at the front, leaving a vacuum in the local security services and consequently a rise in banditry. Paul J. Smith (2006) has challenged the reductionist argument that wen (the civil) dominated over wu (the martial) during the Song by demonstrating how the classic romance novel *Shuihu Zhuan* (Water Margins) and its archetypal figures of arms instructors and manorial lords, together with other non-fictional sources, reveals the military subculture embodied in the *baojia* (protective shield) system implemented under the reforms (c.1050-60) of Wang Anshi 王安石 (1021-1086). This subculture contributed to the rise of the scholar-warrior and even laid the groundwork for the rise of scholar-physicians. The *baojia* was originally meant to decrease the size of the military, provide weapons and training to farmers for local self-defense and policing, and supply reserve forces for the standing army. Smith found that by c.1100 about 78% of arable land was in the hands of 14% of the population, most of whom were part of the militocracy that occupied the Central Plains at the founding of the Song, and these same influential gentry then invited renowned martial arts teachers to train their own private armies, all with the support of the civil government.

Many Jurchen warriors prided themselves on their Confucian education, just like the famous Song scholar-warrior Yue Fei 岳飛 (1103-1142) who became the proverbial thorn in the side of the Jin during their early empire building. Many details of the war between the Jin and Song are recorded in the *Jintuo Cuibian* 金陀粹編 (Essential Compilation from the Golden Hill), a biography of Yue Fei written by his son Yue Ke 岳珂 (c.1200), which was used as a primary source for an exhaustive study of Yue Fei and this conflict by Edward H. Kaplan (1970). Although some events were likely exaggerated to venerate his father, it remains a valuable source on the period, especially as the early records in the *History of the Jin* are scant. Kaplan found that according to the legends, when Yue was born in Tangyin 湯陰 village (Anyang, Henan province) there was a large bird circling and cawing overhead inspiring his father Yue He 岳和 to name him Fei, which means “to fly,” which further inspired his style name, Pengju 鵬舉 (Rise of the *Peng*). Comparable to the more popular *feng* (phoenix), the *peng* (roc) was a
legendary enormous bird of prey that prominently appeared in the first chapter of the Daoist classic *Zhuangzi* 莊子 (c.300 BC):

北冥有魚其名為鯤 鯤之大不知其幾千里也 化而為鳥其名為鵬
鵬之背不知其幾千里也 怒而飛其翼若垂天之雲 是鳥也
海運則將徙於南冥

Deep in the north there is a fish that is called the *kun*. The *kun* might be as large as a thousand miles. It can transform into a bird, which is called the *peng*. The wingspan of the *peng* might be a thousand miles. When it is aroused and takes flight its wings trail down from Heaven like clouds. Such is this bird. The seas churn as it migrates towards the distant south.

Like the *peng*, Yue Fei was born in the north, was transformed into a supernatural being by those in awe of his accomplishments as he moved south to serve the Song court unto his death in a time of profound upheaval. His association with avian flight certainly helped fuel the legends of his prowess in archery and the eagle claw style of martial arts. Similar to Jin Taizu, it was said that as a child Yue Fei showed remarkable strength and agility. Yue was further described as a bright student and avid reader who often studied his books until dawn by the light of crude home-made candles, just as expected of any future scholar. The Yue lineage even traced their origins back to Shennong 神農, the Divine Farmer and father of herbal medicine, and they claimed an ancestor who had served in a minor government post during the early Song dynasty, giving them a tenuous qualification for membership in elite society. Thus, even though they were peasants, they were considered to be a literate family that trained their children in the Confucian classics in the hope that their offspring might again serve as officials, a goal ultimately realized by three of Yue Fei’s five sons. The oldest and youngest sons followed their father into the army. Yue Tianyou 岳天祐, also known as Shenyou 腎祐 (Kidney Adjutant), was a relative of Yue Fei who also grew up in Tangyin village during the Jin and was proficient in astronomical and astrological studies. Yue Tianyou further studied medicine and was identified as a *ru* 儒 (Confucian, literati) who merged these two fields while serving as a *taiyi* 太醫 (grand physician) to the Jin court (G. Wei, 1994). Thus Yue Fei’s legacy also included this connection to Jin literati medicine.

In 1123, Yue Fei joined the local *baojia* at the age of 20 after his wife had given birth to their first son, Yue Yun 岳雲 (1119-1142), who would later fight and die by his father’s side. In his early childhood, Yue trained under a local *hao* 豪 (knight errant,
strongman) named Zhou Tong 周侗 who taught him everything he knew of martial arts, with stories told of how he split the arrows of his teacher during an archery lesson. Zhou Tong would have been the type of man recruited as an arms instructor for the baojia. Yue Fei’s potential was immediately recognized by his superiors, who promoted him in rank and tasked him with bandit suppression around the capital. Yue proved to be a capable commander in the baojia and joined the regular Song military at the age of 23. According to legend, when Yue Fei told his mother that he was joining the army his mother tattooed on his back the phrase: jinzhong baoguo 盡忠報國 (absolute loyalty & devotion to the state).

During the years following the defeat of the Liao, the Jin secured its newly acquired empire and Taizong turned his ambitions to the Song. Initially, this may have been a means to demonstrate his military prowess to the Jurchen people as a legitimate successor to the throne. In 1124, Taizong used a minor border incident as an excuse to break the Jin-Song alliance and pointed to the inadequacies of the grain tribute received from the Song to launch another military campaign. A possible explanation for his actions is found in the wuxing section of the History of the Jin:

霖雨害稼 且為蝗所食 秋泰州潦害稼
[In 1124] continual rains harmed the crops and moreover, there were locusts that ate them. In the fall, Taizhou (Jiangsu) was flooded, which harmed the crops.

This passage suggests that not only were their troubles with the harvest in the territories controlled by the Jin, but that similar problems affected the Song and may have resulted in the diminished tribute that year. This would have occurred right in the middle of the climactic cooling phase of 1110-1152 identified by Zhang, et.al., (2007), and supports Di Cosmo’s (1999) “response to crisis” model of state formation. It can be concluded that the Jin’s attacks on the Northern Song were driven in part by climate change and the depletion of agricultural resources across East Asia, forcing competition for control over the limited food supply.

By the end of 1125, the Jin had allied with the Xixia in a war against the Song. Soon the embattled Song generals began pulling back their armies from Hebei province and massing their remaining forces around their capital at Bianjing to secure the emperor and his court. In an attempt at appeasement, Huizong abdicated the throne to Qinzong 欽宗 (r.1125-27, d.1161) who immediately dismissed Tongguan and other high officials.
from their posts and prepared the capital defenses for the Jin attack, which came early the next year. Following the Jin siege, Qinzong signed the most humiliating peace treaty of any Song emperor, and perhaps of any Chinese emperor. The 1126 Jin-Song treaty required forfeiture of both Hebei and Shanxi provinces to the Jin, payment of a large war indemnity, annual tribute of 300,000 units each of silver and silk, and most significantly: Song recognition of their inferior diplomatic status. That same year, the Gaoli dynasty on the Korean peninsula submitted to the Jin and became their vassal, perhaps hoping to avoid the same fate as the Song. Taizong was subsequently recognized by the Song, Xixia, and Gaoli kingdoms as the legitimate Tianzi (Son of Heaven), the ruler of Tianxia (all under Heaven). Henceforth, the Jin was the dominant East Asian regional power of the twelfth century. As if Heaven was smiling upon them, it was reported in the History of the Jin that they enjoyed excellent harvests in the years 1125 and 1126.

The humiliated Song Qinzong was indignant and hostilities resumed between the Jin and Song later that year in battles around the city of Taiyuan. As the Jin army moved to flank the Song to the west they encountered a small cavalry force that included Yue Fei and suffered heavy losses, but soon afterwards the Song army retreated. Having once again proven their military might and expanded their empire southwards, Taizong then demanded that the Song provide a royal hostage to secure the peace. Yet as the hostage was being sent north the Jin army moved swiftly south in two columns led by the royal Wanyan generals Wolibu 斡離不 and Nianhan 粘罕, crossed the Yellow River, and pounced upon the Song capital. The Jin demanded all the territory north of the Yellow River, and even after Qinzong agreed the siege continued until the city was destroyed. The Jin armies captured both the retired emperor Huizong and the sitting emperor Qinzong, demoting them to commoner status and giving them denigrating titles. Still not satisfied, the generals forced Qinzong to sign a formal “declaration of submission” that was prepared on the spot by the Song official Sun Di 孫覿 (1081-1169) and presented to Taizong, earning these two Jin generals much power and prestige at court. Afterwards, the two dethroned Song emperors and three thousand members of their court were escorted back to the Jin capital in the far northeast as prisoners of the Jin. It appeared the Song dynasty had come to an end.

During all of this chaos, Prince Kang 康王 (1107-1187) of the Song’s royal Zhao 趙 family, who was being sent north as the royal hostage when the Jin invaded, managed to escape south and regroup with a small contingent of Song army regulars at Xiangzhou
襄州（Hubei province). It was said that this is where Prince Kang first met Yue Fei, whom he assigned the task of not only bandit suppression, but bandit conscription into the ranks of the Song army to bolster its strength before launching a counter-attack, which ultimately failed. Prince Kang was further forced to postpone his northern campaign as the political will back in Xiangzhou faltered after hearing the news that the two Song emperors had been imprisoned after surrendering to the Jin. Some Song officials tried to persuade Prince Kang that the Zhongyuan (Central Plains) had been lost and that he should escape south to Jiangnan (South of the [Yangzi] River) where he could hold off the Jin at the Yangzi while building a new capital as the successor to the Song throne. Other officials argued that their army could succeed in retaking the capital if given reinforcements and that retreating sent a message of defeat, which was not appropriate for imperial succession. This latter argument predicated the legitimacy of his rule and a zhongxing 中興 (dynastic restoration) on control over the Central Plains. The young politician tried to please both parties and split his limited forces into two groups; half would move north to reinforce the effort to retake the capital, and half would move south to protect Jiangnan. The prince then took the title of emperor and the reign name Jianyan 建炎 ([Re]building the Flame), a declaration that the fire elemental-phase continued to shine brightly in the south. Prince Kang was posthumously known as Gaozong 高宗 (r.1127-1162), the first ruler of the Nansong 南宋 (Southern Song) dynasty (1127-1279).

Soon after the founding of the Nansong, Yue Fei sent a memorial to Gaozong arguing he should immediately rally the entire army to retake the Central Plains and rescue the imprisoned emperors. Although Gaozong may have shared the sentiment, the rescue of the dethroned emperors brought his own legitimacy as ruler into question. Moreover, such a memorial was considered inappropriate from such a low ranking officer and Yue was promptly demoted and told to return to his place of origin. This actually meant that Yue joined the most forward Song army unit in northern Henan province under the command of general Zong Ze 宗澤 (d.1128) who was tasked with recapturing the capital. It was said that Zong Ze met with Yue Fei to commend him for his bravery and tactical expertise, but remarked that Yue did not follow the ancient methods expected of a general. To this Yue replied: “the ancient and modern situations differ…the essence of military methods is to come up with something unusual which cannot be fathomed.
Only then can victory be obtained (trans. Kaplan, E.H., 1970, p.54).” Notably, this same sentiment will later be expressed by Jin physicians regarding the field of medicine.

After the Jin conquered Bianjing in 1127, Taizong allowed his beloved generals to set up there the puppet state of Chu 楚 (1127-?). Due to the sudden and rapid expansion of their empire the Jin court did not have the capacity to effectively govern its new territory. J. Tao (1976) found that during this time Taizong transplanted many wealthy Chinese families and their material goods, as well as artisans, peasants, astronomers, musicians, and medical doctors, from the Central Plains back to the northeast. He further implemented a taxation system on his new subjects to support the army occupying the Central Plains. To fill the growing administrative gap, Taizong had also held civil service examinations in 1123 and 1124 to recruit Chinese and Khitan as local officials, followed by regular triennial examinations after 1129. Conscripting local functionaries to serve the Jin in exchange for a modicum of power and their help to create order in the Central Plains while providing a buffer between the north and south was the purpose for creating this puppet state. However, soon afterwards the Nansong general Zong Ze and his northern army were able to briefly recapture the capital and topple the state of Chu.

During the course of 1127, those Nansong officials who supported retaking the north lost favor. Gaozong decided to stop heeding the advice of the war faction and listened instead to the advice of the official Zhang Jun 張俊 (1086-1154) and began to pull his forces back to secure the south. During the retreat, the northernmost armies continued to hold the capital and Yue Fei continued to distinguish himself in battle on the northern front. However, gradually their numbers dwindled. Then late in the year, the Jin army led by another Wanyan general named Wuzhu 兀朮 attacked and drove Zong Ze and his army out of Bianjing. After regrouping, Zong Ze set up defensive positions to stop further Jin advances and held these positions until the seventh month of 1128 when the weary general fell ill and died at the age of seventy. Although popular support was given to Zong Ze’s son to take command of the northern army, Gaozong appointed Du Chong 杜充 (d.1141), an avowed member of the peace faction who was eager to end the hostilities.

After disappearing behind enemy lines, Du Chong reappeared and ordered the soldiers to break the dikes of the Yellow River in Henan province in what he claimed was a desperate attempt to slow the advance of a massive Jin army offensive. This caused the
flow of the Yellow River to be redirected to the southeast and the floodwaters caused widespread devastation and hardship as the “River of Sorrow” carved a new passageway through the Central Plains and poured into the Huai River. This only served to cede even more territory to the Jin who continued to control everything north of the Yellow River, which thereafter included the Shandong peninsula and the northern portions of Anhui and Jiangsu provinces. Given the unusual activities of Du Chong, it must be considered that this action was planned by Gaozong and Taizong as part of a negotiated settlement to end hostilities. Since the south had become a producer of surplus grain, Gaozong may have been willing to relinquish the northern territory, and Taizong may have been satisfied with the increase in taxable and arable land.

The monarch of the Nansong set up temporary court in Lin’an 靈安 (Zhejiang, modern day Hangzhou), while the northern armies were redeployed at Jiankang 建康 (Jiangsu province), which was supposed to become their new capital. Gaozong decided that a military solution was not achievable. He reorganized his court, and placed another member of the peace faction, Wang Yuan 王淵, in charge of the military, after which he ordered a full retreat of the army. After an attempted coup, the court consolidated the power of loyalists like Zhang Jun of the peace faction, purged those whose loyalties were suspect, and excluded the military from policy discussions.

In early 1130, the Jin launched another offensive led by the Wanyan general Wuzhu, this time marching across the Yangzi River, reaching as far as Xiaowang 瀟王 (Zhejiang) before encountering significant resistance. During the fighting and in fear his own capital would fall, Gaozong jumped onto a ship and headed out to sea, taking temporary refuge on the island of Taiwan. Although the Jin cavalry proved dominant in battles on the northern steppes and Central Plains, the mountainous, marshy, and riverine terrain of the south had turned the advantage in favor of the Nansong infantry, and so the Jin withdrew. After memorializing Gaozong about his security concerns, Yue Fei was placed in charge of the eastern flank of the front line defenses at the Grand Canal route north of the Yangzi River, and in late 1130 the Jin attacked just where he had predicted. For two months Yue’s forward unit held off the Jin advances until after several tactical retreats they had to flee back across the Yangzi, leaving everything to the north of that river under Jin control by early 1131.

From 1131 through 1133, the Jin continued to consolidate its newly acquired territory. The Huihe (Uighurs) submitted to the Jin in 1127 and sent another tribute
mission in 1131, followed by eight more missions to the Jin during the course of the twelfth century. J. Tao (1976) described the “Great Migration” of Jurchen from the far northeast into the Central Plains between 1126 and 1133, whereby the government assigned farmland to soldiers so they could support themselves and their kin. After that, migration slowed until 1150 when it essentially ceased. Tao found that the population of northern China c.1190 was estimated to be around 50 million, and included a minority of approximately 5 million Jurchen. During this period when the Jin controlled everything north of the Yangzi, the Jurchen generals ordered the indigenous population of the Central Plains to adopt Jurchen clothing and hair styles or else be identified as Song loyalists and executed. This ban on Chinese style dress was later lifted in 1150, while a ban on Chinese-Jurchen intermarriage was lifted in 1191. The royal military general Wanyan Talan 完顏撻懶 set up another puppet state called Qi 齊 (1132-1137) at Bianjing in 1132 with the approval of the Jin emperor. Thus the southern provinces of the Jin were essentially under the control of generals loyal to Taizong who were also members of the royal Wanyan clan, including: Wolibu, Nianhan, Wuzhu, and Talan. Their primary duty was to secure the border and maintain order.

In the south the turmoil contributed to the people’s doubts about the legitimacy of the Nansong, with many liukou 流寇 (roving bandits) and tufei 土匪 (local bandits) springing up in this era of violence and uncertainty claiming their own dynasties and fighting with each other, the general population, and the government. The task of bringing order out of this chaos was no simple chore and it is believed this was the time when Yue Fei wrote some of his poetry, including the famous Man Jiang Hong 滿江紅 (Filling the River with Red):

怒發冲冠 憐闘處 蕭蕭雨歇 抬望眼 仰天長嘯 壯懷激烈
Anger rushes upwards to my skull. I steady myself on the railing. Miserably the rain subsides. I turn my gaze upwards. Facing Heaven I let out a long roar. The force in my chest is intense.

三十功名 塵與土 八千里路 云和月 莫等閑白了少年頭空悲切
Thirty years I struggled to make a name in the dust and dirt. Eight thousand miles I traveled like clouds passing over the moon. I cannot wait idly as my hair turns white and mourn in vain.

靖康耻猶未雪 臣子恨何時滅 駕長車 踏破賀蘭山缺
The tranquil Kang (ruler of Nansong) has been disgraced and [the disgrace] has not been erased. Officials are remorseful, but when will they have their vengeance?
Let us grab the reins of our chariots and drive onward until we capture the Helan Mountains (spanning Ningxia into western Mongolia).

壮志饥餐胡虏肉 笑谈渴饮匈奴血 待从头收拾旧山河 朝天阙
My driving ambition is to feast on the flesh of our barbarian prisoners. To laugh and chat while imbibing xiongnu (northern barbarian) blood. I wait until we regain our former mountains and rivers and the court of Heaven is restored. 19

In this poem, the frustration of Nansong loyalists like Yue Fei over the loss of the Central Plains and being constantly beaten back by the Jin armies is evident. Yue is arguing that it is not yet too late to recapture the center and achieve a zhongxing 中興 (dynastic restoration). This is the quest he pursued unto his death. In 1133, Gaozong rewarded Yue for his success in bandit suppression with gifts of gold-threaded armor, gilded weapons, a fresh battle horse and saddle, an inscribed battle flag, as well as more gifts for the soldiers under his command. Despite making offers of peace, he then ordered Yue to take command of the northern border armies and soon after securing his post Yue memorialized the emperor with a plan to retake the north. With the support of Gaozong, Yue began his northern campaign in 1134.

During the early phase of Yue Fei’s first northern campaign his army crossed the Yangzi and marched steadily northwest across abandoned ground, while a reserve army moved forward to secure the eastern flank up to the Huai River. The Jin army rallied its forces and again formed two columns; one moved southwest to confront Yue’s army, while the other charged southeast toward the capital at Lin’an. Although Yue’s army held their ground in the west, the army guarding the eastern flank collapsed. Yue’s forces conducted a tactical retreat and reinforced the eastern flank in time to stop the Jin assault on Lin’an, and the combined Nansong forces were able to hold off the Jin army just north of the Yangzi River for the remainder of 1134. Then early in 1135 the second Jin emperor Taizong, who had been so aggressive towards the Nansong for his entire reign, died. The Jin armies pulled back to the Huai River as a successor was decided upon according to the norms of traditional steppe culture.

With the support of the celebrated generals who had conquered the Central Plains, the throne was transferred to a grandson of Aguda named Hela 合剌, who ruled as the third Jin emperor Dan 亶 (r.1135-50), posthumously known as Xizong 熙宗 (Splendid Ancestor). For those living at or near the Jin capital in the far northeast during his first reign period (1135-1138), entitled Tianhui 天會 (Heaven’s Unification), it was a time of
resplendent peace and responsible administration, but at the far reaches of the empire the
territory was under military rule with the generals operating sometimes as provincial
governors and other times as despotic warlords. Since he was indebted to the support of
these four generals, and likely still due to struggles managing the new empire and
securing the southern border, Xizong allowed them to operate essentially independently
in the Central Plains. However, this served the needs of Xizong by securing the center
and pacifying the periphery. For a time peace remained between the Jin and Nansong,
especially since Gaozong was still struggling to secure the south, including the
suppression of a major rebellion in the Dongting Lake region of Hunan province.

**Medicine prior to the Jin**

An understanding of Jin literati medicine is predicated not just on an
understanding of the Confucian cosmological paradigm, but also an understanding of
medical history prior to the Jin. Especially important are the developments immediately
preceding the Jin, such as the publication and dissemination of a classical medical canon
by Northern Song medical officials. This canon was essential to raise the status of
physicians by providing them with a collection of texts on par with the Confucian canon,
which further enabled the development of a state examination system for medicine. These
classical texts were essential for establishing a medical orthodoxy within which Jin
doctors worked to improve clinical outcomes and construct a standard of care. However,
with these texts came an officially sanctioned narrative of medical history that displaced
earlier historiography. Furthermore, the authenticity of several of these classics as
representatives of early Han dynasty medicine must be challenged by modern historians
based on textual anomalies, for this same challenge was made by several Jin physicians.
It is herein argued that the extant classical medical canon promulgated by Northern Song
officials represents their idealized conception of elite Tang dynasty medicine rather than
genuine Han medicine.

As for the indigenous medical practices of the Jurchen, little is known. It is
believed they practiced some form of “shamanism,” which is a word of Tungusic origin
rendered phonetically in Chinese as *shanman* 珊蠻. This term also references the traditional medicine of southerners since the phonetic component *Man* 蠻 also refers to a southern ethnic group whose healing practices based on supernatural beliefs were criticized by Confucians as barbaric or uncivilized. K.A. Wittfogel and C. Feng (1946) as well as J. Tao (1976) found that the *wu* 巫 (shamans, spirit mediums) in the Liao and Jin were very close to the centers of power because of their perceived ability to interact with and influence events in the natural and supernatural world. The Jin royal *wu* Wanyan Xiyin 完顏希尹 was one of those tasked with creating the first written language for the Jurchen and was a strong proponent at court for full scale adoption of Chinese institutions. As demonstrated by Mark Edward Lewis (1999), there has always been a close association between writing and authority in China. The *wu* also continued to use *osteomancy* (bone divination) to decide upon important matters like going to war, which was the process of heating animal bones such as sheep scapula or tortoise shells by burning substances like mugwort and horse manure and reading or interpreting the resultant cracks in the bone. In his study on oracle bone divination and power, R.K. Flad (2008) found that this practice persisted in northern steppe culture up until the early 20th century, so it is probable some Jin *wu* practiced this art. Buddhist religious healing practices were likely incorporated into the indigenous Jurchen healing system as well, since the Buddhist canon known as the *Tripitaka* (Three Baskets) was requested and received from the Northern Song in 1019, evidencing the growing importance of Buddhism in Jurchen culture prior to state formation.

It is also probable that there was some degree of cultural influence from the Korean peninsula, including in the field of medicine. Hans Bielenstien (2005) found that before the establishment of the Jin, the Liao emperor Muzong (r.951-958) became sick and summoned a Korean physician to examine his condition and promised he could return home if he cured the disease. After his successful treatment, he informed the Jurchen of the Wanyan clan about the event while returning home. Although details are lacking, it can be deduced that there was some exchange of medical practices between the two peoples. It is known that Korean medicine was strongly influenced by Chinese ideas, but the degree to which the two systems resembled each other during the eleventh century is not known. Korean, Khitan, and Jurchen indigenous medicine most likely included the use of prayers and incantations, ritual dances, divination, spirit mediums, animal sacrifices, exorcisms, as well as the use of locally available medicinals. As such,
traditional Jurchen medicine had much in common with Chinese medicine as practiced by religious and lay practitioners. While many of these practices endured, the Confucian influenced field of literati medicine thrived under the Jin.

The system of Chinese medicine that was based on the authority of a classical canon and was passed on to Jin literati physicians was the result of several actions taken by their predecessors on the Central Plains. The evolution of Chinese medicine during the Northern Song is detailed by Asaf Goldschmidt (2009), who describes how the first four Song emperors, Taizu 太祖 (r.960-976), Taizong 太宗 (r.976-997), Zhenzong 真宗 (r.997-1022), and Renzong 仁宗 (r.1022-1063), all displayed an interest in medicine and thus contributed to the increase in status for physicians and the formalization of an orthodox system. These early Song rulers made the publication and dissemination of medical literature a priority and sought to consolidate medical knowledge from the few surviving records that were described as damaged, containing omissions and errors, and were scattered across the empire. Many texts were gathered from privately owned manuscripts with appropriate compensation provided to the original owner. This process began as early as 973 with the publication of the Kaibao Chongding Bencao 開寶重定本草 (Restored Materia Medica of the Kaibao Era), which was a compilation of earlier works on the subject. This was followed in 976 with the Taiping Shenghui Fang 太平聖惠方 (Sagely Generosity Prescriptions of the Taiping Era). Together these texts provided the necessary information required for the prescribing of internal medicine based on presenting symptoms with reasonable expectations of positive clinical outcomes. Nonetheless, it still lacked the broader framework needed for understanding health and the etiology and pathophysiology of disease in order to make a differential diagnosis of symptoms according to the Confucian cosmological paradigm.

During the reign of Renzong the practice of acupuncture was revived, and efforts were made to develop a standardized approach to this technique that had waned over the years and been overshadowed by the use of cautery (commonly referred to today as moxibustion). The English term “moxibustion” refers to the combustion or burning of “moxa”, a word derived from the Japanese term mogusa もくさ (mugwort), which is the name of an herb known in Chinese as ai 艾 (Artemisia vulgaris L., Herba). This herb is burned over specific locations on the body to stimulate the qi 氣 (energy) and promote healing, a technique called jiu 灸 (cauterization using mugwort). These locations on the
body were referred to by the Chinese as *xue* 穴 (holes or caves) due to their being found in natural depressions along the body surface. Today they are known as the acupuncture points, or acu-points; meaning the places where needles (Latin: *acus*; Chinese: *zhen* 针 or 針) are inserted to various depths. The stimulation of these points with the intent of healing is commonly referred to as *zhenjiu* 针灸 (acupuncture & moxibustion). The Northern Song *zhenjiu* revival was led by Wang Weiyi 王惟一 (c.987-1067) who oversaw the casting of two identical life-size bronze acupuncture statues in 1026 for purposes of study and practice along with the publication of a companion text, the *Tongren Shuxue Zhenjiu Tujing* 銅人俞穴針灸圖經 (Illustrated Classic on Approved Acu-Moxa Points on the Bronze Figure), henceforth referred to as the *Bronze Figure Classic*.

During the following year of 1027, Renzong supported the publication of three major classical texts in an effort to establish a medical orthodoxy consistent with the current cosmology. The first was the *Huangdi Neijing Taisu* 黃帝內經太素 (Yellow Emperor’s Inner Classic, Grand Basics), which was an early version of this seminal Han dynasty classic compiled by Yang Shangshan 楊上善 (c.600) during the Sui 隋 dynasty (581-618). This was followed by the publication of the *Nanjing* 難經 (Classic of Difficulties), purported to be a commentary on the *Huangdi Neijing* (Yellow Emperor’s Inner Classic) and credited to the doctor Bianque 扁鵲 (Wandering Magpie), also known as Qin Yueren 秦越人 (407-310 BC), despite the obvious inconsistencies in the dates. The third was the *Zhubing Yuanhou Lun* 諸病源候論 (Treatise on the Origins & Symptoms of Various Diseases), which was compiled by Chao Yuanfang 巢元方 (550-630) during the Tang dynasty. Together these three texts provided Song physicians with the classical authority necessary for the legitimation of medicine as a scholarly pursuit, the theoretical basis for understanding health and disease according to the classical paradigm, and when used in combination with the *Kaibo Bencao*, the *Taiping Shenghui Fang*, and the *Bronze Figure Classic*, a diversity of internal and external treatment options.
Emperor Renzong established the Jiaozheng Yishu Ju 校正醫書局 (Bureau for Revising Medical Texts) to sponsor the revision, publication, and widespread distribution of classical medical literature to relieve the suffering of his people. This action followed a wave of epidemics (1045-1060), but the mission of the Bureau extended well beyond this crisis. The Bureau began with the production of the Bencao Tujing 本草圖經 (Illustrated Classic of the Materia Medica), edited by Su Song 蘇頌 (c.1063), which was an updated materia medica complete with illustrations of the medicinals and the collation of information from several classical works, including: Shennong Bencao (Divine Farmer’s Materia Medica, c.100 BC); Wushi Bencao Jing 吳氏本草經 (The Wu Clan’s Classic of the Materia Medica, c.300) by Wu Pu 吳普; Bencao Jing Jizhu 本草經集注 (Collection of Commentaries on the Classic) by Tao Hongjing 陶弘景 (452-536); the first imperially sponsored text of this genre called Tang Xinxiu Bencao 唐新修本草 (Newly Compiled Materia Medica of the Tang Dynasty, 659) compiled by Su Jing 蘇敬; and Bencao Shiyi 本草拾遺 (Gleanings of the Materia Medica, 739) by Chen Cangqi 陳藏器. The Bencao Tujing became the definitive work on the subject until the publication in 1108 of the Jingshi Zhenglei Daguan Bencao 經史證類大觀本草 (Materia Medica of the Daguan Era, Classified & Verified from Classics & Histories) by Tang Shenwei 唐慎薇 forty-five years later. Thereafter, this text was referred to simply as the Daguan Bencao and was the most up to date materia medica available to Jin dynasty physicians.

As a specific response to the epidemic crisis, the Bureau for Revising Medical Texts published the Shanghan Lun 傷寒論 (Treatise on Cold Damage) in 1065, which arguably became the most influential prescription manual in Chinese medical history. This text was said to have been written when its author, Zhang Zhongjing 張仲景 (142-220), was an official in the southern town of Changsha (Hunan province), after his community was ravaged by an epidemic. It was originally known as the Shanghan Zabing Lun 傷寒雜病方論 (Treatise on Cold Damage and Miscellaneous Disorders) and was later divided into two sections; the first dealt with externally contracted diseases and became known as the Shanghan Lun, and the second with internally generated illness.
This second part was called the *Jingui Yaolue Fanglun* 金匱要略方論 (Treatise on Essential Strategies and Prescriptions from the Golden Cabinet) and was published the following year in 1066, along with the *Qianjin Yifang* 千金翼方 (Prescriptions Worth Thousands in Gold) by the Daoist alchemist Sun Simiao 孫思邈 (541-682). This growing body of medical literature imparted with a classical authority on par with the Confucian canon further encouraged scholars who were unable to secure an official post to pursue medical studies.

The Bureau for Revising Medical Texts continued over the next three years to provide physicians with access to classical texts. In 1067, the Bureau published the *Huangdi Neijing Suwen* 黃帝內經素問 (Yellow Emperor’s Inner Classic, Basic Questions), a revised edition of the *Taisu* produced forty years earlier. The *Suwen* contained many of the same essays found in the earlier *Taisu* version but was reorganized and expanded. In 1069, the Bureau published three more classical texts: *Zhenjiu Jiayi Jing* 鍼灸甲乙經 (Systematic Acupuncture & Moxibustion Classic) attributed to Huangfu Mi 皇甫謐 (215-282); *Maijing* 脈經 (Pulse Classic) attributed to Wang Shuhe 王叔和 (265-316); and *Waitai Miyao Fang* 外臺秘要方 (Secret Essential Prescriptions from an Official) attributed to Wang Tao 王燾 (702-772). The *Zhenjiu Jiayi Jing* provided much greater detail on the acupuncture channels and the organizational system of the acu-points than was available in the manual that had accompanied the bronze statues. The *Maijing* provided a systematic study of the pulse that would make this method of diagnosis premier among Confucian doctors. The *Waitai Miyao Fang* continued to expand the treatment arsenal with over six thousand prescriptions available for consideration by literati doctors. Thus by 1070, scholar-physicians had a plethora of classical literature that they could immerse themselves in for study and draw upon in practice. It seemed the mission of the Bureau had been fulfilled.

Having established an authoritative body of texts, officials proceeded with the bureaucratization of medicine. As part of the reform movement of Wang Anshi, the Song established the *Heji Ju* 和劑局 (Bureau of Prepared Formulas) in 1076 to promote the health of society, regulate prices, and ensure supplies. Accompanying this was the publication of an updated version of the earlier *Taiping Shenghui Fang* 太平昇華方 that included the various preparations available for public purchase in the pharmacy. In order to keep pace with medical developments, this text was revised, expanded, and republished numerous
times during not only the Song, but also in subsequent dynasties, and this institution survived centuries of the imperial era despite various criticisms. As a result of the frequent revising and reprinting it is difficult for medical historians to determine exactly what formulas were included in the earliest version and what formulas were added later. Also during this reform movement, the Taiyi Ju 太醫局 (Imperial Medical Bureau) was created within the prestigious Hanlin Academy 翰林院 in a further effort to promote medical studies by Confucian scholars and provide oversight of the pharmacy.

The Bureau for Revising Medical Texts had two more contributions to make to the corpus of classical literature. In 1080 it produced yet another version of the Huangdi Neijing Suwen (Yellow Emperor’s Inner Classic, Basic Questions), this time based upon an annotated edition by the Tang dynasty physician Wang Bing 王冰 (c.762). This edition is cited as the origin of the wuyun liuqi 五運六氣 (five elemental-movements & six climactic-energies) doctrine that became very influential during the late Song and Jin dynasties following its dissemination. This four character string only appears in chapter 71 of the Wang Bing edition, which is one of seven chapters (66-71 & 74) that the Song editors believed were added by Wang, in part because they are considerably longer than any other chapter in the text, and also because they deal with subject matter not emphasized elsewhere. Nonetheless, the Wang Bing version became the definitive edition of this seminal classic, although the other versions continued to circulate. Ten years later in 1090, the Bureau published what was believed to be another Han dynasty classic, the Huangdi Neijing Lingshu 黃帝內經靈樞 (Yellow Emperor’s Inner Classic, Divine Pivot), after a fragmentary copy was brought back to China from the Korean Peninsula. The Lingshu then became the definitive source for knowledge in the field of acupuncture, although a subsequent edition was published in 1155 by the Nansong court expressly with the intent of correcting errors in the earlier version.

Once this classical medical canon was published, it was feasible to develop education and examination standards. Although the second to last Northern Song emperor Huizong was criticized for his ineffectual governance, the continued promotion of medicine was a priority of his reign. Goldschmidt (2009) found that after several attempts were made during the 1040s, 1060s, and 1080s to establish medical schools under imperial auspices in the provinces and districts without success, Huizong finally established the Yixue 醫學 (Medical College) in 1103 under the Directorate of
Education to train *shangyi* 上醫 (superior physicians). The College required an entrance examination and progress exams every three months, and issued new degrees to graduates similar to those of the civil service examination. In 1113, Huizong coined the term *ruyi* 儒醫 (Confucian physicians) to further enhance their prestige by linking Confucian scholarship with medical learning and practice. The status of the medical field was further reinforced in 1117 when Huizong ordered that the *Huangdi Neijing* be included in the curriculum of all imperial schools. In 1118, at the behest of emperor Huizong, a staff of medical scholars produced the *Zhenghe Shengji Zonglu* 政和聖濟總録 (The Medical Encyclopedia: A Sagely Benefaction of the Zhenghe Era) and the *Shengji Jing* 圣濟經 (Canon of Sagely Benefaction), both highlighting the theory of *wuyun liuqi* introduced in the Wang Bing chapters of the *Huangdi Neijing*.

Several other public health initiatives were accomplished by the Song court during the reign of Huizong. They included poorhouses, public hospitals, and pauper’s cemeteries, and the expansion of the government backed pharmacy, renamed the *Huimin Ju* 惠民局 (Bureau for Benefiting the People). Goldschmidt (2009) found that the pharmacy initially proved to be a very profitable enterprise for the government, and was composed of two offices: *Shuyao Suo* 熟藥所 (Office of Preparing Medicines) and *Maiyao Suo* 賣藥所 (Office of Selling Medicines). The pharmacy also provided medicines free of charge during epidemic outbreaks, serving as evidence of the governments concern for the welfare of the masses. In 1120, the prescriptions available from the pharmacy were published in the *Jiaozheng Heji Jufang* 校正和劑局方 (Revised Formulary of the Imperial Pharmacy). This was revised and expanded as the *Taiping Huimin Heji Jufang* 太平惠民和劑局方 (Formulary of the Pharmacy for Benefiting the People of the Taiping Era) in 1151, but was commonly referred to as the *Jufang* 局方 (Imperial Formulary). These multiple revisions suggest a flourishing market for their products and the need to stay current with demands.

The *Jufang*, a compilation of classical and contemporary formulas for a wide range of health concerns, influenced physicians during the Jin dynasty. Although the number and type of prescriptions in the manual must have changed appreciably over time, several formulas from the *Jufang* were consistently recommended by Jin literati doctors for conditions of both deficiency and excess. These same formulas were consistently
reprinted in subsequent editions of the *Jufang* throughout imperial history. Two of those that first appeared in this formulary derived from anonymous sources became important as types of over-the-counter remedies based on simple, but often modified, four-ingredient base formulas: *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction) to tonify the *qi*, and *Siwu Tang* 四物湯 (Four Substance Decoction) to nourish the blood. Both of these prescriptions are composed of ingredients that were readily available in the north Central Plains, which further explains their popularity with Jin physicians:

**Imperial Formulary’s *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction):**

Renshen 人參 (*Panax ginseng* C.A. Mey, Radix)
Gancaozhi 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)
Fuling 茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium)
Baizhu 白术 (*Atractylodes macrocephala* Koidz., Rhizoma)

**Imperial Formulary’s *Siwu Tang* 四物湯 (Four Substance Decoction):**

Danggui 當歸 (*Angelica sinensis* (Oliv.) Diels, Radix)
Chuanxiong 川芎 (*Ligusticum wallichii* Hort., Radix)
Baishaoyao 白芍藥 (*Paeonia lactiflora* Pall., Radix)
Shugan dihuang 熟乾地黃 (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix Preperata)

For both of these prescriptions, the dosage was listed simply as equal parts of each medicinal. Although these two formulas were arguably based on earlier prescriptions, this was their first appearance as distinct named formulas.

In addition, there were two heat clearing formulas from the *Jufang* that were even more popular with Jin physicians than the tonics. The first was *Liangge San* 涼膈散 (Cool the Diaphragm Powder), which purged heat through the bowels, and the second was *Bazheng San* 八正散 (Eight Ingredient Rectification Powder), which flushed out heat through the urinary bladder:

**Imperial Formulary’s *Liangge San* 涼膈散 (Cool the Diaphragm Powder):**

Chuandahuang 川大黃 (Rhei Radix et Rhizoma, Sichuan variety)
Poxiao 朴硝 (Mirabilite)
Gancaolan 甘草瀝 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)
Shanzhiziren 山梔子仁 (*Gardenia jasminoides* Ellis, Fructus et Semen)
Boheye 薄荷葉 (*Mentha haplocalyx* Briq., Folium)
Huangqin 黃芩 (*Scutellaria baicalensis* Georgi., Radix)
Lianqiao 連翹 (*Forsythia suspensa* (Thunb.) Vahl, Fructus)
Imperial Formulary’s *Bazheng San* 八正散 (Eight Ingredient Rectification Powder):  
Cheqianzi 車前子 (Plantaginis, Semen)  
Qumai 瞿麥 (*Dianthus superbus et chinensis* L., Rhizoma)  
Bianxu 蕹蓄 (*Polygonum aviculare* L., Herba)  
Huashi 滑石 (Talcum)  
Shanzhiziren 山梔子仁 (*Gardenia jasminoides* Ellis, Fructus et Semen)  
Gancaozhi 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)  
Mutong 木通 (*Akebiae Caulis*)  
Dahuang 大黃 (*Rhei Radix et Rhizoma*)

The dosages listed for these ingredients was relatively large (e.g., 20 *liang* 兩, ~600 grams), although the recommended dose for both of the prepared formulas was moderate at just 2 *qian* 錢 (~6 grams, a *qian* is one tenth of a *liang*). These formulas were an essential part of the medical heritage that Jin doctors received from their predecessors on the Central Plains. It is further evident from these examples that Jin doctors were not rejecting orthodox medicine in favor of a revolutionary approach, but were working within that orthodoxy to improve clinical outcomes, construct a standard of care, and raise the status of literati physicians.

*Early Song medical historiography*

The Northern Song reconstruction of the classical medical canon subsequently altered the narrative of the early history of Chinese medicine. Before analyzing the extant corpus, an examination of at least one alternative history of Chinese medicine that predates the publication of that canon by the Bureau for Revising Medical Texts (c.1060-1100) is warranted. A valuable source for this is the *Taiping Yulan* 太平御覽 (Imperial Readings of the Taiping Era, c.980), which was compiled just twenty years into the Song dynasty from a diverse array of pre-Song records and histories. This reveals that the officially sanctioned narrative elevated the importance of selected texts while diminishing
the importance of others, and thus calls into question the authenticity of Song medical historiography and the standard of care during the Han and Tang they purport to represent.

Many details concerning the early legends of Chinese civilization and medical development in the *Taiping Yulan* are said to be derived from a text called the *Diwang Shiji* (Epoch of Emperors) by Huangfu Mi, the purported author of the *Zhenjiu Jiayi Jing* (Systematic Acupuncture & Moxibustion Classic). For example:

The *Diwang Shiji* (c.250) says: Master Fuxi (r.2852-2737 BC) looked up and observed the appearance of Heaven, he looked down and observed the laws of the Earth, he observed the patterns of the birds and beasts, and how they matched with the Earth. Nearby he sought these in the body, far away he sought these in things. Thereupon he invented books and contracts to replace government by knots. He drew the *bagua* (eight trigrams) to transmit the virtue of spiritual enlightenment. He categorized the myriad things according to their nature, such that there were the six *qi* (climactic energies) and the six *fu* (palaces, hollow organs), the five *zang* (depots, solid organs) and the *wuxing* (five phases), *yin yang* and the four seasons. As for water and fire, rising and falling, these have their appearances; as for the principles of the hundred diseases, these have their categories. Then he tasted the flavors of the hundred medicinals and manufactured the nine needles in order to save the weak and suffering.

From this opening passage the importance of the classical cosmological paradigm is evident, including *yin yang* and *wuxing* doctrine. Although it asserts that acupuncture was a common practice from the dawn of humanity, this claim is contested in other classical literary sources. The story continues:

[The *Diwang Shiji*] also says: Yandi (Flame Emperor) Master Shennong (r.2737-2697 BC) grew up in *Jiangshui* (Ginger water). In the beginning he taught all those under Heaven to cultivate and consume the five grains and use them to prevent loss of life. He tasted the flavors of the plants and trees and announced what medicinals cured diseases and could save the weak in the service of fate. The hundred families daily used them but did not understand, so he wrote the *Bencao* (Materia Medica [of Shennong]) in four *juan*. Although Shennong is usually credited with first tasting all the medicinals to discover their function, this history implies he was only continuing a practice begun even earlier.
by Fuxi and then recorded this information in the earliest text in the *bencao* genre of medical literature. These legendary figures are best understood as metaphors for developments that occurred during the Paleolithic (c.5 million-50,000 BC) and the Neolithic (c.50,000-2000 BC) periods. Among all the received editions of the Han classics, the *Shennong Bencao*, which was preserved in several subsequent texts, appears to be the most authentic example of late Han dynasty medicine. The story continues:

又曰 黃帝有熊氏命雷公 歧伯論經脈傍通 問難八十一 為難經
教制九針 著內外術經十八卷 又曰 歧伯 黃帝臣也 帝使岐伯嘗味草木
典主醫病 經方 本草 素問 之書咸出焉

[The *Diwang Shiji* also says: Huangdi (r.2697-2597 BC) had Master Xiong compel Leigong (God of Thunder) and Qibo to discuss the channels and vessels and their flow. He asked eighty-one difficult questions which became the *Nanjing* (Classic of Difficulties). He taught how to manufacture the nine needles and wrote the *Neiwa Shujing* (Inner & Outer Arts Classic) in 18 *juan*. It also said: Qibo was Huangdi’s minister. The emperor had Qibo taste the flavors of the *bencao* and standardize the practice of medicine and diseases, and the books *Jingfang* (Canonical Prescriptions), *Bencao* (Materia Medica), and *Suwen* (Basic Questions) all resulted from this.]

This passage actually implies that the *Nanjing* predates the *Huangdi Neijing*, as well as the lost *Waijing*, if those are what is being referred to as the *Neiwei Shujing* or the *Suwen*. Such dates are consistent with Bianque as the author of the *Nanjing* but inconsistent with the claim that it was meant to elucidate difficult matters from the *Neijing*. As Paul U. Unschuld (1986) found, the compilation date of the *Nanjing* has been an ongoing controversy, with some scholars proposing dates as late as the 6th century. Unschuld notes a significant gap between the language and concepts of the *Nanjing* and that of the *Neijing*, suggesting development over time and an effort to rectify the unsystematic nature of the *Neijing*. Unschuld further found that the earliest reference to the *Nanjing* in Korea was in 1058, three decades after the Song’s official publication of the text.

In addition to Huangfu’s version of early history, another passage recorded in the *Taiping Yulan* reaffirms the role of Shennong and Huangdi in medical development:

又曰 太古書今見存者 有神農山海經 山海經 或云禹所作
素問 黃帝作 連山 歸藏 夏所作 周時曰 易
蔡邕云 禮記月令 周公所作 證法 司馬法 亦云周公所作

The [*Bowu Zhi* 博物志 (Records of Many Things)] also says: of the very ancient books that are extant today, we have Shennong’s *Shanhai Jing* (Mountain & Seas Classic). Some say that the *Shanhai Jing* was written by [sage king] Yu, the
Suwen (Basic Questions) was written by Huangdi, and the Lianshan (Continuous Mountains) and Guicang (Return to Storage) were written during the Xia dynasty. During the time of the Zhou dynasty the Yi Jing (Classic of Changes) was written. Cai Yong said the Liji (Book of Rites) and the Yueling (Monthly Happenings) were written by the Duke of Zhou, and that the Zhentia (Methods of Diagnosis) and the Sima Fa (Methods of Sima) were also written by the Duke of Zhou. 27

Notably this passage makes no reference to the Bencao when discussing the accomplishments of Shennong, and other than the Shanhai Jing, these medical texts purportedly from the Zhou are no longer extant.

As for prescription manuals, Zhang Zhongjing is credited with compiling the earliest extant formulary, and the Taiping Yulan provided the following details related to his life and work:

張仲景方序曰 衛泛好醫術 少師仲景 有才識 撰四逆三部厥經
及婦人胎藏經 小兒顱囟方三卷 皆行于世
In the preface to Zhang Zhongjing’s formulary it says: Wei Fan had good medical skills and for a while taught Zhongjing who acquired talent and insight. He composed the Sini Sanbu Juejing (Four Rebellions & Three Sections Absolute Classic), the Furen Tiaicang Jing (Pregnant Mother & Fetus Classic), and the Xiao’er Luxin Fang (Children’s Fontanel Formulas) in three juan (scrolls). These have all been transmitted through the ages. 28

In another section on the life and work of Wang Shuhe, the Taiping Yulan added:

高湛養論生曰 王叔和性沉靜 好著述 考核遺文 彩摭群論 撰成脈經十卷
編次張仲景方論 編為三十六卷 大行於世
Gao Zhan’s Yang Lun Sheng (Nurturing Discussions of Life) says: Wang Shuhe had a calm and quiet character, was good at composition, checked and verified lost texts, considered and selected certain doctrines, and [from all of this] composed the Maijing (Pulse Classic) in 10 juan. [Also,] he arranged Zhang Zhongjing’s formulary and discussions into 36 juan. These were transmitted widely through the ages. 29

Notably there is no mention of the Shanghan Lun or Jingui Yaolue Fanglun, which were revised and published in 1065 and 1066 by the Song and credited to Zhang Zhongjing. It is possible the Sini Sanbu Juejing may have been the source of the formulas Sini San 四逆散 (Four Rebellions Powder) and Sini Tang 四逆湯 (Four Rebellions Decoction) found in the received edition of Zhongjing’s text, and may have been included in the formulary arranged by Wang Shuhe. This further suggests that by the early Song dynasty
Zhang Zhongjing had not yet become famous for the texts in the received canon, while the other texts he authored are no longer extant.

Both Huangfu Mi and Wang Shuhe were active during the 3rd century and although Wang is given credit for his work on pulse diagnosis, Huangfu is not specifically credited with authorship of the *Zhenjiu Jiayi Jing* in this early Song compilation. A lesser known predecessor of these physicians from that era was Lu Boshao 呂博少, whose contributions are described in the *Taiping Yulan*:

The *Yugui Zhenjing Xu* (Preface to the Jade Cabinet Needling Classic) says: Lu Boshao became famous for his medical skills. He was good at diagnosis, pulse reading, expounding on diseases, and he wrote many books. During the Wu dynasty (222-277) in the second year (239) of the Chiwu reign period (238-250), he became a taiyi ling (honored grand physician [of the court]). He wrote the *Yugui Zhenjing* (Jade Cabinet Needling Classic) and a commentary on the *Baishiyi Nanjing* (Classic of 81 Difficulties). These were transmitted widely through the ages.

Despite these claims of transmission, the *Yugui Zhenjing* and Lu’s commentary to the *Nanjing* are no longer extant. They might have been included in a compilation by Huangfu Mi, but this cannot be determined. The *Taiping Yulan* includes the following biography of Huangfu:

The *Jin Shu* (History of the Jin Dynasty, 265-420) says: As for Huangfu Mi, styled Shi’an, he was calm and quiet as a youth with few desires but grand ambitions and wrote on various matters. He called himself Xuanyan Xiansheng (Mister Mysterious). Later he was afflicted with a wind obstruction disease (e.g., hemiplegia), which caused him to study medicine. He practiced and read the classics and formularies, his hands were incessantly holding a book, and thus he exhausted their subtleties.

Given that Huangfu Mi was a prolific writer, the biographers or editors of the *Taiping Yulan* may have felt it was unnecessary to name any of his books, such as the *Zhenjiu Jiayi Jing*, or perhaps this text was indeed attributed to him at a later date. One of the earliest references to a text with a name like this is found in the inner chapters of the *Baopu Zi* 抱朴子 (Master Baopu) by Ge Hong 葛洪 (281-341). In an essay entitled
Ge lists what he considered to be important Daoist texts. Included among titles such as the *Yin Yang Jing* (*Yin & Yang Classic)*, *Yangsheng Shu* (*Book on Nurturing Life*) in 105 juan, the *Anmo Jing* (*Massage Classic)*, and the *Daoyin Jing* (*Calisthenics Classic*) in 10 juan, is a text called the *Jiayi Jing* (*Systematic Classic*) in 170 juan, which suggests it was related to the topic of health or medicine. However, this is almost certainly an entirely different text since Huangfu was only 66 years older than Ge, making it questionable whether Huangfu’s compilation could have risen to such prominence in the library of Ge in that short time, as well as since the received edition of the *Zhenjiu Jiayi Jing* has only 12 juan. Therefore, any references to a *Jiayi Jing* before the eleventh century may be to this voluminous Daoist work, portions of which may have been preserved in Song publications.

Another important medical development detailed in the *Taiping Yulan* is in regards to the accomplishments of the physician Zhen Quan 甄權 (540-643):

> The *Tang Shu* (History of the Tang Dynasty) says: Zhen Quan was from Xuzhou (Shandong), Fugou County. Once when his mother was sick he gave her a prescription recommended by his brother’s doctor which had a good effect. At the beginning of the [Sui] emperor’s reign he created a secret book that was concise and verified, and the empress thought it suitable for use on diseases. During the Sui dynasty (581-618), the provincial governor of Luzhou She Diqin was suffering from a wind ailment and couldn’t bend his arm. Various doctors were unable to cure him. Quan spoke to him saying: just as your honorable general can shoot an arrow at a target, with one needle I can shoot [your problem]. He needled just the one acu-point *jianyu* (LI-15, shoulder corner) and shot it at the corresponding time.

The use of calendrical cycles to determine appropriate times for acupuncture or moxibustion was called *renshen* 人神 (human spirit) and was an important feature of Tang medicine (D. Harper, 2005). The compilation of Tang dynasty texts entitled *Tongdian* 通典 (Canon of Transmission, c.800) by Du You 杜佑 (735-812) provides further details on Zhen:
Zhen Quan lived to be more than 100 years old and composed the Maijing (Pulse Classic), the Zhenfang (Needling Methods), and the Mingtang Renxing Tu (Illustration of the Human Form from the Bright Hall).

These texts are no longer extant, but they likely contributed to the evolution of pulse diagnosis, acupuncture, and anatomy, and may have been incorporated into the received canon.

This brief survey from a limited selection of sources still serves to illustrate the dynamic nature of medical history prior to the Song’s publication of an official canon of classical medical texts. During this pre-Song period of development there is scant reference to most of the texts promulgated by the Bureau, with the exception of the Huangdi Neijing Suwen, Nanjing, and the Maijing. However, as shown above there appears to have been several different texts given the same name at various times and this is probably true of other texts as well. As for Yang Shangshan’s Huangdi Neijing Taisu (c.600), the only reference found to a similarly named text was in the Baopu Zì, which mentioned the Taisu Jing (Classic of Great Simplicity) that was preserved in the Ming Daoist canon. Moreover, that text would predate Yang’s compilation by almost 300 years, so one cannot assume these are identical or even related. In Daoist literature, the binome taisu referred to an idealized state of being; a returning to the source of existence by achieving a state of perfect minimalism. Otherwise the texts Shanghan Lun, the Jingui Yaolue Fanglun, the Zhubing Yuanhou Lun, the Waitai Miyao Fang, and the Huangdi Neijing Lingshu, were not part of the narrative transmitted in the Taiping Yulan at the start of the Song. While many pre-Song texts perceived to be important were later forgotten, these other seemingly lesser known texts were elevated in importance.

*The Han medical classics*

In conjunction with a textual analysis of their content, the exact sequence of medical publications produced by the Northern Song’s Bureau for Revising Medical Texts poses some serious questions regarding claims about the antiquity of these classical
texts. Most problematic is the ongoing claim that the received versions of the “Han medical classics,” which includes the *Huangdi Neijing Suwen* (Yellow Emperor’s Inner Classic, Basic Questions) and *Huangdi Neijing Lingshu* (Yellow Emperor’s Inner Classic, Divine Pivot), the *Nanjing* (Classic of Difficulties), the *Shennong Bencao* (Divine Farmer’s Materia Medica), and the *Shanghan Lun* (Treatise on Cold Damage) and *Jingui Yaolue Fanglun* (Treatise on Essential Strategies and Prescriptions from the Golden Cabinet), are representative of the state of the field during the Han dynasty, a claim that is often made without qualification. In some instances this may be influenced by a strong Han national and/or ethnic identity that politely declines to question the myths and legends of early history. However, in the West when the claim is made that Chinese medicine has remained virtually unchanged for two thousand years, the rationale is more puzzling. While some may think that such continuity is itself a form of legitimation for a profession that continues to struggle for mainstream acceptance, others use the same reasoning to argue that Chinese medicine has suffered from intellectual stagnancy and has no place in the modern medical arena. Modern textbooks and journals of Chinese medicine routinely quote passages or recommend treatment strategies from these texts without providing historical contextualization, leading many modern practitioners to believe they are practicing medicine in the same manner as a Han dynasty physician. Yet the excavated texts dated to the Han and Tang dynasties paint a very different picture than that found in the received tradition. A more rational and evidence based argument is that the received texts are the result of over a thousand years of normal scientific development that were formalized during the Northern Song dynasty, and at best represents an idealized conception of elite Tang medicine by eleventh century officials.

Throughout the centuries of Chinese imperial history, scholars have collated, annotated, revised, and published classical works, and this process has presented the greatest challenge to medical historians because it clouds the historical trajectory and has most likely generated a distorted picture of early medical beliefs and practices. As Ma Kanwen (1989) points out, many different editions of the same text have surfaced at various points in history, and he remarks that even today there are at least 27 known editions of the *Huangdi Neijing Suwen* such that the production of a single “authentic” text that accounts for not just these variations, but also the omissions, disarrangements, and miswritten characters, has been a truly difficult task. Regarding omissions, Ma notes that the meaning of many passages is altered when a single character is missing, yet it is very difficult to identify these omissions and translators often struggle to make sense of
the text as written. Disarrangements often occur when piecing together ancient manuscripts written on bamboo strips, and it becomes an enormous challenge to sequence these strips back into the original form and reconstruct the original meaning. As for miswritten characters, a famous phrase is often cited by scholars of classical Chinese texts that states when a manuscript is copied three times, characters of similar appearance, but different meaning, find their way into the text. Ma concluded that together these processes have made the reconstruction of authentic Han medicine a seemingly impossible task.

Other scholars have described this evolutionary process. As stated by Susan Cherniack (1994), “texts always change in the course of transmission, either by accident or design (p.5).” Cherniack argues that the Chinese approach to the transmission of medical texts actually encouraged changes that were thought to improve the quality, accuracy, and usefulness of the text, and that the Song dynasty was “a period of remarkable textual volatility (p.6).” This idea of collaborative authorship is contrasted with the prevailing Western view that such changes corrupt and degrade the original work. To emphasize this point, she recounts a story told by Hong Mai 洪邁 (1123-1202) of several engravers working on the printing blocks for the medical reference text *Taiping Shenghui Fang* 太平聖惠方 (Sagely Generosity Prescriptions of the Taiping Era) first published in 992. These engravers made many errors and were subsequently punished. Cherniack argues this indicates not only the problems associated with textual transmission, but also a specific concern that errors in medical texts might endanger the public. In the preface to the 1147 edition of this work, it reports that editors had to correct over 10,000 errors and omissions in previous editions. Even if the number of errors is exaggerated it is clear evidence of how changes occurred in texts over time. Although the common rhetoric is that these changes were meant to eliminate errors in order to restore the work to the author’s original meaning, changes in medical texts were also made based on current clinical experience and understanding because it was assumed that sages of the past were knowledgeable about what later physicians discovered to be valuable. Furthermore, as a Confucian scholar one should be humble regarding one’s own accomplishments and credit the ancient sages and famous physicians of long ago with developing useful clinical concepts and techniques, while at the same time correct errors that were ascribed to editors or engravers whose understanding and ability were inferior.
to the original authors. Cherniack states that this phenomenon was known as zhishu 治書 (curing the text).

Curing texts was a long standing tradition. One of the first scholars to engage in this practice was Kong Fuzi 孔夫子 (551-479 BC), known in the West as Confucius, who was said to have compiled, collated, and rectified earlier writings into the canonical works later referred to as the Confucian Classics: Yijing 易經 (Classic of Changes), Liji 禮記 (Book of Rites), Shujing 書經 (Classic of History), Shijing 詩經 (Classic of Songs), and Chunqiu 春秋 (Spring & Autumn Annals), although subsequently these texts had the strongest prohibitions against any alterations. However in medicine, due to the need to eliminate harmful remedies and add new effective prescriptions, changes would have been more common. The authors of early versions of the medical corpus from the Warring States Period (c.500-220 BC) through the Han 漢 dynasty (206 BC-221) remain cloaked behind the anonymity of legendary figures, while the contributions to these classics by later named authors through the Tang dynasty is obscured by the revisions of Northern Song editors. Furthermore, the Song revival of classical learning and the refinement of the cosmological paradigm that drove the integration of these doctrines into medical literature would have accelerated the rectification of ancient texts to conform to current orthodox theories. Cherniack (1994) argues that the development of woodblock printing may have been spurred more by the desire to create a definitive and authoritative version of a text that would survive unaltered for generations rather than for mass production, and was therefore comparable to the stone engravings of the Confucian Classics chiseled during the Han and Tang dynasties from which rubbings could be made by the public. Thus these “mass-produced” texts were more of a political tool to serve the needs of the imperial court rather than an effort to preserve ancient medical literature for posterity. Cherniack notes that during the Song, civil service examination questions challenged scholars to assess the authenticity of canonical works. Eventually, the right to publish “improved” copies without government approval was granted in the Xining 熙寧 (Bright Peace) reign period (1068-1077), overturning an earlier 998 edict that restricted publishing rights to the imperial government.
Among the most sacred of the Han medical classics is the *Huangdi Neijing Suwen*, but without a clear understanding of the history of this text the entire field of Chinese medical history remains entrenched in myth and legend. A few scholars of Chinese medical history have broached the subject, but it remains sufficiently controversial as well as extremely difficult to offer counter-arguments based on compelling evidence that most have avoided directly addressing the issue.

David J. Keegan (1988), in his detailed textual analysis of the *Huangdi Neijing*, concludes that extant editions “are not simply compilations but the last in a progressive series of compilations (p.254).” Keegan argues that these texts were copied within a tradition of textual transmission of medical literature in existence since the Han and passed on from master to disciple, such that each student had their own selection and arrangement of an extensive body of over 300 texts within this genre that were written down on bolts of silk in the order received by various collectors. Keegan asserts that a “true Han edition of the *Neijing*” existed only as an ideal, whereas the reality was a diverse collection and arrangement of similarly structured primary texts. However, absent from Keegan’s thesis is consideration of how older versions of texts fell out of circulation, were revised and rectified to accord with clinical experience or philosophical trends, or how new treatises were composed and incorporated into the genre through the ages. Keegan asserts that the extant editions of the *Huangdi Neijing* from the Song dynasty are the “final” compilations of what were considered the most relevant texts taken from a dynamic literary tradition. Carrying the argument further, it is reasonable to assert that all of the Han classics published by the Song’s Bureau for Revising Medical Texts were the last in a series of compilations. The very name of the Bureau unequivocally confirms that changes were made to the source material used when producing these publications, but the extent of those changes may never be known with certainty in the absence of further archaeological discoveries.

Paul U. Unschuld (2003) dedicated many years to an exhaustive study of the *Huangdi Neijing Suwen* and identified several anomalies within this text that are evidence of change over time. Nonetheless, he concludes that the *Suwen* as known today was written sometime during the Han dynasty, although he admits various compilations, rearrangements, emendations, and additions occurred during the subsequent centuries that culminated in the Wang Bing edition of 762. Unschuld believes the Song Bureau made
only “minor editorial changes (p.ix),” but of course there is scant evidence to support or refute such arguments. Indirectly, Unschuld points to one of the most remarkable things about the Suwen, which is its avoidance of demonological, ancestral, or other supernatural explanations of disease, as well as treatments such as exorcisms, rituals, incantations, talismans, or other related methodologies that are known from the archaeological evidence to have been widely used during the Han and Tang eras. Instead the Suwen is a study of nature and an attempt to understand natural processes. Demonology remains only in the text’s ubiquitous use of the term xie 邪 (evil) as a metaphor for pathogenic forces. Subsequently, P.U. Unschuld and Zheng Jinsheng (2005) assert that “demonology has its unquestioned place in the healing arts (p.22)” of the Han dynasty, but fail to provide a compelling explanation for its absence in the Huangdi Neijing Suwen. Perhaps the Song Bureau’s footprint can be found in the deletion or non-inclusion of all references to heretical beliefs and practices during a time when the court wished to limit their influence? An editorial campaign to eradicate such references, if it indeed occurred, cannot be accurately described as “minor editorial changes.”

Recently Y.C. Kong (2010) proposed that the first authors of the Huangdi Neijing were court archivists prior to the Qin 秦 dynasty (221-206 BC) that had access to medical collections, and that the results of their efforts were spared from fiery destruction by the first emperor before making their way into the Han imperial library. Kong points to several passages from the Chunqiu Zuozhuan 春秋左傳 (Spring & Autumn Annals of Master Zuo, c.500 BC), the Zhuangzi 庄子 (Master Zhuang, c.369-286 BC), and other classics that are repeated verbatim in the Neijing as documentary evidence of when some of its treatises were written. However, this is certainly not evidence that any of the other original passages were composed that early. In fact, citing classical texts to support an argument is a hallmark of the Confucian textual tradition throughout imperial history. Kong concludes that as an independent medical text it couldn’t predate the Western Han, since Chun Yuyi 淳于意 (c.176 BC) made references to texts mentioned in the Neijing but did not refer to the Neijing itself, while Zhang Zhongjing 張仲景 (142-220) encouraged physicians to study the Huangdi Neijing Suwen and the Nanjing, which he argues is evidence for their existence before the fall of the Han. However, Kong further acknowledges that it is hard to prove that the contents of these texts during the Han were similar to later editions. He adds that there were likely several concurrent editions of
these texts in circulation with different passages added on by different authors over time. Yet, similar to Unschuld (2003), Kong does not assert that any substantive changes were made to the *Huangdi Neijing* during the Northern Song.

The earliest reference to a *Huangdi Neijing* is found in the *Han Shu* 漢書 (History of the Han Dynasty, c.90) compiled by Ban Gu 班固 (32-92), wherein it lists various texts housed in the imperial library. Under the medical collection, it simply referred to the title of the book and its eighteen *juan* 卷 (scrolls, sections, fascicles). Considered by many scholars to be significant is that this text is listed first out of 36 titles in the broader collection, which was subdivided into four groups in the following order: *yijing* 醫經 (medical classics), *jingfang* 經方 (classical prescriptions), *fangzhong* 房中 (within the bed chamber), and *shenxian* 神僊 (spiritual transcendence). However, the rationale for the order is not detailed and amongst the medical classics there was also the *Bianque Neijing* 扁鵲內經 (Bianque’s Inner Classic) in nine *juan*, the *Baishi Neijing* 白氏內經 (Bai Clan’s Inner Classic) in thirty eight *juan*, and three different versions of a text entitled the *Waijing* 外經 (Outer Classic) totaling eighty seven *juan*, none of which are extant. Furthermore, the name *Huangdi* appears in seven other medical texts listed in the *Han Shu*, and some of these texts may have been incorporated into the received versions of the *Neijing*.

Significantly, Donald J. Harper (1998) found that the entire collection of excavated medical texts from the Mawangdui tomb site discovered in 1973 within a Han dynasty tomb at Changsha (Hunan province) and dated to the year 168 BC, are representative of all four disciplines in the *Han Shu*. Furthermore, another archaeological discovery at the Zhangjiashan tomb (Hubei province) provides further examples of Han medical texts that are similar in scope and theory to those found at Mawangdui. Therefore these authentic early manuscripts provide the first comprehensive survey of standard Chinese medical theory during the early Han dynasty.

There are several essays among the excavated texts that are clearly within the *Huangdi Neijing* corpus. Among the Mawangdui collection are texts that describe eleven channels (6 leg, 5 arm) of *qi* within the body, which were treated primarily using moxibustion. In addition to texts on pregnancy and childbirth, there are hundreds of treatments for a variety of diseases using internal medicine, surgery, and exorcistic rituals and incantations, texts on dietetics, exercise, and sexual hygiene. In his translation of
these texts, D.J. Harper (1998) reveals that a manuscript entitled the Shiwen 十問 (10 Questions) is framed as conversations between sage rulers and their teachers, beginning with four passages involving Huangdi (the Yellow Emperor). The Yellow Emperor first asks Tianshi 天師 (Heavenly Teacher) about how animals move, plants grow, and the sun and moon shine, and the teacher responds that it is based primarily on the forces of yin and yang, and then expounds on qi (breath) cultivation techniques. The emperor then asks Dacheng 大成 (Great Perfection) about the facial complexion and learns of the significance of the wuse 五色 (five colors) and sexual practices. Huangdi then asks Cao’ao 曹熬 (Official Ao) about life and death and learns of the wusheng 五聲 (five tones [of arousal]) and more sexual practices for cultivating one’s essence. Huangdi then asked Rongcheng 容成 (Expressing Perfection) about conception and longevity and is told to follow the principles of Heaven and Earth and engage in qi (breath) cultivation, and Rongcheng cites a conversation between the sage kings Yao and Yu who stressed the investigation of yin and yang to understand life. In the other conversations the importance of sexual practices in health and disease continues to be emphasized, as well as how the blockage of qi and blood circulation can negatively affect the limbs, and the benefits of herbs, alcohol, and sleep on the wuzang 五藏 (five solid organs). From these essays it is evident that yin yang and wuxing theory were already influencing the early trajectory of medical development, but the Han emphasis on magical medicine and sexual hygiene is markedly diminished in the received tradition. Harper concludes that the Mawangdui medical manuscripts “graphically confirm the hypothesis that the [received edition of the] Huangdi Neijing is a summation of written medical knowledge edited so as to reframe older recorded teachings in terms of theoretical innovations (p.89),” whereas these ancient texts evidence the mixture of natural philosophy and occult thought.

Preliminary analysis based on the frequency of characters within the received versions of the Huangdi Neijing Suwen and Lingshu reveals more patterns that show change over time, and suggests that the Suwen predates the Lingshu, perhaps by several centuries. Even the famous Nansong philosopher Zhu Xi 朱熹 (1130-1200) in the Zhuzi Yulei 朱子语类 (Master Zhu’s Words Categorized) had a comment to make on these two halves of the Huangdi Neijing:
The language of the *Suwen* is profound, but [that of] the *Lingshu* is shallow and comparatively simple.  

Given his reverence for authentic classical learning, Zhu may have been revealing a commonly held belief among the literati that the *Suwen* transmitted ancient wisdom while the *Lingshu* was a recent invention. Beginning with a cursory review of the indices of these texts, of the 81 chapters or essays in both the *Suwen* and the *Lingshu*, only 11 (13.5%) of the titles in the *Suwen* do not use the character *lun* 论 (treatise, essay, discussion), whereas only 10 (12%) of the essays in the *Lingshu* do use *lun* in the title; a near perfect symmetry of opposites that challenges the argument these two texts were constructed at the same time. The significance of this discrepancy is that the *Suwen* represents the compilation of a diverse set of primary texts within a genre, whereas the *Lingshu* was produced much later as a single cohesive text. The addition of some of the treatises to the *Lingshu* may have been a way to increase the chapter count to 81 so as to be consistent with the number of chapters in the *Suwen* and *Nanjing*.

As mentioned previously, the four character string of *wuyun liuqi* (five elemental-movements & six climactic factors) only appears in chapter 71 of the *Suwen*, and only twice within that chapter added by Wang Bing (c.762). Although other non-medical classical texts used the term *wuyun* 五運 (five elemental-movements), this binome appears only twenty-one times in the *Suwen* and does not appear anywhere in the *Lingshu*, nor does it appear in the *Nanjing*. Of those twenty-one, eighteen occur in the chapters attributed to Wang Bing (66-71 & 74), there is one occurrence in chapter 73 that was absent in the Wang Bing edition published by the Song in 1080 but included in the earlier Song edition published in 1067, and two occur in chapter 9. Additionally, the term *liuqi* 六氣 (six climactic energies) appears as a binome fifteen times in the *Neijing*, with fourteen of those occurring in Wang Bing’s additions to the *Suwen*, one again in chapter 9, and the remaining three are in chapter 30 of the *Lingshu*. However, the *Lingshu* examples are clearly referring to a different set of phenomenon than the other passages. The *Nanjing* also does not mention the term *liuqi*, while the *Shanghan Lun* mentions it just once. This suggests that chapter 9 was either the inspiration for Wang Bing or another example of his additions to the classic. The fact that the *Lingshu* does not use either of these terms supports the argument that not only did it escape editorial
revision by Wang, but that it most likely was not even known to this Tang medical
official.

A similar pattern is found in occurrences of the term *taixu* 太虛 (the great void) in
the *Huangdi Neijing*, which was a concept associated with early Daoist literature that was
later adopted into Buddhist literature. This term occurs sixteen times in the *Suwen* and
does not appear anywhere in the *Lingshu* or the *Nanjing*. Of these, eleven are found in the
chapters attributed to Wang Bing and four in chapter 73 from the Song edition, with the
one other example found in chapter 27. Given the prominence of Buddhist thought during
the Tang dynasty, the use of the term in those chapters may indicate its increasing
prominence in contemporary religious discourse. More intriguing is the lone occurrence
in chapter 27, not because of the specific use of the term to describe the *zhenqi* 真气 (true
energy) of the channels, but because of the opening statement of that chapter:

黃帝問曰 余聞九鍼九篇 夫子乃因而九之 九九八十一篇 余盡通其意矣
Huangdi inquired: I have heard of the nine needles and the nine *pian* (passages,
chapters). For this reason the master multiplied these by nines, and so nine times
nine are eighty-one *pian*, and I will completely transmit this idea. 43

This passage was apparently used to justify the format of eighty-one chapters in both the
*Suwen* and the *Lingshu*, which is also the number of chapters in the *Nanjing*. The precise
symmetry of these three texts with 81 chapters each seems to contradict the assertion that
these were compilations of diverse treatises that changed over time, unless of course only
the Song’s final versions of these texts reflect this symmetry.

The above passage is distinguished from the *Han Shu*, which states there were
eighteen *juan* (scrolls, sections, fascicles) in the *Huangdi Neijing* instead of nine *pian*
(passages, chapters), although this discrepancy is later rectified by arguing the *Neijing* is
divided into the *Suwen* and *Lingshu* with nine *juan* each. However, the received version
of the Wang Bing edition of the *Suwen* is 24 *juan* due to the abundant commentaries,
while the *Lingshu* is 12 *juan* with no commentary. This minimally suggests the content of
these texts expanded over time such that the Song editions were much larger than their
Tang or Han counterparts. Keegan (1988) further found that several chapters appear to be
combinations of different essays, and that this was in part done to ensure that all material
deemed important to include by both the Tang and Song editors was integrated into the
predetermined 81 chapter structure. Given the anomalous inclusion of the term *taixu*, at
least parts of chapter 27 may also date to the Tang, and the absence of the term from the *Lingshu* again suggests it was not known to Tang editors.

Another pattern emerges when examining the use of a common set of terms in Chinese medicine that are based on the theory of opposite yet complementary forces: the *yingwei* 营衛 (constructive & protective) energies. The original meaning of *ying* 营 is an army barracks, but in the medical context it would be where the body’s circulating energies are resupplied internally before being redeployed to the *wei* 卫, which refers to the outer defenses that guard and protect both the state and the body. The specific binome *yingwei* appears a total of twenty-two times in the *Lingshu*, however, it does not appear anywhere in the *Suwen* or the *Nanjing*. Instead, the character *rong* 萍 (luxuriant growth) is substituted for *ying*, with the binome *rongwei* 萍衛 (constructive & protective) appearing twenty times in the *Suwen*, nine times in the *Nanjing*, and eleven time in the *Shanghan Lun*. The term *rongwei* also appears once in *Lingshu* alongside *yingwei*, suggesting this might have been inserted during transcription as a loan graph, and twice in chapter 75 of the *Lingshu*, but in the exact same passage:

虚邪偏容於身半，其入深，內居於榮衛。榮衛稍衰，則真氣去，邪氣獨留。

[When] deficient evils deviate they are contained in half of the body, they enter deeply, and interiorly reside in the *rongwei*. The *rongwei* is slightly weakened, and then the *zhenqi* (true energy) departs and the evil qi alone remains.

However, this passage appears in the last section of this chapter, whereas a reference to the *yingwei* appears earlier in the same chapter, and thus this could be an example of how sections were added on by later editors, especially as this last section begins with an entirely new question posed by Huangdi to his medical advisor Qibo. The preference for *rong* over *ying* is also found in other pre-Song medical literature, and this distinction provides further support for the argument that the *Lingshu* and *Suwen* represent different literary traditions and are not part of a singular Han dynasty work.

In another example, an essay in the *Taiping Yulan* entitled *xumeng* 敘夢 (recounting dreams) is presented as a quote from the *Huangdi Zhenjing* 黃帝針經 (Yellow Emperor’s Needling Classic). The passage is similar, but not identical, to one from chapter 43 of the *Lingshu*. One of the obvious differences is that the *Lingshu* uses the binome *yingwei* for the constructive and protective energies, whereas the passage in the *Taiping Yulan* uses the *rongwei* binome. Thus this essay was known prior to the Song,
was left out of the *Suwen*, and was updated for inclusion in the *Lingshu* using the preferred nomenclature. Additionally, the binome *rongwei* instead of *yingwei* to refer to these paired functions is used in Sun Simiao’s biography from the *Tang Shu* included in the *Taiping Yulan*, once again evidencing the earlier preference for *rongwei* in pre-Song medical texts.

Even just looking at the use of *rong* and *ying* as single character terms there is a similar pattern. The character *rong* 荣 appears alone (meaning without *wei*) fifty-eight times in the *Suwen*, twenty-five times in the *Shanghan Lun*, eighteen times in the *Nanjing*, and in the *Lingshu* just twenty-one times. In contrast, *ying* 营 appears alone just fourteen times in the *Suwen*, does not appear in the *Shanghan Lun*, appears seven times without *wei* in the *Nanjing*, and forty-eight times in the *Lingshu*. Thus the preference for using *rong* in the *Suwen*, *Nanjing*, and *Shanghan Lun* compared to using *ying* in the *Lingshu* is maintained, with *rong* appearing a total of 78 times in the *Suwen* compared to just 24 times in the *Lingshu*, and *ying* appearing a total of 70 times in the *Lingshu* to just 14 in the *Suwen*. This clear distinction between the frequencies of occurrence of the two characters further supports the argument that these texts represent different phases of Chinese medical development, with most sections of the *Suwen*, *Nanjing*, and the *Shanghan Lun* predating most sections of the *Lingshu*.

The question of when the *Suwen* and *Lingshu* were written is further confounded by the preface to the *Zhenjiu Jiayi Jing* (Systematic Acupuncture & Moxibustion Classic), published by the Song in 1069, wherein the purported author Huangfu Mi asserts:

> 黃帝內經十八卷 今有針經九卷 素問九卷 二九十八卷 即內經也 亦有所忘失
> The *Huangdi Neijing* [is composed of] eighteen *juan*. Today there are the *Zhenjing* (Needling Classic) in nine *juan*, and the *Suwen* in nine *juan*. These two [sets of] nine make eighteen *juan*, and these are the *Neijing*. Also, there are those [juan] that have been forgotten and lost.

It is solely upon this passage that it assumed that the “original” *Neijing* was composed of two even divisions with one dedicated to theory and the other dedicated to acupuncture. The Nansong editors of the revised *Lingshu* published in 1155 to rectify errors found in the earlier version preface their edition by re-stating Huangfu’s claims with one important variation:
昔黃帝作內經十八卷 灵樞九卷 素問九卷 乃其數焉
Long ago Huangdi wrote the Neijing in eighteen juan. The Lingshu was nine juan, and the Suwen was nine juan, and thus this number. “

This suggests the Zhenjing and the Lingshu were the same text, and together with the Suwen were considered to be halves of a singular text at that time, an assumption that survives unto today. However, the problem becomes further confounded when one considers the content and date of publication of the four major works on acupuncture that appeared during the Northern Song and compares them to excavated manuscripts from earlier periods.

The evolution of acupuncture

The history of acupuncture that emerges from an objective evaluation of the evidence is one of gradual development and refinement over a thousand years, a process that then becomes accelerated under the auspices of the Northern Song’s Bureau of Revising Medical Texts. Donald Harper (1998) argues that vessel or channel theory evolved as part of hygienic practices to encourage the unhindered circulation of qi and blood and was later extended for use in physiology and pathology, especially as related to pain. In the Mawangdui medical collection there is a description of eleven acupuncture channels with associated pathologies using the six stage yin yang classifications of taiyang, shaoyang, yangming, taiyin, shaoyin, and jueyin, but without any mention of an arm jueyin vessel; hence eleven instead of twelve vessels. There are clear parallels in these passages with chapter 10 of the Lingshu, although in other excavated manuscripts the arm yang vessels are alternatively identified as the shoulder, ear, and tooth vessels.

There are also a few tangential references in the Mawangdui manuscripts to locations on the body that later became known as acu-points. One of these describes treatment strategies based on the principle of draining the excess and nourishing deficiency, recommending that when qi ascends “discern which vessel has excess and cauterize it” and when qi
“emerges, lance the vessels at the poples and elbow with a lancing-stone (trans. Harper, 1998, p.214).” This treatment strategy is very different from the one that immediately follows, which describes using the stone-lance for draining pus from abscesses with details on proper technique (not too deep, shallow, large, or small to avoid doing harm or being ineffective), because it is puncturing four points without any reference to an identified lesion. These locations correspond to the later named points of weizhong 委中 (UB-40, bend at the middle, cast out and strike) in the center of the popliteal fossa and quchi 曲池 (LI-11, crooked pond) at the elbow crease. Similarly, there is another reference to cauterizing the top of the head (baihui 百會, DU-20, hundred meetings) for inguinal swelling. Thus a very rudimentary form of acupuncture and moxibustion is described whereby stimulating a limited number of specific locations on the body away from the site of the problem was believed to aid in the healing process or to expel demons, wind, qi, and various kinds of bugs (hui 虫, chong 蟲, gu 蠱) from the afflicted.

Other archaeological finds help to construct the early history of acupuncture. At the Yongxing no. 2 tomb site dated to the Western Han (c.118 BC) at Mianyang in Sichuan province, a 28.1 cm long lacquered carved wooden figure of a human body (missing the left hand and right foot) was discovered wrapped in a red woven fabric, and incised lines in the figure describe the pathways of acupuncture channels, but do not indicate any acupoints (Lo, V., 1998) (see figure 5). This figurine is the earliest extant acupuncture channel model and is further evidence of evolving theories on the subject, as the pathways on the figurine are significantly different than those described in later texts. However, they are remarkably similar to illustrations found in a Jin dynasty text (see figure 6). Other archaeological evidence includes stone relief carvings dated to the Han dynasty uncovered at Double City Mountain in Weixiang county and at mount Song in Jiaxiang that depict what scholars believe to be Bianque depicted as a half-man, half-bird, figure apparently taking a patient’s pulse with one hand and wielding a linear instrument in the other that could be an acupuncture needle (Eckman, P., 1996; Wang, X.T., 1986), but could just as easily be a moxa pole for cautery. In the tomb of Liu Sheng dated to 113 BC, a close relative of the
founder of the Han dynasty Liu Bang that was discovered in May 1968 in Mancheng County (Hebei province), were found instruments for herbal medicine preparation and administration, a bronze scalpel, and 9 acupuncture needles made of gold (4) and silver (5), which is the earliest evidence of needles associated with medical practice (Zhang, D.X., 2007). Although revered for his standardization of writing, currency, weights and measures, the width of cart axles and roads, and clothing styles, Qin Shihuang 秦始皇 (r.221-201 BC) is reviled for his burning of the books and killing of scholars, but the Shiji (Historical Records) confirms that books on medicine were spared ⁶² and this presents the possibility that the first emperor was the first to attempt the establishment of a medical orthodoxy.

Despite this early trajectory of development the field of acupuncture progressed slowly. Initially the practice of acupuncture with gold and silver needles was likely reserved for Han royals and other elites, while the use of cauterization for general diseases or the lancing stone for draining pus from abscesses remained more common among the masses. Harper (1998) remarks that later versions of the Huangdi Neijing corpus would have replaced the character for bian 砭 (lancing stone) with zhen 鍼 (needle), and the character nong 膿 (pus) with bing 病 (disease). Such simple revisions have a profound effect upon the meaning and represent the practice of “curing the text.” Nonetheless, the following is found in the Taiping Yulan in a section on yizhen 醫針 (medical acupuncture) that traced the history of this modality:

梁書曰 王僧孺多識古事 侍郎金元起欲注 素問 訪以砭石
僧孺答曰 古人當以石為針 必不用鐵 說文有此砭字 許慎云 以石刺病也
東山經 高氏之山多針石 郭璞云 可以為砭針 春秋 美疹不如惡石
服子慎注云 石 贙石也 季世無復佳石 故以鐵代之耶

The Liang Shu (History of the Liang Dynasty) (c.636) said: Wang Sengru had much knowledge of the ancient books. The official Jin Yuanqi wanted to comment on the Suwen and investigate the use of the bianshi (stone lance or needle). The monk Ru said in response: the ancient people must have used stone as a needle and not iron. The Shouwen (Literary Discourse) had this bian character, and Xu Shen (c.147) said: use a stone to puncture the disease. The Dongshan Jing (Eastern Mountain Classic) said: Master Gao’s mountain has a lot of needles [made of] stone. Guo Pu said: one can use the bianzhen (stone needle). The Chunqiu (Spring & Autumn Annals) said: the beauty of a rash is inferior to the ugliness of a stone [needle], and the Fu Zishen commentary says this stone is the bianshi. So therefore why have the more recent generations not returned to using fine stones and use iron instead? ⁶³
From this it appears that use of a lancing stone was more common than needling as late as the seventh century when the use of the metal needle was gradually becoming more popular.

The predominance of cauterization over needling is still evident during the Tang dynasty, along with alternative theories and practices. Manuscripts discovered in 1900 at the Mogao 莫高 cave temples at Dunhuang 敦煌 (Gansu province), included fragments of over seventy medical texts that help historians reconstruct elements of Tang era medicine. Wang Shumin (2005) divided the collection into five groups: medical canons and diagnosis (14 texts), remedy texts (29 texts), acupuncture and moxibustion texts (4 texts), materia medica (4 texts), and other material (24 texts). Wang describes two manuscripts with illustrations depicting human forms that mark the location of a total of 57 acu-points and explain a symptom based method of selection. They do not depict any channels connecting the points and many of the point names were not transmitted to later acupuncture literature. In contrast, the texts alternately state that a person has 649 points, of which 365 are qi 氣 (energetic), and 284 are feng 風 (wind), or that a person has 360 shi 試 (testing locations) where the energy shu 豎 (rises to the surface) and 384 hun 魂 (ethereal souls) that wander with the po 魄 (corporeal soul) through the body. These ideas were not transmitted to the received literature. Vivienne Lo (2005) also examined these same texts from Dunhuang that she argues were prepared for a literate audience, depict 16 figures with acu-points marked and with captions detailing each point’s name, how to locate it, the illnesses it treats, and how many cauterizations are recommended. In the preface to one of the manuscripts its compiler claimed to have brought together the best practices from various schools to make a practical guide for those in the periphery of the empire without access to internal medicine. The texts include taboos against using points where the renshen 人神 (human spirit) is currently residing according to a system using the calendrical cycles. Lo further argues that the way these texts organized information around disease categories bears little resemblance to the system detailed in the received editions of the Zhenjiu Jiayi Jing and Huangdi Neijing Lingshu. Lo further found that the overwhelming majority of acu-points are located on the posterior aspect of the body with only a few located anteriorly, which is consistent with the channels inscribed into the Mianyang figurine. Based on this evidence it appears the Tang system of acupuncture was only incrementally more developed than during the Han dynasty, and still bears little resemblance to the system promulgated during the Northern Song.
The next major leap forward came in the early Song with the publication of the \textit{Bronze Figure Classic} in 1026. The original bronze figures of the Song have since been melted down (although similar ones were recast in later periods), but one can reconstruct the early Song acupuncture system based on this manual, which has survived. It includes twelve illustrations of a male figure, four each for front, back, and side views, with a total of 164 acu-points described and with written details on their precise locations, the fourteen channels on which they are found, and some general indications for which they can be used in treatment. However, none of the illustrations have the pathways of the channels drawn, although in several instances the points are clearly in a row and are discussed together in sequence. Nonetheless, the introduction to the manual describes all of the channels flowing from points located distally on the hand and feet and moving proximally towards the torso. This is a very simple model compared to the multiple directions of circuitous channel flow detailed in the \textit{Lingshu}, with this specific movement from distal to proximal retained in the theories of some of the more important acu-points on the limbs. As for systemization, the \textit{Bronze Figure Classic} provides the following description of six \textit{shu} (transporting) points:

\begin{verbatim}
凡孔穴流注 所出為井 所流為營 所注為俞 所過為原 所行為經
所入為合 此針之大法也 春刺井 夏刺營 仲夏刺俞 秋冬刺合也
\end{verbatim}

Ordinarily the \textit{kongxue} (openings of the holes) flow and pour. The place it emerges is the \textit{jing} (well), the place it flows is the \textit{ying} (barracks), the place it pours is the \textit{shu} (stream, transporting), the place it passes through is the \textit{yuan} (source), the place it travels is the \textit{jing} (river, channel), and the place it enters is the \textit{he} (confluence). This is the great method of needling: in spring puncture the \textit{jing}, in summer puncture the \textit{ying}, in the middle of summer puncture the \textit{shu}, in fall and winter puncture the \textit{he}.

The influence of the \textit{Bronze Figure Classic} on the publication of the \textit{Nanjing} the following year is evident. The flow of the twelve primary channels from the hands and feet to the torso or head is preserved. In the sixty-third difficulty of the \textit{Nanjing} it reiterates that the channels begin at the \textit{jing} (well) points that correspond to spring and the beginning of things, and the sixty-fifth difficulty adds that the \textit{he} (confluence) points correspond to winter and the ending of things. In the sixty-second difficulty it states that only the channels of the \textit{fu} (hollow organs) have six \textit{shu} (transporting) points (as described in the \textit{Bronze Figure Classic}), whereas the channels of the \textit{zang} (solid organs) have only five, stating that having more points is due to the \textit{yang} nature of
the fū and their connection to the sanjiao (triple burner) that creates the yuan (source) points. **6** However, the sixty-fourth difficulty of the Nanjing introduces the wuxing correspondences for the five shu points, leaving out the yuan points for all twelve primary channels:

十變又言 陰井木 陽井金 陰荥火 陽荥水 陰俞土 陽俞木 陰経金 陽經火 陰合水 陽合土

The ten transformations also say the yin jing (well) are wood, the yang jing are metal; the yin ying (spring, crashing waves) are fire, the yang ying are water; the yin shu (stream, transporting) are earth, the yang shu are wood; the yin jing (river, channel) are metal, the yang jing are fire; the yin he (confluence) are water, the yang he are earth. **60**

Notable is the change in the character for the second point in the sequence, rendered in the Bronze Figure Classic as ying 营, and in the Nanjing as ying 穴, with the latter continuing to be used in subsequent publications of classical texts during the Song. Elsewhere in the introduction of the Bronze Figure Classic, the term ying (barracks, constructive) is paired with wei (defensive), **71** and this remains the preferred character for this concept in the Zhenjiu Jiayi Jing just as in the Lingshu. In one instance ying is used in the Bronze Figure Classic to designate the lung in a summary of the five shu points on each of the twelve channels. **72** Additionally, in this summary of the heart and pericardium channel in the Bronze Figure Classic, the five shu points are exactly opposite of those listed in the Lingshu, with the one exception of daling 大陵 (PC-7, great mound) that continues to be described as the yuan (source) point of the heart in the Lingshu. **73** Therefore, after the publication of the Bronze Figure Classic with this new twelfth channel, it was decided the heart and pericardium pathways and points needed to be switched. Since the Han system, and possibly the Tang system, only recognized eleven channels, the addition of the pericardium channel apparently generated some disagreement and debate during the Northern Song over its position in the body relative to the heart channel.

Another anomaly in the Bronze Figure Classic compared with later texts is the list of six shu points rather than five. In the sixty-sixth difficulty of the Nanjing it states that the yuan (source) points for all twelve channels are also the shu (stream) points, indicating this is due to a close association between the sanjiao and the yuan qi (source energy) of the kidneys. **74** This rectifies the discrepancy between five or six by overlapping these two categories. The Bronze Figure Classic also only discusses the
twelve primary channels associated with the zangfu (solid & hollow organs), as well as
mentioning the ren 任 (conception) and du 督 (governing) vessels in reference to their
named points. The Nanjing builds on this foundation by introducing the fifteen luo 絜 (connecting) vessels, although the additional three include two for the yinqiao 陰蹻 (yin heel) and yangqiao 陽蹻 (yang heel) that will later be changed to the ren and du in the Lingshu, as well as the great luo of the spleen. The Nanjing also added the bamai qijing 八脈奇經 (eight extraordinary channels), which includes the ren, du, yinqiao, yangqiao, and the chong 沖 (penetrating), dai 帶 (girdle), yinwei 隱維 (yin linking), and yangwei 陽維 (yang linking) channels. Once again this suggests a dynamic field undergoing significant changes during the course of the Northern Song.

Forty-two years after the Nanjing was published, the Zhenjiu Jiayi Jing became
the new standard for acupuncture during the Song. Although this text was allegedly
compiled during the Jin 晉 dynasty (265-420) from the Suwen, Zhenjing (or Lingshu),
and another text no longer extant, it is more reasonable to assume that it served as the
source for the reconstruction of those same texts. The Zhenjiu Jiayi Jing repeats much of
the information from the Nanjing, but then builds on it by adding detailed descriptions of
the internal and external pathways of not only the twelve primary channels, but also the
eight extraordinary channels and the connecting channels. The Zhenjiu Jiayi Jing was
also the first text available to Song acupuncturists that described twelve jingjin 經筋
(sinew channels). It also describes the locations and functions of 350 acu-points,
almost twice as many as found in any earlier publication.

In the second chapter of the Zhenjiu Jiayi Jing there is a passage that offers
different advice than the Bronze Figure Classic on acupuncture according to the seasons:

藏主冬 冬刺井 色主春 春刺榮 時主夏 夏刺腧
音主長夏 長夏刺經 味主秋 秋刺合
Storing governs winter, in winter puncture the jing (well). Colors govern spring,
in spring puncture the ying (spring, crashing of waves). Time governs summer, in
summer puncture the shu (stream, transporting). Sounds govern long summer, in
long summer puncture the jing (river, channel). Flavors govern fall, in fall
puncture the he (confluence).

This exact same passage with only a slight variation in one character also appears in
chapter 44 of the Lingshu, which was published twenty-one years later. Very revealing
in these passages is the transformation of the characters used to render the term *shu* (transporting, stream). Both the *Bronze Figure Classic* and the *Nanjing* use the more rudimentary *shu* 俞, but in the *Zhenjiu Jiayi Jing* it adds the radical for *rou* 肉 (flesh) to render it as *shu* 蠲, identifying it as a part of the body. Finally in the *Lingshu* it again transforms to become *shu* 输, substituting the radical *che* 車 (chariot, vehicle) for *rou* to capture the deeper meaning of transportation that was always intended. From just this one character the evolution of acupuncture theory during the Song is evident and the timeline of these texts is elucidated.

From this brief survey it can be plausibly argued that the sequence of publication of these texts during the Song is a more accurate model for understanding the development of acupuncture theory than any labored effort to assert the exact opposite based on a legendary history. After its slow evolution during the Han and Tang dynasties, the field of acupuncture accelerated during the Song beginning with the *Bronze Figure Classic* in 1026, the *Nanjing* in 1027, followed by the *Zhenjiu Jiayi Jing* in 1069, and culminating with the sophisticated system of acupuncture detailed extensively in the *Lingshu*, first published in 1090 and then revised again in 1155. Although physicians through the subsequent centuries continued to develop and refine the field, and all of these various publications remained in circulation, the Song edition of the *Lingshu* eventually became the enduring standard.

There was one passage in the introduction to the *Bronze Figure Classic* that endured virtually unchanged (except for the character *zhen* 鍼 for 銭), found buried in the middle of chapter 25 of the *Suwen*, that captures the essence of what it meant to be an ideal acupuncturist in China’s middle period.

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故針有懸布天下者五 黔首共餘食 莫知之也 一曰治神 二曰知養身
三曰知毒藥為真 四曰制砭石小大 五曰知府藏血氣之診
五法俱立 各有所先
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Therefore needling has the five *xuanbu* (hanging cloths, banners) from all under Heaven, *qianshou* (classifiers for plays & poems) have shared [these banners like] surplus food, and [yet] there are none who understand these [five banners]. First it is said to *zhishen* (order the spirit); second it is said to know *yangshen* (nurturing the body); third it is said to know which *duyao* (toxic medicinals) are genuine; fourth it is said to control the large and small *bianshi* (stone needles & lancets); fifth it is said to know how to diagnose the blood and *qi* of the *fu* (hollow organs) and *zang* (solid organs). These five methods are entirely proven and each has that which advances [a doctor’s skills].

82
Shanghan Lun

Similar to the Neijing, the Shanghan Lun must have also gone through a series of transformations before its publication in 1065, but to what degree is again difficult to prove unequivocally. The Mawangdui manuscript known as the Wushi’er Bingfang (52 Ailments & Prescriptions) may be the earliest extant version of this text. For example, based on the translation by D. Harper (1998), both texts use a woman’s menstrual pad for treatments and substances that have been tentatively identified in the Wushi’er Bingfang include many that were commonly used in the Shanghan Lun, such as; jiang 薑 (Zingiber officinale Rosc., Rhizoma), gui 桂 (Cinnamomum cassia Blume, Cortex et Ramulus), gancao 甘草 (Glycyrrhiza uralensis Fischer, Radix), huangqin 黃芩 (Scutellaria baicalensis Georgi., Radix), xingren 杏仁 (Prunus armeniaca, L., Semen), zhu 术 (Atractylodes Rhizoma), shaoyao 芍藥 (Paeonia Radix), zao 栗 (Ziziphus jujubae Mill., Fructus), fangfeng 防風 (Ledebouriellae Radix), huangqi 黃耆 (Astragalus membranaceus (Fisch.) Bge., Radix), jiao 椒 (Zanthoxylum bungeanum Maxim., Pericarpium), wuhui 烏喙 (Aconitum Radix), houpo 厚朴 (Magnolia officinalis Rehd. Et Wils, Cortex), baizhi 白芷 (Angelicae Dahuricae Radix), banxia 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma), and fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium). Thus there is some continuity between the two texts.

Regarding Song additions to the Shanghan Lun, the clearest example is found in the formula Zhenwu Tang (Perfected Warrior Decoction). Edward L. Davis (2001) found that Zhenwu was a divine spirit in the Daoist tradition who was originally known as Xuanwu (Dark Warrior), but his name was changed because the character xuan 玄 became taboo during the early Song. This figure only became prominent after being honored by the first Song emperors to gain his support in securing the new empire, and when a spirit-medium was possessed by Zhenwu he prophesized the birth of a son to the childless emperor Zhenzong, and indeed Renzong was born soon thereafter. Thus it is not surprising that when the Shanghan Lun was published soon after the death of Renzong it included this formula named in honor of Zhenwu.
In terms of authenticating the *Shanghan Lun* as a pre-Song text, Wang Shumin (2005) found that a fragment of the essay *bianmai fa* (differentiating the pulse method) as found in the Song edition of the *Shanghan Lun* was included in the Dunhuang collection, but this only dates a small portion of the text to no later than the Tang. Also found at Dunhuang was a previously lost text attributed to Zhang Zhongjing entitled the *Wuzang Lun* (Treatise on the Five Solid Organs), but this had no apparent connection to the *shanghan* (cold damage) tradition. A twentieth century copy of a text entitled *Fuxingjue Zangfu Yangyao Fayao* (Secret Instructions for Assisting the Body: Essential Methods for the Application of Drugs to the Viscera & Bowels) that was allegedly removed from Dunhuang around 1912 and later destroyed in 1966 during the Cultural Revolution contains three sections drawn from a text entitled *Tangye Jingfa* (Canonical Methods of Decoction) attributed to the Han dynasty that includes many of the same prescriptions found in the *Shanghan Lun*, but often with different names. However, the authenticity of this copy remains in question and should not be used to support any claims of the Han dynasty origins of the *Shanghan Lun* formulas in the received edition without further corroborating evidence.

Finally, the promotion of the *Shanghan Lun* by the Northern Song was specifically in response to a wave of epidemics with the intent of providing relief. However, if we accept this as true it would be illogical to assume that the court would have promoted a nearly thousand year old prescription manual that would have most likely relied equally upon rituals and incantations as medicinals prepared from plants, animals, and minerals. Under the obligation to provide relief and faced with the need to attribute the formulas to a classical authority to promote social acceptance and patient compliance, the best strategy for the Song emperor would have been to order imperial physicians to compile the most sophisticated standard of care manual based on current best practices and attribute it to a famous physician of the Han dynasty. This would further explain the absence of supernatural causes of disease and magical or occult treatments in a text attributed to the Han dynasty, but published in the Song.
Chapter summary

The wood phase (1115-1135) of the Jin dynasty corresponds to the period of state formation as Taizu organized the Jurchen in the northeast according to the norms of Confucian governance and established a dynasty that quickly became the dominant East Asian regional power of the twelfth century. In addition to the individual goals of Jurchen leaders like Taizu, his successor Taizong, and the Wanyan military generals leading the charge, it is evident that climactic pressures leading to competition over limited resources was a major factor in driving Jin state formation. This process first involved an alliance with the Northern Song against the Liao, but once the Liao was defeated the Jin turned to conquer the Song. While the mighty Jin cavalry proved unbeatable on the steppes and Central Plains, it consistently got bogged down as it tried to finish off the remnants of the Song in the south, which refused to acknowledge defeat and reorganized into the Nansong. The very presence of this kingdom that claimed the Song’s mandate was perceived as a constant threat to the legitimacy of the Jin by politicians and physicians alike. Regardless, Jin suzerainty was recognized during the reign of Taizong by all the states of East Asia that it bordered; Xixia, Gaoli, and Nansong, with the latter agreeing to pay a substantial annual tribute to secure the peace.

Essential to legitimation of medicine among the Chinese intelligentsia was the publication and widespread dissemination of a classical medical canon on par with the Confucian classics. By publishing this canon the Northern Song provided the impetus for Song and Jin literati to study and practice medicine. Although the canon was itself authoritative, its encyclopedic scope failed to provide a clear systematic approach to clinical practice that can be reasonably called orthodox. The medical classics were at times contradictory over matters of theory and with thousands of formulas described it provided far too many treatment options for the promotion of any consistent standard of care. What could be called orthodoxy for literati medicine of the Northern Song was drawing authority from these classical texts that extended the Confucian cosmological paradigm to explain medical phenomenon. It was up to the next generation of literati physicians under the Jin to consider how after a century of the widespread dissemination of these classics and after as many years of clinical experience and experimentation, the claims made within this paradigm were either supported or refuted, in much the same way Song followers of the daoxue movement tried to make classical learning relevant to solving contemporary problems.
The identification of textual anomalies in the Han medical classics compels historians to challenge the myths and legends that once dominated early Chinese medical historiography and reveals the impact of Song editors. The most obvious impact was the exclusion of supernatural ideas. Examining the frequency of occurrence of important terms reveals a striking difference between texts alleged to have been written around the same time and strongly suggests these differences in the professional nomenclature are evidence of differences in temporal construction. This strongly argues against the claim that the received editions of the *Huangdi Neijing Suwen* and *Lingshu* were once part of a singular Han dynasty work. While certainly many of the ideas and treatises in these classics predate the Song, being originally written as far back as the Zhou dynasty, what is more difficult to determine is the relative percentages of the received text that date to any specific period of time.

Regarding texts in the field of acupuncture specifically, it appears more logical that the sequence of textual creation follows the sequence of publication from the *Bronze Figure Classic* in 1026, to the *Nanjing* in 1027, to the *Zhenjiu Jiayi Jing* in 1069, and culminates with the first edition of the *Lingshu* in 1090 and the second edition in 1155. Although the concept of a channel system that integrates the various bodily functions and can be manipulated by the stimulation of specific locations also predates the Song and can be traced back to at least the Han dynasty through excavated texts, the highly organized and sophisticated system of acupuncture detailed in the received canon most likely describes Song innovations in the field. The attributing of these texts to ancient authors or periods by the Song editors should not be allowed to obscure the evolution evident in their content. It is similarly argued that the *Shanghan Lun* was created by the Northern Song editors by bringing together what was perceived as the most efficacious formulas and represents the closest example of an orthodox standard of medical care, which further explains its enduring popularity. While this study challenges the authenticity of these texts as representative of Han dynasty medicine, being at best an idealized conception of elite Tang medicine, it further acknowledges that Song and Jin literati physicians perceived these texts as representing a classical authority on par with the Confucian canon from which their legitimacy was derived.
The elemental-phase of fire corresponds to summer, to effulgent growth, to the southern direction, and to the empire building phase of an established regional power. The third Jin emperor Xizong 熙宗 (r.1135-50) had been orphaned at age five and raised in the court with a traditional Confucian education. He made the integration of Chinese systems of governance a priority of his reign. One of his early efforts towards this goal was the abolishment of the Jurchen tribal council and the reorganization of his court based on Chinese norms, but he still appointed primarily Jurchen tribesmen to office. An exception to this was the recreation of the Hanlin Academy 翰林院, which was staffed primarily by Han Chinese scholars. Hok-lam Chan (1984) found that Xizong was the first to invoke the Chinese term zhengtong 正統 (legitimation) in reference to the founding of the Jin by Wanyan Aguda in 1115 to strengthen their rule over the majority indigenous population of the Central Plains. The issue of legitimacy would continue to be a subject of concern throughout both his reign and the entire dynasty.

Despite his desire to focus on internal matters, Xizong was forced to deal with the continuing conflict on his southern border. Initially the Nansong ruler listened to the advice of Qin Hui 秦桧 (1090-1155), one of the captured officials among the courts of Huizong and Qinzong who unexpectedly returned south in 1132 after four years in the north. Qin Hui told Gaozong that he had been pressed into service as a military advisor to the puppet regimes that had been set up as buffer states along the border between the Nansong and Jin. However, many in the court remained suspicious of Qin’s motives, believing that his intense support of a peace agreement with the Jin relinquishing all claims to the north was really part of a Jin plot to further weaken the Nansong. In the third month of 1136, Yue Fei’s mother died and he promptly resigned his post to mourn. This raised Gaozong’s concerns over the security of his northern border. Knowing there was only one way to get Yue back on the front line, Gaozong ignored Qin Hui and gave his full support to Yue to resume the northern campaign.

The campaign failed again. By the eighth month of 1136, Yue had again marched his army across the deserted region south of the Huai River and in the ninth month sacked Bianjing, toppling the puppet state of Qi. However, the Jin military responded and quickly drove Yue’s army back across the Huai, but did not pursue them any further.
next year word reached Lin’an that Huizong and his empress had died. Gaozong sent an envoy to Jin to request the release of their bodies, which Xizong refused. This was most likely because of continued Nansong aggression, although he did conduct a proper funeral service for the former emperor. Gaozong even ordered the court to move north to Jiankang to show his determination to recapture the Central Plains, but the growing influence of the peace faction effectively stalled support for the northern campaign. In 1138 the court was moved back south to Lin’an and peace treaty negotiations with the Jin were broached. In exchange for their continued submission and annual tribute, the Jin granted the Nansong control of the abandoned territories currently held by Yue’s army while still holding the remains of the imperial family as hostages to ensure they complied with the terms. Such humiliation was difficult for Gaozong to accept, but Qin Hui convinced him that these indignities were inevitable and should not stand in the way of peace or the possible release of the imperial family in the future. This was a great victory for Xizong. He had renewed peace on the southern border, gained legitimacy through the Nansong’s acknowledgment of Jin suzerainty, and bolstered his economy through an advantageous trade and tribute relationship.

Xizong chose to celebrate by declaring a new reign period (1138-1141) entitled Tianjuan 天眷 (Heaven’s Family), and began moving elements of his court south to Yanjing 燕京 (Hebei province) near the Chaobai River, which had previously served as the Liao’s southern capital. He began referring to the capital in the Jurchen homeland by the name Shangjing 上京 (Upper or Northern Capital), 1 demonstrating that he planned on permanently designating Yanjing as the new center of all under Heaven. Soon thereafter came Heaven’s reply, beginning with an earthquake in the capital that same year, followed by this event:

夏有龍見於熙州野水 凡三日 初於水面見一蒼龍 良久而沒 次日見金龍一 爪承一嬰兒 兒為龍所戲 略無懼色 三日如故
[In 1138] during the summer there were dragons that appeared in the waters surrounding Xizhou and remained for three days. At first one blue dragon appeared on the surface of the water, it stayed for a long time and then vanished beneath the water. The next day there appeared one metal dragon and in her claws she grasped a single infant child. The child became a playful dragon and it plundered without any show of fear. For three days it went on like this. 2
The first challenge to interpreting these events is finding out where they took place. There was a place in Gansu province called Xizhou 熙州 that was located just south of Lanzhou, but it was not surrounded by water. There may also have been a coastal region around Bohai Bay with this name, and notably this place name uses the first character in Xizong’s posthumous title, which might suggest the dragons appeared around the imperial court. Wherever it occurred, the appearance of the water dragon likely described a storm off the coast generating turbulent seas while the metal dragon and its offspring that brought the disaster onto the land, where they “plundered” the region for three days, describes an epic storm system that must have destroyed buildings, uprooted trees, and endangered lives. This disaster was followed by another unusual event that is more difficult to interpret:

有見一人 乘白馬 紅袍玉帶 如少年官狀 馬前有六蟾蜍 凡三時乃沒 郡人競往觀之

There then appeared a person who rode a white horse with red robes and a jade belt just like a young official. In the front of the horse were six toads. This happened on three occasions and then [the horseman and the toads] vanished. The people of the region all came to see it.

This story could be a metaphor for Xizong, represented by the young official on the white horse, being prevented from continuing his journey to Yanjing by the six toads blocking the road, but it is not clear who the six toads are meant to represent. This may have represented concerns by Jurchen officials that their original homeland should remain the center of the Jin empire. The three day storm of dragons plus the vanishing horseman and toads must have been interpreted as signs that Heaven disapproved of Xizong moving the central capital to Yanjing. These events speak to the close association between the natural environment and the socio-political climate.

Despite the advantageous terms of the 1137 treaty, hostilities continued between the Jin and Nansong. This could either have been the Jin generals on the Central Plains operating independently and trying to expand their own spheres of influence, or it may have been an effort by Xizong to secure their loyalty by revitalizing Jurchen martial culture and authorizing them to recapture the southern territories recently ceded to the Nansong. However, according to Zhang, et.al. (2009), the climate remained in a cooling phase until 1152 with continued agricultural stress causing crop failures and driving competition for limited supplies. Therefore, these hostilities may have been driven by the
need to extract more resources. While regular tribute mission from the Gaoli and Xixia kingdoms are reported during Xizong’s early reign there may have been grain shortages in the south that led to insufficient tribute by the Nansong. In early 1140, the Jin armies took an aggressive posture on the border and in the fifth month they broke the treaty and launched another two pronged attack on the south. The fighting along the border continued for several months with the Jin only slowly able to advance towards the Yangzi River, until another stalemate resulted. This was due in part to the quick reaction of Yue Fei and his soldiers. As a result, the peace treaty was resumed and the Jin armies moved back north across the Huai River. At the end of 1140 there was another earthquake.

Early in 1141 the Jin armies again attacked, meeting the Nansong army’s entrenched defensive positions just north of the Yangzi River. Although the Nansong lines held and the Jin eventually withdrew back across the Huai River, Yue Fei was accused of not responding promptly to orders to reinforce their defenses as he tried to maneuver his forces to attack the Jin’s western flank. Qin Hui was eager to pursue a peace treaty but he perceived that the greatest obstacle to this goal were the Nansong generals who still advocated retaking the Central Plains. Qin first convinced Gaozong to appoint his top three field commanders, including Yue Fei, to the civil bureaucracy as high ranking officials and then Qin discredited them through political maneuvering. Yue Fei responded by submitting his resignation. Gaozong refused, but continued pressure by officials led him to lower Yue’s rank and reassign him to a lower post. Then Qin brought charges against Yue for plotting a rebellion, although even under torture he refused to confess and maintained his loyalty.

By late 1141 a peace treaty was reached that officially delineated the border between the Jin and Nansong by the Huai River in the east and the mountain passes in Shaanxi in the west. In addition, the new treaty required the Nansong to pay an annual tribute of 250,000 units each of silver and silk to the Jin, forbade the deployment of large military garrisons along the border, demanded that Nansong send congratulatory envoys for the birthdays of all Jin emperors, and ordered that Nansong officials refrain from using any denigrating remarks about their former enemy, henceforth to be referred to as the *Da Jin* (Great Jin dynasty). Hans Bielenstein (2005) discovered that in the written treaty the Nansong ruler used his personal name as if he were a commoner and referred to himself as a subject of the “superior state” of Jin, a humiliation required to secure the release of the imperial family, whose coffins arrived in Lin’an the following
year. In a further gesture of peace, Gaozong found Yue Fei guilty of treason and had the once celebrated general executed together with his son Yue Yun. In commemoration, Xizong declared the start of a new reign period (1141-1150), entitled Huangtong (Imperial Lineage), suggesting Xizong was now more confident than ever that the Jin had secured their mandate to rule all under Heaven.

Despite the peace with the Nansong, the Jin dynasty remained internally chaotic as Xizong became inexplicably violent and deranged. Unlike the Chinese, the Jurchen did not exempt officials from corporal punishment and Xizong began regularly flogging his officials for minor offenses and conducted rampant executions and purges of those who crossed his path. Hok-lam Chan (1994) argues that his hostility was a result of his impotence in controlling his generals and their frequent breaches of the peace as well as his inability to beget a male heir. However, it is possible his generals were operating with his full support, and the steppe tradition of tanistry would have negated the importance of primogeniture early in the dynasty. Perhaps he had consumed too many elixirs of immortality containing mercury and was going mad as a result, or perhaps he contracted syphilis or some other disease that caused his mental deterioration. Heaven also expressed its displeasure with Xizong, or perhaps the difficult environment exacerbated Xizong’s displeasure. In the fall of 1141 there were plagues of locusts and then the Jigu Dian (Hall of Classical Studies) caught fire and burned down. In early 1142 there was a famine in the west and heavy snows early that year, but then:

秋 燕 西東二京 河東 河北 山東 汴 平州 大熟
In the fall [of 1142] in Yan, in the western and eastern capitals, and in Hedong, Hebei, Shandong, Bianjing, and Pingzhou, there was a great scorching. 

This heat wave that scorched most of the Jin empire might have been interpreted by officials as a sign of excess fire; an imbalance in the cosmic forces. It would further suggest that the cooling phase was coming to an end and the warming phase had already begun. This heat wave led to droughts the following year and then another earthquake shook the empire in 1144. These problems reached a crescendo a few years later:
[One night in the fourth month of 1149,] there was great wind, rain, thunder, and lightning that shook the palace quarters. The *chiwei* 鴟尾 (owl’s tail, the central supporting roof beam in old palace architecture) was broken and a fire entered the emperor’s quarters and burned his draperies, raised his fear, and he moved to another palace. A few days later there were dragons fighting above Lizhou and the Yulin River and a great wind destroyed the people’s houses and sixteen or seventeen government buildings. Trees, roof tiles, people, farm animals, they were all blown around for more than ten miles, killing and injuring many hundreds of people.

Finally in 1150 Xizong was killed by the victims of his wrath and by those convinced he had lost Heaven’s mandate. This *coup d’état* was led by a grandson of Wanyan Aguda named Digunai 延古乃, who subsequently ruled as emperor Liang 亮.

During the reign of Liang the generals on the Central Plains were brought under the direct administration of the imperial center. To accomplish this task, Liang resorted to the same coercive violence and wanton cruelty as his predecessor, but applied it more broadly and efficiently. Upon taking the throne he purged senior officials and military leaders he thought were disloyal to him in a series of mass executions and replaced them with those he deemed the most trustworthy while streamlining the bureaucracy to further strengthen his power. This resulted in his being reviled by his contemporaries and posthumously demoted to King Hailing 海陵王 (r.1150-1161).

However, this negative image of Hailing is only the reflection of Jurchen officials, warlords, and court scribes, whereas the image of the fourth Jin emperor among the Han literati may have been very positive. Like Xizong before him, Hailing was raised with a traditional education in the Confucian classics and actively promoted Chinese culture. To gain the support of the Chinese literati he reorganized the civil service examination and reintroduced the palace examination while expanding official service opportunities for degree holders. In addition, Hailing ordered the construction of Confucian temples across the empire. However, the public flogging of officials for misconduct continued unabated.

The *History of the Jin* reveals some details on the scope and structure of the civil service examinations during this era:
When the Liao dynasty arose to succeed the Tang dynasty they tended to use the Tang *jinshi* (advanced scholar) method of selection. To become an official of the kingdom, they tested their diligence and self discipline and the *jinshi* was reserved for two or three out of ten [candidates], and that is all. When the Jin dynasty took charge following the Liao they wanted to surpass the Liao era in all regards. Therefore the *jinshi* core curriculum was double the selection methods of the Tang or Song dynasty, but with some variation.

This suggests the Jin strived to produce a more rigorous examination process than the Tang, Song, and Liao. Yet even though the goal was to identify the most qualified candidates for government service, the process was still tilted in the favor of Jurchen candidates over their Han competitors:

Those who were born into families that passed the examinations regarded the previous generations as especially important and their methods were also kept confidential. For instance, some would use the *celun* (essay on current affairs, policy advice) for the *jinshi* selection of the state and the use of Jurchen script was considered the proper style. This would completely and immediately identify [these candidates to] the elders so as to accept their service. They also wanted to write their native script to encourage people to pass on the practice and not let it be abandoned. At the end of the Jin dynasty the core curriculum for candidates had become extensive.

Thus even though the standards may have been rigorous, preference for use of the Jurchen script was an effective means to ensure that official posts were staffed primarily by Jurchen tribesmen.

This climate of unequal opportunity exacerbated the trend of their being far more Han literati than available government posts, forcing them to find alternative means of employment. During the Northern Song, in addition to the pathway leading to the *jinshi* (advanced scholar) degree in preparation for official service in the bureaucracy, there were also examinations for military service and medicine. Both of these examinations were continued under the Jin. Those who did not qualify for the *jinshi* could become a *wuju* (esteemed warrior) and serve as an officer in the army or they could become a *taiyi* (grand physician) and serve in a government medical facility.
or as an army doctor. There was a branch of government known as the *Sitian Yixue Shike* (Bureau of Cosmological & Medical Studies Examination Branch) and under this department were two divisions. In addition to medical studies, there was a division called the *Sitiantai* (Bureau of Astrology) with the following details provided in the *History of the Jin*:

凡司天臺學生 女真二十六人 漢人五十人 聽官民家年十五以上
三十五十以下試補 又三年一次選草澤人試補

Altogether, the students of the *Sitiantai* (Bureau of Astrology) included 26 Jurchen and 50 Han people. Among the official and commoner families, between 15 and 30 per year took the examination. Also, every third year one [candidate] was selected by examination as the *caozei ren* (grassy pond person, an allusion to calligraphy or to a distinguished Confucian scholar).  

From these enrollment numbers it is seen that twice as many Han scholars as Jurchen pursued this branch of study, which might be because they just had fewer options. As many scholars have pointed out, membership in elite society during the Northern Song was dependent upon knowledge of the classics and success in the examinations. However, just as there were limitations on the literati’s ability to secure an official post after successfully passing the examinations, there were increasingly limitations on even taking the examinations. The availability of alternative professions within the government that required examination success led to a broadening of the literati base that no longer had the luxury of their condescending attitudes towards everything less than the *jinshi*. The curriculum of the astrological branch is also recorded:

其試之制 以宣明曆試推步 及婚書 地理新書
試合婚 安葬 拜 易筮法 六壬課 三命五星之術

As for the regulations of their examination, they considered the *Xuanmingli* (Calendar of Bright Declarations, an almanac) in organizing the examinations, as well as the *Hunshu* (Wedding Book) and the *Dili Xinshu* (New Book of Geography). [Candidates] were tested on arranging marriages, burials, worship, *Yijing* (Book of Changes) divination methods, *liuren* (six Heavenly stems) divination, and the arts of the *sanming* (three commands) and the *wuxing* (five astral-bodies).  

Furthermore, medicine became an increasingly accepted scholarly pursuit even for those who did not take the medical examination. The *History of the Jin* does not provide any details on the medical curriculum, although one can safely assume it included the corpus of classical medical literature promulgated by the Northern Song.
Nonetheless, the *History of the Jin* does describe an extensive medical infrastructure under the auspices of the *Daxing Fu* 大興府 (Palace of Great Endeavors) in the imperial court:

凡醫學十科 大興府學生三十人 餘京府二十人 散府節鎮十六人
防禦州十人 每月試疑難 以所對優劣加懲勸 三年一次試諸太醫
雖不係學生 亦聽試補

Altogether there are ten branches of medical studies with thirty students at the *Daxing Fu*, twenty students at the numerous capital palaces, while peripheral palaces have been reduced to sixteen students, and there are ten students at the militarized border provinces. Each month they take difficult and challenging examinations and based on the quality of their performance they are either reprimanded or encouraged. Once every third year there is an examination for the various *taiyi* (grand physicians) and although they are not required to have been students they also follow the examination process.  

From this it appears that the triennial medical examinations were open to the public. This further provided literati doctors with opportunities to become teachers, just as other literati who could not secure an official post became teachers of Confucian learning. This would have further promoted the publication industry to produce copies of the medical classics, study guides, and other manuals for examination preparation. Once these students graduated they might have been given the opportunity to work at one of the many imperially sponsored medical clinics. The *History of the Jin* lists 19 different locations across the empire where these clinics were established:

並同此 皆置醫院 醫正一人 醫工八人
[These 19 places] were all like this: in each was established an *yiyuan* (medical institution, clinic, hospital), with one *yizheng* (principle physician) and eight *yigong* (medical workers).

From this it is evident that the Jin took seriously their obligation to care for their subjects and regularly employed at least 171 *taiyi* across the empire to staff these institutions, as well as many more doctors employed with the military.

During Hailing’s first reign period (1150-1153), entitled *Tiande* 天德 (Heaven’s Power), he began construction of a new Jin capital at Yanjing, once again shifting the imperial center towards the geographic center of the empire. Certainly aware of the problems his predecessor faced in making this same move, Hailing took greater care to make certain the process went smoothly:
In the fourth month of 1152, Hailing had officials chart the landscape of Yan to plan [the location of] the government buildings and army barracks as was appropriate according to *yin*, *yang*, and the *wuxing* (five families). Hailing said: the fortunes of our state and its people resides in *de* (power), it does not reside in the land [of our origin]. What caused Jie (last ruler of the Xia, r.1818-1766 BC) and Zhou (last ruler of the Shang, r.1154-1122 BC) [both of whom were cruel tyrants] to be in their position? Although it was divined as a good place what was the benefit? What caused [the sage rulers of the Xia dynasty] Yao and Shun to be in their position? Was it because they used divination? 

Thus Hailing invoked both Confucian cosmology that required the new capital to be in harmony with the cosmic forces, a process often referred to as *fengshui* 風水 (geomancy), and further used legendary examples from Chinese history to legitimate his decision to move the capital to Yanjing. He also dismissed the art of divination as a useful method in making decisions regarding the transition, which might have been utilized by Xizong in his failed attempt. Although this passage uses the term *wuxing* 五姓 (five families) instead of the *wuxing* 五行 (five elemental-phases), this is clearly what is meant as it follows the *yin yang* reference and is homophonous. This term may describe the five phases and their extended families of correspondences in the natural world. He also references the *de* 徳 (power, virtue), which comes from their phase of metal and further references the name of the reign period. Therefore, Hailing was asserting that legitimation comes from both the correct elemental power and the virtue of its ruler.

Still the construction process was not without problems. According to Chan Hok-lam (1992), during the building of the new capital at Yanjing many workers succumbed to epidemics during the hot summer months leading Hailing to summon physicians from up to five hundred miles around to provide treatments for the sick workers. Hailing became very concerned about the problems he was having in creating his new central capital so he called upon his closest advisors for guidance. Two of them, including Ma Guizhong 馬貴中 (fl.1150-1168) who was serving in the *Sitian Tidian* 司天提點 (Department of Astrological Signs) at the time, dared to respond:

Together with the minister Gao Shouyuan, [Ma Guizhong] memorialized that Heaven’s manifestation of disasters was unusual and pointed to disobedience [by
the emperor]. Hailing used the cane (corporal punishment) on both of them and dismissed Guizhong [from his post].

Although Hailing flogged these officials for suggesting it was his personal flaws that had brought on the displeasure of Heaven, a sentiment that was no doubt widely held, he would later call again on the advice of Ma Guizhong. When construction of the capital was finally completed in 1153, Hailing changed the reign period (1153-1156) to *Zhenyuan* 真元 (True Origins) and announced that:

改燕京為中京 府曰大興 汴京為南京 中京為北京

[He had] made Yanjing the new central capital, the palace was called *Daxing* (Great Endeavors), Bianjing became the southern capital and the [previous] central capital became the northern capital.

The name of the new reign period, “True Origins,” may have been a response to prior concerns over the capital being located in the Jurchen homeland, which also might have been related to concerns over his actions as expressed by Ma Guizhong. Thereafter Yanjing was also known as Zhongdu 中都 (Central Capital), the previous southern capital of Liaoyang 遼陽 became the eastern capital, while Datong 大同 became the western capital. Together with Shangjing as the northern capital and Bianjing as the southern capital, it completed a *wuxing* arrangement of the dynasty’s five seats of power.

![Fig. 7: Jin dynasty palace complex (c.1167). Reprinted by permission of the author.](image)

Although the palace complex at Yanjing was later destroyed it is still possible to get a glimpse of how it might have appeared. In a study of Jin dynasty material culture, Ellen J. Laing (1988-89) examined wall paintings dated to 1167 at the Buddhist *Yanshang Si* 岩上寺 (High Grotto Temple) on the northern slope of *Wutaishan* 五台山 (Five Peaks Mountain) between Shanxi and Hebei provinces. While the paintings depict primarily religious imagery there was also a mural of what has been identified as an imperial palace (see
Laing describes the unique features of the palace architecture that distinguished this early style, including narrow gates and the wooden bracketed bases supporting the elevated pavilion rooms above the foundation. The wooden brackets used in the Jin palace construction promote the illusion that the structures are floating up towards the heavens, a fitting home for the Son of Heaven. In the later imperial period these unique features were replaced by large arched gates and stone support structures for elevated floors, which gave the building the appearance of being more firmly rooted to the ground.

As Hailing moved into the new palace, Jin suzerainty was acknowledged by all those states that surrounded their domain:

In 1153 Hailing ordered his ministry to receive tribute from the Nan song, Gaoli, Xi xia, and Huihe (Uighurs). On the bingwu day for his birthday, Hailing again received congratulatory envoys from Nan song, Gaoli, and Xi xia. This was remarkable because although the Nan song and Xi xia were sending missions annually, those from Gaoli and Huihe were more sporadic. This was the sixth out of ten tribute missions sent by the Uighurs, whose borders did not meet those of the Jin as they were located even further west from the Xixia in modern day Xinjiang. However, since the land trade routes to Central Asia and India passed through their territory, maintaining good relations between these states facilitated both economies. Additionally, that year the Jin received two tribute missions from its three closest neighbors, one to honor their new capital, which represented their expanding empire and regional influence, and the other to honor the reigning Jin emperor on his birthday according to the terms of the peace treaties. For a short time there was peace and security within all under Heaven.

Soon thereafter, Hailing encouraged the migration of Jurchen families to the new capital with land grants and other privileges to enlist their help in maintaining order among the native population and bolstering the economy. To further promote the health of his subjects, in 1154 Hailing established the Huiminju (Bureau for Benefiting the People) that was responsible for preparing and selling medicine just as originally created by the Northern Song. It continued to operate until the end of the dynasty, even after officials complained the income was inadequate to pay the costs of maintaining this institution (Franke, H., & Chan, H., 1997). This may have been due to mismanagement, since the Northern Song had been able to maintain this institution at a profit. Support for imperial pharmacies further helped the development of the medical field by both
promoting the use of orthodox remedies and ensuring a steady supply of medicinals, relieving individual physicians of the burden of maintaining their own pharmacies. This provided doctors with more time to see patients, to study their texts and expound upon their meaning with their own literary productions, and to teach their students.

During his third and final reign period (1156-1161), entitled Zhenglong (Proper Prosperity), Hailing became obsessed with conquering the Nansong as a means to secure Jin legitimacy. Although they had been enjoying a period of peace and prosperity, their failure to conquer the Nansong was perceived as increasing the chances of renewed conflict; a self-fulfilling prophecy. This relates directly to wuxing cosmology, because the Nansong represented the fire phase, and repeated instances of heat, drought, and fire made it evident to Jin scholars that fire remained in a state of excess. Since fire conquers metal, the continued existence of the Nansong left open the possibility that the dynasty would fulfill its elemental destiny and destroy the Jin. In the summer of 1155 an unspecified disaster at the southern capital Bianjing was recorded. In 1157 locusts damaged crops across the center of the empire, and the next year there was a powerful sign of Heaven’s discontent:

In the third month of 1158 the sun was eclipsed. That day while they waited for it to end, Hailing referred to [Ma] Guizhong saying: from today’s ordinary encounter with the eclipse, those who were on the memorial must not wait to make it known near and far. Ma Guizhong was thus redeemed as Hailing came to believe that the solar eclipse must be a sign that indeed he had not acted properly. However, despite any attempts to rectify his mistakes the disasters continued unabated. In 1159 there was another harsh winter and in 1160 there were two major earthquakes and a dafeng (typhoon, hurricane) that knocked down buildings, crushing many people to death. It was likely at that point that Hailing decided that his only course of action was to defeat the Nansong and eliminate any challenges to his Heavenly mandate. However, as Hailing conscripted soldiers for the coming battle it disrupted agricultural production and as he stockpiled supplies for the army it further depleted available resources for the rest of the population. As a result, by the time the war began he had effectively undermined popular support for the effort and generated widespread discontent. In 1159 Hailing once again called upon Ma Guizhong for guidance:
海陵伐宋 问曰：朕欲自将伐宋，天道何如？

When Hailing [was planning to] attack the [Nan]song, he asked [Guizhong] saying: I want to lead the attack myself against the [Nan]song but what about the Tiandao (way of Heaven, laws of nature)?

The response he received once more displeased the emperor. Ma described the various movements of the planets in the sky and noted that while in the previous month Yinghuo 熒惑 (Mars) followed its predicted path, that month it did not, and then the Jin’s celestial patron Taibai 太白 (Venus) appeared during the day. Ma concluded:

占為兵喪 為不臣 為更主 又主有兵兵罷 無兵兵起
The observation [of the planets] indicates that the military will be defeated, that one shouldn’t be submissive and one should replace the leader, and also that the leader has a military that will fight and quit but doesn’t have a military that will fight and succeed.

Hailing was still not convinced so he asked Ma about the prior disasters:

鎮戎軍 地震大風 海陵以問 貴中對曰：伏陰逼陽 所以震也
又問曰：當震大風，何也？對曰：土失其性則地震，風為號令
人君命令嚴急則有烈風及物之災
When garrisoning the main army the earth quaked and there was a typhoon so Hailing asked why this happened. Guizhong replied: submitting is yin, pressing onward is yang, and that is why there was an earthquake. [Hailing] also asked him: during the earthquake was a typhoon, why was this? [Guizhong] replied: the earth lost its nature and then the earth quaked, the wind became haoling (howling, a verbal command) and the men and lords commanded strictly and anxiously and then the fierce wind caused a disaster of things.

Of course, Hailing refused to abdicate the throne and continued to ready his army for battle. Then in 1161 came another sign from Heaven:

日有暈珥戴背 海陵問 近日天道何如
[In the second month of 1161] the sun had a halo like a jade ring being worn on its back and Hailing asked [Guizhong]: recently what is going on with the Tiandao (way of Heaven, laws of nature)?

Ma once again described how the planets and constellations had fallen out of alignment and that this continued to portend disaster. Eventually Hailing grew tired of these
prophecies and a few months later the Jin emperor himself led an army of five hundred thousand into battle with disastrous consequences.

As Hailing’s army attempted to cross the Yangzi River in late 1161 they were met by the Nansong navy that had been preparing itself for just such an attack. Unable to cross the river, the Jin army was forced to retreat and regroup. Complicating the military debacle, back north there was rampant banditry and peasant uprisings due to the hardships placed on the populace as the Jin devoted its resources to the war effort while natural disasters continued unabated. The people looked for a new leader to bring order out of chaos and they found one in another grandson of Wanyan Aguda named Wulu 烏祿. The *History of the Jin* described him as a charismatic figure:

生於上京 體貌奇偉 美鬚髯長過其腹 胸間有七子如北斗形

[Wulu] was born in the northern capital and his physical appearance was amazingly grand with a beautiful beard and whiskers that reached down to his belly. In the middle of his chest there were seven marks that resembled the shape of *beidou* (northern bucket, big dipper, the constellation of the great bear). 27

His ascent to the throne was also foreshadowed by auspicious signs:

一日方寢 有紅光照室 及黃龍見寢室上 又嘗夜有大星流

[In 1161,] one day while [Wulu was] lying down in bed, there was a red glow that illuminated the room and then a yellow dragon appeared in the bedroom and ascended. Also that night there was a great star that flowed [across the sky]. 28

However, soon thereafter Heaven once more made its discontent with Hailing known:

是歲 東梁水漲溢 暴至城下 水與城等 決女牆石罅中流入城 溅激如涌

That year (1161), the waters of the eastern *Liang* [River] overflowed its banks and devastation washed over the city. The waters inundated the city and reached the parapets where it flowed over the walls through the crenellations. As the violent surge of water churned the people in the city were frightened and shocked. With their loved ones they climbed the walls, they raised some wine and poured it out [as an offering], and the waters receded. 29

While this disaster was unfolding, Hailing was sealing his own fate on the Jin’s southern border:

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Later that month another yellow dragon appeared in clouds blowing in from the west. Hailing was subsequently assassinated by his generals, ending the southern campaign. The yellow dragon invoked earlier signs of Wulu’s ascension, who thereupon proclaimed himself emperor Yong 雍 (r.1161-1189) of the reign period Dading 大定 (Great Certainty), posthumously known as Shizong 世宗 (World Ancestor), the fifth Jin emperor.

Medicine during the early Jin

Cheng Wuji

One of the first contributions to literati medicine during the Jin was also one of the most influential. According to biographical records, Cheng Wuji 成無己 (1062-1155) was born into a family of ruyi 儒醫 (Confucian physicians) from Shandong province, which makes his direct ancestors beneficiaries of the term coined by Song Huizong in 1113 for literati who chose to study medicine. Although he was born a subject of Song, after the Yellow River was redirected to the south in 1129, Cheng became a subject of Jin. Since this occurred when he was in his late sixties, he had probably dismissed the option of leaving his home and fleeing south to repatriate with the Nansong. This likely divided his loyalties, although as Jennifer W. Jay (1991) argues; loyalty should be understood in relative rather than absolute values. While Jay examined the change in dynasties from the Nansong to the Yuan, the situation faced by those who remained in the north under the Jin dynasty was comparable. While the majority of the population was primarily concerned with day to day survival, Jay identified three types of Song loyalists among elites: zhongyi 忠義 (righteously devoted), or those who died for their cause; yimin 遺民
(remaining subjects), or those who survived the change in dynasties but withdrew from public service; and a sub-group of *yimin* who she describes as marginal loyalists whose accommodations to foreign rule were criticized by later historians as collaborators. Therefore, Cheng Wuji might have been an *yimin* who did not serve in public office, but he continued to be active in his chosen field. He might also have considered the Song to have lost their mandate and became a loyal subject of Jin. He was also the first literati doctor of the Jin who used his medical writings to engage in political discourse.

Cheng wrote two texts that are extant that were published together in 1144. The first was the *Zhujie Shanghan Lun* 注解傷寒論 (Treatise on Cold Damage Annotated & Explained) in ten *juan* 卷 (scrolls, sections, fascicles), which includes a complete copy of the original *Shanghan Lun* 傷寒論 (Treatise on Cold Damage) attributed to Zhang Zhongjing 張仲景 (142-220) and reprinted and distributed in 1065 by the Northern Song. In this annotated version of the seminal formulary, Cheng added his own commentaries and explanations of the different passages along with selected quotations from other classical texts on the subject. Cheng’s edition of the *Shanghan Lun* became the definitive edition after the original Song dynasty publication fell out of circulation and is now no longer extant. As a result, it is Cheng’s edition that was included in the medical collection of the Qing dynasty’s *Qinding Siku Quanshu* 欽定四庫全書 (Complete Collection in Four Treasuries for the Emperor to Admire) published in 1782 for the Qianlong 乾隆 emperor (r.1736-1796) as the best copy of the original treatise. Therefore, Cheng Wuji was instrumental in preserving this classic, which was passed down to the modern era in much the same way as Wang Bing’s (c.762) annotated version of the *Huangdi Neijing Suwen* 黃帝內經素問 (Yellow Emperor’s Inner Classic, Basic Questions). The companion text Cheng published was the *Shanghan Mingli Lun* 傷寒明理論 (Treatise Enlightening the Principles of Cold Damage) in four *juan*, expanding on various topics covered in the original treatise and commentaries.

Cheng acknowledges that he was only building upon a foundation of knowledge passed on to him from previous generations. He even remarks in the preface to the *Shanghan Mingli Lun* that the field of *shanghan* 傷寒 (cold damage) studies was originally revived by Zhang Zhongjing, sometimes called Zhang Changsha because of where he served as an official, and then passed on to later generations:
Moreover, [regarding what was] emphasized about the hundred diseases, [the ancestors] did not emphasize *shanghan* (cold damage). Some [patients] died and some were cured, and [symptoms] stopped between six or seven days [after onset, or sometimes] more than ten days. Therefore in the Han dynasty, Zhang Changsha was compelled to return to this lost treatise of antiquity. [Because] there were none he could rescue from damage by *heng* (going against the flow) and *yao* (human frailty), he compiled the *Shanghan Lun* in ten *juan*, with 397 methods and 113 prescriptions, [and this text] became medicine’s rules and regulations, the ancestral foundation for the treatment of disease.

In this passage Cheng is stating that Zhang was not the original author of the *Shanghan Lun*, but was able to use its ancient formulas successfully after all other methods had failed. Cheng may have considered himself a modern day Zhang Changsha who had returned to study a classic that had been widely distributed and promoted a century earlier by the imperial authorities as an authentic Han dynasty text. Cheng would have been committed to this legendary history because it provided literati doctors a textual authority on par with the Confucian canon, and he would have perceived his own commentaries to this medical classic as equivalent to a scholar commenting on the Confucian classics.

*Shanghan* studies during the Tang

During the Tang dynasty (618-907) it is clear that *shanghan* 傷寒 (cold damage) was but one of several categories of externally contracted illnesses. Many of these diseases were described according to their progression through the same six stages, especially during the first week after the onset of symptoms. The *Zhubing Yuanhou Lun* 諸病源候論 (Treatise on the Origins & Progression of Various Diseases), which was published in 610 by Chao Yuanfang 巢元方 (550-630) during the Sui 隋 dynasty (581-618) and reprinted during the Northern Song in 1027, begins by providing details on twelve different disease categories that are due to external factors. Although *shanghan* is included, it is certainly not presented as more important than any of the other categories.

The *Zhubing Yuanhou Lun* first describes fifty-nine different conditions caused by *fēng* 風 (wind), which had been an important disease category since at least the
Shang dynasty (c.1500-1000 BC). Its prominence in this text suggests that wind was considered the primary pathological influence during the Sui and Tang. This is followed by a chapter on seventy-five different conditions caused by xulao 虛勞 (weakness from toil), another chapter on ten types of yaobei 腰背 (lower back burdens), and eight types of xiaoke 消渴 (wasting & thirsting), all of which were probably common afflictions given their standing in the text. This is followed by a chapter on twenty-six types of a diverse category of disease called jiesan 解散 (dissolving & disintegrating). In the seventh juan, Chao introduces the chapter on shanghan disease beginning with details on the first nine days of the disorder, but he includes a total of seventy-seven different problems related to this pathology. This is followed by a chapter on shiqi 時氣 (seasonal energies) that also begins with details on the first nine days of the disorder and includes a total of forty-three different conditions. The next chapter covers rebing 熱病 (heat diseases) and again discusses the first nine days of the disorder and includes twenty-eight conditions. The next chapter covers wenbing 溫病 (warm diseases) and again discusses the first nine days and includes thirty-four conditions. Chao concludes the portion of the text focused on externally contracted illnesses with just two passages on yili 疫瘧 (epidemic plagues), one on zhangqi 瘧氣 (miasmic energies), plus fourteen manifestations of nue 疟 (malaria). The remainder of the text, which is substantial and includes another thirty-nine juan, is devoted primarily to internal diseases.

What is significant about Chao’s presentation of not just shanghan, but also shiqi, rebing, and wenbing, is that the daily progression of disease was described using the same six categories of yin and yang: on the first day taiyang 太陽 (greater yang), on the second day yangming 陽明 (yang brightness), on the third day shaoyang 少陽 (lesser yang), on the fourth day taiyin 太陰 (greater yin), on the fifth day shaoyin 少陰 (lesser yin), on the sixth day jueyin 厥陰 (terminal yin), after which the disease would either be cured or the cycle repeated, assuming the patient had not yet died. This same sequence is also found in chapter 31 of the Huangdi Neijing Suwen, which begins with the statement that rebing can also be categorized as shanghan, and includes many of the same symptoms detailed for each of the six stages as found in Chao’s text. Chao further specified for shanghan, shiqi, rebing, and wenbing, that during the first three yang stages
the disease remained on the body’s exterior and could be treated using the method of han (diaphoresis, inducing perspiration), and that during the subsequent three yin stages the disease moved interiorly and could be treated through tu (emesis, inducing vomiting) during the taiyin stage, or xia (draining downwards, inducing defecation or urination) during the last two stages. Although these four disease categories (shanghan, shiqi, rebing, & wenbing) included some variation of symptoms, the many similarities between them made their unification into a single coherent diagnostic system in the Song edition of the Shanghan Lun an almost inevitable evolution.

Missing from Chao’s text are specific formulas that can be used for treatment. The early evolution of this can be found in the Qianjin Yifang (Prescriptions Worth Thousands in Gold) by Sun Simiao (541-682), which was reprinted by the Northern Song in 1066. Sun’s text includes many of the same formulas found in the Shanghan Lun. Although Sun describes treatments for the various stages of shanghan disease as found in Chao’s text, he does not include treatment options for any of the other externally contracted disorders except for wind. However, Sun does begin his discussion by stating:

論曰 傷寒熱病 自古有之 名賢濬哲 多所防御 至於仲景 特有神功
The treatise says: shanghan (cold damage) and rebing (heat diseases) have been around since antiquity. Many famous sages and profound philosophers have defended against [these diseases,] but only [Zhang] Zhongjing achieved extraordinary efficacy.

It is not clear what “treatise” Sun is quoting from, but he goes on to mention the name of Zhongjing’s treatise as being the Shanghan Dalun (Great Treatise on Cold Damage) and describes it as covering both shanghan and rebing conditions. In Cheng Wuji’s edition of the Shanghan Lun it instead emphasizes zhongfeng (wind strike) and wenbing in addition to shanghan. Thus it appears there were several variations of the Shanghan Lun in circulation during the Tang dynasty. Together with the texts of Chao and Sun, these other early versions of the Shanghan Lun may also have been used as sources for the Waitai Miyao Fang (Arcane Essential Prescriptions from an Official), compiled by Wang Tao (702-772) and reprinted by the Northern Song in 1069 and 1104. This text provides prescriptions for many of the same ailments found in Chao’s compilation, and includes many of the same formulas attributed to Zhang
Zhongjing that were further detailed in Sun Simiao’s work. Wang Tao also emphasized zhongfeng together with shanghan, which demonstrates a growing emphasis on these causes of disease during the Tang.

Along with the increased emphasis on shanghan disease as the overarching category for externally contracted illnesses came an equal emphasis on the formulas recommended for the treatment of its six stages. Sun Simiao’s description of shanghan patterns in the Qianjin Yifang begins with a discussion of these stages and he recommends six specific groups of formulas that continue to be important throughout the Jin dynasty and long after. Those formula groups are: Guizhi Tang (Cinnamon Twig Decoctions), Mahuang Tang (Ephedra Decoctions), Qinglong Tang (Green Dragon Decoctions), Chaihu Tang (Bupleurum Decoctions), Chengqi Tang (Order the Qi Decoctions), and Xianxiong Tang (Sinking into the Chest Decoctions).

Twenty key formulas from the Shanghan Lun, including several from these six categories, were discussed by Cheng Wuji in the last chapter of his Shanghan Mingli Lun under the title yaofang lun (treatise on medicinal prescriptions). Since these are essential for understanding the contributions of Jin literati physicians and the state of the medical field during the middle period of Chinese history, these twenty formulas with ingredients are included in the Appendix for reference (see Appendix 1). Although the ingredients are the same as in the original treatise, the medicinals are rearranged according to Cheng’s perception of their relative importance, with the most important medicinal always listed first.

Included among these twenty formulas are four that he connects both to the wuxing and to four of the five directions. These are Da Qinglong Tang (Major Green Dragon Decoction), Baihu Tang (White Tiger Decoction), Lizhong Wan (Order the Center Pill), and Zhenwu Tang (Perfected Warrior Decoction). Cheng begins the description of these formulas by first remarking that the green dragon is the spirit of the east and the wood phase, the white tiger is the spirit of the west and the metal phase, ordering the center corresponds to the central region and the earth phase, and the Perfected Warrior is the spirit of the north and the water phase.

For unknown reasons there is no formula in the Shanghan Lun named for the spirit of the south and the fire phase. It might be that since the Nansong had claimed fire power and now ruled in the south, literati doctors like Cheng, who perceived the Nansong
as a pathological threat to the Jin, didn’t want to assign a corresponding healing formula to this direction. If this is true, then the fire phase formula was intentionally omitted. Among these four formulas, all of them can be found in earlier texts such as the *Waitai Miyao Fang* by Wang Tao or the *Qianjin Yifang* by Sun Simiao, except for *Zhenwu Tang*, which as argued earlier was likely added or renamed during the Northern Song. However, there is no mention of a “Red Phoenix Decoction” or similar formula in these Tang dynasty texts, which would have been the likely name for a fire phase prescription.

Although all of the classical formulas included in the *Shanghan Lun* were widely used before, during, and after the Jin, slight variations can be seen in different texts, especially concerning the dosage of the medicinals. Consistent standards in weights and measures are especially important in medicine to guarantee proper therapeutic dosages. Qin Shihuang 秦始皇 (r.221-210 BC) is credited with being the first to standardize weights and measures, which facilitated economic development that continued into the Han dynasty. The Tang dynasty enjoyed unprecedented levels of international trade that also relied upon standardized weights and measures to guarantee consistent and fair prices. When the Northern Song chose to publish classical medical literature with the intention of providing practical clinical guidelines for contemporary use, it would have been contrary to that goal to provide medicinal dosages in measurements that were no longer applicable because this would endanger the public through over or under prescribing. Although these standards fluctuated over time, it can be argued that all of the Song publications were revised to make certain that current standards were used in the dosages of medicinals.

Change in the dosages of classical formulas recommended by various physicians over time can be seen as a measure of normal scientific development. For purposes of illustration, the following versions of *Guizhi Tang* are detailed:

**Sun Simiao’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction):**

*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus)                      2 liang
*Shaoyao* 芍藥 (*Paeoniae, Radix*)                                      2 liang
*Gancaozhi* 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)  2 liang
*Shengjiang* 生薑 (*Zingiber officinale* Rosc., Rhizoma)                2 liang
*Dazao* 大枣 (*Ziziphus jujubae* Mill., Fructus)                       12 pieces
Wang Tao’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction): ⁵¹

- **Guizhi** 桂枝 (*Cinnamomum cassia* Blume Ramulus) 3 liang
- **Shaoyao** 芍藥 (*Paeonia* Radix) 3 liang
- **Gancaozhi** 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata) 2 liang
- **Shengjiang** 生薑 (*Zingiber officinale* Rosc., Rhizoma) 3 liang
- **Dazao** 大枣 (*Ziziphus jujubae* Mill., Fructus) 12 pieces

In Cheng Wuji’s edition of the *Shanghan Lun* he uses the larger doses of Wang Tao, ⁵² which might have been the trend during the Tang. Nonetheless, the overall trend during the Jin was to use smaller dosages than the original texts proposed. These physicians may have found that the formulas were equally effective at the lower dosages, while the lower dosages may also have mitigated any non-therapeutic or adverse effects. Of note is that medicinals like *dazao*, or jujube dates, were measured by the actual number of pieces of these small fruits, which makes it useful as a constant when assessing changes in dosages.

It is further important to recognize the broader implications of the key medicinal in this formula, cinnamon (see figure 8). In the oldest of the received materia medica, the *Shennong Bencao* 神農本草 (Divine Farmer’s Materia Medica), the two types of this plant, *mugui* 牡桂 and *jungui* 菌桂, were simply said to grow in mountain valleys. Tao Hongjing 陶弘景 (452-536), in his *Mingyi Bielu* 名醫別錄 (Miscellaneous Records of Renowned Physicians), added that *mugui* 牡桂 came from *nanhai* 南海 (the southern seas) and *jungui* 菌桂 came from Jiaozhi 交趾. ⁵³ Jiaozhi was the name of the southernmost province of China during the Han and Tang dynasties (modern northern Vietnam), and cinnamon along with many other important medicinals was imported from various places in Southeast Asia, collectively referred to as the “southern seas.” During the Jin dynasty, medicinal trade with the Nansong became an important tool for diplomacy, because the south wanted northern medicinals such as ginseng and the north wanted southern medicinals such as cinnamon.
Examining the medical texts Zhubing Yuanhou Lun, Qianjin Yifang, and Waitai Miyao Fang, reveals that shanghan was only gradually becoming the dominant category of externally contracted diseases during the Tang dynasty. The Northern Song reconstruction of the Shanghan Lun (Treatise on Cold Damage) likely drew upon this broader tradition to create a more simple and practical clinical guide for contemporary use. This required an emphasis on a select few formulas drawn from the thousands described in earlier texts that could be effectively modified to treat a variety of symptoms that were categorized according to the six stages of yin and yang. Therefore, the received edition of the Shanghan Lun preserved by Cheng Wuji is most likely very different from the Han dynasty original.

Shanghan studies during the Northern Song

Cheng’s annotated version of the Shanghan Lun was the culmination of a movement that began during the Northern Song. Several literati physicians before Cheng had considered the strengths and limitations of the text promulgated by the Bureau for Revising Medical Texts, and they offered up their own ideas on how to integrate shanghan studies within the broader field of Confucian medicine. Many of these doctors tried to integrate ideas from the Huangdi Neijing, which also included chapters on cold damage and other externally contracted disorders, as well as details on pulse diagnosis. One of the central concepts of classical Chinese medicine missing from the original treatise was wuxing 五行 (five elemental-phases) and it seems that many thought that the Shanghan Lun remained incomplete unless the wuxing could be fully integrated into the treatise. Cheng describes in the preface to the Shanghan Mingli Lun those scholars who preceded him:

自宋以來 名醫間有著述者 如龐安常作 雜病論 朱肱 活人書
韓祗和作 微旨 王寔作 證治 雖皆互有闡明之義
然而未能盡張長沙之深意
From the Song dynasty onwards, among the famous physicians who compiled and passed on [the Shanghan Lun,] there were those like Pang Anchang who wrote the Zabing Lun (Treatise on Miscellaneous Diseases), Zhu Gong [who wrote the] Huoren Shu (Book on the Life of Man), Han Zhihe who wrote the Weizhi (Subtle Meaning), and Wang Shi who wrote the Zhengzhi (Diagnosis & Treatment).
Although all of them together explained and enlightened its meaning, none of them has yet been able to surpass the profound ideas of Zhang Changsha.  

The first author Cheng refers to as Pang Anchang was also known as Pang Anshi 廖安時 (1042-1099), and the book he wrote is now known as the *Shanghan Zongbing Lun* 傷寒總病論 (Treatise on Cold Damage and General Diseases). One of things Pang tried to do was reintegrate the other forms of external diseases and offer up treatments. In doing so he referred to a passage from the *Nanjing* (Classic of Difficulties), but added *wuxing* correspondences to the five disease types:

難經 載五種傷寒 言溫病之脈 行在諸經 不知何經之動 隨經所在而取之 中風木 傷寒金 熱病火 潮溫水 溫病土 治之者各取其所屬

The *Nanjing* recorded five types of *shanghan* and spoke of the pulses of *wenbing* and their movements in the various channels. If you don’t know which of the channels it is moving in then follow the channel it is in [according to the pulse] and then select that one. [The five types are] *zhongfeng* (wind strike) wood, *shanghan* (cold damage) metal, *rebing* (hot disease) fire, *shiwen* (damp warmth) water, and *wenbing* (warm disease) earth. To treat them, each is selected according to their category.

Some of his choices are easily understood. The elements wood and fire already corresponded to the specific environmental influences of wind and heat, respectively. The water phase, which usually corresponds to cold, is matched with dampness by Pang, obviously because water is wet. Although dampness usually goes with the earth phase, this phase also corresponds to long summer when there is still much warmth. Although it begins getting cold in the fall, which corresponds to metal, the metal phase also corresponds to the lung. The lung is understood as the first organ affected by externally contracted diseases, so assigning *shanghan* to metal elevates it as the primary pathology of the five.

Pang made another effort to integrate the *wuxing* with the *Shanghan Lun* by connecting it with the six stages of disease progression:

以陽主生 故足太陽水傳足陽明土 土傳足少陰水 為微邪
以陰主殺 故木傳足太陰土 土傳足厥陰木 水傳足厥陰木
至第六七日 當傳厥陰肝木 必移氣克於脾土

Considering the *yang* governs generation, thus the foot *taiyang* water (urinary bladder channel) is transmitted to the foot *yangming* earth (stomach channel), earth is transmitted to the foot *shaoyin* water (kidney channel), and then it becomes a bit deviant. Considering the *yin* governs extermination, thus the wood
is transmitted to the foot taiyin earth (spleen channel), earth is transmitted to the foot shaoyin water (kidney channel), and water is transmitted to the foot jueyin wood (liver channel). Reaching to six or seven days it should be transmitted to the jueyin liver wood and must shift the qi to subdue the spleen earth.

There appears to be either a transcription error in his description of the three yang stages, or perhaps Pang had not yet worked out the details of his model. The progression generally agreed upon would be taiyang, yangming, shaoyang, but for some reason Pang ends this sequence with shaoyin. Had he instead used the foot shaoyang wood (gallbladder channel) then he would have consistently used both the six stage model and the wuxing conquest sequence, whereby the first stage of water is conquered by the second stage of earth that is conquered by the third stage of wood. Conversely, in his opening statement he suggests that yang is governed by generation rather than conquest. His yin sequence is more strained, as earth to water is counter to the conquest (or extermination) sequence, and then water to wood follows the generation sequence, with wood finally subduing earth according to the conquest sequence.

The next author Cheng Wuji mentioned in his preface was Zhu Gong 朱肱 (c.1108). Zhu wrote the Huoren Shu活人書 (Book on the Life of Man), which also attempted to integrate wuxing theory with the six stages. Moreover, Zhu appears to have been aware of Pang’s mistakes and made the appropriate corrections:

以陽主生 故太陽水傳足陽明土 土傳足少陽木 為微邪也
陰主殺 故木傳足太陰土 土傳足少陰水 水傳足厥陰木
至六七日 當傳厥陰肝木 必移氣克於脾土

Considering the yang governs generation, thus the taiyang water (urinary bladder channel) is transmitted to the foot yangming earth (stomach channel), earth is transmitted to the foot shaoyang wood (gallbladder channel), and then it becomes a bit evil. The yin governs extermination, thus the wood is transmitted to the foot taiyin earth (spleen channel), earth is transmitted to the foot shaoyin water (kidney channel), and water is transmitted to the foot jueyin wood (liver channel). Reaching to six or seven days it should be transmitted to the jueyin liver wood and must shift the qi to subdue the spleen earth.

While the yang sequence now makes more sense the problem of rectifying the yin sequence remains unresolved.

Additionally, both Pang Anshi and Zhu Gong recommended Guizhi Tang for taiyang stage disorders, but once again there are variations in the dosage:
Pang Anshi’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction): 58

*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus) 1 ½ liang  
*Shaoyao* 芍薬 (*Paeoniae*, Radix) 1 ½ liang  
*Zhigancao* 炙甘草 (*Glycyrrhiza uralensis* Fischer, Radix Preperata) 1 liang  
*Shengjiang* 生薑 (*Zingiber officinale* Rosc., Rhizoma) 1 ½ liang  
*Dazao* 大枣 (*Ziziphus jujubae* Mill., Fructus) 6 pieces

Zhu Gong’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction): 59

*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus) 3 liang  
*Shaoyao* 芍薬 (*Paeoniae*, Radix) 3 liang  
*Zhigancao* 炙甘草 (*Glycyrrhiza uralensis* Fischer, Radix Preperata) 2 liang  
*Shengjiang* 生薑 (*Zingiber officinale* Rosc., Rhizoma) 5 slices  
*Dazao* 大枣 (*Ziziphus jujubae* Mill., Fructus) 2 pieces

Thus Pang divides the original formula in half compared to those from Wang Tao and the Song edition of the *Shanghan Lun* preserved by Cheng Wuji. The fact that all of the medicinals were reduced by the exact same amount, from 3 liang to 1 ½ (50% reduction), from 2 liang to 1 (50% reduction), and from 12 pieces to 6 (50% reduction), with the latter measurement an unambiguous amount, supports the argument that dosages in the *Shanghan Lun* and other classical texts represented contemporary measurements. Zhu maintains the higher dosages of the first three medicinals but reduces the other two, which he actually only lists under the preparation instructions suggesting he did not consider them integral to the formula. Those two substances, *shengjiang* and *dazao*, or fresh ginger and jujubes, become commonly used in a wide variety of formulas to harmonize the *ying* (constructive) and *wei* (protective) energies of the body. However, just like in Zhu’s version of the above formula, they are often included only in the preparation instructions, which suggests the physician could opt to leave them out of the formula without negatively impacting its efficacy.

The third physician mentioned by Cheng in his preface is Han Zhihe 韓祗和 (c.1030-1100) who authored the *Shanghan Weizhi Lun* 傷寒微旨論 (Treatise on the Subtle Meaning of Cold Damage), published in 1086. Han was admired for his discussion of pulse diagnosis for *shanghan* diseases. Unlike Pang and Zhu, Han does not discuss any of the classical formulas from the original treatise, but instead offers up many of his own innovative prescriptions. Regarding pulse diagnosis, Han states:
When differentiating the pulses of shanghan disease there are not that many types; they are called floating, deep, fast, slow, yin, and yang. One must first understand these six types of pulses and then afterwards one can differentiate the flourishing and weak, consider the large and the small, and examine the tight and the relaxed. One considers the treatment of disease to be an urgent matter but physicians of today who disseminate treatments of shanghan disease only rely upon the idea that the floating pulse is yang and the sinking pulse in yin.  

Han describes in detail the qualities of all twelve of these pulse qualities, as well including several others pulses discussed in the Maijing 脈經 (Pulse Classic) by Wang Shuhe 王叔和 (265-316), which he categorized under these twelve general headings. In Han’s pulse system he introduces new categories, such as cheng 盛 (flourishing), and new ways of organizing the qualities, such as listing the four qualities of lao 牢 (firm), shi 實 (excess), hong 洪 (flooding), and hua 滑 (slippery) under the new category cheng. Han further specifies how certain pulse types can occur simultaneously, such as floating and tight or floating and rapid. He concludes by observing that taking medicinals to either induce perspiration, vomiting, or a downward draining of the bowels or bladder, should change the quality of the pulse. If the pulse remains the same it indicates that the treatment was ineffective and the problem unresolved.

Thus Cheng Wuji was heir to an emerging tradition of analyzing the Shanghan Lun. This text, published by the Northern Song in 1065, was the first classical formulary produced and its attribution to a Han scholar-official granted it an authority on par with the Confucian canon. As a result, literati physicians like Pang Anshi, Zhu Gong, and Han Zhihe, carefully studied this text and produced commentaries that tried to more fully integrate it with the Confucian cosmological paradigm.

Shanghan studies and social discourse

Like his Northern Song predecessors, Cheng endeavored to rectify the Shanghan Lun with Confucian cosmology and his own clinical experience, but he also began using the medium of medical literature to engage in social discourse. Like Pang Anshi and Zhu
Gong, Cheng applied wuxing theory to the etiology and pathophysiology of shanghan disease. In the Zhujie Shanghan Lun, Cheng argues:

陽結為火 至十七日傳少陰水 水能制火 火邪解散 則愈
陰結屬水 至十四日傳陽明土 土能制水 水邪解散 則愈
彼邪氣結甚 水又不能制火 土又不能制水 故當劇

When the yang is bound it becomes fire. Reaching the seventeenth day it is transmitted to shaoyin water (kidney) and as water is able to control fire, the fire pathogens are resolved and dispersed and then they are cured. When the yin is bound it is categorized as water. Reaching the fourteenth day it is transmitted to yangming earth (stomach) and as earth controls water, the water pathogens are resolved and dispersed and then they are cured. Those pathogenic qi that are bound in the extreme such that water is not able to control fire and earth is also not able to control water must therefore be severe.

Rather than try to rectify the strict transmission of the six stages with the generation and conquest sequences like his predecessors, Cheng points to the elemental balance of fire and water to explain why disease might be resolved at certain stages. Thus when a fire disease reaches the water stage or when a water disease reaches the earth stage they are naturally brought under control according to the conquest sequence. Thus, when this normal cycle is perturbed it indicates the disease is more severe.

Cheng’s choice of elemental examples, such as fire being in need of control, was a response to both the political and environmental circumstances. Indeed, subsequent Jin dynasty physicians place an even greater emphasis on these elements. In 1144, when Cheng’s books came on the market, the Jin had just survived a scorching heat wave followed by severe droughts that led to widespread food shortages. These events followed a peace agreement with the Nansong whose continued existence as the fire element dynasty was a constant threat to the legitimacy of the Jin. The recurring theme of a fire and water imbalance during the Jin must be understood not only on the microscopic scale of the human body but also on the macroscopic scale of all under Heaven. Although it was perhaps a bitter pill to swallow, Han literati under the Jin came to accept the new rulers of the Central Plains and believed that, for a return to peace and order, the Jin needed to completely extinguish the fire of Song that still burned in the south. The combination of political and environmental factors made it evident that the fire was excessive and needed to be controlled by water. It further appears many Han literati believed the Jin dynasty represented the water phase, since it had come from the north to conquer the south.
Additionally, at the time Cheng’s books were published, the Jin emperor Xizong was regularly punishing officials for perceived offenses, and the court remained in constant fear of his wrath. As a literatus whose conception of Confucian civilization exempted government officials from such indignities as corporal punishment, this might have prompted Cheng to include an essay on *buren* 不仁 in the *Shanghan Mingli Lun*, which begins:

仁 柔也 不仁 謂不柔和也
As for *ren* (humanity, sensitivity, benevolence), it is *rou* (soft, supple, yielding). As for *buren* (inhumanity, insensitivity, lacking benevolence), it is called not being *rouhe* (soft & gentle). 63

In a medical context, as Cheng Wuji goes on to explain, this term refers to numbness or a lack of sensitivity to pain, temperature, or proprioception, but in the Confucian context *ren* is one of the foremost virtues and an essential quality of good governance. Although he provides a few clinical examples, Cheng decided to end his discussion of this term with the following story:

昔越人入虢 診太子為屍厥 以鬱冒不仁為可治 刺之而得痊濟者
Long ago when [Qin] Yueren (a.k.a., Bianque 扁鵲) entered the state of Guo and examined the crown prince’s corpse, it was emitting a smell and was *buren*, [but Yueren] thought he could treat him. He needled him and [the crown prince] was able to recover with his help. He truly was a divine physician and diagnostician. Alas, if someone has a floating or flooding pulse, their body has an oily sweat, they are gasping for breath endlessly, they cannot swallow water or soup broth, and their body is *buren*; this is also considered to be the end of their life even though Yueren was able to revive them. 64

References to, and reiterations of, this famous story of the legendary physician Bianque are found in several early histories, including the *Shiji* 史記 (Historical Records, c.100 BC), 65 the *Hanshi Waizhuan* 韓詩外傳 (Biography of Han Poetry, c.100 BC), 66 the *Qian Han Ji* 前漢紀 (Records of the Early Han Dynasty, c.100), 67 as well as the original preface to the *Shanghan Lun* credited to Zhang Zhongjing, 68 all with some variation. However, none of these versions mentions the term *buren*. Thus one must question why Cheng felt this was an important story to illustrate the meaning of this term. One possible
Rather than reference numbness, this passage predicates the revival of the spirit on the achievement of benevolence. For Cheng, the crown prince in this story serves as a metaphor for Xizong whose spirit suffers because he no longer rules with benevolence. The crown prince of Guo is revived only after the intervention of the divine doctor who serves as a metaphor for literati physicians whose task is to restore benevolence. As a Confucian, Cheng may have thought that Xizong’s lack of benevolence would lead to the fall of the Jin and thus he concludes that today the situation has become more dire and doubts whether the intervention of literati doctors would be sufficient to revive the patient and bring order out of chaos.

The dual use of this term in medicine and morality was not lost in the larger arena of Jin literati discourse. Hoyt C. Tillman (1992) found that a text compiled during the middle of the twelfth century called the Zhuru Mingdao Ji 諸儒鳴道集 (Records of Various Confucians Propagating the Dao) was the most important source book for the transmission of Northern Song Confucian learning to the Jin dynasty. It represents a current of dao xue 道學 (learning of the way) that flourished independent of the southern influences that came to define the movement. This text was later reprinted by the Nansong in 1235 after the fall of the Jin and included the following discussion on ren and buren:

若夫至仁 則天地為一身 而天地之間 品物萬形為四肢百體
夫人豈有視四肢百體而不愛哉
It seems that when a person achieves ren (benevolence) then Heaven and Earth become a unified body. Between Heaven and Earth the objects, things, and myriad forms become the four limbs and the hundred parts [of our bodies]. Thus, how could a person have looked upon [their] four limbs and hundred parts and not have affection?
A sage is one who has achieved ren. Only the xin (heart, mind) is able to embody it. How can one experience disorganization and disunion and seek [the cause] outside [the xin]? Therefore one can select the common example that this is why Zhongni (Confucius) revealed to Zigong (his disciple) what he considered to be the method of ren.

Medical books consider hand and foot wind mischief to be called siti buren (four limb numbness) because this painful disease doesn’t accumulate in the xin. If the hands and feet were mine the painful disease would not give me awareness. So how can this not be buren (insensitive, without benevolence)?

Thus Cheng’s discussion was intended for an elite literati audience, not a group of lower status technicians who would gain no practical clinical insights from this retelling of the story of Bianque. Therefore, Cheng was engaging in social discourse.

Cheng also discusses the applicability of the wuxing to pulse diagnosis, and ties this into a macrocosmic discussion. He first cites the original passage from the Song edition of the Shanghan Lun, followed by his own analysis of its meaning:

[Someone] asked: the pulse has the [the four types of] mutually dominating [relationships]. [They are called] zong (vertical, indulging, giving free reign to something), heng (horizontal, unrestrained, turbulent, harsh), ni (rebellious), and shun (compliant), what are these? The teacher said: The water phase dominates fire and the metal phase dominates wood; this is called zong (going with the flow [of the conquest cycle]). The fire phase dominates water and the wood phase dominates metal; this is called heng (going against the flow [of the conquest cycle]). The water phase dominates metal and the fire phase dominates wood; this is called ni (rebelling against [the generative cycle]). The metal phase dominates water and the wood phase dominates fire; this is called shun (following [the generative cycle]).

[Cheng comments:] Metal conquers wood and water conquers fire. As for zong, this is called going with the flow of their appointed qi, dominating what they have conquered. As for heng, this is called their qi going against the flow and rebelling,
contrarily dominating what they have not conquered. As for zongheng, this gives the idea of connecting [the phases with] random zong and random heng. Water is the son of metal, and fire is the son of wood. If the son phase dominates the mother its qi is rebelling. If the mother dominates the son its qi is complying. 71

The first passage introduces four terms used to identify the healthy and unhealthy relationships of the wuxing, with zong and shun describing the normal cycles of conquest and generation, respectively, while heng and ni are the pathological cycles. Cheng then expounds on the many ways the wuxing relationships can be understood, but makes a point to identify those relationships deemed proper. This serves as another example of social discourse. For example, since the Jin conquered the Song it is proper for the conqueror to dominate the conquered, just as it is proper for water to conquer fire. However, if the opposite occurs then there will be disorder and disease. Cheng seems concerned that these random and unhealthy cosmic relationships are being allowed to continue, just as disorder in the family, such as a son being disrespectful to his mother, leads to disorder within not only the family, but the entire kingdom, and the continuation of these patterns will create or perpetuate chaos under Heaven.

Cheng consistently identifies passages using wuxing theory and adds his commentary, as in the following example from the Zhujie Shanghan Lun:

緩遲者 脾之脈 脾為肺之母 以子母相生 故云皆愈
數者 心之脈 火克金 為鬼賊相刑 故劇
Slow and intermittent are the pulses of the spleen. The spleen is the mother of the lungs. Because the son is generated by the mother it is said all of these can be cured. Rapid is the pulse of the heart and fire subdues metal, ghosts and thieves are punished; therefore [this condition] is critical. 72

In this passage Cheng emphasizes how the generation cycle of earth to metal has a positive prognosis whilst the conquest cycle produces crises. Following these passages, Cheng goes on to describe how unseasonable weather patterns indicate that Heaven is in a state of chaos, 73 which all Confucians would acknowledge means that the emperor’s mandate to rule is in question and that this in turn unbalances the wuxing, which becomes a primary cause of disease on earth. Therefore, these passages can also be understood as social discourse.
Developments in diagnosis

At the time Cheng Wuji wrote his treatise there were primarily three different pulse systems being promulgated that defined the location of the zangfu (solid & hollow) organs at the cunkou (inch opening, the radial artery pulse) on the wrists. The first system was detailed in chapter 9 of the Huangdi Neijing Lingshu (Yellow Emperor’s Inner Classic, Spiritual Pivot), whereby one assesses the relative strength of the pulses at the radial artery in the wrist compared to the carotid artery in the neck at a point called renying (ST-9, man’s prognosis) to determine which channel is out of balance. Although this system continued to be used, those pulse methods that emphasized the cunkou position alone became more widely written about, and so it can be deduced that they were more popular.

The second system was detailed in chapter 17 of the Huangdi Neijing Suwen (Yellow Emperor’s Inner Classic, Basic Questions), which described the three locations of the cun (inch), guan (bar), and chi (cubit) positions at the wrist that correspond to the upper, middle, and lower jiao (burners, body regions), which are found distal to proximal, respectively. Each of these three positions on each wrist also has a superficial and deep location, for a total of twelve places to feel the energies of the various organs and regions of the body reflected in the pulse. There are also differences for the right and left wrist, and the model according to the Suwen is summarized below:

<table>
<thead>
<tr>
<th>Neijing Suwen Pulse Model:</th>
<th>Depth / Position:</th>
<th>cun (distal)</th>
<th>guan (middle)</th>
<th>chi (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Superficial:</td>
<td>lung</td>
<td>stomach</td>
<td>kidneys</td>
<td></td>
</tr>
<tr>
<td>Right Deep:</td>
<td>chest</td>
<td>spleen</td>
<td>abdomen (intestines)</td>
<td></td>
</tr>
<tr>
<td>Left Superficial:</td>
<td>heart</td>
<td>liver</td>
<td>kidneys</td>
<td></td>
</tr>
<tr>
<td>Left Deep:</td>
<td>pericardium</td>
<td>diaphragm</td>
<td>abdomen (intestines)</td>
<td></td>
</tr>
</tbody>
</table>

This chapter of the Suwen goes on to state that further distal can be found the throat, and further proximal the lower limbs.

The Maijing (Pulse Classic) essentially reiterates this arrangement and continues to use an anatomical model of correspondence:
寸主射上焦 出頭及皮毛竟手 關主射中焦 腹及腰 尺主射下焦 少腹至足

The *cun* governs emissions from the upper *jiao*, it extends to the head and includes the skin, hair, and extends to the hands. The *guan* governs emissions from the middle *jiao*, reaching all around the abdomen. The *chi* governs emissions from the lower *jiao*, the lower abdomen and reaching to the feet. 80

The *Maijing* further specified that both the kidneys and the *mingmen* (life gate) could be found in the *chi* position, but without indicating left or right, and that the strength of the normal pulses on the left and right are different according to gender. 77

Otherwise this text devoted most of its pages to describing the various pulse qualities and their relationship to various diseases. 78

The third system of pulse diagnosis is found in the *Nanjing* (Classic of Difficulties). This text does not differentiate the three positions and two depths of the radial artery pulse, but instead only considers one position and divides the pulse into five different depths. 79 This same system from the *Nanjing* is repeated in Cheng Wuji’s *Zhujie Shanghan Lun* amidst the pulse diagnosis essays:

師曰脈者 人以指按之 如三菽之重者 肺氣也 如六菽之重者 心氣也
如九菽之重者 脾氣也 如十二菽之重者 肝氣也 按之至骨者 腎氣也

The teacher said regarding the pulse, if a person presses his finger down [at the radial artery] and uses a pressure of three beans, there is the lung *qi*. Using the pressure of six beans, there is the heart *qi*. Using the pressure of nine beans, there is the spleen *qi*. Using the pressure of twelve beans, there is the liver *qi*. Pressing down to reach the bone, there is the kidney *qi*. 80

The *Nanjing* provides more detail on what tissues and fluids are found at each of the five levels with the organs: the skin and hair at the first level with the lung; the blood vessels at the second level with the heart; the muscles and flesh at the third level with the spleen; the sinews at the fourth level with the liver; and the reference to the bones at the fifth level implied its connection with the kidneys. 81 These three different classical pulse models are an important reference to understand later developments on pulse diagnosis during the Jin dynasty.

Perhaps Cheng Wuji’s greatest contribution to medical development within the field of diagnostics was regarding tongue diagnosis. Although the assessment of the color, coating, shape, and moisture of the tongue remains a regular part of the modern clinical practice of Chinese medicine, for a long time the observation of the tongue remained peripheral to the diagnostic process. Scattered references to the tongue can be found in
the *Huangdi Neijing* and the *Nanjing*, but many of these are related either to its correspondence with the heart and as a means to control speech or to its connection to the spleen to control taste and its structural relation to swallowing and digestive disorders. Several acupuncture channel pathways have a branch that goes to the tongue, including the heart, stomach, spleen, urinary bladder, and *sanjiao*, but their relation to diagnostics remained undeveloped in these classics. There are also a couple references to the tongue curling up during a *jueyin* disease, usually together with contracture of the sinews and retraction of the testicles, or the mouth and tongue being dry due to a heat disease. References to the blood vessels under the tongue are found in chapter 22 of the *Huangdi Neijing Suwen*, where it says:

> 舌下血者 其變病 刺郄中血者
> As for the blood [vessels] under the tongue, they change when there is disease, prick them in the center and let them bleed.

Similarly in chapter 36 on malarial diseases the *Suwen* also suggests bleeding these vessels, providing the name of these two vessels: *lianquan* 廉泉 (honest spring). The *Suwen* also cautions physicians regarding this technique in chapter 52:

> 刺舌下中脈太過 血出不止 為瘖
> Needling under the tongue and striking the vessels too aggressively so that the blood comes out and won’t stop causes the patient to become mute.

Additionally, both the *Lingshu* and the *Nanjing* provide a description of the size and shape of the tongue:

> 舌重十兩 長七寸 廣二寸半
> The tongue weighs 10 *liang*, it is 7 inches long and 2 ½ inches wide.

The only reference to the color of the tongue body and its coating in the *Huangdi Neijing* is found in chapter 32 of the *Suwen* where it describes a case of heat in the lung which includes these symptoms:

> 舌上黃身熱
> Upon the tongue it is yellow and the body is hot

Assuming that one did not need to palpate the tongue, the hot body likely refers to a redder than normal appearance of the tongue body, whereas the yellow on top would
indicate the color of the coating. Finally, in chapter 23 of the *Huangdi Neijing Lingshu* on heat diseases, it says if the heat is unremitting the root of the tongue will rot and the patient will die. ⁹¹ These limited examples confirm that tongue diagnosis was not well developed in the *Huangdi Neijing* and *Nanjing*.

Many of the same descriptions of the tongue are found in Chao Yuanfang’s *Zhubing Yuanhou Lun*, but this text also makes a few additions. In the first section of wind diseases it notes that if either the heart or spleen is affected by wind evils the tongue becomes stiff and one cannot speak. ⁹² In the section on *xulao* (weakness from toil) it states that if the blood is harmed it can result in heat, and if the heat affects the heart or spleen it will cause the tongue to become swollen. ⁹³ In the chapter on blood diseases it states that heat in the heart can cause bleeding from the top of the tongue, like a *yongquan* (gushing spring). ⁹⁴ This is in stark contrast to the above passage from the *Huangdi Neijing* in which the vessels under the tongue were named *lianquan* (honest spring), and is further puzzling because there are no major blood vessels visible on the surface of the tongue like those found underneath. Moreover, *yongquan* is also the name of an acupuncture point located on the bottom of the foot (KD-1). There is a section on various diseases of the mouth that begins with *koushe chuang* (mouth & tongue ulcers) in which it is stated that these ulcerations are caused by heat overflowing into the heart or spleen channels. ⁹⁵ This section goes on to quote from a frequently referenced text entitled the *Yangsheng Fang* (Methods to Nurture Life) that correlated bad breath with a white or yellow color upon the tongue, and further asserts the *shen* (spirit) flows through the tongue. It goes on to discuss how heart heat causes a dry mouth, how the heart and spleen channels both have a pathway to the tongue, and that weakness in those organs can also cause a swollen tongue. ⁹⁶ In the section on women’s diseases Chao states that bleeding from the mouth and tongue can be caused by reckless movement of blood due to problems of the heart and spleen. ⁹⁷ In the final sections on children’s diseases Chao repeats that heat in the heart or spleen can cause tongue and mouth ulcerations and also notes that heat in those same organs can cause the tongue to swell. ⁹⁸ Thus the *Zhubing Yuanhou Lun* affirms that wind, heat, or deficiency in the heart or spleen can cause the tongue to stiffen, swell, ulcerate, or bleed, and even makes a brief reference to the tongue coating.

The *Shanghan Lun* further developed tongue diagnosis by making references to various appearances of the tongue, especially the coating, and correlating them with the
stages of disease. In each of these instances, Cheng provided a commentary on the passage in his *Zhujie Shanghan Lun* and provided an additional summary of his findings in a short essay in the *Shanghan Mingli Lun* entitled *she shangtai* (舌上苔, the coating on the tongue). Cheng’s essay may be the first systematic study in Chinese medicine of the significance of the coating in tongue diagnosis.

In his commentaries to the *Shanghan Lun*, Cheng Wuji provides a meticulous analysis of all eleven cases where the tongue is mentioned. Although following these cases and Cheng’s commentaries may be cumbersome, especially to the lay reader, this represents a milestone in the development of tongue diagnosis and therefore is included below in a standardized format:

1) The *Shanghan Lun* presents a case with a tight pulse and a slippery tongue coating and cautioned against treatment; Cheng comments that these symptoms are due to an abundance of *yin*.

2) The *Shanghan Lun* states that in a *shaoyin* disease there may be a poor connection between the kidneys and the lung causing dryness of the mouth and tongue; Cheng comments that this is due to the evil influences moving internally, which can be confirmed by the pulses that will be deep in the *cun* and *chi* positions, which correspond to the lung and kidneys.

3) The *Shanghan Lun* presents a case of early morning diarrhea or vomiting, chest fullness, inhibited urination, and a coating on the tongue, and states the patient has heat in their *dantian* (cinnabar field, lower abdomen) and cold in their chest; Cheng comments that the tongue coating would be white because there is cold in the upper part of the body whereas the heat remains in the lower portion far from the tongue.

4) The *Shanghan Lun* presents a difficult to treat case of feeling like there is a knot in the chest that is worse with eating or drinking, accompanied by frequent diarrhea, and a tongue coating that is white and *hua* (slippery, thick & sticky); Cheng comments that the tongue coating is again a sign of cold in the chest making the case difficult to treat.

5) The *Shanghan Lun* presents a case of *taiyang* disease with severe constipation that has not resolved after repeated attempts to purge the bowels, with a tidal fever, fullness below the heart, terrible abdominal pain, thirst, and a dry tongue; Cheng comments that this is no longer an exterior disorder as the *taiyang* designation would suggest, but that the evil influences have become knotted on the interior.
6) The *Shanghan Lun* presents a case of unremitting vomiting and diarrhea lasting a week due to internal heat, also with a dry tongue; Cheng comments that the dry tongue in this case is due to combined internal and external evils.  

7) The *Shanghan Lun* presents a case where after purging the bowels the stomach became empty and was invaded by an external pathogen leading to emotional disturbances and a coating on the tongue; Cheng comments that if the coating was yellow it would be due to heat in the stomach, but if white it is due to the heat being trapped in the chest and thus unable to vent upwards and change the color of the tongue coat.  

8) The *Shanghan Lun* presents a case of *yangming* disease with fullness and stiffness in the flanks, constipation and vomiting, and a coating on the tongue; Cheng comments that normally the coat would be yellow, but argues that this is actually a *shaoyang* disease, meaning half interior and half exterior, so the coating is white because the heat has not yet moved completely internal.  

9) The *Shanghan Lun* presents a case of *jueyin* disease with a tight pulse, irregular perspiration, a chaotic hissing sound in the throat, and a withered tongue; Cheng comments that this is actually a *shaoyin* disease with the kidneys identified as the root of the disease and the lungs as the branch, and so due to the connection between the kidneys and the root of the tongue, it withers.  

10) The *Shanghan Lun* presents a case of unremitting diarrhea and loss of speech because the tongue could not move; Cheng comments that this was due to the damage of the stomach *qi*.  

11) The *Shanghan Lun* presents a case of loss of fluids after excessive sweating and defecation of blood with a white tongue coating; Cheng comments that the white coat was due to *yang* deficiency and cold.  

In addition to these case by case commentaries in which Cheng tries to explain the classic or to build upon its foundation, and even in a few cases to make corrections, he also adds some further insights in his essay devoted to the tongue coating. He begins his study with the following overview:

舌者 心之官 法應南方火 本紅而澤 傷寒三四日已後 舌上有膜
白滑如苔 甚者或燥 或濕 或黃 或黑
The tongue is the sense organ of the heart. Methodologically it corresponds to the southern direction and fire, thus the root [of the tongue or its body] is red and moist. After three or four days of a *shanghan* [disease] there is a membrane on the tongue. It is white and slippery like moss, and if [the disease] is severe it might be dry, rough, yellow, or black.
In his previous commentaries, Cheng only discussed the dry and slippery tongue, and the coating colors of white and yellow. Here he introduces the possibility of a rough or black coating, the latter of which is relatively uncommon in clinical practice. Cheng goes on to assert that the coating is formed only when external evil influences penetrate the interior and affect the body fluids, and that in cases of cold the coating is white and slippery. As the cold works its way interiorly and begins to transform into heat, the coating will change first from slippery to rough, and then as the heat becomes more severe it damages the fluids and the tongue becomes dry. Finally the heat will cause the tongue coating to become yellow, although Cheng notes that if the heat is in the stomach it will change to yellow very quickly. Only if the heat is extreme will the coating turn to black, and he quotes an unidentified passage from a text he calls the *Huangdi Zhenjing* 黃帝針經 (Yellow Emperor’s Needling Classic) that indicates in such cases the patient will die. Cheng concludes his tongue coating essay by once again invoking *wuxing* theory:

以心為君主之官 開竅於舌 黑為腎色 見於心部 心者火 腎者水
邪熱已極 鬼賊相刑 故知必死 觀其口舌 亦可見其逆順矣

The heart is considered to be the office of the sovereign ruler and its orifice opens into the tongue. Black is the color of the kidney, so if one sees [this color] in the realm of the heart, and as the heart is fire and the kidney is water, then pathogenic heat has already become extreme, ghosts and thieves are being punished. Therefore, one knows they must die [because water conquers fire]. Observing their mouth and tongue one can also see if they are rebelling or complying.

Therefore combining all of this information together from the early classics through Cheng Wuji’s essays, tongue diagnosis became a more complete system during the Jin dynasty that considered how the color, coating, moisture, and shape of the tongue changed due to pathological influences.

*Sudden turmoil*

In addition to the differentiation of diseases according to the six stages of *yin* and *yang*, from *taiyang* to *jueyin*, there is a section of the *Shanghan Lun* dedicated to a condition called *huoluan* 霍亂 (sudden turmoil). This disease category also has a long history recorded in early classical medical literature and serves well as a vehicle to
discuss the struggle of Jin physicians to bring order out of the turmoil or chaos of the times. References to this specific term are found in the *Huangdi Neijing*, but the binome appears only five times in the *Suwen* and twice in the *Lingshu*. No mention of this disease is found in the *Nanjing*. In the *Suwen*, the first reference in chapter 28 suggests treating the stomach channel for the condition; in chapter 69 it is associated with diarrhea and abdominal pain; and in chapter 71 the term appears three times and is associated with a *taiyin* disease and heat accompanied by vomiting and abdominal fullness. In chapter 10 of the *Lingshu* it is mentioned as a disorder of the *taiyin* channel of the spleen through its connections with the stomach and intestines. Finally, in chapter 34 of the *Lingshu* it is identified as one of the *wuluan* 五亂 (five turmoils), which is the title of this chapter. The opening question and answer in this chapter first describes the cosmic interrelationships upon which health depends:

Huangdi asked: there are twelve channels that are differentiated by the *wuxing* and separate into the four seasons. So how do these lose [their natural order] and become chaotic, and how does one [restore] order? Qibo replied: the *wuxing* have their [proper] sequence, the four seasons have their separations. If they follow their [normal sequence] then there is order, but if they rebel then there is chaos.

The passage then identifies five types of the disorder, which are: chaos in the heart causing emotional turmoil; chaos in the lungs causing coughing, wheezing, and crying; chaos in the arms and legs causing spasms and contracture; chaos in the head causing a loss of balance or unconsciousness; and chaos in the stomach and intestines causing *huoluan*. Thus from the bits and pieces of information on this disorder it can be understood as an acute digestive disorder accompanied by abdominal pain, vomiting, and diarrhea.

Chao Yuanfang in the *Zhubing Yuanhou Lun* has several entries on the subject of *huoluan*. The first mention of the condition is in the section devoted to *shanghan* diseases, in which it describes vomiting and diarrhea as the key symptoms accompanied by fever and a weak and choppy pulse. It adds that symptoms appear on the fourth or fifth day of a *shanghan* disease, placing it within the interior or *yin* stages, and then suggests it resolves without treatment in twenty-two days or when the appetite returns. Later in the text an entire chapter is devoted to *huoluan* where it differentiates different manifestations of the disease. This section first identifies the key symptoms and organs, and remarks that if
it is preceded by heart pain then vomiting will come first, but if preceded by abdominal pain then diarrhea comes first. It then goes on to identify causes such as wind, cold, excess consumption of wine and meat, irregular sleeping habits, lying on the damp earth, or eating honey in the seventh month according to the classical text *Yangsheng Fang* (Methods of Nurturing Life). All of these causes of *huoluan* deplete the energies of the spleen and stomach. Chao concludes that if the pulse is big then it can be treated, but if the pulse is weak and thin it cannot be treated. He also begins by identifying three different names for the disorder:

霍亂有三名 一名胃反 言其胃氣虚逆反 吐飲食也 二名霍亂 言其病揮霍之間 便致繚亂也 三名走哺 言其哺食變逆者也

*Huoluan* has three names: the first name is *weifan* (stomach reversal) because the stomach qi is weak and rebellious [resulting in] vomiting of drinks and food. The second name is *huoluan* (sudden turmoil) because the disease suddenly wipes away what is inside [the body] resulting in confusion and chaos. The third name is *zuobu* (fleeing meals) because whatever meal you ate is transformed into rebelliousness.

In other essays within the section devoted to *huoluan*, Chao further identifies how after frequent bouts of vomiting and diarrhea the disease turns into *gan huoluan* (dry sudden turmoil) with retching and tenesmus due to the severe depletion of body fluids, which further causes coldness with spasms and contracture of the four limbs. Chao adds that if accompanied by mental vexation then the vomiting and dysentery will be severe, and that the loss of fluids also leads to weakness of the kidney. He also mentions a type of *ezhong huoluan* (evil attack of sudden turmoil) caused by ghosts. This condition is briefly mentioned just two other times in Chao’s text. Under women’s and children’s diseases he adds that children are vulnerable due to their weak digestive systems and can contract the condition from the breast milk of their infected mothers. The *Zhubing Yuanhou Lun* provides a broad summary of *huoluan* and the various theories circulating during the 7th century about its origins and manifestations.

Once again, Chao’s text only provides descriptions of the diseases without any treatments, but in the *Qianjin Yifang*, Sun Simiao steps in to fill this void and details prescriptions for this disorder in two different sections of his text. The first begins by summarizing information about the condition, focusing on the *shanghan* variety with accompanying symptoms of fever, head and body aches, aversion to cold, and a weak and
choppy pulse, and again suggests it might resolve without treatment in only twelve days or when the appetite returns. The formulas that Sun recommends are exactly the same as those found in Cheng Wuji’s annotated edition of the *Shanghan Lun* and are presented in the same order: *Sini Jia Renshen Tang* 四逆加人参湯 (Four Rebellions Plus Ginseng Decoction), *Wuling San* 五苓散 (Five Ingredient Poria Powder), *Lizhong Wan* 理中丸 (Order the Center Pill), and *Tongmai Sini Jia Zhudan Tang* 通脉四逆加猪胆汤 (Penetrate the Vessels with Four Rebellions Plus Pig Bile Decoction). In the second section, Sun begins by emphasizing the formula *Lizhong Wan* for the condition while adding in twenty-four other prescriptions not found in the *Shanghan Lun*. However, his two entries on *Lizhong Wan* used different dosages, with the *Shanghan Lun* using the larger doses:

**Shanghan Lun’s Lizhong Wan 理中丸 (Order the Center Pill):**

- *Renshen* 人参 (Panax ginseng C.A. Mey, Radix) 3 liang
- *Baizhu* 白术 (Atractylodes macrocephala Koidz., Rhizoma) 3 liang
- *Gancaozhi* 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 3 liang
- *Ganjiang* 乾薑 (Zingiber officinallis Rosc., Rhizoma) 3 liang

**Sun Simiao’s Lizhong Wan 理中丸 (Order the Center Pill):**

- *Renshen* 人参 (Panax ginseng C.A. Mey, Radix) 1 liang
- *Baizhu* 白术 (Atractylodes macrocephala Koidz., Rhizoma) 1 liang
- *Gancaozhi* 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 1 liang
- *Ganjiang* 乾薑 (Zingiber officinallis Rosc., Rhizoma) 1 liang

In the *Waitai Miyao Fang*, Wang Tao recommends this same formula for *huoluan*, but adds two more ingredients and reduces the dosages even further:

**Wang Tao’s Lizhong Wan 理中丸 (Order the Center Pill):**

- *Renshen* 人参 (Panax ginseng C.A. Mey, Radix) 8 fen
- *Baizhu* 白术 (Atractylodes macrocephala Koidz., Rhizoma) 8 fen
- *Gancaozhi* 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 8 fen
- *Ganjiang* 乾薑 (Zingiber officinallis Rosc., Rhizoma) 6 fen
- *Gaoliangjiang* 高良薑 (Alpinia officinarum Hance, Rhizoma) 8 fen
- *Guixin* 桂心 (Cinnamomum cassia Blume, Cortex) 6 fen

Remarkably, the *Waitai Miyao Fang* extensively cited the works of both Chao Yuanfang and Sun Simiao with only scant references in the section on cold damage to the *Shanghan*
Lun. This might be because the former three texts were used to recreate the latter during the Song dynasty by the Bureau for Revising Medical Texts.

In the Zhujie Shanghan Lun, Cheng Wuji provided his commentaries to the section discussing huoluan. The source text first defines the term as being a disorder of vomiting and diarrhea with a fever, headache, body aches, and aversion to cold; Cheng comments that a cold pathogen has entered the interior and damaged the spleen and stomach. Next the source text describes the pulse as fine and choppy, and notes that those who are able to eat will recover; Cheng comments that the pulse is fine because of the loss of yang and choppy due to the loss of blood, and adds that return of the appetite indicates the stomach is harmonized. This is followed by the same treatment options presented by Sun Simiao with details on ways to modify these prescriptions.

Cheng Wuji continues the discussion of huoluan in an essay from the Shanghan Mingli Lun, and begins by presenting two types of the condition:

傷寒吐利者 邪氣所傷 霍亂吐利者 飲食所傷也

In shanghan vomiting and diarrhea it is the pathogenic qi that is doing harm. In huoluan vomiting and diarrhea it is the food and drink that is doing harm.

Thus Cheng argues the shanghan (cold damage) pattern of this disorder is caused by external pathogens attacking the body leading to the symptoms detailed in earlier texts, whereas true huoluan is a food or water borne illness. Cheng may consider the former manifestation to be more virulent and result in higher mortality, whereas the latter may be a type of food poisoning that tends to be of shorter duration with higher recovery rates. This categorization also serves to reduce the myriad of causes described in other texts to just two basic mechanisms, with the pathogens of wind, cold, damp, and ghosts included in the first category, and dietary and lifestyle irregularities including the contaminated breast milk in the second. Similar to Chao Yuanfang, Cheng also identifies two subdivisions of this disorder:

病有乾霍亂 有濕霍亂 乾霍亂死者多 濕霍亂死者少

This disease has a gan huoluan (dry sudden turmoil) and a shi huoluan (damp sudden turmoil). Those that die from gan huoluan are many while those who die from shi huoluan are few.

Thus Cheng not only differentiates the dry from the damp, but adds a prognosis based on these symptoms. Indeed, if the vomiting and diarrhea led to severe dehydration during a
time when intravenous fluids could not be given to the patient this disease could easily be fatal. This simple statement speaks to knowledge that could only be gained through clinical experience, confirming that Cheng was not just engaged in abstract theoretical argumentation, but actually practiced medicine.

Cheng Wuji epitomizes the literati tradition of commenting on the classics. This was a long established practice among Confucian scholars extended to the realm of medical learning, and Cheng was instrumental in the preservation of the *Shanghan Lun* and the perpetuation of its strategies. Based on a careful analysis of both Cheng’s annotated edition and earlier works on the subject, it appears the *Shanghan Lun* was reconstructed from theories and formulas found in Tang dynasty compilations. Cheng identified himself as the successor to the late Northern Song movement begun by medical scholars like Pang Anshi, Zhu Gong, and Han Zhihe, which in part tried to integrate *wuxing* with *shanghan* theory. Cheng also engaged in a socio-political discourse with a play on the term *buren*, which refers both to physical numbness and moral insensitivity. Furthermore, because the Nansong represented the fire elemental-phase, a growing concern among Jin literati doctors was an excess of fire in the microcosmic body and the macrocosmic world, and this is already evident in Cheng’s works. A unique accomplishment of Cheng is how he built upon the *Shanghan Lun* to expand the field of tongue diagnosis, especially interpreting the tongue coating. Finally, Cheng contributed to the discussion on *huoluan* (sudden turmoil) by differentiating the categories of external environmental pathogens from a food or water borne illness and giving a poor prognosis to the dry type of the disease. *Huoluan* is symbolic of the struggle by Jin physicians to bring order out of chaos.

*Li Qingsi*

The *History of the Jin* includes a biography of another early Jin dynasty physician named Li Qingsi 李慶嗣 (fl.1150-1153) who lived in the Mingzhou 溥州 area between Hebei and Shandong provinces and was active during the reign of Hailing. It is said
that he lived for more than eighty years without any serious illness and according to his biography:

少舉進士不第 棄而學醫 讀 素問 諸書 洞曉其義
When he was young he failed the *jinshi* (advanced scholar) civil service examination so instead he studied medicine. He read the *Suwen* and various books, [and similar to] a break of light in a cave he [understood] their meaning. ¹³⁸

Given his dates of activity, locality, and membership in elite society by virtue of qualifying for the *jinshi* examination, it is likely Li Qingsi was in contact with Cheng Wuji. Although it is not known if Cheng also sat for the *jinshi*, he described himself as coming from a family of *ruyi* (Confucian physicians), which means at least some of his family passed the medical examination during the late Northern Song. This family history combined with his writings suggests he received the necessary education to qualify him as a member of elite society. Although the date of Li’s birth is unknown, he may also have been born in the north during the Northern Song and became a Jin subject following the redirection of the Yellow River in 1129. Both Li and Cheng were interested in the study of the cold damage tradition and although none of Li’s works are extant, his biography includes the titles of four of his books. ¹³⁹ Two of these were *Shanghan Zuanlei* 傷寒纂類 (Cold Damage Categorized & Compiled) in four *juan*, and the *Shanghan Lun* 傷寒論 (Treatise of Cold Damage) in three *juan*. Clearly the latter does not refer to the original treatise, so at least half of his texts were dedicated to the study of cold damage. Another of Li’s texts was the *Gaizheng Huoren Shu* 改證活人書 (Corrected & Confirmed Book on the Life of Man) in three *juan*, which from its title suggests he was building on the work of Zhu Gong who also wrote on the cold damage tradition during the Northern Song. His fourth book was the *Zhenjing* 針經 (Needling Classic) in one volume, which demonstrates that he was also interested in acupuncture. Again, the *Zhenjing* was also the original name of the *Huangdi Neijing Lingshu*, but given that Li’s text is limited to a single *juan* it was more likely a summary of the ideas Li deemed essential to practice.

Li’s biography also records one of his most celebrated acts of compassion, which was his response to a local epidemic. Although Chan Hok-lam (1992) found that an epidemic affected the workers who were constructing Hailing’s new capital at Yanjing
around the same time, the records of Li Qingsi suggest the problem he was responding to was much closer to his home:

天徳間歲大疫 廣平尤甚 貧者往往閑門臥病 慶嗣 携藥與米分遺之 全活者衆

During the Zhengda reign period (1150-1153), one year there was a great epidemic and in Guanping it was especially terrible. Those who were affected [by the epidemic] were frequently lying in sickness behind closed doors. Qingsi brought along medicine and rice and distributed them among the people. The lives he saved were numerous. 40

Although both Yanjing and Guanping were both located in Hebei province, the capital was farther north whereas Guangping was located just west of Mingzhou. It therefore is not clear whether this outbreak was either part of the same epidemic that spread across the province, two separate and isolated incidents, or the same incident whose location was misidentified. The reference to people “lying in sickness behind closed doors” suggests that a type of quarantine was in effect, since it would not otherwise be remarkable to find sick people at home in bed. Modern critics of Chinese medicine argue that the ignorance of microbial pathogens limited the clinical effectiveness of earlier doctors, but this allusion to the isolation of sick patients suggests otherwise. Although bacteria and viruses had not been identified, there was clearly a rudimentary understanding of infectious disease and how to control the spread of epidemics.

Had any of Li Qingsi’s texts survived he might have been considered for inclusion among the four great masters of the Jin dynasty. From extant records it is clear he was one of many literati doctors who was unable to achieve success in the jinshi examinations and turned to the study of medicine to find new opportunities to fulfill the Confucian goal of helping to bring order to the world. It is evident that Li was inspired by the same Northern Song scholars as Cheng Wuji and provided his own commentaries to the Shanghan Lun. Although the focus of Jin literati medical texts is internal medicine, Li’s short primer on acupuncture suggests it was gradually gaining acceptance among this peer group. Li’s biography also speaks to the efficiency of the government’s medical relief efforts in times of crisis, which used a combination of quarantine, herbal prescriptions, and food to relieve suffering and limit the spread of the epidemic.
Another literati physician who may have been called in to provide relief for victims of the epidemic of 1151-52 was Liu Wansu 刘完素 (c.1100-1200). Liu’s style name was Shouzhen 守真 (Guardian of Truth), and he was also called Hejian 河間 based on his place of origin in southern Hebei province, which was a region located midway between Yanjing and Mingzhou. The History of the Jin recounts a story about his early medical training:

嘗遇異人 陳先生 以酒飲守真大醉 及寤洞達醫術 若有授之者
乃撰 運氣要旨論 精要宣明論 劇庸或出妄説

Once [Liu Shouzhen] encountered an extraordinary person [called] Mister Chen who went drinking wine with Shouzhen and they became greatly intoxicated. When he awakened in a cave he had attained medical skill as though he had been instructed [by Mister Chen]. Afterwards [Shouzhen] compiled the Yunqi Shuazhi Lun (Treatise on the Essential Points of the Movement of Qi) and the Jingyao Xuanming Lun (Treatise on Essentials of Declared Enlightenment). [However, he] was considered to be a mediocre physician who put forth absurd explanations.

This story does not describe a Confucian upbringing like that of Cheng Wuji or Li Qingsi. However, it is known that Liu was a prolific writer and his ideas became profoundly influential on medical development both in his own time and for centuries afterward, despite being charged with mediocrity and absurdity by his biographers. Furthermore, late in his life he was invited to serve in the court of Zhangzong (r.1190-1209) as an official (Hoizey, D., & Hoizey, M.J., 1993; Gao Wei, 1994; Ding Guangdi, 1999). Like Cheng Wuji and perhaps Li Qingsi, Liu was born a subject of the Northern Song and then became a subject of Jin in 1129.

The first text referred to in his biography is no longer extant and the second may be a variation of a text with a similar title. Among the received texts by Liu, the one that is considered to be the earliest is the Shanghan Biaoben Xinfa Leicui 傷寒標本心法類萃 (Collection of Core Methods on the Manifestation & Root of Cold Damage), which may have been published around 1146 when Liu was about forty years old. Because the records for many Jin physicians are fragmentary, the exact dates of their births and deaths are often unknown. For Liu Wansu, the only text he wrote that is definitively dated was
published in 1166 when Liu refers to his more than sixty years of experience, thus his estimated birth date was around 1100, while the offer to serve Zhangzong suggests he was a centenarian. At the very end of the *Shanghan Biaoben Xinfa Leicui* Liu refers to his more than forty years of experience, thus 1146 is a reasonable estimate for when this book was written.

*Cold damage versus heat pathogens*

Liu begins his study of the *shanghan* tradition by describing the diversity of external pathogens, including: wind, cold, heat, and dampness, as well as combinations of these influences as found in other texts of the genre. Notably, he makes very few references to the six stages of *yin* and *yang* in his description of disease progression. Perhaps he was trying to distance himself from the majority of earlier literati authors, like Pang Anshi, Zhu Gong, Han Zhihe, and Cheng Wuji, who used this model extensively. Uniquely, Liu also adds an entry for *zhuanran* (contagious diseases), which further demonstrates that physicians of this time were well aware of the process of disease transmission among dense populations. Although the entry is brief, it encapsulates Liu’s foremost contribution to medical development: the treatment of diseases caused by heat:

凡傷寒疫癘之病 何以別之 蓋脈不浮者傳染也
設若以熱藥解表 不惟不解 其病反甚而危殆矣

As for the *shanghan* diseases of epidemics and plagues, how are they differentiated? In all cases when the pulse is not floating, it is a *zhuanran* (contagious disease). If one uses hot medicinals to resolve the exterior then not only will they not resolve [the disease], that disease will instead become worse and [the patient] will be in grave danger.

Here Liu is arguing that warming formulas that were meant to allopathically treat cold pathogens are not only ineffective for the treatment of epidemics and plagues, but will actually aggravate these diseases. Liu argues that these diseases are caused by heat. Although there are a variety of treatment options in the *Shanghan Lun* for both cold and heat conditions, Liu might have been reacting against a tendency to diagnosis infectious diseases as being cold in nature, or at least caused by cold pathogens and treated with warming formulas. Instead, Liu preferred the metaphor of contagious diseases spreading like fire.
When looking at this text in its entirety the preference for formulas that clear heat is undeniable. Of the two most commonly recommended formulas out of the sixty-eight he details, one of them isn’t even from the *Shanghan Lun*, nor is it related to any of its prescriptions. That formula is *Huanglian Jiedu Tang* 黃連解毒湯 (Coptis Resolve Toxicity Decoction). This prescription was first recorded in the *Waitai Miyao Fang* 外臺秘要方 (Secret Essential Prescriptions from an Official), which was compiled by Wang Tao 王燾 (c.752) during the Tang dynasty and published by the Northern Song in 1069, under a section entitled *Cuishi fang* 崔氏方 (prescriptions of Master Cui) for the initial stages of a *shanghan* disease. Interestingly, the original description of this formula includes a reference to Liu’s surname, which may also be understood as a noun referring to a type of battle-axe or as a verb meaning to slaughter or massacre the enemy:

又前軍督護劉車者 得時疾三日已汗解 因飲酒複劇 苦煩悶乾嘔 口燥呻吟 錯語 不得臥 余思作此黃連解毒湯方

In addition, the forward army defending Liu’s chariot obtained a seasonal disease. After three days the sweating stopped. Because they drank wine they made the condition more severe, and suffered with vexation, depression, dry retching, dry mouth, moaning and groaning, muttering, and an inability to lie down. So I got the idea to make this prescription: *Huanglian Jiedu Tang*. 146

Thus the invention of this formula appears to have happened on the battlefield with the goal of getting the army back into fighting shape. The formula henceforth invoked the image of warfare against disease and Liu Wansu’s extensive use elevated this formula’s importance among Jin literati doctors. This story also demonstrates how contagious diseases spread quickly through dense populations, such as an army. The *Waitai Miyao Fang* detailed the following ingredients and dosages:

**Wang Tao’s *Huanglian Jiedu Tang* 黃連解毒湯 (Coptis Resolve Toxicity Decoction):** 147

- *Huanglian* 黃連 (Coptis chinensis Franch., Rhizoma) 3 liang
- *Huangqin* 黃芩 (Scutellaria baicalensis Georgi., Radix) 2 liang
- *Huangbai* 黃檗 (Phellodendri Cortex) 2 liang
- *Zhizi* 梔子 (Gardenia jasminoides Ellis, Fructus) 14 pieces

Liu does not provide any details on the dosage of the four ingredients, but states that the patient should take 5 *qian* for each dose of the prepared decoction. 148 All four of these medicinals are considered cold in nature and are used to clear heat from all the regions...
and organs of the body. When combined, the decoction could be compared to a modern broad-spectrum antibiotic.

The other formula that Liu commonly used in this early text was *Sanyi Chengqi Tang* 三一承氣湯 (3 into 1 Order the Qi Decoction), 149 which is a simple combination of three of the *Chengqi Tang* 承氣湯 (Order the Qi Decoction) formulas found in the *Shanghan Lun* merged into one formula with five medicinals. This purgative to clear heat through the bowels was used as frequently as *Huanglian Jiedu Tang*, but was one of Liu’s own creations. Together these two formulas represent 25% of the total number of formulas recommended by Liu (62 out of 251).

The other formulas frequently recommended by Liu were either classical *Shanghan Lun* formulas or contemporary prescriptions. Liu’s third most commonly recommended formula was *Baihu Tang* 白虎湯 (White Tiger Decoction), another cold formula from the *Shanghan Lun* used to clear *yangming* heat. His fourth was *Liangge San* 涼隔散 (Cool the Diaphragm Powder), which as the name implies was also used to clear heat, but this formula was first recorded in the *Jufang* (Imperial Formulary). The fifth was *Wuling San* 五苓散 (Five Ingredient Poria Powder). Although this *Shanghan Lun* formula can be considered warming because of its inclusion of cinnamon twigs, Liu used it as a diuretic to clear heat through the urinary bladder. Among Liu’s other *Shanghan Lun* favorites were formulas used to both clear heat and harmonize *shaoyang* disorders; *Xiao Chaihu Tang* 小柴胡湯 (Minor Bupleurum Decoction) and *Da Chaihu Tang* 大柴胡湯 (Major Bupleurum Decoction). Therefore, Liu emphasized the use of heat clearing formulas from the *Shanghan Lun* over those that warmed and expelled cold.

Liu also commonly recommended *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction). The frequent use of formulas that include cinnamon twigs suggest that despite the hostilities between the north and south, medicinal trade routes remained open. Further notable is the dosage modifications by Liu in this ever popular formula:

**Liu Wansu’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction):**

- *Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus) 2 ½ qian
- *Shaoyao* 芍藥 (*Paeonia lactiflora* Pall., Radix) 2 ½ qian
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix) 2 ½ qian
- *Shengjiang* 生薑 (*Zingiber officinale* Rosc., Rhizoma) 3 slices
- *Dazao* 大枣 (*Ziziphus jujubae* Mill., Fructus) 1 piece
Just like Zhu Gong, Liu only includes the last two ingredients under the cooking directions and his further reductions in dosage suggest their importance was also being further minimized. However, proportionately they may have been reduced at roughly the same rate as the other ingredients, which are measured in the smaller unit of qian instead of liang. Nonetheless, later Jin physicians continue to reduce the importance of the ginger and jujubes in this classical prescription. Given that this is by far the most warming formula among Liu’s top ten, the lower dosages may have been due to his reluctance to add heat to the body. Liu was striving for a balance between inducing perspiration with warm medicinals and clearing heat.

Liu Wansu became renowned for his doctrine of clearing heat, but his perceptions of excess heat were not limited to the individual patient. Liu perceived imbalances within all under Heaven and his insistence that fire was in a state of perpetual excess speaks to the environmental and political situation in which he lived. In the conclusion to Shanghan Biaoben Xinfa Leicui, Liu argues for the importance of considering the cosmic influences in medicine:

萬物之生 人為最靈 四時有變兮 百疾兆生 欲辨陰陽之證 必明天地之情
Of the myriad things that are created, mankind is considered the most divine. The four seasons have their transformations and foretell the generation of the hundred diseases. If you desire to differentiate a diagnosis of yin and yang, one must be enlightened as to the condition of Heaven and Earth. 151

Fire, water, & social discourse

The second text written by Liu Wansu became one of his most influential contributions to medical discourse, despite being limited to only a single juan. The Suwen Xuanji Yuanbing Shi 素問玄機原病式 (The Suwen’s Profound Theories on the Origins of Disease Patterns) solidified his arguments regarding the imbalance of fire and water that characterizes the rest of his writings. His unrelenting insistence on the significance of this imbalance is most likely what earned him the criticism of “absurdity,” yet within the context of the political and environmental turmoil of the Jin, he could also be considered a genius. Liu’s biographers made a point of singling out this text for critique:
[Liu] also wrote the *Suwen Xuanji Yuanbing Shi*, wherein he revered 288 characters [of the original] and injected more than 20,000 words [of his own].

In a culture that revered classical learning, the relative lack of emphasis on the source text in his commentary may have troubled other literati who were not accustomed to such a forceful presentation of contemporary and challenging ideas. An extant edition of this text was published in 1186 (Hu G. & Song N., et al., Eds., 2006). However, there is no indication in the text itself regarding the first date of publication, and the 1186 version may have been a reprint of an earlier thesis after he had gained a sufficiently positive reputation to warrant the recirculation of his ideas among the literati. In fact, the tone of this text is one of heightened concern that better epitomizes the reign period of Hailing (1150-1161), rather than the relative stability of the subsequent reign period, which was the longest during the dynasty. Additionally, this text has the tone of youthful exuberance rather than mature deliberation.

The *History of the Jin* further describes Liu’s contribution to medicine based on *wuxing* cosmology:

然好用涼劑 以降心火益腎水 為主自號 通元處土
So it was that [Liu Wansu] was good at using cooling prescriptions in order to diminish the heart fire and benefit the kidney water. What governed these designations was the connection to the source location of earth.

The overarching theme of the *Suwen Xuanji Yuanbing Shi* is evident in its organization according to the doctrine of *wuyun liuqi* 五運六氣 (five elemental-movements and six climactic-energies). This was a phrase unique to chapter 71 of the *Huangdi Neijing Suwen* that was added by the Tang dynasty physician Wang Bing 王冰 (c.762) and focused on the importance of climactic influences and cosmic cycles. The specific interest in these apocryphal chapters may have been that they provided a form of legitimacy for Jin physicians to put forth their own theories and contribute to an evolving canon of medical literature. In other words, acceptance of these late additions into the Han medical canon generated a culture of acceptance of new interpretations of the classics. This created an intellectual environment that accepted and encouraged diversity and debate as opposed to a stifling orthodoxy.
Although there is no evidence Liu ever passed the highest level of the civil service examinations, he boldly asserts the place of literati physicians among society’s elite. In the opening lines of the preface, Liu first celebrates the mythological history of medicine:

夫醫教者 源自伏羲 流于神農 注于黃帝 行于萬世 合于無窮
本乎大道 法乎自然之理

Now as for those who teach medicine, the source [of their teaching] originated with Fuxi (r.2852-2737 BC), flowed through Shennong (r.2737-2697 BC), poured forth from Huangdi (r.2697-2597 BC), was transmitted through myriad generations, was integrated with the infinite, was rooted in the great dao, and the methods are consistent with the principles of the natural world.

According to the preface of a book by Kong Anguo: the books of Fuxi, Shennong, and Huangdi are called the three tomes [and contain] the words of the great dao (way or moral path). The books of Shaohao (r.2597-2513 BC), Zhuanxu (r.2513-2435 BC), Gaoxin (r.2435-2365 BC), Tang (r.2356-2255 BC), and Yu (r.2255-2205 BC), these are called the five canons [and contain] the words of the perpetual dao. That which surpasses the five canons, it is the branches of the three tomes, for in no case are they without the great dao. Still they embody the dao of enlightened zhi (governance, treatments) from generations. As for the three tomes, they are the rooted in the five canons, for in no case are they without the perpetual dao. Still they are considered to embody the great dao, and the perpetual dao serves as their usefulness. They are able to bring to completion the affairs of all under Heaven.

Thus Liu argues that not only is the classical medical canon (e.g., *Shennong Bencao, Huangdi Neijing*) rooted in the Confucian canon, it surpasses them because it developed means to promote health and longevity while embodying the great dao. As a result, they are able to bring to completion the affairs of all under Heaven. In a society so deeply rooted in Confucian thought, this was a bold and audacious claim. This may be why Liu uses Kong Anguo as an authority, since Kong’s transmission of the *Shangshu* 尚書 (Esteemed Book, c.500 BC) was challenged by later scholars as apocryphal, similar to Wang Bing’s additions to the *Suwen*. Jin literati appear to have been sympathetic towards these revisions of classical learning and used these precedents in support of their own
contributions. Also notable is that Liu was clearly aware of the sequence of sage rulers in China’s legendary early history who were referred to in the Kongzi Jiayu (Sayings from the Confucian School) by Wang Su 王肅 (195-256) 157 that was extensively cited by the Jin’s special councils when debating the dynasty’s wuxing powers in subsequent years. All of these rulers reigned during the period before the founding of the Xia dynasty, which suggests an early unnamed dynasty whose imperial succession followed the rule of primogeniture.

The reference to Kong Anguo is also intriguing on another level. Although he was an actual person, the importance of securing the state in Confucian thought cannot be overlooked. The term anguo 安國 (securing the state) appears together with the term zhengshen 正身 (rectifying the body) in identical passages found in the Liji 禮記 (Book of Rites), the Xunzi 荀子 (Book of Master Xun), and the Kongzi Jiayu:

安燕而不亂 此五行者 足以正身安國矣 彼國安而天下安
Secure Yan and there is no chaos. These wuxing (five elemental-phases) are sufficient to rectify the body and secure the state. When this state is secure then all under Heaven is secure. 158

In the original passage, Yan 燕 would have referred to the kingdom of Yan during the Zhou dynasty that occupied northern Hebei and Liaoning provinces. However, since Liu’s text may have been written while the new Jin central capital was either under construction or recently completed at Yanjing 燕京, he might have been making an allusion to these passages that equate the health of the body with the health of the state. If this is what he meant then Liu was engaged in the type of discourse characteristic of the literati; referencing the Confucian classics to make a statement about current events. Furthermore, Liu subsequently follows this reference up with a veiled commentary on the current political situation:

嗚呼 餘之醫教 自黃帝之後 二千五百有餘年 漢末之魏 有南陽太守張機
Alas! [There has been] a surplus of medical teachings since after Huangdi more than 2,500 years ago. During the Wei kingdom (221-265) at the end of the Han dynasty (206 BC-221) there was the Nanyang (Henan province) governor Zhang Ji Zhongjing, who provided relief to the lives of the people who often suffered from diseases of shanghan when destruction and harm overflowed from Heaven. 159
The dates for Zhang Zhongjing’s life are 142-220, which means he died right on the cusp of the Han’s dynastic fall and the rise of the *Sanguo* (Three Kingdoms) period (221-265). However, his governorship was not at Nanyang as Liu suggests, but at Changsha, such that literati doctors such as Cheng Wuji often referred to the purported author of the *Shanghan Lun* as Zhang Changsha. Changsha was in the southern region dominated by the Wu kingdom (222-280) and not in the north where the Wei kingdom ruled, which came to power under the notorious general Cao Cao (155-220). This general recruited the help of the Xiongnu (the nomadic tribes along the Han’s northern borders) and his son forced the final abdication of the last Han emperor. This historical period in many ways paralleled the socio-political turmoil that Liu Wansu grew up in, with the capturing of the north by the Jurchen who drove the Song court south to the region once ruled by the Wu kingdom. Therefore, Liu’s alternative history, which suggests this great master of the Han was loyal to the Wei kingdom, may have been an attempt by Liu to find or create an historical precedent for his own shift in loyalties to the new dynastic house.

Liu goes on to criticize the many practitioners who use the methods from the *Shanghan Lun* but fail to understand its deeper cosmological significance. He acknowledges the contributions of the late Northern Song authors whose commentaries and reorganization have helped to clarify the meaning of this classic, specifically mentioning Zhu Gong’s *Huoren Shu* (Book on the Life of Man) as an example, but he adds:

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然而其間亦有未合聖人之意者 往往但相肖而已 由未知陰陽變化之道
所謂木極似金 金極似火 火極似水 水極似土 土極似木者也
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However, among them are those who also have not pieced together the ideas of the sages, and frequently they only appear to mimic [the practice of a sage physician] and that is all. [This is] because they don’t understand *yin* and *yang* and the *dao* of transformational change. What they call wood being extreme appears as metal, metal being extreme appears as fire, fire being extreme appears as water, water being extreme appears as earth, and earth being extreme appears as wood.

In this case, the *wuxing* cycle described is the conquest sequence in reverse, and so Liu is arguing these mediocre doctors fail to grasp such an extreme imbalance upsetting the natural order. Liu goes on to compare the *Shanghan Lun* to the *Yijing* (Book of
Changes) by remarking how many authors have made commentaries but few have grasped its deeper meaning, often making mistakes based on their misunderstandings. Liu argues that the fundamental theories of Confucian cosmology should be the same for the Yijing, for the teachings of Confucius, as well as for medicine, because they are all based on the singular dao. 161 Therefore, although Liu may have been unaware of the philosophical trends being led by the Nansong scholar Zhu Xi 朱熹 (1130-1200) during his lifetime, a movement that led to the faction that self-identified as the daoxtue 道學 (learning of the Way), Liu was still part of the broader philosophical debates that began in the Northern Song and continued into the Jin. This further affirms Liu as a literati physician and member of the elite engaging in social discourse through his medical literature.

Although the structure of the Suwen Xuanji Yuanbing Shi is based on the wuyun liuqi doctrine, the emphasis remains on heat and fire. The first section of this text briefly discusses the wuyun in five short passages, all of which were drawn predominantly from the Wang Bing chapters of the Suwen. 162 The second section is much longer and discusses the liuqi in six subsections: feng 風 (wind), re 熱 (heat), shi 濕 (damp), huo 火 (fire), zao 燥 (dry), and han 寒 (cold). 163 Under heat there are 34 disease headings, some discussed at length. Damp covers 8 disease headings, fire has 22 that are also often discussed at length, dry has only 3, and cold has 9. Thus a total of 56 diseases (74%) discussed in this text are related to heat and fire, compared to 20 diseases (26%) for all other pathogens combined. However, there is an even more remarkable feature of Wang Bing and Liu’s list of the liuqi.

Anyone familiar with the medical classics and their discussions of exterior pathogens would have questioned the inclusion of fire. In the Huangdi Neijing, fire was first and foremost recognized as one of the five elemental-phases and a correspondence of yang, that served together with yin and the other elemental-phases as part of the classical cosmological paradigm that explained the principles of the universe. As a member of the wuxing, fire also had a physical correspondence in the natural world, thus the phrase ru huo zhi re 如火之熱 (resembling the heat of fire) was used in regards to inflammatory symptoms of a malarial illness. 164 But equating fire with the climactic influences directly responsible for causing sickness was an idea first introduced by Wang Bing in chapter 66 of the Neijing:
Cold, heat, dry, damp, wind, and fire; they are the yin and yang of Heaven; the three yin (taiyin, shaoyin, jueyin) and three yang (taiyang, shaoyang, yangming) above revere them. Wood, fire, earth, metal, water, and fire; they are the yin and yang of Earth; birth, growth, transformation, harvest, and storage below comply with them. This passage is actually quite strange despite its use of familiar phrases, especially the inclusion of fire among the climactic factors. This was a new idea that may have been an attempt to rectify the additional zangfu (solid & hollow organs) associated with the fire element, the xinbao 心包 (pericardium) and sanjiao 三焦 (three burners), with their own climactic influence distinct from the heart and small intestine. The pericardium had already been relegated to a lower status as evidenced by the common reference to the wuzang liufu 五臟六腑 (five solid & six hollow organs), so this may represent an intellectual revival of these systems. Even stranger is Wang Bing’s repetition of fire in the list of the now six elemental-phases. While some might discount this as a copying error, it appears again immediately following this section of the passage as if to reinforce for the reader that this was intentional. This might again be calling attention to the two zangfu pairs associated with fire and the need to rectify this with two fire phases. However, unlike the six stages of yin and yang (corresponding to the six pairs of solid & hollow organs) that are compared to the six climactic influences, when listing the processes that correspond with the wuxing on Earth, Wang still only lists five beginning with birth and ending with storage. Thus the need to include the extra fire phase remains incomplete and unexplained since he does not establish a parallel sixth Earthly correspondence. By highlighting these passages by Wang Bing, Liu justifies his conviction that there is an excess amount of fire causing disharmony in the world. Therefore, his arguments must be seen as applying equally to the individual patient as well as the environmental and political conditions within all under Heaven.

Sudden & emotional turmoil

Regarding Liu’s discussion of diseases under the category of heat in the Suwen Xuanji Yuanbing Shi, his essay on huoluan (sudden turmoil) is the first one that stands
out as important because of its length. While frequent outbreaks during the Jin of food and water borne illnesses causing acute vomiting and diarrhea might be one reason this condition received greater emphasis than most others, the political and environmental turmoil may also have contributed to this essay. While previous scholars like Cheng Wuji considered this to be a condition of the stomach and intestines, using the *Huangdi Neijing Suwen* and *Shanghan Lun* as their authority, Liu begins by emphasizing the role of the *sanjiao* 三焦 (three burners), which is also known as the hand *shaoyang* fire channel and one of the superfluous fire element organs:

三焦為水谷傳化之道路 熱氣甚則傳化失常 而吐下霍亂 火性燥動故也
The *sanjiao* is the pathway of the transmission and transformation of water and grains. If the hot *qi* is extreme then the transmission and transformation lose their regularity resulting in vomiting, diarrhea, and *huoluan* (sudden turmoil). This is because the nature of fire is dry and moving.

Moreover, Liu argued that *huoluan* was primarily due to excess heat, not cold as proposed in other classical texts and confirmed by their preference for warming formulas like *Lizhong Wan* (Order the Center Pill) for this disorder. Liu did consider that in some cases the condition could be caused by cold, but added that in these cases the pulse will be deep, thin and slow, whereas in heat conditions the pulse is excess, big, and rapid. Additionally, he considers the following:

或損氣亡液過極 則脈亦不能實數 而反弱緩 雖爾 亦為熱矣
Perhaps if the decrease in *qi* and loss of fluids is excessive then the pulse is also unable to be excessive and fast, but is the opposite, weak and sluggish. Although it is thus, it is also considered heat.

Thus he cautions that when unremitting vomiting and diarrhea due to heat leads to dehydration, the pulse will no longer exhibit the same qualities of excess and can be easily mistaken as an indication of cold or deficiency. These kinds of astute observations support the argument that Liu was actively engaged in medical practice and was willing to modify accepted doctrines to match the clinical realities he encountered, especially in cases like this where the pulse could lead a novice to make an incorrect diagnosis and do harm to the patient with an inappropriate treatment.
Liu also carefully considers the colors of the diarrhea and applies *wuxing* theory to explain the differences. He begins by detailing what appears to be the most common presentation in his clinical experience:

利色青者  肝木之色  由火甚制金  使金不能平木  則肝自甚  故青色也
If the color of the diarrhea is green, which is the color of the liver wood, it means the fire is extreme and controls metal, which causes metal to be unable to harmonize wood, and then the liver becomes extreme, therefore the color is green.

Green stools could indicate rapid transport of bile, which is produced by the liver and excreted through the gall bladder into the intestines, with insufficient time to be transformed by digestion. In sudden turmoil disorder, the rapid motility of acute diarrhea through the bowels (metal corresponds to the large intestine) could cause green diarrhea. Although the language is metaphorical the physiology is sound. For this condition, Liu recommends *Da Chengqi Tang* 大承氣湯 (Major Order the Qi Decoction) from the *Shanghan Lun* to purge the bowels of heat.

He adds if the diarrhea is yellow it is due to heat in the spleen, and if red then heat from heart fire. He also adds if the diarrhea is black it is due to the heat being extreme but does not suggest any kidney involvement. Yellow stools can be due to decreased pancreatic enzymes and the functions of the pancreas are subsumed under the spleen in Chinese medical theory. Red or black in the stools would indicate bleeding in the lower or upper gastro-intestinal system, respectively, and Chinese medicine asserts that heat in the heart can be transferred directly into the blood causing reckless movement and extravasation. Liu asserts:

大便不黑者易治  黑則難治也
If the stools are not black then it is easy to treat.  
If [the stools] are black it is difficult to treat.

Bleeding in the stomach or intestines would certainly indicate a more severe condition, so once again Liu’s observations are sound and are evidence of actual clinical experience and not just theoretical conjecture.

Finally, Liu suggests that physicians should consider the role of the *renmai* 任脈 (conception vessel) in *huoluan* because it traverses the center of the body from its origins in the lower abdomen to the tongue, and the *daimai* 帶脈 (girdle vessel) because it
encircles the waist. 171 He thus attempts to integrate the theories of the jingluo 經絡 (channels & collaterals) into his internal diagnoses, something absent from any earlier discussion on huoluan. After recommending a variety of cooling medicinals, Liu spends the remainder of the essay stressing the role of the spleen and stomach over the kidneys regarding the formation and elimination of pathological dampness associated with this disease. 172 In conclusion, Liu advanced the study of huoluan by considering the role of heat and fire, cautioning against misinterpreting the pulse of a dehydrated patient, providing explanations on the different colors of excrement and using this information to make a prognosis, considering the role of various acupuncture channels, and finally stressing the role of the earth element and dampness in this disorder.

Another important theme of both the Jin period more generally and diseases in the category of heat in Liu’s text more specifically are the emotions. As this text transitions from physical to psychological conditions, Liu discusses the topic of zhanli 戰慄 (trembling with fear, violent trembling) at length. 173 This term only appears once in the Huangdi Neijing, which was in chapter 71 of the Suwen added by Wang Bing as a symptom of a shaoyin disorder, and also once in the Shanghan Lun. 174 This term also appears in other early classical literature, including in the repetitive form of zhanzhan lili 戰戰慄慄, 175 which describes the fear that grips one when faced with the violence of zhan 戰 (warfare). Liu describes this type of trembling as being due to an imbalance of fire and water:

此由心火熱甚　亢極而戰　反兼水化制之  故寒慄也　然寒慄者　由火甚似水
The reason for this [zhanli] is the heart fire and heat are extreme. Due to this utmost extreme there is a battle. Opposing this at the same time is water, which changes and regulates it and therefore there is cold trembling. Thus as for cold trembling, it is due to fire being extreme and surpassing water. 176

According to Liu, the water is trying to control the fire, but because the fire is too strong it is unable to be conquered and continues to cause the imbalance. To overcome the disease, one needs to overcome the fear of battle and allow the water to finally extinguish the fire. If one considers that fire is a metaphor for the Nansong and water is the Jin, then the problem is rooted in the battle between these two forces. Liu goes on to suggest that it is fear that is holding back the resolution of the disease:
Perhaps if ordinary people have extreme fear and there is zhanli, this is due to fear serving as the kidney’s ambition, and if this ambition is excessive then toil damages the root of the zang (solid organs). Therefore if there is fear then it damages the kidneys, and if the kidney water declines then the heart fire becomes extreme and the result is zhanli. 177

In a subsequent section on gan 感 (emotions), Liu makes essentially the same argument as he did for zhanli by returning to the fire and water imbalance:

If one doubts their feelings and hesitates, there is turbid chaos and the ambition is not united. The appearance of fire is jagged and its emotions are chaotic. Therefore if fire is excessive then water declines and one loses their ambition and the emotions are chaotic. 178

From there Liu turns to the emotion of sadness, which he notes is associated with metal and the lung, although he begins by describing the emotional correspondences of the five zang (solid organs): liver-anger, heart-joy, lung-sadness, spleen-consternation, and kidney-fear. However, he then references the seven emotions listed in the Liji (Book of Rites), 179 which provides an even greater authority to the debate on the role of emotions in health for the literati. Of course, Liu still maintained they are all due to heat:

Ordinarily that which damages all of the five ambitions is heat. It is like the six desires, [which originate from] the eyes, ears, nose, tongue, body, and thoughts. [Or it is like] the seven emotions of happiness, anger, sorrow, fear, love, hate, and desire. If there is damage by the emotions then each is categorized as fire and heat. 180

In addition to considering that Liu Wansu was arguing for an excess of fire due to the Nansong dynasty, or just an excess of fire and heat in the body, there is still the third possibility for his unwavering focus on not just fire, but specifically heart fire. The character for heart in Chinese is xin 心, which has the simultaneous meaning of the mind. The heart in Chinese medicine also houses the shen 神 (spirit), which is akin to concept of a soul in Western thought. An excess of xinhuo 心火 (heart fire) is characterized by agitation, vexation, incessant thoughts and speech, anxiety, and even mania. Liu may
have also been arguing that the mind and emotions can disturb the spirit causing all of the various organ systems to lose harmony and become diseased. Therefore this uncontrolled fire of the mind is the root of all human suffering. Just as force always follows the path of least resistance, the mental pathologies manifest in different places on different people, each according to their vulnerabilities and their \( jing \) (reproductive essence, genetic inheritance). Thus Liu was an early proponent of the Confucian \( xinxue \) (school of the mind) later popularized by Wang Yangming 王陽明 (1472-1529).

As a final example of Liu’s doctrine, there is a discussion of \( long \) 聾 (deafness) under the section on diseases associated with fire. This passage is one of the longest discussions under any of the disease headings under one of the longest subsections, and therefore must have been especially important to Liu and perhaps he thought others should listen closely to what he had to say on the matter. The character for deafness is composed of the phonetic element \( long \) 龍 (dragon) perched atop an \( er \) 耳 (ear). The dragon has always been associated with the emperor and is a symbol of imperial power. Because the image is of a dragon blocking the ear’s ability to hear, restoring health requires the dragon be removed from his seat. The core of Liu’s doctrine is that the fire elemental-phase tends to be excessive while the water element tends to be deficient, and since according to the conquering cycle of the elements water is supposed to overcome fire, this imbalance is at the root of many diseases. Thus in his discussion of deafness Liu argues:

夫豈知水火之陰陽 心腎之寒熱 榮衛之盛衰 猶權衡也 一上則必一下 是故高者抑之 下者舉之 此平治之道也

So how is it possible to know the \( yin \) and \( yang \) of water and fire, the cold and heat of the heart and kidney, the flourishing and defending of the vigorous and decrepit, and still weigh the advantages and disadvantages? If there is one above then there must also be one below, and the reason is that which is high represses the other, and that which is below rises up against the other. This is the \( dao \) of harmonious treatment (or governance).

Since the context is medical, the use of the character \( zhi \) 治 is usually translated as “treatment,” but the same character is commonly used in the Confucian context as “governance” or the ordering of all under Heaven. Thus Liu could be alluding here to the inevitable decline of one dynasty and the rise of the next according to the conquering cycle of the \( wuxing \). Later in the same passage he continues:
Thus the dao of treating disease is to drain the excess and tonify the decrepit and there will be harmony thereafter. Perhaps this is called diseases of heat being fire excess and water deficiency. Paradoxically it is said when kidney deficiency is considered cold, the heart-mind is confused as to the correct principle, it doesn’t dare use the correct diagnosis and cold medicinals. Mistakenly using food before taking medicine they are assisting the yang hot medicinals. What they want is to command the lower section of water to victory and the retreat of the upper jiao heart fire.

Although this lengthy rant falls under the topic of deafness it appears he is expounding upon a fundamental truth that he believes explains many things. This argument is repeated so frequently in various forms throughout the text that one must consider that he also saw this principle applicable to the political and environmental crisis faced by the Jin. It appears that Liu wanted the Jin to command their armies to victory over the Nansong, defeating the excess fire and restoring order to all under Heaven.

Liu Wansu repeatedly asserted that the most insidious elemental imbalance was an excess of fire and a deficiency of water. Early in his literary career he participated in the movement begun during the late Northern Song and perpetuated by Cheng Wuji and Li Qingsi of commenting on the Shanghan Lun. Liu’s contribution to the cold damage tradition included a discussion of contagious diseases caused by fire or heat, and the integration of Huanglian Jiedu Tang, a classical formula to clear toxic heat, to the arsenal of Shanghan Lun and other more contemporary prescriptions. In Liu’s earliest commentary on the Huangdi Neijing Suwen, he embraced the wuyun liuqi doctrine expounded upon by Wang Bing (c.762) in the chapters he added to this seminal classic, citing specific passages to support his contention of excess fire and deficient water. These apocryphal chapters generated a culture of acceptance towards new interpretations of the classics by literati doctors, and encouraged diversity and debate rather than rigid adherence to orthodoxy. Liu even argued that the medical canon rivaled the Confucian canon in its ability to propagate the dao and promote enlightenment, engaging in a socio-political discourse through literary allusions to these classics. Liu contributed to the discussion of huoluan (sudden turmoil) in several ways and he further emphasized the significance of emotional turmoil in causing various diseases due to excess heart-mind fire and deficiency of the water phase. From Liu’s discourse it is evident that he was a
loyal subject who believed the Jin had secured the mandate of Heaven after conquering the Northern Song, but considered the continued existence of the Nansong a threat to Jin legitimacy.

Chapter summary

The fire phase (1135-1161) of the Jin dynasty corresponds to the period of empire building when Xizong and Hailing worked to secure the southern border and bring order and administration to a territory that stretched from the Jurchen homeland to the Central Plains. During this phase, Xizong tried and Hailing succeeded in moving the central capital south to Yanjing, the new center of the vast Jin empire with the other four capitals in the north, south, east, and west, arranged in accordance with wuxing doctrine. Hailing especially was a strong proponent of literati learning and expanded the still limited opportunities for civil service. The Jin continued to offer not only the standard examinations leading to the jinshi degree, but also maintained tracks in military, astrological, and medical studies, which further encouraged literati to become engaged in medicine as an alternative to government service. Because the triennial medical examinations were open to the public it provided literati doctors with opportunities to become teachers, just as jinshi degree holders who could not secure an official post became teachers of Confucian learning. This in turn supported a publication industry. Meanwhile, the climate continued to challenge the security of the Jin. It generated a great heat wave that scorched the empire in 1142 followed by droughts, and then a huge destructive storm signaled to the people that the deranged Xizong had lost the mandate to rule leading to the coup in 1150 by Hailing. Hailing’s own reign was subsequently threatened by environmental disasters and his failed campaign to conquer the Nansong in the south led to his demise.

The early Jin literati physicians Cheng Wuji, Li Qingsi, and Liu Wansu, all engaged in the study of the Shanghan Lun. This text was the closest example of an orthodox style of medical practice among literati doctors of the late Northern Song and early Jin who provided their own analysis and commentary. Among the thousands of
formulas found in the various classics promulgated by the Northern Song’s Bureau for
Revising Medical Texts, scholar physicians focused on a limited number of prescriptions
from this treatise that they identified as being the most efficacious and appropriate for
integration into the Confucian cosmological paradigm as applied to medicine. Liu
Wansu’s study of the *Huangdi Neijing Suwen* focused on the *wuyun liuqi* doctrine from
the apocryphal chapters inserted by Wang Bing during the Tang dynasty to what was
supposed to be a Han dynasty classic, which served the dual purpose of supporting his
theory of excess fire while granting literati the authority to make substantive changes or
additions to the field of medicine. The extant medical literature from the early Jin further
evidences an embedded socio-political discourse on the legitimacy of the Jin and the need
to subdue the Nansong.
CHAPTER 3
EARTH, 1161-1209

The elemental-phase of earth corresponds to long summer, to transformation and maturation, to the central direction, and to the long period of relative stability in the middle of a dynasty. Yellow is the color of the earth phase and the appearance of the yellow dragon that announced the ascension of Shizong 世宗 (r.1161-1189) and the start of his singular reign period Dading 大定 (Great Certainty) of 28 years, the longest of all the Jin emperors, marked the beginning of this phase. ¹

Like others before him, Shizong underwent a classical Chinese education under the tutelage of his mother, but he was also encouraged to embrace his Jurchen heritage from his father. Early in his reign, Shizong continued to receive tribute missions from Gaoli 高麗 and Xixia 西夏, but the political situation with the Nansong 南宋 remained tense for several years. ² Eventually, after Xiaozong 孝宗 (r.1163-1190) succeeded Gaozong as the ruler of the south, Hailing’s military failure and subsequent death were sufficient to appease the southerners for his breach of the peace. As a condition of the 1165 peace agreement, it was reiterated to the Nansong that in all official writings the character da 大 (great) must always proceed Jin 金 (the Jin dynasty) and must never appear before Song 宋 (the [Nan]song dynasty). ³ Thereafter, the Huai River border was restored and the south continued their annual payments to the Jin of 250,000 units of silver and silk. Gradually the economy recovered, and the Jin even received tribute missions in 1172 from the Huihe 回纥 (Uighur) kingdom, which controlled the overland trade routes in the far west. ⁴ Shizong continued to enjoy recognition of Jin suzerainty by the surrounding tributary states throughout his long reign.

The strength of the Jin economy is difficult to measure. This is due in part to the regular tribute they received from their neighbors that may have mitigated any domestic shortfalls. However, the tributary relationship had traditionally been one whereby the center was able to demonstrate its wealth and power to tribute states in return for recognition of suzerainty, which often meant giving back more material wealth than they received. In this capacity, the Jin may have served as a conduit to funnel the surplus wealth of the Nansong to the smaller states of Gaoli, Xixia, and Huihe. Tribute missions
also opened up opportunities for private trade, which took place primarily along the borders.

The economic historian Richard Von Glahn (2010) found that the Jin was the first Chinese dynasty to attempt a shift exclusively to paper currency. During the mass exodus from the Central Plains to the south during the Jin conquest, most of the bronze coins were removed from circulation. Lacking copper mines in the north, the Jin never minted their own bronze coins. Later in the dynasty, as the climate wreaked havoc on grain supplies leading to war on three fronts, the value of Jin paper currency deflated and silver replaced paper as the preferred currency; the Jin even minted a silver coin for six years (1194-1200) (see figure 9). However, foreign silver may not have been a significant contributor to the overall Jin economy. Von Glahn (1996) argues against the conventional wisdom that the fall of the Ming was due to a sharp decline in silver imports to an economy that had become dependent upon foreign silver for growth. He instead found that decline in the indigenous demand for silver had been determined by a catastrophic famine that decreased the supply of grain leading to price inflation, stagnating the economy. When the Jin was facing a similar crisis, it issued a new paper note backed by the government’s substantial silver reserves in 1217, and again in 1233, trying desperately to prop up the collapsing socio-economic structure. Von Glahn further argues that this silver backed paper currency was a catalyst for the silver based economy of late imperial China, making the Jin an important factor in Chinese economic history.

Shizong’s reign remained troubled by environmental disturbances. In the third month of 1163, there was another plague of locusts in the fields surrounding Yanjing; in the third month of 1164, there was an earthquake at the capital; in the seventh month, a huge storm uprooted trees; and in the eighth month, locusts returned to the capital. The next year an attempt was made to appease the imperial ancestors with an offering:

河南府进芝草十三本得於芝田 石上薦之太廟
[In the sixth month of 1165] in Henan prefecture, [Shizong] was presented thirteen caps of zhicao (ganoderma fungus) that were obtained from a ganoderma field and offered them up on a stone as a sacrifice at the imperial shrines.
The *Daguan Bencao* (Materia Medica of the Daguan Era, 1108) includes the six different types of ganoderma fungus that were first described in the *Shennong Bencao* (Divine Farmer’s Materia Medica, c.100) and differentiated by color: red, black, green, white, yellow, and purple. Notably the first five colors correspond to the *wuxing* while the sixth, also known as *lingzhi* (Ganoderma lucidum, Curtis) P.Karst., Sclerotium, or in Japan as the Reishi mushroom, was the preferred variety. The reason for using this medicinal as a sacrifice to the imperial ancestors is made clear in the following two passages quoted in the *Daguan Bencao*:

論衡云 芝生於土 土氣和 故芝草生
瑞命記曰 王者仁慈 則芝草生是也
The *Lunheng* (Measured Discussions, c.80) says: ganoderma grows from the earth and earth *qi* is harmonious. Therefore, ganoderma fungus grows.
The *Ruiming Ji* (Auspicious Mandate Record) says: if kings are honest and kind then ganoderma will grow.

Thus it was with the intent of recognizing Shizong’s benevolence and securing good fortune and longevity for the Jin that these medicinals were presented at the imperial shrines.

At least initially this effort to pacify the cosmic forces failed, for later that same month the following occurred:

京師地震 有聲自西北來 殷殷如雷 地生白毛
[In the sixth month of 1165,] the capital region had an earthquake, there was a sound that came from the northwest, rolling like thunder, and the earth grew white hair.

What was meant by the earth growing white hair? This may have been the result of a volcanic eruption that blanketed the earth with white ash following an earthquake. This correlation between seismic activity and hair growth is repeated in subsequent events. However, later in this middle period the hair grows back without references to any earthquakes. Another possibility is some type of fungal disease that infected plants and agricultural crops across a wide area. As fungal diseases like damp conditions this would also correspond to the earth phase. Whatever this “hair” was, it was clearly troubling to officials. Even more troubling was the instability of the earth. In the seventh month of 1165, there was another earthquake and then in the eleventh month a thick fog turned the day into night, further describing a damp climate. The environmental troubles continued
in 1167 with another earthquake and in 1168 a huge storm swept across East Asia from the north bringing high winds, rain, and hail. Still none of this was sufficient to prevent Shizong from maintaining relative peace and prosperity during his reign and promoting literati culture.

While the Jin enjoyed relative political stability there was unrest in the south. Many Nansong officials were displeased with the current state of affairs and what they perceived as the humiliating terms of the peace treaty with the Da Jin (Great Jin dynasty). In 1167 the Nansong official Hong Mai 洪邁 (1123-1202) asked Xiaozong to order the retired official Sun Di 孫覿 (1081-1169) to assist in the compilation of the Veritable Records of the last Northern Song emperor, probably because it was Sun who wrote the “declaration of submission” demanded by the Jin at Bianjing and signed by Qinzong in 1126. Charles Hartman (2003) argues Sun was being set up as a scapegoat for the torrent of criticisms that would result from an even remotely factual account of events. Sun had to cope with not only the loss of court records following their expulsion by the Jin, but also the politically sensitive fact that both he and the retired emperor Gaozong (d.1187) were directly involved in the events leading to the downfall of the Northern Song. Indeed, Sun was subsequently criticized by Zhu Xi 朱熹 (1130-1200) as a moral degenerate who was complicit in the loss of the Central Plains. However, Hartman also argues that Zhu Xi constructed this revisionist history to serve his own political goals.

Southerners used the same cosmological paradigm to determine legitimacy as the Jin, which gave them serious concerns about their own fate since they no longer occupied the center. In an 1169 petition to Xiaozong, Chen Liang 陳亮 (1143-94), a staunch member of the war faction, urged military preparedness and proposed a strategic plan for another northern campaign to expel the Jurchen invaders and restore order to the center. Chen memorialized on the matter again in 1178 and 1188, but could not generate enough support to put his plan into action. Hoyt C. Tillman (1979) underscores how Chen was criticized for his concern over the guo (state) rather than the broader concept of Tianxia (all under Heaven) and his emphasis on the unique qualities of the qi (energy) of the Central Plains that produced Confucian civilization. Chen equated zhongguo (the central state) with zhengqi (upright or anti-pathogenic energy) and the endowment of the Tianming (mandate of Heaven), which he contrasted with
the *xiaqi* (evil or pathogenic energy) of the barbarians on the periphery. Thus Chen used a metaphor that was familiar to government officials as well as literati physicians.

Shizong has been credited with a revival of Jurchen culture. Critics of his efforts suggest that he was primarily concerned with the increasing assimilation that threatened to eliminate any remaining vestiges of Jurchen culture; however, the evidence shows he made no effort to reverse this trend. Instead Shizong sought to revitalize the dynasty by encouraging both Jurchen and Chinese culture in order to ensure his mandate to rule over the Central Plains continued at a time when that mandate was being challenged by cosmological forces. In addition to promoting Jurchen culture among the Chinese, Shizong promoted Chinese culture among his tribesmen by sponsoring the translation of the Confucian classics into the Jurchen language. In 1168 he was spurred into action once again by rejecting the advice of the controversial official Ma Guizhong (fl. 1150-1168):

In 1168, Shizong was playing *jiqu* (a martial sport using a ball) in the Changwu Dian (Hall of Perpetual Martial-Spirit) when Guizhong presented a memorial remonstrating [the emperor] saying: your majesty governs all under Heaven, guards the ancestral shrines, and is important for all the gods and deities. Circle hunting and playing sports are both dangerous activities. The other day the crown prince fell off a horse [and died]. This can be considered an admonishment but your servant hopes this is the beginning of the end of it.  

Ma was reasonably concerned that the emperor would fall off his horse like the crown prince and be seriously injured or killed. According to Chinese traditions, Ma thought he should stop engaging in such risky behavior and focus on his regal duties and daily rituals. However, as the leader of the mighty Jurchen warriors it was essential for Shizong to demonstrate his martial vigor to maintain the loyalty of both his court and the military to prevent any grab for power. This explains Shizong’s response:

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Shizong’s explicit dedication to the fundamental marital spirit of the Jurchen people likely gained him the confidence of his subjects, quieted any discontent over his support for Confucian learning, and thereby helped to ensure a long and unchallenged tenure on the throne.

Shizong may have hoped that by reinvigorating the Jin’s marital spirit it would help to appease Heaven and the Jurchen ancestors, bringing tranquility to all under Heaven. It did not, for in 1171 another storm ravaged the southwest:

雨雹三十餘里 小者如鷄卵 其一最大廣三尺 長丈餘 四五日始消
[In the sixth month of 1171.] there was rain and hail for more than 30 miles. [As for the pieces of hail,] the small ones resembled chicken eggs while the largest were as wide as three feet and as long as ten feet or more and only after four of five days did they begin to melt away. 13

In the third month of 1172, after this incredible storm with gigantic chunks of ice falling to the earth, it “rained dirt,” which likely describes a severe dust storm. This was followed by the outbreak of some unknown but deadly disease, and the next month there was a drought. 14 Shizong must have thought he needed to shore up his mandate, so in the fourth month of 1174 he issued the following decree:

顧謂皇太子及諸王曰 聿思先朝所行之事 未嘗暫忘 故時聽此詞 亦欲令汝輩知之 汝輩自幼惟習漢人風俗 不知女真純實之風 至於文字語言 或不通曉 是忘本也 汝輩當體朕意 至於子孫 亦當遵朕教誨也
[Shizong] addressed the crown prince and various kings and said: we consider for the first time that the court has duties of behavior and we must not even for a moment forget this. Therefore, it is time to listen to these words and I also want to order your generation to understand this. Your generation has since childhood only practiced the customs of the Han people, and are unaware of the Jurchen custom of *chunshi* (purity & honesty, frugality). As for writing and speaking, perhaps you are not proficient or have forgotten your native language. Your generation must solidify our ideas and as for your sons and grandsons, they also must comply with our teachings sincerely. 15

That same month he ordered that songs must be sung in the Jurchen language and the following month he forbid the Jurchen people from taking a Han surname.

These edicts promoting Jurchen culture have often been pointed to as examples of nativism by Shizong. If this were indeed the case, there is no record of the efficacy of Shizong’s efforts, which casts doubt on whether such nativism took place. Moreover, support for “Jurchen customs” does not negate his support for “Han customs.” These
edicts more clearly demonstrate that Shizong seriously considered the environmental
catastrophes to be a reflection of his moral identity and a challenge to his mandate to rule.
Shizong’s efforts to revitalize his native culture appear to have had an influence over the
Heavens, for later that same year there was another dragon sighting:

白龍見於御帳之東小港中 既而乘雷雲而上 尾猶曳地 良久北去
[In the eighth month of 1174], a white dragon appeared in a small harbor to the
east of the imperial tent. Having made its appearance it rode the thunder clouds
and ascended. It was as if its tail was dragged across the earth for a long time as it
moved off to the north. 16

The tail that dragged across the earth from a dragon riding the thunder clouds is clearly a
description of a tornado. The fact that it rode past the imperial quarters and headed
toward the Jurchen homelands with no mention of any loss of life or destruction of
property, coupled with it being a white dragon, the Jin imperial color, all suggest this
dragon was an auspicious sign. Unfortunately the good luck only lasted for two years.

During this interim, Shizong gave imperial recognition to a physician named Ji
Tianxi 紀天錫 (fl.1161-1189) from Tai’an 泰安 (Shandong province). He was styled
Qiqing 齊卿, which means “equal to a high-ranking official,” indicating both his
aspirations and frustrations regarding his inability to achieve an official post. The History
of the Jin provides only a brief biography, but states that Ji abandoned his jinshi 進士
(advanced scholar) aspirations and decided to study medicine. 17 Although no text of his
is extant, he was known to have collected annotations to the Nanjing (Classic of
Difficulties) that were used by Hua Shou 滑壽 (c.1300-1360) during the Yuan dynasty
when the latter composed his Nanjing Benyi 難經本義 (Genuine Meaning of the Classic
of Difficulties) in 1341. 18 Only a few examples of Ji’s work were retained, but the
following commentary to the 53rd difficulty evidences the trend during the Jin for using
wuxing theory as an explanatory model:

紀氏云 心火傳肺金 肺金傳肝木 肝木傳脾土 脾土傳腎水 腎水傳心火
心火受水之傳一也 肺金複受火之傳再也 自心而始 以次相傳 至肺之再
是七傳也 故七傳死者 一藏不受再傷也
Master Ji [Tianxi] said: heart-fire transfers to lung-metal, lung-metal transfers to
liver-wood, liver-wood transfers to spleen-earth, spleen-earth transfers to kidney-
water, and kidney-water transfers to heart-fire. When heart-fire receives the
transmission from water this is one [more transfer, or the sixth], and then lung-
metal again receives another transfer from fire. Since it begins with the heart and then transfers to each in succession, when it reaches the lung again this makes seven transfers. Therefore, seven transfers leads to death, for a single organ cannot repeatedly receive the damage. 19

Ji elucidates the conquest sequence, highlighting that the problem of seven transfers is due to fire repeatedly damaging metal. Like other Jin physicians, Ji appears concerned that the fire of the Nansong was threatening the metal of Jin. In 1175, Shizong bestowed on him the title Yixue Boshi 醫學博士 (Erudite Scholar of Medical Studies). 20 It is not known exactly what so impressed the emperor about this physician. However, a few years earlier in 1172 there is a record of an illness that appeared suddenly one morning, but was relieved by that evening. Perhaps Ji was thought to have been responsible for containing this crisis, which would explain this honor.

The remainder of Shizong’s reign was plagued by natural disasters, 21 a time when according to Zhang, et.al., (2007) East Asia was in the middle of a warming phase (1153-1193). Although only the cooling phases were correlated with warfare, the warming phases were still calamitous for the Jin. In the third month of 1176 following a rain, the beans in one region suddenly turned red and acquired an extremely bitter taste. This may have been due to high acidity in the rainfall indicative of further volcanic activity spewing poisonous gas into the atmosphere. This was followed in the same year by widespread drought and locust infestation, which impacted nearly every province of the Jin. The next year, heavy rains caused rivers to overflow their banks and burst their dikes, marking a violent environmental swing from not enough rain to too much. In 1180, following a fire at the Taining Gong 太寧宮 (Great Tranquility Temple), there was another earthquake near the capital and this time the earth grew black and white hair. This could have been more volcanic ash, but some fungi are black, so this might again refer to some type of fungal disease infecting the landscape. That same year also experienced a drought. In the first month of 1183 at Guanle Yuan 廣樂園 (Park of Widespread Joy), a lantern accidentally set the mountain ablaze, and the recent droughts would have made the dried vegetation on the mountains perfect fuel for wildfires. This was followed by what was described as a miasmatic dust-cloud that rained dirt for two months, and then in the fifth month there was rain, hail, and once more the earth grew white hair. In 1184 the weather suddenly turned so cold that all tribute missions were cancelled to prevent unnecessary hardship. In 1186 a river burst and destroyed much of
the city of Weizhou (Henan) and then in 1189 the earth again grew white hair and the rivers again overflowed. During that winter when Shizong became ill and died there was no snow.

The Chinese literati benefited from the initiatives of Shizong and his successor in support of Confucian civilization. For example, Peter K. Bol (1987) found that in 1166 Shizong established the Taixue 太學 (Imperial College), added seventeen fuxue 府學 (prefectural schools) in 1176, and added sixty more prefectural schools in 1189, just before his death. This commitment to Confucian education and the examination system must have satisfied many literati and opened up pathways for advancement. Shizong also reformed the civil service examination to emphasize classical Confucian learning, which surely pleased Chinese conservatives. Jingshen Tao (1970) found that following these policies there was an increasing number of graduates recruited into office, and Bol found the most jinshi degrees were granted in the years 1197 (925 graduates), and 1215 (800 graduates). Tao (1974) argues that the Jin’s political recruitment policies were more flexible in comparison to the rigidity of the Liao, hoping to channel talented Han and Jurchen into government posts through a diversity of social institutions, including the civil service examinations, privilege, hereditary selection, and transfer from the military to the civil service. For these and other reasons, the period around Shizong’s reign has been identified as the start of the “High Jin” (Chan, H., 1984; Bol, P.K., 1987; Tillman, H.C., 1995). According to Bol (1995), a key figure in this revival was the scholar official Zhao Bingwen 趙秉文 (1159-1232), who took inspiration from both Su Shi 蘇軾 (1036-1101), organizing his ideas around wen 文 (literary culture), as well as from Cheng Yi 程頤 (1033-1107), expounding on the concept of li 理 (principle) to explain the structure and function of the world. Zhao was the author of the Xianxian Laoren Fushui Wenji 閑閑老人滏水文集 (Collected Works of the Leisurely Old Man Fu River) wherein he directly supported the argument that the Jin had received the mandate of Heaven after conquering the Central Plains. During the time of Shizong there must have been widespread acceptance among Jin literati that Confucian civilization was secure within the center of all under Heaven.

Taking the dragon throne in 1190 was the crown prince Madage 麻達葛, who ruled as emperor Jing 璟, and was posthumously known as Zhangzong 章宗 (r.1190-1209). This latter title, meaning “literary ancestor,” was due to both his continued
promotion of Confucian learning among his subjects as well as his own academic accomplishments:

封金源郡王 始習本朝語言小字 及漢字經書 以進士完顏匡

[In 1179, the crown prince Madage] was appointed King of the Jin Homeland and began to practice the current dynasty’s language and writing, as well as Han writing and classical books, to become a jinshi of the Wanyan track.  

Zhangzong ruled the Jin for nearly twenty years, a duration second only to his predecessor. His first reign period (1190-1196) was entitled Mingchang 明昌 (Bright Prosperity), which reflected optimism as he assumed the role of the Son of Heaven. Zhangzong continued to enjoy regular tribute missions from the Nansong, Gaoli, and Xixia kingdoms surrounding the center.

The promise of Zhangzong’s reign was immediately overshadowed by continuing climatic disturbances. In the second month of 1190, there was another instance of the earth growing white hair. In the sixth month it is recorded that dushui jin yiluan 都水進異卵 (all of the waters offered up unusual eggs). Evidently, a strange phenomenon was occurring in the rivers, lakes and seas, and was considered a bad omen. One can only speculate what these “unusual eggs” truly represented. That same year, a drought in the summer was followed by torrential rains that destroyed the autumn harvest. The drought continued for the following two years, resulting in a famine. Also in 1192, there was another bizarre occurrence in Shaanxi. An unidentified number of panghuichong 螃虯蟲 (crab-like parasitic worm creatures) were born. Perhaps they hatched from those unusual eggs that had recently washed ashore. Whether it was the continuing drought, famine, and strange events that happened during his first two years on the throne, Zhangzong decided drastic cosmological measures were needed to maintain the Jin’s legitimacy to rule over all under Heaven. In the spring of 1193, he made this announcement to his court:

若諭所司官吏有能務行德化者 擢而用之 則教化可行 孝弟可興矣

[Zhangzong] ordered that officials from the various departments that are involved with the transformation of the powers of the elemental-phases are to be promoted. He then instructed them that changes could be made to the elemental-phases so a filial son can flourish.  

This was a profound undertaking for the court and it took them almost a decade to complete the task. The very name of the dynasty embodied the elemental-power of metal,
and yet it was decided that another power might need to be chosen to rectify the cosmic
imbalances. Jin court officials, perhaps due to their more thorough Confucian education,
realized the inherent problems associated with the invoking of the metal phase by the
dynastic founder Wanyan Aguda or Taizu.

The details of the proceedings are provided in Jin court documents entitled the *Da
Jin Deyun Tushuo* 大金德運圖說 (Illustrated Discussion of the Great Jin Elemental-
Powers & Movements), which were translated and analyzed by Chan Hok-lam (1984).
The arguments proposed by various scholars and officials at these deliberations all
focused on the generative sequence of the *wuxing* 五行 (five elemental-phases),
apparently without considering the conquest sequence. This was due in part to their
unwavering focus on a passage from the *Kongzi Jiayu* 孔子家語 (Sayings from the
Confucian School) attributed to Wang Su 王肅 (195-256):

五行更王 终始相生
The *wuxing* changed the kings from beginning to end by mutual generation.  

However, as previously argued by this author in the introduction to this study, this
passage is more appropriately understood as describing the change of kings within a
dynastic period rather than a change of dynasties. This is especially true since the
example Wang Su provides describes how the throne was passed from father to son for
the last three kings of high antiquity according to the Chinese custom of primogeniture.
Furthermore, none of those early rulers are associated with a specific named dynasty.
Nonetheless, discussion of the matter by this special council during the Jin proposed
arguments based only on the generative sequence and made frequent reference to the
*Kongzi Jiayu* in support of these arguments. This suggests that those in power were part
of a peace faction that wanted to resolve the dynasty’s troubles without resorting to war
with the Nansong.

The proposals for identifying the patron element of the dynasty fell into three
camps: those in favor of metal, those in favor of earth, and those in favor of wood. The
metal camp argued that no change in element was required because the founder of the
dynasty had already chosen the element with the naming of the Jin, and that auspicious
signs from Heaven confirmed his decision. Responding to concerns that this choice
violated the proper generative and conquest sequence of the *wuxing* (since the Liao had
been identified with water, which is generated by metal, while the Northern Song had

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been identified with fire, which conquers metal), some within the metal camp argued that both of these dynasties were illegitimate and that the Jin followed the Tang dynasty, which was associated with the earth phase that generates metal. Some even tried to include the puppet regimes the Jin set up as buffers between it and the Nansong early in the dynasty to argue those states had earth power and then generated metal. The general consensus was that arguments about the founder’s intentions had merit, but it really made no sense at all to ignore the Northern Song or to include the puppet states.

Those that favored the earth phase did so because earth is generated by fire. It was argued that the Jin’s conquest of the Central Plains and capture of the two Song emperors indicated that the Jin had indeed succeeded fire (although they had not conquered fire) and that earth should thus follow fire in the generative sequence. This was problematic because vestiges of the Song continued to claim legitimacy in the south, and the founder of the Nansong invoked the fire element upon his ascension, arguing that he was the true successor of the Northern Song’s mandate, just like the usurper Wang Mang 王莽 (r.9-23) during the Han dynasty. As long as the fire of Song continued to burn in the south, any Jin claims to earth appeared premature.

The third camp suggested the wood phase since their first achievement was succeeding the water phase of the Liao. However, the Liao was a vassal to the Song and neither ruled over the Central Plains nor all under Heaven, and even though water generates wood, wood then generates fire, thus invoking this element would only encourage the fire of the Nansong. As a result of these counter-arguments, the wood camp received little consideration.

Although it received no consideration at the Jin court, many literati considered the Jin to have obtained the power of water and believed this is what allowed them to conquer the Northern Song. Chan (1984) found that in a private history entitled the Da Jin Guozhi 大金国志 (Records of the Great Jin State) composed in the south by the Jin defector Yuwen Maozhao 宇文懋昭, it was held by many that the Jin had the power of water. Chan also found later sources that attributed the water phase to Jin, as in a novel about the last emperor of the Northern Song, Huizong, by an anonymous author entitled Da Song Xuanhe Yishi 大宋宣和遺事 (Lost Affairs of the Great Song during the Xuanhe Era). In this novel, Huizong traveled through the heavens on a blue bird and encountered two men playing chess under a tree: the Water Lord dressed in black sat in the north, and the Fire Lord dressed in red sat in the south. The stakes of the game was control of all
under Heaven and the Water Lord was victorious. Although Chan dismisses these as fiction, it is evident from the medical writings of the Jin that many physicians also held that the Jin possessed the power of water. The suppression of debate over claiming water, which conquers fire, was most likely because of the influence of a peace faction that wanted to avoid war with the Nansong.

Soon after Zhangzong directed his special council to consider the *wuxing* issue, one of his officials brought the matter of celestial disturbances to his attention:

御史中丞董師中奏 迺者太白晝見 京師地震 北方有赤氣
遲明始散 天之示象 應有以警悟聖主也

[In the third month of 1193,] the Imperial Deputy Censor Dong Shizhong memorialized the emperor [saying]: Seeing as *Taibai* (Venus) has appeared in the daytime, there have been earthquakes in the capital, the northern direction has a red *qi*, and gradually its brightness begins to dissipate, revealing the image of Heaven. I hope to make you keenly aware of sagely governance.  

From the following rescript, it is clear that this was an irksome memorial, bringing to his attention matters the emperor was already keenly aware of and had taken actions to rectify. Zhangzong’s rescript said in part:

朕欲令自今司天有事而不奏

I wish to order that from now on the Bureau of Astronomy handle these affairs and do not memorialize me [again on these matters]!  

It is no surprise that the emperor was growing impatient because Heaven refused to stop demonstrating its concern with sagely governance. In the fifth month of 1193, continual rains led the rivers to overflow the next month, once again devastating the city of Weizhou (Henan province). However, these rains appeared to end the years of drought. In the fall of that year, several of the areas in Hebei, Shandong, and Shanxi reaped huge grain harvests. This would have helped the people endure the harsh winter that was recorded that year. The rains continued to moisten the fields in 1194, and the emperor may have thought that his efforts to ensure the proper elemental-phase had been chosen were beginning to yield positive results. That fall there was yet another auspicious sign from Heaven:
天壽節 先陰雨連日 至是開霽 有龍曳尾於殿前雲間
[In the seventh month of 1194, during] the Heavenly Longevity Festival, at first it was cloudy and rainy for several days and then as it started to clear up, there was a dragon within the clouds dragging its tail to the front of the palace.  

Once again, this dragon sighting suggests a tornado stirring up the grounds near the imperial palace, and once again there was no mention of death or destruction associated with the event. Because the dragon was sighted approaching the imperial palace, everyone must have thought it had come to visit Zhangzong. Although the following month some rivers overflowed due to the unusually heavy rainfall associated with the dragon sighting, there were no other disasters reported that year.

Yet the environmental troubles were not over. In the spring of 1195, the Jin shook with another earthquake, followed by rain, hail, and fierce winds that broke the Yingtian Men 應天門 (Gate of Heavenly Correspondence). Moreover, the emperor had to respond to a medical crisis:

諭胥持國 河上役夫聚居 恐生疾疫 可廩醫護視之
[In the spring of 1195, Zhangzong] ordered Xu Chiguo to go to the Yellow River corvée labor camp region where it was feared an epidemic disease was being generated, and [Xu was authorized] to use government grain, doctors and other personnel to inspect the situation.

This was another example of the government’s medical institutions in action. Zhangzong’s official likely called upon doctors from one of the nineteen Yiguan 醫院 (Medical Clinics) located around the empire as well as drawing upon the resources of the Huiminju 惠民局 (Bureau for Benefiting the People) to provide the necessary medicinals for treatment. There are no further details on the disease outbreak, which suggests the matter was dealt with quickly and effectively.

Later that fall there was another dragon sighting, but this time it was definitely not auspicious:

六年八月 大雨震電 有龍起於渾儀鰲趺 臺忽中裂而摧 儀仆於臺下
In the eighth month of 1195, there were great rains, earthquakes, and lightning. Then there was a dragon that arose from the mud and looked like an ao (giant sea turtle) sitting cross-legged. A platform was suddenly struck, cracked open, and destroyed. It looked like [the dragon] had fallen forward onto the platform, which collapsed.
The unusually shaped dragon that destroyed buildings was in stark contrast to previous sightings. This seems to describe a massive mud slide that swept over some structures. Afterwards, Zhangzong ordered his officials to provide relief to those affected by the disaster and even dared to halt construction of earthen embankments to hold back the swollen rivers in the Gansu region while the people recovered. These actions suggest the chaos caused by this mud dragon was severe and may have prompted the emperor to change the reign period the following year.

Zhangzong’s second reign period (1196-1201) was entitled *Cheng’an* (Continued Security), which was also a statement on the political peace enjoyed during his time on the throne despite internal cosmological struggles. It did not rain for the first five months of 1196; in 1197 it did not rain for the first four months, followed by a hail storm; and in 1199, there was another hail storm followed by a drought. Also in 1199, perhaps as part of his effort to legitimize the Jin both for his current subjects and posterity, Zhangzong decided to revise the civil service examinations and directed his officials to compile early court records:

> 更定考試隨朝檢 知法條格 右補闕楊庭秀請類集
> 太祖 太宗 世宗 三朝聖訓 以時觀覽 從之仍詔增 熙宗為四朝

[In the twelfth month of 1199, Zhangzong] decided to change the examinations and allow court oversight [such that candidates must] understand the laws, rules, and regulations. The minister for repairing wrongs Yang Tingxiu was invited to categorize the records of Taizu, Taizong, and Shizong, as these three courts were sagaciously informed and used their time to observe carefully. After that [Zhangzong] decreed to expand [and include the records] of Xizong who was considered the fourth court.

The change in the examination seems a practical one reminiscent of the reforms of Wang Anshi (1021-1086) during the Northern Song and suggests there was criticism that *jinshi* scholars were well versed in the Confucian classics but lacked sufficient technical knowledge to be effective government officials. Regarding the compilation of court records, notably absent is Hailing, as he had already been posthumously demoted to a mere king and was deemed not worthy of mention among the Jin’s early emperors. The elevation of Shizong in this edict, the fifth Jin ruler, is also notable as it placed him among the founders as the three sage rulers of the Jin. Xizong, actually the third Jin emperor, was worthy of mention only after these others had been properly venerated. The edict continues:
It was decided to change the rules on the branches of study, which was expanded with the *Guoshi Yuan* (Institute of World History) so that the Jurchen and Han peoples similarly written histories would account for each and every person. From this statement it is clear that there was an effort by Zhangzong to establish a sense of equality among all of his subjects, Jurchen and Han alike, in order to promote social tranquility. This is further evidence against the existence of any Jurchen nativism.

Despite all of these positive developments, Heaven remained unappeased in the last year of this reign period. In fifth month of 1200 there was an earthquake, and in the fall things got worse:

天久陰 是日雲色黃而風霾

[In the tenth month of 1200,] for a long time the heavens were dark, then one day the color of the clouds turned yellow and the wind blew up a dust storm.

After that there was another earthquake and a dark frost covered the trees. These events again suggest either a volcanic eruption or the years of drought simply led to frequent dust storms. In either case, it appears these events were sufficiently troubling to cause Zhangzong to change the reign period once again. This time he chose the title *Taihe* (Peaceful Harmony) for his final reign period (1201-1209), which given the context sounds more like an appeal to Heaven rather than a prediction of things to come. Nonetheless, things did remain quiet for the next two years.

In 1202 there was another extraordinary event, one that was considered to be an auspicious sign from Heaven. The record of what happened provides such rich detail it seems certain that it was describing a real phenomenon, although trying to determine what that “reality” was remains elusive. Given that this event was considered to be of great significance it seems appropriate to recount the story in its original detail:

有大鳥十集於臺上 其羽五色爛然 文多赤黃 赭冠雞項 尾闊而修

[In the eighth month of 1202,] there were ten large birds gathered above a platform. Their feathers were psychedelic colored but the pattern was mostly red and yellow, their crowns were ochre [similar to] the back of a chicken neck, their tails were wide and flamboyant, strong like a carp’s tail and long, their height exceeded that of a man, [although] nine [out of ten] were smaller and were subservient [to the larger bird]. [The smaller birds] were as tall as four or five feet,
and these birds had a myriad of shapes and colors and each was different. Some were flying, some were perched, some were walking, some were standing, but all of them were moving in a procession and all of them were headed directly towards the [emperor and] his court as if to encircle [the capital].

初自東南來 勢如連雲 聲如殷雷 林木震動 牧者驚惶 即驅牛擊物以驚之 殊不為動 俄有大鳥如鵰鶚者 怒來擊之 民益恐 奔告縣官 皆以為鳳凰也 命工圖上之 留二日西北去

At first they had come from the southeast. Their momentum was like a succession of clouds, their sound was like rolling thunder, and the trees of the forest quaked as they moved. The shepherds were terrified and they urgently tried to drive away their herds by striking things in order to scare them, but for some reason they could not be compelled to move. Then suddenly a large bird like an eagle or hawk angrily came to strike them; the people were even more scared and hurried to tell the county officials. Everyone thought it was the fenghuang (phoenix). [The officials] ordered workers to make illustrations of the birds, which remained for two days and then departed towards the northwest.

按視其處 糞迹數頃 其色各異 遺禽數千 累日不能去 所食皆巨鯉 大者丈餘 魚骨蔽地

[When the officials arrived] to inspect the place [where the birds were spotted], there was evidence of lots of dung covering a large area. The colors [of the dung or perhaps dropped feathers] were all different and these remnants of the birds numbered in the thousands and had accumulated daily and did not go away. All of [the birds] had eaten giant carp that were bigger than ten feet in length and fish bones were scattered over the earth. 37

Perhaps this was another violent storm that stirred up the sea and flung fish many miles inland, or perhaps the severity of this storm that originated in the southeast caused a sudden mass migration of “birds of paradise” trying to escape the tempest. Although such a severe weather phenomenon might appear to be an inauspicious event, it may have been that it was so extreme and rare an event that it was perceived as a positive omen, especially as there is no mention of property destruction or loss of human life.

A few months later the special council that had been deliberating over the wuxing conundrum finally provided the emperor with their recommendations, and Zhangzong announced his decision:

更定德運為土
[In the eleventh month of 1202.] it was decided that the deyun (power of the elemental-movements) was earth. 38

The announcement of this change from metal to earth was also made to the tributary states surrounding the Jin: Nansong, Gaoli, and Xixia. The camp that had argued in favor
of the Jin succeeding the Northern Song via the generation cycle had won out and thus earth was chosen in succession to fire. The following year celebrations were held to commemorate this decision and the sighting of the phoenix was used for further legitimation:

以重五 拜天 射柳 上三發三中 四品以上官侍宴 魚藻殿
以天氣方暑 命兵士甲者釋之 丙戌以定律令 正土德 鳳凰來
皇嗣建 大赦

[On the fifth day of the fifth month of 1203] during the Chongwu (“Double Five” Dragon Boat Festival), respects were paid to Heaven and there was the shooting of willows invoking the three [arrows] shot and three [arrows] that struck [their targets by the dynastic founder Taizu in his youth]. Four courses were brought out for a feast given for officials at the Yuzao Dian (Fish and Seaweed Palace). Because the weather was hot, [Zhangzong] commanded the army to relieve themselves of their armor. Two weeks later it was established as law and decreed that the correct elemental-power was earth. The phoenix had returned, the imperial succession had been established, and there was a general amnesty. 39

That same month Zhangzong ordered the construction of the Taiji Gong (Temple of the Great Ultimate), which reflects the importance placed on the Confucian cosmological paradigm within which the theories of yin, yang, and the wuxing are paramount.

Heaven seemed quiet for a brief period. The end of Zhangzong’s reign overlapped with the start of the next cooling phase (1194-1302) of the climate identified by Zhang, et.al. (2007). There were reports of a drought and big winds in 1203 with heavy fog and a freezing winter, followed by big winds that destroyed some buildings and further droughts in 1204. That year at the Wanning Gong 萬寧宮 (Myriad Tranquility Temple) there was mention of some type of calamity but no details are provided, and another freezing winter was followed by drought in 1205. 40

The effect of proclaiming the earth element in succession to the Northern Song has been pointed to by scholars such as Chan Hok-lam (1984) as a possible reason for the Nansong army making several otherwise unprovoked incursions into Jin territory north of the Huai River during the following years. As noted earlier, the Nansong philosopher Zhu Xi 朱熹 (1130-1200) had argued that their dynasty possessed the power of earth instead of fire, and other scholars and officials may have agreed with Zhu Xi since the Nansong had succeeded the Northern Song. Since earth conquers water, Zhu might also have believed the Jin possessed water power and that their earth power could ensure the
conquest of the north. For those is support of this perspective, the Jin was viewed as usurping their elemental-phase. In response to the Jin’s announcement, the Nansong stopped their tribute missions from 1204 until the end of Zhangzong’s reign in 1208, and following the advice of a war faction official named Han Tuozhou 韓侂冑, the Nansong ruler Ningzong 宁宗 (r.1195-1224) formally declared war on the Jin in 1206. Unable to achieve any military success, Ningzong requested peace the following year and in appeasement executed Han Tuozhou and sent his head to the Jin. In 1208 the peace was restored and the Nansong agreed to raise the tribute payments to 300,000 units each of silver and silk. If the reason for the attacks was a response to the elemental declaration and not just climactic pressures, it demonstrates the great importance Confucian thinkers placed on their cosmology. By flexing their political and military muscle they were sending a message that either the fire phase had not yet been extinguished or the earth phase was already claimed by the Nansong, and reminded officials on both sides of the Huai River the possibility that fire might still conquer metal or that earth might one day conquer water.

After securing the peace, Zhangzong also provided relief to those affected by the recent war with Nansong:

以許宋平 詔中外 免河南 山東 陝西 等六路今年夏稅
河東 河北 大名 等五路半之
[In the sixth month of 1208] as was promised in equalizing relations with [Nan]song, [Zhangzong] decreed, [in support of] center-periphery relations, exemption from taxes for the [southern border provinces] of Henan, Shandong, and Shanxi, and their six transportation routes, for the summer of this year. [In addition, for the northern provinces] of Hedong, Hebei, and Daming, and their five transportation routes, their taxes were halved. 41

Although it is not made explicit in any records from this period, a condition of the peace treaty may have been a return to the Jin invoking metal as its cosmic patron, instead of earth, which implied the Nansong’s destruction. That same month:

飛蝗入京畿 乙未 定服飾明金象金制
[In the sixth month of 1208] a flight of locusts entered the capital and its periphery. It was subsequently determined that clothing be adorned with a bright metal appearance for metal regulation. 42
From this it appears that Zhangzong was invoking the metal elemental-phase to regulate the cosmic imbalance represented by the locust swarm, which might also have been a metaphor for the Nansong. Soon thereafter another imperial decree was made after a daytime sighting of the Jin’s celestial patron, *Taibai* (Venus):

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詔更定蝗蟲生發坐罪法
[In the seventh month of 1208, Zhangzong] decreed a change deciding that locusts swarms be amended to the criminal code. 43
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Of course on the surface it seems absurd that a swarm of locusts could be held accountable in a Jin court of law, but together with the decree that people adorn themselves with metal to regulate the swarm it might point to a reversal of the earth element decree. In the eighth month of 1208 it is recorded that a tiger appeared outside the gates of a city and the people chased it away and then shot at it with arrows until finally it was captured. 44 As the tiger is associated with the western direction and the metal phase, versus the phoenix that corresponds to the south and the fire phase, this might also have been included in the dynastic records as a sign that the metal phase had returned. This reversal would further explain why several years later the Xuanzong (r.1213-1224) emperor would once more convene a special council to reconsider the proper elemental-phase for the Jin.

By the end of Zhangzong’s reign all was returned to order and in the tenth month of 1208 the emperor again received tribute missions from Nansong, Gaoli, and Xixia. Soon afterwards he became ill, and as he was without an heir, he decided to appoint his favorite cousin, the seventh son of Shizong known as King Weishao 衛紹王 (r.1209-1213), as his successor against the advice of his closest officials:

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自武定軍入朝 是時 章宗已感嗽疾 衛王 且辭行 而章宗意留之
章宗初年 雅愛諸王 置王傳府尉官以傳導德義
[In the eleventh month of 1208,] the *Wuding* (Martial Determination) army had entered the court. At that time Zhangzong was already feeling sick with a cough and King Wei[shao] was about to take his leave, but Zhangzong invited him to remain. In his early years, Zhangzong showed great kindness towards the various kings but he installed King [Weishao] into the office of military affairs so as to guide him in virtue and righteousness. 45
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Weishao had a short and troubled reign of just five years and, like Hailing before him, was posthumously demoted and stripped of his imperial title.
Liu Wansu (continued)

Liu Wansu (c.1100-1200) wrote several medical works during his long life that have been preserved unto today, yet the only one that can be dated with relative certainty is the *Suwen Bingji Qi yi Baoming Ji* (Suwen’s Disease Mechanisms and the Qi Suitable for Protecting Life Collection), henceforth referred to as the *Suwen Bingji*. According to the original preface, this text was published in 1166 during the early reign of Shizong. As discussed in the previous chapter, based on Liu’s comments at the end of the *Shanghan Biaoben Xinfa Leicui* (Collection of Core Methods Related to the Manifestation & Root of Cold Damage), this text was likely written twenty years before the *Suwen Bingji*, around 1146, during a time when commentaries on the *Shanghan Lun* (Treatise on Cold Damage) were in vogue. Liu’s concise essay, the *Suwen Xuanji Yuanbing Shi* (Etiology of Disease Based on the Profound Theories of the *Suwen*), set forth his conviction that the major pathology afflicting the people of the Jin dynasty was an imbalance between excess fire and deficient water. Given the urgent tone of this essay, it was likely first written during the time of heightened military conflict on the southern border (c.1150-60), and then republished late in his life.

It was in his later years that he composed his other major works, including the *Suwen Bingji*. The two others that are extant, the *Huangdi Suwen Xuanming Lunfang* (Prescriptions Compiled and Analyzed on the Basis of the *Huangdi Suwen*) and *Xinkan Tujie Suwen Yaozhi Lun* (Newly Published Illustrated Study of the *Suwen* for Purpose of Discussion), henceforth referred to as the *Suwen Xuanming* and *Suwen Yaozhi*, respectively, are presented more clinically and dispassionately, a calm and mature tone suggesting these texts represent some of his later
work produced during times of greater political stability (c.1170-90). In addition, there is a short essay entitled the Sanxiao Lun 三消論 (Treatise on the Three Eliminations), which was preserved in the collected writings of a later Jin dynasty physician, Zhang Congzheng 張從正 (1156-1228). This essay might also have been written during Liu’s later years. There is also a short treatise on pediatrics called Baotong Miyao 保童秘要 (Essential Secrets for Protecting Children) that provided prescriptions for many common ailments using reduced dosages of the medicinals for this unique patient population, but estimating when this text was written remains difficult. Besides these works, the Siku Quanshu 四庫全書 (Complete Collection in Four Treasuries, 1782) attributed a text called the Shanghan Zhige Fang 傷寒直格方 (Direct Investigations of Formulas for Cold Damage) to a Liu Wansu, stating that it was written during the Song dynasty. However, it is doubtful Liu was composing texts at such a young age, which makes the authenticity of this work questionable. Perhaps it was written by a different author with the same name.

In the preface to the Suwen Bingji, Liu provides more details on his early years of medical study. He comments that the wisdom contained within the Huangdi Neijing Suwen (Yellow Emperor’s Inner Classic, Basic Questions) is obscured by its lack of systematic organization, a complaint that still resounds today. Liu states that from the age of twenty-five when he first began the study of medicine, unto his sixties when he wrote this text, he had been diligently studying this seminal classic to uncover its mysteries. Although it is not overtly stated, his early education was undoubtedly focused on the Confucian classics in preparation for the civil service examinations, providing him with the necessary literary skills. According to Liu, it was only after studying for nearly forty years that he met the teacher who was able to impart the wisdom he sought:

```
得遇天人 授飲美酒 若橡斗許 面赤若醉 一醒之後 目至心靈 大有開悟 衍其功療 左右逢源 百發百中
When I encountered a Heavenly person, he instructed me to drink some wonderful wine. It was somewhat like an oak concoction, and my face turned red like I was intoxicated. After sobering up, I achieved profound insights and an expanded awareness from which I developed my meritorious cures whose effects were evident everywhere; a hundred shots and a hundred strikes.
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This version of the story from the Suwen Bingji paints a more positive image of his training with the master identified in the History of the Jin as Mister Chen, after which he becomes an outstanding physician instead of a mediocre one with absurd explanations.
His reference to a hundreds shots and strikes may have been intended as a reference to the Jin founder Taizu, who as a child was praised for his archery skills and the striking of three birds in flight with three arrows. Liu also addressed the critics who labeled him as absurd by providing the following response:

今見世醫多賴祖名 倚約舊方 恥問不學 特無更新之法
縱聞善説 反怒為非 悟呼
Now I see that generations of physicians often depend upon the reputation of their ancestors. They rely strictly upon old prescriptions. Shamefully they question but don’t study. They are especially without any new methods. They indulge in listening to [my] good explanations but then go against them angrily and make mistakes. Alas!

Apparently, Liu thought that other doctors were critical of his methods because he did not simply follow classical guidelines and use standard formulas. Instead, he turns the criticism back towards his colleagues, accusing them of failing to develop new methods and relying strictly upon old techniques. This call for new methods becomes one of the defining characteristics of Jin medicine, especially during this middle period, and is a defining feature of normal scientific development. This same spirit was found in the Northern Song philosophers who dared to provide alternative interpretations of the Confucian classics, and by so doing set off a trajectory of intellectual debate that continued for centuries. Even though Liu Wansu and other Jin physicians were advocates of new approaches, their movement was not a scientific revolution. This is because they did not call for the abandonment of the current cosmological paradigm, but instead made an effort to extend and refine the orthodox paradigm. In fact, the perpetuation of the existing paradigm was essential to their legitimation among elite society.

In all three of Liu’s later studies of the Huangdi Neijing Suwen, the Suwen Bingji, the Suwen Yaozhi, and to a lesser extent the Suwen Xuanming, he begins by invoking the Confucian cosmological paradigm. This is evidenced by the title of the first essay in the former text: yuandao lun 原道論 (treatise on the origins of the dao). Liu’s cosmology was following the momentum created by the philosophical trends of the Northern Song that integrated various Daoist and Buddhist ideas and practices. This trend eventually culminated in the daoxue (learning of the Way) of Zhu Xi (1130-1200). Zhu traced his intellectual genealogy to the sijia 四家 (four masters) of the Northern Song whose texts were dedicated to the process of gewu zhizhi 格物致知 (investigating things & extending
knowledge) within the existing cosmological paradigm, a practice continued by literati doctors of the Jin. All of these scholars sought balance and order within living systems, with political philosophers and doctors seeking order within all under Heaven as well as harmony within the individual. While politicians sought to understand the world to help them intervene in the course of human affairs and promote a secure and harmonious society, physicians observed the processes of life and death and sought the most efficacious interventions to restore health and combat disease. Yet at the same time, it was understood that the individual patient and the entire state were part of a continuum, such that ordering one was contingent upon ordering the other.

Like Confucian scholars before and after, Jin physicians based their authority on the classical canon. This practice was based on the belief that the greatest wisdom was the result of not only personal enlightenment and new ideas, but also the accumulated wisdom of sages transmitted through the centuries. Jin medical texts cite passages from numerous classics to support their arguments, most notably focusing on the apocryphal Wang Bing (c.762) chapters of the *Suwen*. For example in the *Suwen Yaozhi*, Liu begins his preface by describing the widely accepted theory on the origins of the universe, then he transitions into a numerological analysis in order to set up his primary thesis, which he accomplishes by paraphrasing *Suwen* chapters 66, 67, and 71, in reference to the *liuqi* (six climactic-energies) and the *wuyun* (five elemental-movements [of which there are six]):

```
天地之道 生一氣而判清濁 清者 輕而上升為天 濁者 重而下降為地
天為陽 地為陰 乃為二儀
The dao of Heaven and Earth generates a single *qi* that separates into the clear and turbid. As for the clear, it is light and rises upward to become Heaven. As for the turbid, it is heavy and descends downward to become Earth. Heaven becomes *yang*, Earth becomes *yin*, and then they become the two manifestations.

陰陽之氣各分三品 多寡不同 故有三陰三陽之六氣
然天非純陽而亦有三陰 地非純陰而亦有三陽 天地各有三陰三陽
總之一十二矣
The *qi* of *yin* and *yang* each divide into the three products with varying amounts [of *yin* and *yang*]. Therefore there are the six *qi* of three *yin* and three *yang*. So Heaven is not pure *yang*, but also has three *yin*, and Earth is not pure *yin*, but also has three *yang*. So Heaven and Earth each have three *yin* and three *yang*, and so as a result there are twelve.
```
Thus the \textit{yin} and \textit{yang} of Heaven are cold, heat, dry, damp, wind, and fire. The \textit{yin} and \textit{yang} of Earth are wood, fire, earth, metal, water, and fire.

As for metal and fire, they do not have the same movement. Therefore, the \textit{wuyun} (five elemental-movements) are evident.\footnote{50}

Liu leads his reader in by first providing the widely accepted paradigm for framing his discussion. He then interjects how \textit{yin} and \textit{yang} each have “three products,” which likely refers to the six stages (\textit{taiyang} to \textit{jueyin}) that was a common medical framework that the \textit{Shanghan Lun} was built upon. He then uses this idea to justify the inclusion of an extra fire into both the list of pathogens and elements to balance the equation and support the theories of Wang Bing. To demonstrate the difference between the \textit{yin} and \textit{yang} of earth as manifested in the \textit{wuyun}, Liu chose to juxtapose metal with fire, although water and fire would have worked as well, if not better. Although metal is \textit{yin} compared to the \textit{yang} of wood, fire is usually juxtaposed with water as exemplifying the primordial manifestation of \textit{yin} and \textit{yang} in the physical world. By selecting metal, Liu adds the final piece of literati medicine, which is to make references to the larger socio-political chaos threatening the health of all under Heaven, with metal representing the Jin dynasty that also possesses water power, which is supposed to conquer fire, or the Nansong.

In addition to citing the medical classics, Liu Wansu also introduces vocabulary from other classical sources to expound upon medical theories. This appears to be an effort to demonstrate to non-medical elites his broader education in the Confucian canon required for success on the civil service examinations. An example is his use of the term \textit{zaohua} (natural processes, the making of change, the process of evolution), which does not appear in the \textit{Huangdi Neijing}, \textit{Nanjing}, or \textit{Shanghan Lun}. This term does appear in several Zhou and Han dynasty texts where it is often defined as the process of change within the world. The following passage is from the \textit{Lunheng 論衡} (Measured Discussions, c.80), which appeared twice in that text including in a section entitled \textit{ziran} (nature), and also appeared with variation in the \textit{Shiji 史記} (Historical Records, c.100 BC) and the \textit{Hanshu 漢書} (History of the Han Dynasty, c.90):\footnote{51}

\begin{verbatim}
Heaven and Earth are the furnace; the myriad things are the bronze ores; \textit{yin} and \textit{yang} are the fire; and \textit{zaohua} does the work.
\end{verbatim}
Furthermore, in several early Daoist texts, such as the *Zhuangzi* (Book of Master Zhuang, c.300 BC), the *Guiguzi* (Master of Spirit Valley, c.300 BC), the *Liezi* (Master Lie, c.200 BC), the *Huainanzi* (Master of Huainan, c.139 BC), and the *Wenzi* (Literary Master, c.55 BC), the term *zaohua* is used to describe the process of spiritual and physical cultivation to achieve longevity. In the *Suwen Yaozhi* and the *Sanxiao Lun*, Liu uses this term when presenting his own interpretation of the orthodox cosmology, such as in the latter text wherein he states:

人與天地造化五行 同一爐備 知彼則知此矣
故立天之氣 曰金與火 立地之氣 曰土與水 立人之氣 曰風與火
Man together with Heaven and Earth, *zaohua*, and the *wuxing*, has the same furnace equipment. If you understand that then you will understand this. Therefore the *qi* of the position of Heaven is called metal and fire; the *qi* of the position of Earth is called earth and water; the *qi* of the position of mankind is called wind and fire.

Here Liu argues that the process of change on which everything depends includes this concept of *zaohua*. He then tries to use Wang Bing’s ideas on the six elemental-phases (including two fire phases) to correlate the *wuxing* with the triad of Heaven, mankind, and Earth (substituting wind for wood in the above passage). In the *Suwen Yaozhi*, Liu further describes how Huangdi commanded his chief physicians Qibo and Gui Yuou to explain the principles of *zaohua* to understand health and disease, which is either an apocryphal story invented by Liu to provide a classical authority for his argument, or is based on a version of the *Huangdi Neijing* that is no longer extant. Liu may have been trying to explain his ideas to other literati using vocabulary they might be more familiar with while further demonstrating his knowledge of classical texts to elite society. Moreover, Liu was following in the tradition of Wang Bing and essentially creating his own treatise in the *Huangdi Neijing* tradition while proposing new medical terminology.

Liu further criticized his colleagues for failing to understand the *dao* of *yin* and *yang* and the *wuxing* in the *Suwen Bingji*. In the preface he repeats verbatim a criticism he made in his earlier text, and then attempts to rectify this problem in the first essay on the origins of the *dao*. In this essay, he presents the principle elements he
believes to be out of balance, water and fire, and blames their imbalance on the actions of mankind:

萬億之書故以水為命 以火為性 土為人 人為主性命者也
是以主性命者 在乎人 去性命者 亦在乎人

In the myriad millions of books they consider water to be fate, consider fire to be nature, and [consider] earth to be mankind. It is mankind that governs nature and fate. Therefore, that which governs nature and fate, it resides in mankind. As for that which departs from nature and fate, it also resides in mankind. 57

In essence, Liu is discussing the mandate of Heaven whereby the moral and righteous actions of man, and especially of the emperor, are reflected in the forces of nature and in the fate or destiny of the people. According to Liu, fire corresponds to nature, which includes all of the environmental disasters plaguing the Jin in the north, as well as fire being symbolic of the perpetuation of the Nansong kingdom in the south. This fire should be controlled by water, which he corresponds to fate, and thus the fate of the dynasty depends upon the power of water. Therefore, Liu is arguing the Jin has the power of water, but is currently weak and ineffectual in conquering fire, which is resulting in excess fire within all under Heaven causing natural disasters, heat waves, and droughts. This basic premise of a fire and water imbalance is repeated by Liu throughout his texts.

Fire, water, & social discourse (continued)

Liu always returns to the imbalance of water and fire as the primary disorder afflicting all under Heaven. In the Suwen Bingji, after summarizing the discussion of shanghan disease from the Suwen with a brief survey of common prescriptions, 58 Liu launches into one of his most lengthy discussions in this text entitled the bingji lun 病機論 (treatise on disease mechanisms), 59 which is also the major theme reflected in the book’s title. To illustrate the relative excess of fire over all other pathogens, he begins by citing chapter 74 of the Huangdi Neijing Suwen, one of the six chapters attributed to Wang Bing (c.762):

夫百病之生也 皆生於風寒暑濕燥火
As for the generation of the hundred diseases, they all are generated from wind, cold, heat, damp, dry, and fire. 60
Whereas in the *Suwen Xuanji Yuanbing Shi* Liu cited chapter 66 from the *Suwen*, another of Wang Bing’s contributions, here he cites one of the few other references to fire as an environmental pathogen. This repetition demonstrates the perceived authority that such quotations provided. Liu continues by citing another passage from *Suwen* 74 discussing each of the *zang* (solid organs) and their diseases, and then adds other relevant passages from various classics, as well as commentaries to the *Suwen* by Wang Bing. Finally, Liu adds his own interpretations that are typically framed as a *wuxing* imbalance. The first organ he covers is the liver and its relationship to wind as a disease mechanism, asserting that it is heat that stirs up the wind. In constructing the *wuxing* argument, Liu states:

肝本不甚熱 因金衰而旺 肺金不勝心火 木來侮於金 故諸病作矣
If the foundation of the liver does not have extreme heat, it is because metal decreased [the heat] and is flourishing. But if lung metal does not conquer heart fire, the wood returns to insult metal, and thus the various diseases are created.  

Although metal normally conquers wood, and thereby can keep excesses from causing problems within the liver, the rest of this argument appears theoretically flawed. If liver wood energy affecting lung metal is considered an insult by reversing the conquest sequence, so to would metal energy conquering the heart fire. However, Liu is arguing that metal needs to conquer fire to prevent or treat disease. Given the internal contradiction with this statement, a logical interpretation is that what Liu is really saying is that the Jin needs to conquer the Nansong.

Near the end of the *Suwen Xuanming* is a section entitled *buyang zonglun* 補養總論 (complete discussion on tonifying and nourishing), which Liu begins by again citing chapter 74 of the *Suwen* to argue the kidney is the organ most in need of strengthening.  

Of course, this means that if water is weak it cannot conquer fire, which will in turn conquer metal. So Liu affirms:

熱則壅澀不通 寒勝則火衰 火衰金旺
If there is heat then there is obstruction and astringency that cannot flow. If cold conquers then fire declines; if fire declines then metal prospers.  

Thus Liu’s goal is to strengthen the water phase so that fire will be conquered and metal, or the Jin dynasty, will prosper. When discussing the kidneys in the *Suwen Bingji*, Liu
quotes a passage from a text called *Xianjing* 仙經 (Immortals Classic) that argued the heart is the *junhuo* 君火 (sovereign fire) and the kidneys are the *xianghuo* 相火 (ministerial fire), and concludes that the kidneys should also be categorized under the elemental-phase of fire. 64 This suggests that fire is the rightful ruler of all under Heaven and water is its servant. Such statements challenge Liu’s contention of a water and fire imbalance, so he rectifies this discrepancy by stating that the left kidney is categorized as water and the right kidney is categorized as fire. Later Jin physicians will again consider this model of the sovereign and ministerial fire and construct alternative arguments.

Still, Liu emphasized that cold is the pathogen associated with the kidney. In the following passage he further describes how this manifests in the environment:

```
故水本寒 寒急則水冰如地而能載物 水發而雹雪
是水寒亢極反似克水之土化 是謂兼化也
Therefore the root of water is cold, and if the cold is severe then the water freezes like the earth and is able to fill up things, and then the water comes forth as hail and snow. This water is cold in the extreme and contrarily surpasses and subdues the earthly changes of water, and this is called simultaneous change. 65
```

This might also be understood as the identification by Liu of the shift back to the cooling phase of the climate. While heat waves and droughts are common complaints during the early to middle Jin, this period begins to shift towards increasingly harsh and freezing winters in the later Jin.

Liu concludes his essay on disease mechanisms with a quote from the opening passage of chapter 71 of the *Suwen*, which again is one of the Wang Bing additions to the *Huangdi Neijing*:

```
經所謂 金木水火土 運行之類 寒暑燥濕風火 臨御之化
則天道可見 民氣可調
What the classics call metal, wood, water, fire, and earth, they are the types of elemental-movements and phases. As for cold, heat, dry, damp, wind, and fire, they are the changes of *linyu* (imperial governance). Then if the Heavenly *dao* can appear the people’s *qi* can be harmonized. 66
```

Although in this quote there are only the standard five elements, the list of environmental pathogens again includes fire. Even more interesting here is the term *linyu* 臨御 (imperial governance), which only appears twice in the *Huangdi Neijing*, once here and once at the very end of this same chapter. It appears that Liu is stressing that harmony among the
wuxing and the climactic forces is the ultimate sign that the emperor has the mandate of Heaven. Given that Liu cites this passage, he must have been aware of the complimentary passage at the end of this chapter, and he probably assumed that most of the other literati physicians who would read this text would also know that this chapter marks the moment when Huangdi becomes enlightened from the teachings:

帝曰 至哉聖人之道 天地大化 運行之節 臨御之紀 陰陽之政
The emperor exclaimed: I have achieved the dao of the sages, the great changes of Heaven and Earth, the regulation of the elemental-movements and phases, the linyu (imperial governance) of the era, and the politics of yin and yang! 67

This passage is pivotal, because it represents the shift from the earlier chapters of the Suwen when Huangdi is the student to the later chapters when Huangdi becomes the teacher. As if to emphasize this, at the beginning of his next essay, the qiyi lun 氣宜論 (treatise on appropriate qi), Liu opens with the statement that to treat disease one must understand, among other things, the linyu of the six climactic energies as well as the Sitian zhi Zheng 司天之政 (Government of the Department of Heaven) for each of the six stages of yin and yang. 68 Taken in consideration with Liu’s other statements on cosmic disharmonies, bringing the reader’s focus to the medical enlightenment of the emperor is clearly an allusion to his hope that the Jin emperor will achieve enlightenment and restore order within all under Heaven by conquering the fire of the Nansong.

Developments in diagnosis

Liu Wansu also contributed to the development of pulse diagnosis, a distinguishing feature of literati medical practice. Liu begins the second essay in the Suwen Bingji, entitled yuanmai Lun 原脈論 (treatise on the origins of the pulse), by discussing the standard seasonal pulse variations and then providing his own alternative qualities based on their relationship to the dao of Heaven and Earth. 69 In the Suwen Yaozhi, Liu provides a simple visual
representation of his preferred pulse system (see figure 10), which uses the conventional terms for the distal, middle, and proximal positions on the radial artery. He categorizes the twelve *zangfu* (solid organs) by their acupuncture channel designation, such as the hand *yangming* large intestine, or the foot *yangming* stomach, and then lists the different organs on the right and left wrists in a deliberate sequence from distal to proximal:

**Liu Wansu’s Pulse Model:**

<table>
<thead>
<tr>
<th>Position:</th>
<th>guan (middle)</th>
<th>chi (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right:</td>
<td>stomach &amp; spleen</td>
<td>pericardium &amp; <em>sanjiao</em></td>
</tr>
<tr>
<td>Left:</td>
<td>gallbladder &amp; liver</td>
<td>urinary bladder &amp; kidney</td>
</tr>
</tbody>
</table>

The logical inference is that each *zangfu* pair (e.g., lung & large intestine) is found in one of the three positions on each wrist (e.g., right *cun*), but Liu does not specify if one is found superficial or with light finger pressure and the other deep or with heavy pressure. He may subdivide each of the three positions into a distal and proximal segment, with the *fu* (hollow organ) distal to the *zang* (solid organ) with the exception of the pericardium and *sanjiao*.

However, in another pulse diagram in the *Suwen Yaozhi* the organs are arranged circularly (see figure 11). In this model the six positions on the wrist (*cun*, *guan*, *chi*, left & right) are indicated in the center, the associated *fu* organs are in the next concentric circle, and the *zang* organs are in the outermost circle.

This arrangement suggests the *zang* organs are felt superficially to the *fu* organs that are found in the deep position, which would be consistent with the earlier *Huandi Neijing Suwen* and *Maijing* pulse models. In either case, Liu’s system is a significant departure from the pulse method described in either the *Suwen*, the *Maijing*, or the *Nanjing*. This is because Liu both includes all twelve organ systems by adding the pericardium plus all the *fu* (hollow organs), including the *sanjiao*, and specifying the large and small intestine rather than just the abdomen more generally. Furthermore, he arranges the organs by pairing each of the *zangfu* according to their basic *yin-yang* and *wuxing* correspondences, rather than strictly anatomical location.

Liu Wansu may have been the first physician to record this new pulse system, but he was not alone. Around the same time in the southern realm of the Nansong, a literati
doctor named Chen Yan 陳言 (fl.1174), also known as Chen Wuze 陳無擇, wrote his now famous *Sanyinji Yibing Zhengfang Lun* 三因極一病證方論 (Treatise on Proven Formulas based on the Three Ultimate Causes of All Diseases), which was published in 1174. Chen is often cited for the following passage:

外則氣血循環 流注經絡 喜傷六淫 內則精神魂魄志意思 喜傷七情 六淫者 寒暑燥濕風熱是 七情者 喜怒憂思悲恐驚是

There is an exterior and then the qi and blood circulate and flow through the *jingluo* (channels & collaterals), and their contentment is damaged by the six excesses. There is an interior and then it is refined into the *shen* (spirit of the heart), *hun* (ethereal spirit of the liver), *po* (corporeal spirit of the lung), *zhi* (the will-power of the kidney), and *yi* (the intellectual capacity of the spleen), and their contentment is damaged by the seven emotions. As for the six excesses, they are cold, summer-heat, dryness, dampness, wind, and heat. As for the seven emotions, they are happiness, anger, worry, consternation, sadness, fear, and fright.

Although not unique, Chen was an important figure in the promotion of the importance of the mental, emotional, and spiritual aspect with regards to the health and disease of mankind, coupled with the more commonly discussed external climactic factors. It is also notable that Chen avoids using the character *huo* 火 (fire) as a cause of disease, instead opting for both *re* 熱 (heat) and *shu* 暑 (heat, or summer-heat), since as a subject of the Nansong his loyalty would have precluded his arguing for an excess of the fire elemental-phase, or even suggesting that fire could be a pathological force. This north-south philosophical divide further supports the argument that medical texts also served as political treatises. Regarding the pulse, in the first *juan* 卷 (scroll, section, fascicle) of Chen’s text he expounds upon the pulse and describes the following arrangement:

**Chen Yan’s Pulse Model:**

<table>
<thead>
<tr>
<th>Position:</th>
<th><em>cun</em> (distal)</th>
<th><em>guan</em> (middle)</th>
<th><em>chi</em> (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right:</td>
<td>lung &amp; large intestine</td>
<td>spleen &amp; stomach</td>
<td>pericardium &amp; <em>sanjiao</em></td>
</tr>
<tr>
<td>Left:</td>
<td>heart &amp; small intestine</td>
<td>liver &amp; gallbladder</td>
<td>kidney &amp; urinary bladder</td>
</tr>
</tbody>
</table>

Once more, Chen maintains the *zangfu* pairs within each of the three positions according to their basic *yin-yang* and *wuxing* correspondences. However, he lists the *zang* organ first and the *fu* organ second in each of the six pairs. Although this marks a distinction between the pulse systems of Liu and Chen, it is still not clear whether this difference is based on a distal-proximal arrangement or a superficial-deep arrangement. Another Jin
dynasty physician later cleared up this confusion and defined the emerging system unambiguously.

One of the rhetorical devices often employed by Jin literati doctors is to first refer to a classical source with a direct quotation, then expound briefly to explain the significance of the quote, and then use this as the authority to introduce new ideas. This sometimes happens several times in a single essay, or happens over a series of essays. For example, in Liu’s third essay in the *Suwen Bingji* he revisits the opening chapter of the *Huangdi Neijing Suwen* that laments how people used to live to a hundred years of age, but now only live half as long due to poor lifestyle choices and disharmony with the cycles of nature. Liu next emphasizes the need for people to harmonize their daily activities to be in congruence with the seasons, returning to the discussion of how fire is yang, water is yin, and the need for these two primary forces to achieve balance to promote the health of Heaven, Earth, and mankind. After reinforcing these classical ideas of needing to achieve a balance of the cosmic forces, in the fifth treatise on examining the patient’s complexion, he then provides an entirely new diagnostic model that combines the different colors of the wuxing based on the generative and conquest cycles according to the seasons.

In his new system of diagnosis based on the complexion, Liu first describes the colors that should normally appear in each season based on the primary wuxing correspondence, plus the next phase in the generative sequence. For example, the color of autumn is white and winter is black, so in autumn one sees white and black, whereas in the winter one sees black and green, since green is the color of spring. However, if the lung is diseased because metal is being subdued by fire, then both white and red appear. There is nothing similar to this system anywhere in the *Huangdi Neijing, Nanjing,* or any other early medical text examined by this author. Liu goes on to describe how when different pathogens affect the organs, different colors may appear in different regions of the body, but primarily in the face. Liu concludes this passage by stating that if one can identify these colors, then one can determine life or death. Although this diagnostic system did not become a widespread or popular technique discussed by other literati doctors, perhaps because careful clinical observations failed to validate the theory, it still represents an interesting attempt at innovation within a dynamic intellectual field.
**Sudden turmoil**

In the *Suwen Bingji*, after considering the disease mechanisms of the five *zung* organs and their associated pathologies of wind, damp, dry, cold, heat, and fire, Liu returns to the discussion of *huoluan* (sudden turmoil). By the time this was published in 1166, Liu must have become aware of Cheng Wuji’s differentiation and prognosis of the two types of *huoluan*, and had confirmed the clinically utility of the model:

There is *gan huoluan* (dry sudden turmoil) and *shi huoluan* (damp sudden turmoil). For those who have vomiting and diarrhea, this is the evil *qi* coming out, and this is called *shi huoluan*. Out of ten [patients], eight or nine will survive. For those who do not seem to have vomiting or diarrhea, [but instead have] scattering suddenness and provoking turmoil (e.g., dry heaves or retching & tenesmus), the evil does not come out, and this is called *gan huoluan*. Out of ten [patients], not even one will live. These are all due to emissions of heat and being struck by heat, dietary irregularity, disharmony between the cold and hot *qi*, the clear and the turbid being mutually dried out, *yin* and *yang* being perverted and separated, and then it becomes these diseases.

Thus not only does he agree that there is a damp and dry type of *huoluan*, but he also provides a more quantitative description of the prognosis of the two types. While Cheng simply said many die from the dry type while few die from the damp type. Liu’s statistics are even more dire for the dry type, which he seems to believe in all cases results in death. Given the lack of technology to directly infuse fluids into the body’s vascular system, these numbers seem realistic. He also reiterates his previous argument that this condition is caused by heat instead of cold, although in this text he no longer emphasizes the role of the *sanjiao* (three burners) in the disease.

Later in the second *juan*, Liu discusses treatment strategies for *huoluan*. He begins this treatise on sudden turmoil disorder by comparing the physician to a general as they both engage in battle against the chaos.
A treatise says: physicians use medicine the way commanding generals use the army. The bencao says: good physicians are unable to be without medicines to cure disease just like good generals without an army are insufficient to conquer the enemy. Therefore using medicine is like using an army. 80

These statements reinforce the argument that these texts contain an embedded socio-political discourse and that for Liu; the problems facing the Jin required a military solution. In addition to these assertions, Liu identifies another dangerous symptom that could determine if the disease progresses from damp to dry:

For those with muscle cramping and huoluan, the treatment method is the same as using an army [to respond to the crisis] quickly; one cannot [respond] slowly. 81

Muscle cramping amidst persistent vomiting and diarrhea signals dehydration, the results of which account for the many deaths attributed to the dry type. Liu identifies fire, wind, and damp as the three pathogens that he believes cause the progression of the disease to this critical stage. Once these symptoms arise, the patient’s condition has become much more serious, and Liu knows that aggressive treatment is the only option. In addition to the standard Shanghan Lun formulas like Lizhong Wan 理中丸 (Order the Center Pill) to harmonize the digestive system, relying in large measure on the ginger to control the vomiting, or Wuling San 五苓散 (Five Ingredient Poria Powder) to drain the heat and dampness through the bladder, which risks further dehydration, Liu first recommends one of his own prescriptions: Banxia Tang 半夏湯 (Pinellia Decoction). 82 The chief medicinal in this formula, banxia 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma) (see figure 12), is also an effective anti-emetic that Liu may have found more clinically efficacious than the other standard prescriptions. Liu also makes extensive use of this medicinal in formulas for respiratory diseases in the third and final juan, based on its ability to dispel phlegm. Liu’s frequent use of this medicinal is not surprising, because the principle location where this medicinal was cultivated was in Huaili 槐里 village in
northern Shandong province, near Liu Wansu’s home town of Hejian. Therefore *banxia* was both effective and easy to acquire.

**Developments in herbalism**

Despite the ever growing number of medicinals described in the literature, physicians probably maintained a more modest assortment of herbs in their private apothecaries that were relatively easy to obtain and effective in the treatment of a wide variety of disorders. In fact, we can reconstruct what Liu’s pharmacy contained based on another section of the *Suwen Bingji* entitled *yaolue* 藥略 (medicinal summary) (See Appendix 2). In this summary, Liu provided a list of sixty-five of his favorite medicinals with a brief description of its primary clinical function. The extreme brevity of this materia medica is in stark contrast to the *Daguan Bencao*, which tried to provide an encyclopedic compilation of everything known about every identified substance. Having a comprehensive reference manual was certainly a welcome tool in any literati doctor’s library, and these doctors certainly spent many hours reading the voluminous pages explaining each medicinal’s taste, temperature, functions, indications, combinations, the places where they grow, the best time of year to harvest, and details about drying for storage and other mechanical preparations. However, when faced with a patient and needing to make a decision about which of the few ingredients immediately available to you had the best chance of improving their health, having a short and concise clinical reference would have been enormously helpful. Thus the fact that Liu saw fit to create such a list is strong evidence that he maintained his own clinical practice and pharmacy. Moreover, this list marks a defining moment in the *bencao* (materia medica) genre of medical literature; when official collections got too large to be clinically expedient and the need for a new type of quick reference list emerged.

The *yaolue* essay is a short and concise study sheet. A few examples based on some of the medicinals already discussed in this study illustrate the nature of this new genre of text. According to Liu, *renshen* and *ganjiang* benefit the *qi* and harmonize the center; *guizhi* stops sweating and harmonizes the exterior; *shaoyao* stops spleen pain and calms *taiyin*; *fangfeng* dispels wind; *huanglian* drains heart fire; and *banxia* dispels phlegm. In all of these examples, the description provided above is the complete entry on
the actions of these medicinals. Furthermore, it can be reasonably inferred that these sixty-five substances were the ones Liu used most often when prescribing from his own pharmacy.

Liu was also innovative using formulas. In the second juan of the Suwen Bingji, Liu provides formulas for the treatment of various diseases. The first three essays discuss diseases caused by wind, and prominently featured in half of the twenty-seven formulas described is the medicinal fangfeng 防風 (Ledebouriellae Radix), which literally translates to “guards against the wind” and was harvested both from the Jurchen homelands in the northeast and Shandong province in the Central Plains (see figure 13). An example of innovation is Liu’s original prescription Fangfeng Tang 防風湯 (Guard Against the Wind Decoction), which was to be used at the earliest sign of a wind disease:

Liu Wansu’s Fangfeng Tang 防風湯 (Guard Against the Wind Decoction): 87
Fangfeng 防風 (Ledebouriellae Radix)
Qianghuo 羌活 (Notopterygii Radix et Rhizoma)
Duhuo 獨活 (Angelica pubescens Maxim., Radix)
Chuanxiong 川芎 (Ligusticum wallichii Hort., Radix)

Notably, this formula is distinct from one by the same name that appeared in the Jufang 局方 (Imperial Formulary) with fifteen ingredients, only two of which were included in Liu’s version; fangfeng and duhuo. Another of Liu’s original formulas was Fangfeng Tongseng San 防風通聖散 (Siler Communicating with the Sages Powder), which proved popular with other literati doctors of the Jin. He also details Fangfeng Wan 防風丸 (Siler pill), Qianghuo Fangfeng Tang 羌活防風湯 (Notopterygii & Siler Decoction), Baizhu Fangfeng Tang 白术防風湯 (White Atractylodes & Siler Decoction), Cangzhua Fangfeng Tang 苍术防風湯 (Red Atractylodes & Siler Decoction), Diyu Fangfeng San 地榆防風散 (Sanguisorba & Siler Powder), Fangfeng Danggui Yinzi 防風當歸飲子 (Siler & Angelica Beverage), and Fangfeng Shaoyao Tang 防風芍藥湯 (Siler & Peony Decoction). The prominence of this medicinal is likely due both to its local availability and clinical effectiveness.
At the end of the third essay on wind is a formula for the treatment of injuries caused by blades or arrows that features *ruxiang* 乳香 (*Boswellia carterii* Birdw., Resina) and *moyao* 没藥 (*Commiphora myrrha* Engl., Resina), also known as frankincense and myrrh (see figure 14). While *fangfeng* would have been readily available to Jin physicians, the tree resins *ruxiang* and *moyao* had to be imported from either the southern seas trade routes, which stretched around India through Southeast Asia and up the coast to Nansong ports in Guangzhou 廣州 (Guangdong province). From there these medicinals had to be transported north up the coast and over the Huai River border to the Jin. Otherwise, they had to travel the overland trade routes from their place of origin in Bosiguo 波斯國 (Persia) in Central Asia, through the Huihe 回紇 and Xixia 西夏 kingdoms in the west, before finally arriving in the Jin. Given that these medicinals were useful for traumatic injuries incurred during war, and given that there was a history of much greater conflict with the Nansong than the other tributary states to the west, it is likely that the Jin relied more heavily on the western overland trade routes to acquire these treasured, and therefore profitable, medicinals.

In addition to relying upon international trade to bring many medicinals to market, Jin physicians like Liu Wansu also took advantage of the government sponsored pharmacies. In the second *juan* of the *Suwen Bingji*, Liu wrote another treatise on heat wherein twice he makes reference to two formulas for heat conditions listed in the *Jufang* (Imperial Formulary) and thus were available for purchase in the local government pharmacies. These formulas are *Xionghuang Jiedu Wan* 雄黃解毒丸 (Realgar Relieve Toxicity Pill) and *Miaoxiang Wan* 妙香丸 (Miraculous Fragrance Pill). To understand why in select instances Liu would choose to send patients to the drug store to buy an over the counter preparation, one need only examine the ingredients, beginning with the gold leaf covering on the Miraculous Fragrance Pill used to contain the aromatics.

These pills were made at the Jin imperial pharmacy with difficult to obtain ingredients, several of which needed to be acquired through the tributary states on their borders. According to the *Daguan Bencao* (1108), the purgative *badou* 巴豆 (*Croton tiglium* L., Semen) came from Sichuan and *yujin* 鬱金 (*Curcuma Tuber*) was grown in
Yunnan and Jiangxi, which were within the borders of the Nansong or Dali kingdoms. Medicinals such as *longnáo* 龍腦 (Borneol Camphor, lit. dragon brains) needed to be shipped north from Southeast Asia to ports in southern China and onwards to the Jin, since the overland route was impractical. The mineral *xionghuang* 雄黃 (Realgar) was mined from the mountains of Gansu, which was under the administration of the Xixia. The musk deer from which *shexiāng* 麝香 (*Moschus moschiferus* L., Secretio) was extracted roamed the mountains of Sichuan, Shaanxi, and Gansu, all along the Jin’s western border, but also could be found in the mountains of Shandong. However, the difficult and time consuming process of capturing the wild animal and extracting the aromatic musk from glands near their genitals would have made this medicinal very expensive due to limited supplies. Even the extraction of *niúhuáng* 牛黃 (*Bovis, Calculus*) from domesticated cattle would have only yielded small amounts of the substance and thus kept prices high, which provided a nice supplemental income to the butcher. Thus a pill like *Miaoxiāng Wān* was reserved for the wealthiest of the elite, and even though Liu might have traveled in these social circles, it would not have been practical to overextend his own capital in stocking such remedies within his personal pharmacy.

In contrast to these difficult to obtain or expensive medicinals, the formula preferred by Liu Wansu in the *Shanghan Biaoben Xinfa Leicui* for the treatment of fire, *Huanglián Jièdù Tang* 黃連解毒湯 (Coptis Relieve Toxicity Decoction), was composed of four medicinals that according to the *Daguan Bencao* (1108) were locally grown and readily available. The chief medicinal in the formula, *huánglián* 黃連 (*Coptis chinensis* Franch., Rhizoma) or Coptis rhizome (see figure 15), might have been the hardest to acquire, but since it grew abundantly all across the Jin’s borders in the southern provinces of Sichuan, Hubei, Zhejiang, just north of the Nansong capital at Lin’an in southern Anhui and Jiangsu provinces, as well as growing as far south as Guangxi, it appears that the laws of supply and demand would have brought this commodity quickly to market. Regarding clinical effectiveness, in a study published in the American journal *Science* (July 1, 1949) by Western trained scientists Gaw H.Z., and Wang H.P., which identified eight Chinese herbs that had
varying degrees of antibiotic action against *Staphylococcus aureus* and *Escherichia coli*, they concluded that *huanglian* had the strongest action while confirming all of the medicinals used in the study were non-toxic to humans. The medicinal *Huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix), or scutellaria root, grew all over the central regions of China with Shandong a major producer. 97 The *Daguan Bencao* first notes that *shanzhizi* 山梔子 (*Gardenia jasminoides* Ellis, Fructus), or gardenia fruit, grew in the river valleys of Nanyang, in Henan province. 98 Finally, Dan Bensky and Andrew Gamble (1993) found that the southwestern variety of *huangbai* 黃柏 (*Phellodendri Cortex*), or philodendron bark, was called *chuan huangbai* 川黃柏 (*Phellodendron chinense* Schneid, Cortex), but another variety came from the northeast called *guan huangbai* 官黃柏 (*Phellodendron amurense* Rupr., Cortex), which grew in the provinces of Hebei, Liaoning, and Jilin; the Jurchen homelands. Therefore, all of these medicinals would have been easy to acquire and inexpensive.

The first two *juan* of the *Suwen Xuanming* are dedicated to the topic of *zhuzheng* 諸證 (various diagnoses), wherein Liu provides a summary of 62 disease presentations with general symptoms and treatment recommendations, 99 with the remainder of the text discussing various other prescriptions and their modifications. 100 Liu combines the *zangfu* (solid & hollow organs), the climactic factors, conditions of excess and deficiency, and other phenomenon, to describe the patterns of disease. Therefore, this text would have served as an effective clinical manual, because the doctor only needed to match the patient’s signs and symptoms as closely as possible to one of these patterns. The doctor then would at least have a suggested prescription that he could analyze for modification, or choose an alternative formula better suited for an individual patient from the remainder of the text.

One of the interesting diseases discussed in the *Suwen Xuanming* is in the section entitled *gubing zheng* 蟲病證 (differentiation of *gu* diseases). 101 *Gu* originally meant some kind of magical poison made from the essence of venomous critters and was associated with the practice of sorcery or witchcraft. In the *Chunqiu Zuozhuan* 春秋左傳 (Spring & Autumn of Zuo’s Teachings, c.500 BC) there is mention of how good officials lost their ambition due to contracting a *gu* disease in the bedchamber, and soon thereafter became ineffective in governance and were ousted from their post. 102 The *Guoyu* 國語 (Words of the State, c.400 BC) reiterated the story wherein it was determined that the
problem was spending too much time being “close to women,” such that officials lost
their ambition, and concluded that *gan yisheng gu* 惑以生蠱 (it was his confusion that
generated the *gu* [disease]). This most likely referred to a sexually transmitted disease
like syphilis or gonorrhea, but may have simply been a metaphor for obsessive sexual
activity. The *Lunheng* 論衡 (Measured Discussions, c.80) described *gu* as grain bugs that
harmed crops and resembled moths, while the *Shouwen Jiezi* 說文解字 ([Han dynasty]
character dictionary, c.100) defined *gu* as an intestinal or blood parasite and attributed the
disease either to ghosts or to the wantonness and cruelty of the afflicted. The *Fengsu
Tongyi* 風俗通義 (Transmitting the Meaning of Social Customs, 195) by Ying Shao 應劭
(140-206) added that this disease can be treated using a chicken head. Some may have
even have thought the Jin emperor Xizong had contracted a *gu* disease late in his life.
Like many Chinese medical concepts, *gu* had several different meanings over the
centuries.

In the *Suwen Xuanming*, Liu paraphrases chapter 19 of the *Huangdi Neijing
Suwen*, which is the only time *gu* disease is mentioned in that text, as well as making a
reference to the *Zuozhuan*:

脾風傳腎 一名疝氣 小腹痛 出白液 名曰蠱
左傳云 以喪志名為蠱 病乃真精不守也
d大建中湯主之 治蠱病 小腹急痛 便溺失精 濡而出白液

When spleen wind is transmitted to the kidney, one name for this is *shanqi* 疝氣
(hernial *qi* or an intestinal/genital blockage), the lower abdomen is painful and a
white liquid is excreted. This is called *gu*. The *Zuozhuan* says: when one loses
their ambition it is called *gu*. They become sick and then their genuine essence is
not protected. *Da Jianzhong Tang* 大建中湯 (Major Construct the Middle
Decoction) governs this [pattern of symptoms]. [This formula] treats *gu* disease,
urgent pain in the lower abdomen, losing the essence through defecation and
urination, [such that when they] urinate there is a discharge of white liquid.

Liu argues that *gu* disease no longer refers to sorcery or magical poisons, but agrees that
it is primarily a genital disease related to the kidney’s governance of these organs and
attributed to excessive sexual activity. This is part of normal scientific development,
where new interpretations and definitions of old disease categories allow for the
perpetuation of the orthodox paradigm. Although superficially the system appears static,
there is actually a dynamic under current. In a further example of this, Liu adopts the
formula name *Da Jianzhong Tang* 大建中湯 (Major Construct the Middle Decoction)
from the *Jingui Yaolue Fanglun* 金匱要略方論 (Treatise on Essential Strategies & Prescriptions from the Golden Cabinet) attributed to Zhang Zhongjing 張仲景 (142-220), but Liu’s version bears little to no resemblance to the original, which had only three ingredients: pepper, ginger, and ginseng. In contrast, Liu’s version includes:

**Liu Wansu’s *Da Jianzhong Tang* 大建中湯 (Major Construct the Middle Decoction):**

*Huangqi* 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix)

*Yuanzhi* 遠志 (*Polygala tenuifolia* Willd., Radix)

*Zexie* 澤瀉 (*Alisma palntago-aquatica* L. var. *orientale* Samuels, Rhizoma)

*Shaoyao* 芍藥 (*Paeonia lactiflora* Pall., Radix)

*Renshen* 人參 (*Panax ginseng* C.A. Mey, Radix)

*Longgu* 龍骨 (*Draconis, Os*)

*Gancaozhi* 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)

Although this particular innovative formula for the treatment of *gu* is very different from its namesake, Liu continues to make extensive use of the standard *Shanghan Lun* formulas in the *Suwen Xuanming*. This includes *Mahuang Tang* 麻黃湯 (Ephedra Decoction), *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction), *Xiao Qinglong Tang* 小青龍湯 (Minor Green Dragon Decoction), *Baihu Tang* 白虎湯 (White Tiger Decoction), *Wuling San* 五苓散 (Five Ingredient Poria Powder), *Xiao Chaihu Tang* 小柴胡湯 (Minor Bupleurum Decoction), *Da Chaihu Tang* 大柴胡湯 (Major Bupleurum Decoction), *Xiao Chengqi Tang* 小承氣湯 (Minor Order the Qi Decoction), *Da Chengqi Tang* 大承氣湯 (Major Order the Qi Decoction), *Tiaowei Chengqi Tang* 調胃承氣湯 (Harmonize the Stomach and Order the Qi Decoction), and *Guadi San* 瓜蒂散 (Melon Pedicle Powder). Thus Liu’s call for innovation does not in any way preclude making use of these classical prescriptions.

Some of Liu’s other herbal strategies in the third and final chapter of the *Suwen Bingji* are based on the Northern Song’s innovations in the field of tonics, in particular the use of formulas that first appeared in the *Jufang*. For example, in the section on *xusun* 虛損 (deficiencies and depletions) Liu recommends *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction) to tonify the *qi*, but in Liu’s version he substitutes astragalus for licorice, but still uses equal dosages of each medicinal:
Liu Wansu’s *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction): 109

*Baizhu* 白术 (*Atractylodes macrocephala* Koidz., Rhizoma)
*Renshen* 人參 (*Panax ginseng* C.A. Mey, Radix)
*Huangqi* 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix)
*Fuling* 茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium)

Just like the later debates over the composition of the *sidajia* 四大家 (four great masters), there was an ongoing debate about the composition of this prescription. Liu even combines this formula with another tonic decoction from the *Jufang*, *Siwu Tang* 四物湯 (Four Substance Decoction), to make a formula he called *Bawu Tang* 八物湯 (Eight Ingredients Decoction) 110 for the benefit of both the *qi* and blood. This same formula was later adjusted and called *Bazhen Tang* 八珍湯 (Eight Treasures Decoction) by subsequent practitioners.

**Herbal formulas & social discourse**

In the field of medicinal formulas, the more prominent of Liu’s innovations appear to have been driven by the socio-political climate to serve as a commentary on the current state of affairs as well as offer solutions to the problems. As discussed earlier, the formula *Huanglian Jiedu Tang* to clear fire from the whole body was one of Liu’s preferred treatment options in his 1146 text, and yet in the *Suwen Bingji* this formula name was not mentioned even once. Instead, Liu presents the same formula, but prepared as a pill instead of a decoction, under the new name: *Da Jin Huawan* 大金花丸 (Great Jin Dynasty Blossoming Pill). These medicinals have a remarkable clinical efficacy, but their extreme bitterness can negatively influence patient compliance. By preparing it as a pill made with honey, it might have helped overcome this obstacle and improve patient outcomes. The binome *jinhua* 金花 could be translated different ways, such as “golden flower,” which would invoke the golden yellow color of the medicinals. However, by prefacing the character *jin* 金 with *da* 大 (great), Liu was obviously invoking the Jin dynasty and arguing its flowering or blossoming depended upon the elimination of the excess fire of the Nansong that was threatening to conquer the metal of Jin according to
wuxing doctrine. It was a standard Chinese practice to preface the name of the current dynasty with “the Great,” making this reference immediately identifiable to any and all of his contemporaries:

Liu Wansu’s Da Jin Huawan 大金花丸 (Great Jin Dynasty Blossoming Pill) from the Suwen Bingji: ⑪

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huanglian 黃連 (Coptis chinensis Franch., Rhizoma)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Huangbai 黃柏 (Phellodendri Cortex)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Huangqin 黃芩 (Scutellaria baicalensis Georgi., Radix)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Shanzhizi 山梔子 (Gardenia jasminoides Ellis, Fructus)</td>
<td>1 liang</td>
</tr>
</tbody>
</table>

*Da Jin Huawan* was not the only example of this mode of discourse. While there are a few other formulas in Liu’s text that use the character *jin* 金, most of these can be explained due to the name of the chief ingredient or being based on an earlier formula. For example, *Jinlu Wan* 金露丸 (Golden Dew Pill), ⑫ which is likely based on the formula by the same name in the Jufang, ⑬ although Liu’s version has only four ingredients that focus on strongly purging heat through the bowels, whereas the *Jufang* version has 22 ingredients but is actually more gentle. However, Liu may have been struggling to decide which formula best deserved this name, for he created another *Jin Huawan* 金花丸 (Jin dynasty blossoming pill) that was used to treat vomiting:

Liu Wansu’s *Jin Huawan* 金花丸 (Jin Dynasty Blossoming Pill): ⑭

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banxia 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Binglang 槟榔 (Areca catechu L., Semen)</td>
<td>2 qian</td>
</tr>
<tr>
<td>Xionghuang 雄黃 (Realgar)</td>
<td>2 ½ qian</td>
</tr>
</tbody>
</table>

In addition to these two, Liu also created a formula to strengthen the kidney called *Jin Gangwan* 金剛丸 (Jin Dynasty Resolute Pill), and of course the kidney corresponds to the water element that conquers fire. In this case, Liu could again be identifying the Jin as having water power, and calling for the emperor to be resolute in the struggle against the south. In this formula the ingredients are listed at equal dosages:
Liu Wansu’s *Jin Gangwan* 金剛丸 (Jin Dynasty Resolute Pill): ¹¹⁵
*Caoxie* 草薢 (unidentified medicinal)
*Duzhong* 杜仲 (*Eucommia ulmoides* Oliv., Cortex)
*Congrong* 蓼蓉 (*Cistanche deserticola* Y.C. Ma., Herba)
*Tusizi* 菟絲子 (*Cuscuta chinensis* Lam., Semen)

In the *Suwen Xuanming*, Liu returns to these ideas and proposes yet another variation on this theme. Unlike the *Suwen Bingji*, in this text Liu included the standard version of *Huanglian Jiedu Tang* from the *Waitai Miyao Fang*, although he changed the dosages to equal amounts for all four ingredients at ½ liang. But he also included a modified version that substitutes the heat clearing purgative *dahuang* for the *shanzhizi*, prepared once again as a pill, and also given the name: *Da Jin Huawan* 大金花丸 (Great Jin Dynasty Blossoming Pill). Although by using the binome *Da Jin* 大金 Liu is clearly referencing the current dynasty, the addition of the “big yellow” or “Great Yellow” ingredient of rhubarb root also provided him plausible deniability should Jurchen official censors be concerned over his unrelenting promotion of war against the Nansong. Furthermore, by changing all the ingredients to the color *huang* 黃 (yellow), Liu may have been conceding to the peace faction’s support of the earth phase while still arguing for the conquering of fire:

Liu Wansu’s *Da Jin Huawan* 大金花丸 (Great Jin Dynasty Blossoming Pill) from the *Suwen Xuanming*: ¹¹⁷
*Huanglian* 黃連 (*Coptis chinensis* Franch., Rhizoma) ½ liang
*Huangbai* 黃檗 (Phellodendri Cortex) ½ liang
*Huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix) ½ liang
*Dahuang* 大黃 (*Rhei Radix et Rhizoma*) ½ liang

Liu adds that if one substitutes *zhizi* 梓子 (*Gardenia jasminoides* Ellis, Fructus) for *dahuang* as in the original formula *Huanglian Jiedu Tang* that it is called *Zhizi Jin Huawan* 梓子金花丸 (Gardenia Jin Dynasty Blossoming Pill), and also is called; *Jiji Jiedu Wan* 既濟解毒丸 (Quick Relief Resolve Toxicity Pill), thereby renaming his older version of *Da Jin Huawan*. Although *jiji* 既濟 in a medical context would logically translate as having already achieved relief from a disorder, suggesting a prescription with a quick action, it might also translate as having already crossed a river, suggesting if the
Jin army would cross the Yangzi River they could resolve the fire toxins threatening the dynasty’s legitimacy.

Should the Jin not succeed in conquering the Nansong, because it was too weak or too influenced by the peace faction, Liu offered the formula *Ruan Jin Huawan* (Irresolute Jin Dynasty Blossoming Pill) for the treatment of heart, chest, back, abdominal, or urinary pain, suggesting Liu was pained at the thought of the Jin’s inaction. Should the water element become depleted leading to a loss of seminal essence, Liu offered the formula *Shui Zhong Jin Dan* (Water within Metal Pill), which was a variation on the formula *Jinsuo Zhengyuan Dan* (Metal Lock Righteous Source Pill) from the *Jufang*, both of which used *longgu* (Draconis Os) or dragon bones to secure the kidney essence and source *qi*. In this case, Liu is equating the Jin dynasty with the power of water. All of these prescriptions reflect Liu’s concern over the affairs of all under Heaven, and are evidence of how Jin physicians used their medical texts to engage in socio-political discourse.

*Developments in acupuncture*

The final contribution of the *Suwen Bingji* to medical development is the inclusion of brief guidelines on acupuncture for literati doctors. At the very end of the text are two short essays on the subject. Although herbal medicine was clearly the favored treatment method among *ruyi* (Confucian physicians), it is apparent that many of them also practiced acupuncture. Not surprisingly, Liu recommends acupuncture primarily for pain conditions, and even today it remains a valuable treatment option for pain management. There is even a reference to applying *wuxing* theory to acupuncture, for in his first entry on the subject he states that for heart pain one should needle the *yuan* (source) point of the kidney channel. Therefore, he used the
conquest sequence of kidney water to regulate heart fire. Liu continues to recommend primarily the use of source points on the other organ-channels depending on the quality of the pulse and other symptoms, but also mentions needling the jìng 井 (well) points. He describes how for the treatment of pain in the lower part of the torso, one should needle the source point of the stomach channel if the pain is in the front, the urinary bladder channel for pain in the back, and the gall bladder channel for pain on the sides, which are the regions of the body these channels traverse. It is probable that he combined the use of source and well points, all of which are located on the hands and feet or on the tips of the fingers and toes respectively, with local points at the site of the pain. He also mentions the use of bleeding therapy and moxibustion.

In addition to this basic methodology, Liu describes a moxibustion protocol that uses wùxìng wúxìng correspondences. In the section on swellings and edemas, he describes a technique using the five shù yù (transporting) points, which he points out represent the wùxìng wùxìng points that begin with wood distally at the fingers and toes and progress proximally via the generation sequence to fire, earth, metal, and finally to water at the elbows and knees. For Liu, one of the determining factors for choosing points to cauterize was the color of the urine; such that if the urine is red one needles the yīng 滎 (spring) point, which corresponds to the fire phase, and so on. Although this idea did not persist, it represents another attempt by Liu to innovate diagnostic and treatment strategies within the orthodox paradigm.

A few more details on Liu’s approach to acupuncture are found in the Suwen Yaozhi. In the first juan, Liu discussed the importance during the Tang 唐 dynasty (618-907) of understanding the calendrical cycles in disease processes and appropriate times for treatment. He adds further details in subsequent juan on the system, which integrates the theories of yīn yáng, wùxìng, and the ten Heavenly stems and twelve Earthly branches. In the sixth juan, Liu explores the subject of acupuncture more directly and provides a total of eleven images, with nine of them being illustrations of parts of bodies or whole bodies with details on the location of named acupuncture points or the flow of the different channel pathways (see figure 16). From these diagrams it is clear that the names and location of these aspects of medical cosmology remained in flux, and that there were still alternative points and pathways being used in acupuncture practice during the Song and Jin dynasties. For example, the point commonly referred to today as hégu 合谷 (LI-4, joining valley) was identified by Liu as hùkòu 虎口 (LI-4,
tiger’s mouth), which is phonetically similar. Regarding location, Liu places the point *tanzhong* (CV-17, center of the chest) lateral to the midline on the kidney channel, instead of in the center of the chest as the name implores, and the point *jugu* (LI-16, huge bone) that is usually found on the top of the shoulder is moved anteriorly by Liu on the lateral chest, level with the armpits, possibly on the spleen channel. Regarding channel pathways, Liu’s drawings of the stomach, lung, urinary bladder, and kidney channels don’t account for the location of the *luo* (connecting) points, which diverge from the trajectory of the primary channel. Although the Northern Song’s Bureau for Revising Medical Texts tried to establish an orthodox system, it also contributed to the existence of diversity by promulgating different authoritative versions at different times. Each updated version probably had a very slow and gradual effect, if any, on contemporary clinical practices.

During the latter years of Liu Wansu’s life he wrote three texts based on his study of the *Huangdi Neijing Suwen* and criticized other doctors for their reliance on old prescriptions and lack of new methods. This was apparently in response to their criticisms of his innovative approach to medicine. Nonetheless, Liu continued to recommend standard formulas from the *Shanghan Lun* and the *Jufang* in addition to his own innovations. The *Suwen Bingji*, *Suwen Xuanming*, and *Suwen Yaozhi* continued to emphasize the *wuyun liuqi* doctrine and the excess of fire and deficiency of water. Liu further described his own pulse system that integrated all twelve *zangfu* according to their *wuxing* correspondences rather than strictly anatomical location. While many of Liu’s ideas demonstrate knowledge gained through clinical practice, some of his innovations were more theoretical such as his system of diagnosis based on the color of the complexion according to the *wuxing* seasonal cycles, or selecting acupuncture points based on the color of the urine. Notably, his pulse innovation had a much greater impact on the trajectory of medical development than his other diagnostics. In regards to *huoluan* (sudden turmoil), Liu added a quantified prognosis based on the damp and dry type of the disease and continued to assert heat over cold as the causative factor. Liu started the trend of creating more concise and clinically useful materia medica compilations with his *yaolue* (medicinal summary) in response to the cumbersome encyclopedic publications like the *Daguan Bencao*. To treat the excess fire, Liu transformed the formula *Huanglian Jiedu Tang* into the *Da Jin Huawan* (Great Jin dynasty Blossoming Pill) and its variants, which proved popular with later Jin doctors. This formula provides direct evidence of
how literati doctors used medical texts to engage in social discourse. Liu also provided guidelines on the use of acupuncture, primarily for relieving pain. His discussions and illustrations evidence the dynamics within the acupuncture field, with various point names and channel pathways variously described in different texts, demonstrating a lack of true standardization at that time. Altogether, Liu Wansu had a diverse and long lasting impact on the development of literati medicine.

Zhang Yuansu

Late in Liu Wansu’s life he had a clinical encounter with a young literati doctor named Zhang Yuansu 張元素 (c.1140-1220), style name Jiegu 潔古 (Cleaning out the Old). Zhang was from Yishui 易水 or Yizhou 易州, 126 which according to the History of the Jin were two names for the same place that was located just west of the capital at Yanjing in modern Hebei province. 127 However, the records indicate that Yizhou was its official name and only adds the alternative name afterwards, perhaps because the editors were aware that local people like Zhang Yuansu were referring to the place as Yishui, which could be translated as “changing to water.” Despite the peculiarities of their clinical encounter, Zhang was also concerned over the water and fire imbalance that was threatening the Jin, so he and others may have taken to calling his place of origin near the capital a place that is “changing to water” in order to conquer fire. Three of Zhang’s books are extant: Zangfu Biaoben Hanre Xushi Yongyao Shi 脏腑標本寒熱虛實用藥式 (Patterns of the Zangfu, Root & Branch, Cold & Hot, Deficient & Excess, and Use of Medicinals, c.1200), Yixue Qiyuan 醫學啟源 (Expounding the Foundations of Medical Studies, c.1210), and Jiegu Laoren Zhenzhu Nang 潔古老人珍珠囊 (Old Man Jiegu’s Bag of Pearls, c.1220). The former and latter texts are hereafter referred to as the Zangfu Shi (Patterns of the Zangfu) and the Zhenzhu Nang (Bag of Pearls), respectively. These texts allow for the reconstruction of the next phase of literati medicine in the Jin.

The exact dates for Zhang Yuansu’s life and publications are unknown. However, it can be reasonably estimated that he was born c.1140, which would have made him
about forty years younger than Liu Wansu, and died c.1220 at about eighty years of age. Zhang had a son named Zhang Bi 張璧, also called Zhang Qizi 張岐子, who followed his father into medicine and survived the fall of the Jin, but little else is known about his life or work (Gao Wei, 1994). It is likely that Zhang Yuansu and Liu Wansu maintained some type of relationship, perhaps just as two literati doctors among elite society who would spend evenings together discussing their medical and political ideas, or perhaps even as teacher and student. Zhang was the sole medical teacher of Li Dongyuan 李東垣 (1189-1251), another member of elite society whose dates are known and who thus might have been around thirty years old when Zhang died, giving him at least ten years during which he could have apprenticed with the old master as an adult. Ten years is the same length of time Luo Tianyi 羅天益 (c.1220-1300) apprenticed with Li Dongyuan. The Zangfu Shi was likely one of Zhang’s earlier works that helped him gain a reputation such that Li sought out his teachings, perhaps published around 1200. According to the preface of the Yixue Qiyuan by Zhang’s disciple Li, he was asked to write the preface while the old master was still alive. 128 This was perhaps around 1210, or a decade after the first book and near the beginning of Li’s apprenticeship. In Zhang’s own preface to the Zhenzhu Nang, and also in several of the entries, he mentions Li Dongyuan, which suggests that this text was compiled late in his life after Li had already become a favored disciple, 129 perhaps around 1220. Without the assistance of his disciple, who ensured Zhang’s ideas were preserved in print, these works might not be extant today.

Zhang Yuansu was a literati doctor in the true sense of the word, having been a child prodigy who passed the jinshi 进士 (advanced scholar) civil service examination at the age of twenty-seven and only afterwards studying medicine. 130 The reason that this brilliant young scholar was not able to pursue a career in government was not just that he was a Chinese subject in the Jurchen state, but that he had used a taboo character on his examination essays and was subsequently demoted in rank, forcing him to take up an alternative profession. Based on a birth date of c.1140, this would have occurred around 1167 when the recent earthquakes, dense fog, and growth of “white hair” over the earth may have prompted Zhang to be critical of Shizong in his essays, earning him extra scrutiny. According to the History of the Jin:
Thereupon he turned to the study of medicine but was without any knowledge or reputation. Then one night in a dream there was a man who used a large axe and a long chisel to bore a hole into his heart, wherein he received inside of him a book of countless volumes. It is in this cave that the art was passed on to him.  

According to the biography by his disciple Li Dongyuan in the *Yixue Qiyuan*, Zhang Yuansu struggled to learn medicine for twenty years before this life altering incident, which is also reminiscent of the strange events surrounding Liu Wansu’s medical enlightenment. Li also provides the name of the text that was transmitted into Zhang’s heart: *Neijing Zhuzhi Beiyao* (Complete Essentials Governing Treatment from the [Yellow Emperor’s] Inner Classic). Li adds that following the dream Zhang came to an understanding:

Following this penetration into the cave of his mind, he could easily expound on the *dao* of Xuan (the Yellow Emperor) and [his court physician] Qi[bo], [as though] commanding the [armies of] Qin [against] Yue!  

This passage invokes both the conquest of the fire of the Zhou dynasty by the water of the Qin dynasty as described by Sima Qian (c.100 BC), as well as the conquest of the southern kingdom of Yue by the northern power of Qin to unite the empire and usher in the Imperial Age (c.221 BC-1911). Thus it draws a double parallel to the conflict between the Jin and Nansong. Because he was born as a subject of Jin, Zhang’s loyalty to the ruling dynasty was absolute, but as a political outsider and member of the war faction during the time of the first special council on the *wuxing*, he continued to advocate for Jin to adopt the water phase and extinguish the fire of the Nansong.

It would have been just a few years after his own medical realizations that he visited Liu Wansu who was sick from a *shanghan* disease. The most detailed account of what happened that day is recorded by Zhang’s disciple, Li Dongyuan, in the preface to the *Yixue Qiyuan*:

Surprisingly, one day [Liu] Shouzhen (a.k.a., Liu Wansu) fell ill from *shanghan* and eight days [later] the mistake of draining [heat] was proven. [Shouzhen had] a headache and tight pulse, ferocious vomiting and no appetite. His disciples
attended to the illness, but they had absolutely no idea what to do, so they begged [Zhang] Jiegu (a.k.a., Zhang Yuansu) to examine him. When [Zhang] arrived, Shouzhen was facing the wall and didn’t acknowledge him. Jiegu said: how can he see me standing here from his lowly position?

診其脈謂之曰 脈病乃爾 初服某藥犯某味藥乎 曰然 潔古曰 差之甚也 守真遽然起曰 何謂也 曰 某藥味寒 下降 走太陰 陽亡 汗不徹故也 今脈如此 當以某藥服之 守真首懇大服其能一服而愈 自是名滿天下

[Zhang] examined [Liu’s] pulse and described it [to the disciples] saying: the pulse [reveals that] the disease is like this. First of all, was he mistakenly given antagonistic medicines? [The disciples] said: yes. Jeigu said: this error was extreme. Shouzhen suddenly awoke and asked: what is the meaning of this? [Zhang] said: the medicinal’s flavor and cold [nature] were downward draining, it went to the taiyin and [as a result] the yang was lost. This is the reason the sweat cannot perfuse. Now that the pulse is similar to this, one should use a specific [warm] medicinal in the prescription. Shouzhen was supremely respectful and a large dose of this [formula] was able to in a single dose result in a cure. From this [diagnosis and treatment, Zhang’s] name filled all under Heaven.

The implication is that Liu thought his illness was due to heat and took a cold purgative such as Da Chengqi Tang 大承氣湯 (Major Order the Qi Decoction) from the Shanghan Lun, but because his illness was actually a cold type of disease the purgative made the condition worse. Zhang recognized the mistake and prescribed an appropriate warming formula to release the exterior and promote sweating to dispel the pathogen, possibly something like Mahuang Tang 麻黃湯 (Ephedra Decoction). Thus Zhang saved old Liu’s life that day, but unfortunately he only had a few more years left.

The approximate date for Liu Wansu’s death (c.1200) is predicated on an invitation to serve in government received from the Jin emperor Zhangzong 章宗 (r.1190-1209). It is likely this occurred early in his reign when he wanted to shape a court that was favorable to his intentions, perhaps in 1193 when Zhangzong was convening the special council to consider the wuxing cycles and the appropriate power for the dynasty. The emperor may have heard about Liu’s steadfast conviction that an elemental imbalance was the cause of all the Heavenly disturbances and thought that Liu was a good candidate for the court and the council. Considering this as a possibility, the reason he declined to serve might have been an attempt to avoid vicious political infighting. The fact that the council refused to consider anything other than succession according to the generation cycle was probably due to the influence of a peace faction within the Jin court. This faction had grown tired of the decades of warfare and wanted the relative peace and stability exemplified by the reign of Shizong to continue into the future. Liu’s conquest
model would have required a massive military campaign to crush the vestiges of fire that still burned in the south and absorb the most economically prosperous region of East Asia into their empire. Had the court chosen water, it would have meant going to war with fire, whereas choosing earth implied a peaceful transition from fire to earth. Liu may have actually died in 1203 out of desperation when Zhangzong declared earth power, which symbolically ended Liu’s campaign to convince the Jin to conquer the Nansong.

Still the campaign continued among other literati, with Zhang Yuansu leading the charge. According to the History of the Jin, Zhang was renowned for his demand for innovation:

平素治病不用古方 其說曰 運氣不齊 古今異軌 古方新病不相能也 自為家法
Ordinarily when treating disease, [Yuansu] didn’t use ancient formulas and his explanation was: the elemental-movements of qi are not identical, the ancient and the modern are on different courses, ancient formulas and modern diseases are not mutually compatible. This was the master’s method. 135

These words are similar those of Zhang’s disciple Li in the preface to the Yixue Qiyuan:

潔古治病不用古方 但云 古方新病甚不相宜 反以書人
[When] Jiegu treats an illness he doesn’t use old formulas, only saying that old formulas and new diseases are to the utmost not mutually compatible, and he opposes those people who rely upon [old] books. 136

Both of these passages are essentially paraphrasing Zhang’s own words from the preface to his Zhenzhu Nang:

言古方新病不相能 自稱家法
I say old formulas and new diseases are not mutually compatible. This is what I consider to be a master’s method. 137

Of course, Zhang and his disciples were not the first to make this assertion, as they were in agreement with statements made by Liu Wansu in the Suwen Bingji (1166) when he criticized his medical colleagues for relying “strictly upon old prescriptions…they are especially without any new methods,” and even recalls the words of the scholar-warrior Yue Fei 岳飛 (1103-1142). Regardless, this was not a call for a scientific revolution and none of these physicians or warriors were advocating the abandonment of their current
cosmological paradigm. Instead they were encouraging other literati to investigate things and extend knowledge.

The similarity between the ideas of Liu Wansu and Zhang Yuansu may have been one of the reasons Zhang felt the need to clear up confusion over the authorship of a text he had written under the title *Bingji Qiyi Baoming Ji*, which some people believed was written by Liu.\(^\text{138}\) At least a large part of the confusion must have been with the title, since Liu also wrote the *Suwen Bingji Qiyi Baoming Ji*, which is identical except for the first two characters referencing the classic, but Zhang said his book also went by the name *Huofa Jiyao* (Essential Mechanisms & Methods of Life). Adding to the confusion, the *Qinding Siku Quanshu* (Complete Collection in Four Treasuries for the Emperor to Admire, 1782) included a text attributed to Zhang Yuansu entitled the *Baoming Ji* (Collection for Protecting Life),\(^\text{139}\) but this work is identical to the *Suwen Bingji* by Liu Wansu. There was even another problem of confusion over authorship of the *Zhenzhu Nang*, which Zhang was concerned had been mistakenly attributed to his disciple Li Dongyuan.\(^\text{140}\) Yet in the *Yixue Qiyuan* there are sections where Zhang borrows liberally from Liu’s texts,\(^\text{141}\) such that the concerns over authorship seem a bit contrived. Still, it is probable that the *Suwen Bingji Qiyi Baoming Ji* was also known as the *Baoming Ji* and was written by Liu Wansu, and the *Bingji Qiyi Baoming Ji* or *Huofa Jiyao* by Zhang is no longer extant.

*Fire generates earth*

The *Zangfu Shi*, most likely Zhang’s earliest treatise, is a concise and systematic clinical manual. This text also reveals that Zhang’s early political ideas may have been more sympathetic towards the peace faction. The *Zangfu Shi* consists of a single *juan* and presents its discussion of the twelve *zangfu* (solid & hollow organs) in the following order: lung, large intestine, stomach, spleen, small intestine, urinary bladder, kidneys, *mingmen* (life gate), heart, *sanjiao* (three burners), gallbladder, and liver.\(^\text{142}\) Immediately noticeable are the inclusion of the *mingmen* and the exclusion of the *xinbao* (pericardium) from the list, as well as a peculiar order. According to the standard cycle of *qi* that moves through the twelve *zangfu*, the heart should follow the spleen and precede the small intestine with which it is paired, but instead the heart gets demoted to
the standard position of the pericardium and placed between the mingmen and the sanjiao, all three of which are in some way associated with fire. Each section of Zhang’s treatise begins by identifying an organ’s elemental-phase and its correspondences, such as the different tissues, orifices, fluids, and emotions, and other information depending on the organ. This is important because what follows are brief explanations of the pathologies associated with these various systems and recommendations for treatment. As the title of the book states, the pathological conditions of each organ are first differentiated by ben (root) and biao (branch). For example the “root” diseases of the large intestine are those associated with the organ itself, such as constipation, diarrhea, defecation of blood, and hemorrhoids, whereas the “branch” diseases involve those regions of the body traversed by the acupuncture channel, such as toothache and sore throat.

Zhang frequently uses the wuxing model to explain both pathology and treatment strategy, including this recommendation early in the text:

清金不外滋陰降火
To clear metal is nothing more than to nourish yin and descend fire.

Thus Zhang brings together various ideas into a succinct and focused medical discussion to facilitate clinical practice. This text also appears to be engaged in social discourse.

For the majority of the organs, Zhang’s recommended treatment in the Zangfu Shi follows the generative cycle of the wuxing, but the few exceptions may reveal his early political ideology. Consistent with the standard protocol of tonifying the mother to nourish the son for the treatment of deficiencies using the generative cycle, Zhang states: that to tonify earth one should tonify its mother fire; to tonify metal one should tonify its mother earth; and so on. However, for draining excesses the standard protocol is to sedate the son to drain the mother, but Zhang deviates from this standard. For example, when discussing the stomach he states:

土生於火 火太過則土焦 降心火 乃以清胃熱
Earth is generated from fire. If fire is excessive then earth is scorched. Thus by diminishing the heart fire one can clear stomach heat.

This alternative strategy is to sedate the mother to drain the son and is in direct opposition to the following treatment strategy he proposes when discussing the heart using the standard protocol:
Both of these examples use the generative cycle of fire to earth invoked by Zhangzong when he declared the Jin was adopting earth power in succession to the fire of the Northern Song. In both of these cases he recommends using the medicinal *huanglian* (Coptis chinensis Franch., Rhizoma), but for different reasons. In the first case this herb will clear heart fire in order to clear stomach fire, whereas in the second case this herb will clear stomach fire in order to clear heart fire. In agreement with Liu Wansu, it appears Zhang believes that whatever the case, the fire phase is excessive and needs to be drained. However, initially Zhang may have been sympathetic to the arguments of the peace faction that the Jin should invoke the power of earth via the generative cycle. If he initially opposed a war to conquer the south, this would explain why he minimized the use of the conquest sequence in this early text. Zhang may have been arguing that by claiming the power of earth the Jin diminishes the fire power of the Nansong, and combined with calming the fiery rhetoric advocating war, the problem of imbalance within all under Heaven could be resolved effortlessly.

Although Zhang was eager to promote the generation sequence for the treatment of excess fire and deficient earth, for cases of excess earth he had to make other accommodations to the *wuxing* system. To drain excess from the spleen the standard protocol calls for draining the son to sedate the mother, or draining metal to sedate earth. However, Zhang bypasses metal since he did not want to diminish the Jin, and instead he points to the need to drain dampness from the earth via the water phase, recommending herbs that promote urination to drain the water. Since earth conquers water this is theoretically awkward but clinically sound. More specifically, Zhang argues the problem is always in the urinary bladder and not the kidney:

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真水無所謂強也 膀胱之邪氣旺 則為水強 瀉膀胱乃以瀉水也
The genuine water [of the kidney] is without that which is called violence. If the evil qi of the urinary bladder is prospering then this is considered water violence. Draining the urinary bladder is thus draining the water.
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This may also have been a reaction against the war faction that wanted water to conquer fire, arguing it is the evil nature of water that engages in violence. Rather than focusing
on extinguishing fire through the power of water, Zhang argued instead that one should focus on supporting the earth phase to overcome the water phase and harmonizing the center of the body and the state to restore order. These accomodations to orthodox wuxing cosmology further suggest that Zhang was initially a supporter of the peace faction.

Once the physician identified the organ involved in a disease and whether the problem was one of root or branch, hot or cold, excess or deficient, Zhang next provided in his Zangfu Shi a list of suggested medicinals for each problem. Remarkable is that he does not mention any formula names, only a short list of substances to consider, although they are consistent with the chief ingredients in standard prescriptions for the various body systems. For example, to tonify the lung qi Zhang recommends renshen 人参 (Panax ginseng C.A. Mey, Radix) and huangqi 黄芪 (Astragalus membranaceus (Fisch.) Bge., Radix); to tonify lung yin he recommends maimendong 麦门冬 (Ophiopogonis Tuber) and baihe 百合 (Lilii Bulbus); to warm the spleen and stomach he recommends aromatics imported from Southeast Asia like dingxiang 丁香 (Eugenia caryophyllata Thunb., Flos), tanxiang 檀香 (Santalum album L., Lignum), baidoukou 白豆蔻 (Amomum cardamomum L., Fructus), and yizhiren 益智仁 (Alpinia oxyphylla Miq., Fructus); to drain dampness from the spleen, small intestine, urinary bladder, and to promote urination, he recommends mutong 木通 (Akebiae Caulis), fuling 赤茯苓 (Poria cocos (Schw.) Wolf, Sclerotium), zhuling 豬苓 (Polyporus umbellatus (Pers.) Fr., Sclerotium), and zexie 滋瀉 (Alisma palntago-aquatica L. var. orientale Samuels, Rhizoma); to nourish heart blood he recommends suanzaoren 酸棗仁 (Ziziphus spinosa Hu., Semen), danggui 當歸 (Angelica sinensis (Oliv.) Diels, Radix), and shudihuang 熟地黄 (Rehmannia glutinosa (Gaertn.) Libosch., Radix Preperata); to regulate blood circulation he recommends the Persian imports ruxiang 乳香 (Boswellia carterii Birdw., Resina) and moyao 没藥 (Commiphora myrrha Engl., Resina); and to nourish the liver and kidneys he recommends gouqi 柿杞 (Lycium barbarum L., Furctus), duzhong 杜仲 (Eucommia ulmoides Oliv., Cortex), and gouji 犬脊 (Cibotium barometz (L.) S. Sm., Rhizoma). Zhang may have been intending to identify the “active ingredients” in the old formulas he thought were incompatible with modern diseases, selectively abandoning
those aspects he deemed ineffective while preserving those aspects with demonstrated clinical efficacy.

Water conquers fire

The *Yixue Qiyuan* brought together both the accumulated wisdom of Zhang Yuansu and selected teachings from Liu Wansu, with a return to an emphasis on the problem of excess fire and deficient water. The first half of the second *juan* of this text is drawn almost entirely from Liu’s *Suwen Xuanji Yuanbing Shi* (c.1150-60) that describes the disease mechanisms for a variety of conditions based on a fire and water imbalance. This text may represent a shift from his earlier policy of supporting the earth phase and the peace faction at court towards becoming a more radical proponent of the war faction. This may have occurred as a result of the failure of the special council’s decision invoking the earth phase to bring peace to all under Heaven. Instead it brought greater conflict with the south and a halt in tribute payments until 1208, which may have even led to a reversal of the *wuxing* decision. At the beginning of this section, Zhang adds the following passage to Liu’s doctrine:

五運主病

五運主病 木火土金水 順則皆靜 逆則變亂 四時失常 陰陽偏勝
病之源也

As for the *wuyun*’s governance of disease: when wood, fire, earth, metal, and water all move in sequence then each is calm; when there is rebellion, then they transform into chaos, the four seasons lose their constancy, *yin* and *yang* lose balance and are conquered. This is the source of disease.

This passage emphasizes the importance literati placed on their cosmology and provides the context for the rest of the text. In a section on *kuang* 狂 (madness), Zhang condenses most of Liu’s comments, but makes certain to retain the following argument:

夫外清內濁 動亂參差 火之體也 靜順清朗 准則信平 水之體也
由是腎水主智 而水火相反 故心火旺則腎水衰 乃失志而狂越也

If the exterior is clear and the interior turbid, then the movement is chaotic and irregular; this is the body of fire. If stillness follows and clarity is restored, then accordingly there is honesty and peace; this is the body of water. The reason for this is kidney water governs wisdom, and water and fire are mutually opposed. Therefore, if heart fire is vigorous then kidney water declines, one thus loses focus and madness overcomes.
Thus Zhang agreed with Liu that to avoid going mad, the wise and clear water needs to conquer the chaotic fire to restore balance. This could be understood on a macro level to be a discussion regarding the need for the Jin to conquer the Nansong, and on a micro level of the origin of psycho-somatic diseases and the significance of the heart-mind-body-spirit connection.

The second half of the second juan describes treatments for the six climactic pathologies: wind, heat, damp, fire, dry, and cold. Zhang again uses Liu’s system that was based on the Wang Bing (c.762) chapters of the Huangdi Neijing Suwen, and suggests many of the same classical and contemporary prescriptions that Liu recommended or invented, including: *Fangfeng Tongsheng San* 防風通聖散 (Siler Communicating with the Sages Powder) for wind; *Baihu Tang* 白虎湯 (White Tiger Decoction) and *Xiao Chaihu Tang* 小柴胡湯 (Minor Bupleurum Decoction) for heat; *Wuling San* 五苓散 (Five Ingredient Poria Power) for dampness; *Liangle San* 涼膈散 (Cool the Diaphragm Powder), *Huanglian Jiedu Tang* 黃連解毒湯 (Coptis Relieve Toxicity Decoction), *Sanyi Chengqi Tang* 三一承氣湯 (3 in 1 Order the Qi Decoction), and *Bazheng San* 八正散 (Eight Ingredient Rectification Powder) for fire; *Maren Wan* 麻仁丸 (Hemp Seed Pill) for dryness; and *Sini Tang* 四逆湯 (Four Rebellions Decoction) and *Lizhong Wan* 理中丸 (Order the Center Pill) for cold. While there is a great deal of continuity between Zhang’s treatment strategies and those of his predecessors, he also makes subtle changes to the old prescriptions so that they better suit modern diseases.

An example of these subtle changes is Zhang Yuansu’s formula Runchang Wan 潤腸丸 (Moisten the Intestines Pill) for constipation from dryness. Zhang appears to have been the first to describe this modification of the Shanghan Lun formula Maziren Wan 麻子仁丸 (Hemp Seed Pill), also called *Piyao Wan* 脾藥丸 (Spleen Medicine Pill) by Cheng Wuji. Subsequently, this formula was adopted and revised by later literati doctors:

**Zhang Yuansu’s Runchang Wan 潤腸丸 (Moisten the Intestines Pill):**

- *Maren* 麻仁 (Cannabis sativa L., Semen) ½ liang
- *Taoren* 桃仁 (Prunus persica (L.) Batsch., Semen) ½ liang
- *Qianghuo* 羌活 (Notopterygii Radix et Rhizoma) ½ liang
- *Danggui* 當歸 (Angelica sinensis (Oliv.) Diels, Radix) ½ liang
- *Dahuang* 大黃 (Rhei Radix et Rhizoma) ½ liang
Zhang’s contributions to medical development are also found in the first juan of the Yixue Qiyuan. Early in this text he presents the twelve zangfu (solid & hollow organs) essentially in the order of the generative cycle of the wuxing: liver, gallbladder, heart, small intestine, spleen, stomach, pericardium, sanjiao, lung, large intestine, kidney, urinary bladder. Each of these twelve essays on the zangfu includes a summary of the organ’s function and its common pathologies drawn from classical sources like the Huangdi Neijing Suwen. However, Zhang then adds a commentary from a source called the Zhuzhi Beiyao (Providing the Essentials Governing Treatment), which may be an updated version of his earlier treatise on the zangfu. This section recommends not only individual medicinals that are similar to those detailed in his earlier text, but also adds formulas created by the distinguished late Northern Song physician, Qian Yi (1035-1117).

**Influence of Qian Yi**

Qian Yi became famous for a book on pediatrics called the Xiao’er Yaozheng Zhijue (Craft of Medicinal Treatment for Childhood Diseases). This book was published in 1119 and was the first text to describe the now famous formula Liuwei Dihuang Wan (Six Flavor Rehmannia Pill) for the tonification of liver and kidney yin. Liu Wansu even wrote a preface to this text, which is evidence of its influence on Jin dynasty physicians. In the preface, Liu provides some biographical information on Qian Yi. Liu first remarks that Qian was styled Zhongyang (仲陽), and that he came from a family that for generations had lived in the south at Qiantang (Zhejiang province, near Lin’an), but had moved north with his great-grandfather. Qian Yi’s father was known as an accomplished acupuncturist and physician as well as a drunkard who liked to roam about; when Yi was three years old, his father traveled east across the ocean and never returned. Since his mother had already died, Yi went to live with his paternal aunt, who had married into a family of literati physicians. He eventually became quite accomplished himself. He was appointed as an instructor at the Hanlin Yixue (Hanlin Medical Academy) after successfully treating a princess in the
court of the Northern Song emperor Shenzong 神宗 (r.1068-1086). A year later, the young crown prince was diagnosed with chizhong 瘀癱 (spasms & convulsions) due to internal wind, but none of the palace doctors could cure him. Qian Yi was persuaded to treat the prince and administered the formula Huangtu Tang 黃土湯 (Yellow Earth Decoction). The child was cured, and afterwards the emperor summoned Qian Yi to court to ask why this treatment was effective. Qian used the wuxing to explain:

乙對曰 以土生水 木得其平 則風自止 且諸醫所治垂愈 小臣適當其愈 天子悦其對 擢太醫丞 賜紫衣金魚

Yi replied: I used earth to generate water and when wood found its balance the wind stopped. Moreover, the many doctors who had treated him had almost achieved a cure so your humble servant followed this and so of course [the child] was cured. The Son of Heaven was pleased and replied: you have been selected as deputy taiyi (grand physician) and I bestow upon you purple robes with the golden fish [insignia].

For each zang (solid organ) in the Yixue Qiyuan, Zhang Yuansu suggested one of Qian Yi’s color-coded formulas to either tonify or drain for cases of deficiency or excess, respectively. The ingredients for these formulas are included in the appendix (see Appendix 3). Specifically, he recommends Dihuang Wan 地黃丸 (Rehmanniae Pill) to tonify the liver and Xieqing Wan 泻青丸 (Drain the Green Pill) to drain; Anshen Wan 安神丸 (Calm the Spirit Pill) to nourish the heart and Xiexin Tang 泻心湯 (Drain the Heart Decoction) or Daochi San 導赤散 (Guide Out the Red Powder) to drain; Yihuang San 益黃散 (Benefit the Yellow Powder) to drain the spleen and Xiehuang San 泻黃散 (Drain the Yellow Powder) to drain; Ejiao San 阿膠散 (Ass-hide Glue Powder) to tonify the lung and Xiebai San 泻白散 (Drain the White Powder) to drain; Bushen Dihuang Wan 補腎地黃丸 (Tonify the Kidney Rehmannia Pill) to tonify the kidney, and Zhang emphasizes that one never drains the kidney. That the kidney always suffers from deficiency but never from excess is fundamental to the medical and social discourse of the Jin. Regarding the latter formula, there is no Bushen Dihuang Wan in Qian Yi’s text so Zhang must have meant that one can use Dihuang Wan, later renamed Liuwei Dihuang Wan, to tonify both the liver and the kidneys.

Zhang also emphasized formulas that clear heat under the fu (hollow organ) of the sanjiao. In addition to familiar formulas like Huanglian Jiedu Tang 黃連解毒湯 (Coptis
Relieve Toxicity Decoction), Liangge San 涼膈散 (Cool the Diaphragm Powder), Baihu Tang 白虎湯 (White Tiger Decoction), and Da Chengqi Tang 大承氣湯 (Major Order the Qi Decoction), Zhang also adds his own prescriptions, including this one for heat causing alternating symptoms, such as fever and chills:

**Zhang Yuansu’s Chaihu Yinzi 柴胡飲子 (Bupleurum Beverage):**

- Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
- Renshen 人參 (Panax ginseng C.A. Mey, Radix)
- Huangqin 黃芩 (Scutellaria baicalensis Georgi., Radix)
- Gancao炙 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata)
- Dahuang 大黃 (Rhei Radix et Rhizoma)
- Danggui 當歸 (Angelica sinensis (Oliv.) Diels, Radix)
- Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix)

This prescription is clearly based on a combination of the *Shanghan Lun* formulas *Da Chaihu Tang* (Major Bupleurum Decoction) and *Xiao Chaihu Tang* (Minor Bupleurum Decoction), but Zhang omits *banxia 半夏* (Pinellia ternate (Thunb.) Breit., Rhizoma) since the ability to transform phlegm and stop vomiting is not always needed, and also omits the ginger and jujube. Thus his new prescriptions are still modifications of old ones.

Zhang criticized his colleagues for blindly following old books like the *Shanghan Lun*, but he nonetheless was still strongly influenced by this treatise and still advocated using the *sancai zhifa 三才治法* (three talented treatment methods) from that text. To persuade his readers on the importance of these methods, Zhang details what happens if a doctor fails to follow the appropriate treatment plan:

- 可下而不下 使人心腹脹滿 煩亂鼓脹 可汗而不汗 則使人毛孔閉塞 悶絕而終 可吐而不吐 則使人結胸上喘 水食不入而死

If you can use purgatives but don’t use purgatives then it will cause a person’s central abdomen to be swollen and full, there will be vexation, chaos, and tympanic swelling. If you can use diaphoretics but don’t use diaphoretics then it will cause a person’s pores to become obstructed and blocked, and if they are absolutely obstructed then it will be the end. If you can use emetics but don’t use emetics then it will cause a person to have knots in the chest and shallow wheezing, water and food cannot enter and they will die.

Zhang’s essay in the *Yixue Qiyuan* is an early example of the debate over the appropriate use of tonification and drainage. Although the *Shanghan Lun* was primarily concerned with the elimination of pathogens, the Northern Song also popularized the use of tonic
formulas like *Sijunzi Tang* (Four Gentlemen Decoction) and *Siwu Tang* (Four Substance Decoction) to tonify *qi* and blood, both of which were recorded in the *Jufang* and sold at the imperial pharmacies, as well as Qian Yi’s tonics like *Dihuang Wan* (Rehmannia Pill). However, Zhang must have been concerned about excessive use of such gentle and nourishing treatment strategies by some literati doctors, especially when the patient’s condition required a more aggressive approach. Overall, Zhang’s strategies represent a balanced approach.

*Developments in diagnosis*

Arguably one of the most remarkable contributions of Zhang Yuansu to medical development is in the field of pulse diagnosis, bringing together divergent ideas into an enduring diagnostic system. Included in the first *juan* of the *Yixue Qiyuan* and found amongst his descriptions of the functions, pathologies, and treatments of the *zangfu*, are subsections within the *fu* (hollow organ) essays that refer to a text called the *Maijue* 脉訣 (Pulse Secrets). There is no reference to such a text prior to Zhang Yuansu, so it is probable that he is the author. In the Ming novel *Xiyou Ji* 西遊記 (Journey to the West, c.1500), there is a passage in which a Tang dynasty (618-907) doctor is accused of charlatanry, but he claims to have studied from the *Suwen*, *Nanjing*, *Bencao*, and the *Maijue*. However, this can hardly be considered a reliable source for Tang medical history, and could easily have been referring to the *Maijing* (Pulse Classic) alongside these other “Han classics.” On the other hand, in the Ming novel *Jin Pingmei* 金瓶梅 (The Golden Lotus, 1617), an imperial physician refers to his rigorous medical training that included the Han classics, texts by Yuan dynasty (1260-1368) physicians, and the *Jiegu Lao Maijue* 潔古老脈訣 (Old Jiegu’s Pulse Secrets). Jiegu is Yuansu’s style name, so it appears that the text referenced in this novel was a version of the *Maijue* mentioned by Zhang Yuansu. This pulse model is detailed below:
Zhang Yuansu’s Pulse Model:

<table>
<thead>
<tr>
<th>Depth / Position</th>
<th>cun (distal)</th>
<th>guan (middle)</th>
<th>chi (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Superficial:</td>
<td>large intestine</td>
<td>stomach</td>
<td>sanjiao</td>
</tr>
<tr>
<td>Right Deep:</td>
<td>lung</td>
<td>spleen</td>
<td>mingmen</td>
</tr>
<tr>
<td>Left Superficial:</td>
<td>small intestine</td>
<td>gallbladder</td>
<td>urinary bladder</td>
</tr>
<tr>
<td>Left Deep:</td>
<td>heart</td>
<td>liver</td>
<td>kidney</td>
</tr>
</tbody>
</table>

Zhang described his model very carefully to be certain there was no confusion about the depths of the zangfu. Each time he repeats how first the fu is felt with light hand pressure and then the zang is felt with heavier pressure, and that the zang are considered yin and interior compared to the fu that are yang and exterior. This redundancy gives him the theoretical authority needed to reverse a centuries-old tradition in pulse diagnosis based on the system detailed in the Huangdi Neijing Suwen and the Maijing, which located the zang organs in the superficial position and the fu in the deep. In order to achieve a professional consensus that reverses a core practice of Chinese medicine we must assume that its clinical validity had been demonstrated over time. The only organ missing is the xinbao (pericardium) and Zhang only provides a short discussion of this surplus organ, concluding that its treatment is the same as for the small intestine. Thus he may have also located the pericardium pulse in the left superficial cun position with the small intestine because it is anatomically exterior to the heart as in the Suwen model, or he may have paired it with the sanjiao pulse in the right chi position as in the models of Chen Yan and Liu Wansu, but in the deep position with the mingmen because it is a yin organ. Old Jiegu’s Maijue was a pivotal achievement in the history of pulse diagnosis and this model is still commonly used today.

Zhang Yuansu further contributed to the discourse on the causes of disease, focusing this time more on the yin-yang paradigm than the wuxing. In an essay on the siyin zhi bing 四因之病 (four causes of disease), he first presents examples of four sets of complementary yet opposite forces, some of which come from Heaven and others from mankind: cold and heat, wind and damp, famine and satiation, toil and leisure. He then describes these four pairs of causes:

As for the first [cause of disease from cold & heat], it begins by causing the qi to move and produces from the interior what are called: accumulations, abdominal masses, tumor qi, goiter qi, jiehe (consumption, tubercular lesions), madness, derangement, insanity, and convulsions.
As for the second [cause of disease from wind & damp], it begins by causing the qi to move and produces from the exterior what are called: carbuncles, swellings, skin ulcerations and sores, scabies, deep ulcerative lesions, piles, shaking, convulsions, superficial edema, those diseases with red eyes and flaming gizzards, with spasms and skin that is swollen, painful, and itching.

As for the third [cause of disease from famine & satiation], it does not cause the qi to move and produces from the interior what are called: retained fluids, habitual eating, famine, gluttony, toil, and laxness, lodged food, huoluan (sudden turmoil), sorrow, fear, happiness, anger, thinking, admiring, and worrying altogether.

As for the fourth [cause of disease from toil & leisure], it does not cause the qi to move and produces from the exterior what are called: zhang (miasmic) qi, thieving evil ghosts, [venomous] insect and snake gu (sorcery) poison, corpse bugs and ghost attacks, being mired in sloshing muck, wind, cold, heat, damp, as well as being hacked [by bladed weapons], shot [by arrows], punctured [by spears], and cut [by knives].

Zhang’s model basically has two interior (yin) and two exterior (yang) causes, and both of these causes, in turn, are differentiated by movement (yang) and lack of movement (yin). The interior causes lead to a variety of internal lesions, fluid retention, digestive disorders, as well as a myriad of emotional disorders, evidencing the close connection between the mind and body as perceived by Jin physicians. The exterior causes lead to a lot of different skin conditions and inflammations when there is movement, but when there is stagnation a miasmic qi arises. There are also both supernatural and natural causes, evidencing the continued acceptance into the cosmological paradigm of ghosts and sorcery alongside climactic influences and traumatic injury. Zhang’s model of disease causation is referenced by later Jin physicians, but was not widely adopted.

Notable in Zhang’s model of pathophysiology is the absence of shanghan disease as a discrete category, and a close association between digestive disorders, huoluan (sudden turmoil), and emotional turmoil. As for the former, although Zhang was evidently committed to the clinical utility of Shanghan Lun formulas, the concept of “cold damage” had become so ubiquitous and encompassed such a broad array of
externally contracted diseases from different environmental pathogens that Zhang is implicitly arguing that it had lost its usefulness as a disease category. Instead he used the term zhang 瘴 (miasmas), which is much less frequently discussed in the medical literature. As for the latter, this idea was expounded upon by Zhang’s disciple Li Dongyuan who emphasized the importance of digestion and the organs of the earth element on the health of the entire person, as well as for all under Heaven.

Regarding huoluan 霍亂 (sudden turmoil), Zhang’s only discussion is a summary of the lengthy exposition presented by Liu Wansu. However, in the Zhenzhu Nang he specifically recommends two different medicinals for this disorder: huoxiang 藿香 (Agastaches seu Pogostemi Herba) (see figure 17) and tanxiang 檀香 (Santalum album L., Lignum). 162 This reflects the standards of the Daguan Bencao (1108) that specifically identified these substances for the treatment of xintong huoluan 心痛霍亂 (heart pain & sudden turmoil). 163 It further noted that tanxiang, or sandalwood, was imported from the southern seas and that huoxiang was one of the ancient wuxiang 五香 (five spices) that previously came from an unknown location, but by the time of the Song was being widely grown in Lingnan 岭南 (South of the Mountains, Guandong & Guangxi provinces) where many families cultivated it domestically. During the heyday of Srivijaya (c.600-1200), the earliest Southeast Asian kingdom in the archipelago, known in China as Sanfoqiguo 三佛齊國 (Kingdom of the Three Buddhists), such aromatic medicinals were traded as valued commodities on the international market with Java being one of the principal exporters of sandalwood (J. Welden, 2011). The name tanxiang literally translates as “sincerity fragrance” and this product was in high demand by devout Buddhists throughout Asia who prized it as incense, which would have further driven up the price. That Zhang chose to include these is further evidence that he was catering to the medical needs of elite society who could afford to purchase these expensive prescriptions. Neither of these medicinals were included in the list of Liu Wansu’s 65 favorites, suggesting he was either cognizant of supply limitations or he treated a more economically diverse group of patients. Zhang includes several other medicinals that had
to be imported from the south and therefore would have been considerably more expensive than locally grown herbs, none of which are found in Liu’s list. These include: dingxiang 丁香 (Eugenia caryophyllata Thunb., Flos), gaoliangjiang 高良薑 (Alpinia officinarum Hance, Rhizoma), jianghuang 藤黄 (Curcuma longa L., Rhizoma), hezi 訶子 (Terminalia chebula Retz., Fructus), and xijiao 犀角 (Rhinoceri Cornu).

Developments in materia medica

Zhang is also well known for his contribution to the materia medica genre of medical literature. Once again, he was part of a broader trend in medical development that spanned the Jin dynasty whereby physicians became increasingly dissatisfied with the impracticality of official publications. Literati doctors were responding to the increasingly voluminous entries found in official texts that inhibited quick access to clinically relevant information. The Daguan Bencao (1108) listed a daunting 1,744 medicinals from a wide spectrum of plant, animal, and mineral substances, far more than one doctor practically requires and certainly more than the majority of doctors could even reasonably keep stocked in their apothecaries, much less in their memories. In his Suwen Bingji (1166), Liu Wansu swung the proverbial pendulum to the other extreme and provided a concise list of 65 medicinals with only the briefest mention of their usefulness. Zhang Yuansu expanded on this information, as well as increased the number of medicinals to 106 in the Yixue Qiyuan (c.1220), and to 112 in the Zhenzhu Nang (c.1220). Of Liu’s 65, 40 of those medicinals (62%) were included by Zhang in both of his texts, and 52 of them (80%) were included in at least one of Zhang’s texts, indicating their primacy in formulas used by literati doctors. Thus one development in this genre was the identification of the most commonly used medicinals, with Zhang’s 112 substances representing only 6% of those recorded in the Daguan Bencao. This trend could be traced to the late Northern Song physician Kou Zongshi 寇宗奭 and his Bencao Yanyi 本草衍義 (Dilatations on the Materia Medica) (1116), but his abridged collection of medicinal anecdotes neither developed any new categorization systems nor was it focused on clinical practice.

Zhang Yuansu made an important contribution to how medicinals were categorized and classified for clinical reference. In the Yixue Qiyuan, in an essay entitled
yaolei faxiang 藥類法象 (forming a method of categorizing medicinals), Zhang proposed a system based on the properties of the medicinals and how those properties were to be used in treatment:

藥有 氣味厚薄升降浮沉補瀉 主治之法
Medicinals have [the properties of] qi (temperature), flavor, thickness, thinness, ascending, descending, floating, sinking, tonifying, draining, and [these properties determine] the method to govern treatment. 164

Following this, Zhang arranged the 106 substances in five categories (see Appendix 4). 165

The first category, feng sheng sheng 風升生 (wind [dispelling], rising, generating), is further classified as yin within yang and includes 20 medicinals. The second category, re fu chang 熱浮長 (heating [and warming], floating, enduring), is classified as yang within yang and also includes 20 medicinals. The third category, shihua cheng zhongyang 潤化成中央 (damp transforming and building the center), includes 21 medicinals but was not designated with a yin yang classification, probably because the center represents the mid-point between yin and yang. The fourth category, zao jiang shou 澀降收 (drying [and moistening], descending, receiving), is classified as yang within yin and includes 22 medicinals. The fifth category, han chen cang 寒沉藏 (cold [and cooling], sinking, storing), is classified as yin within yin and includes 23 medicinals. These five categories are determined primarily by the relative strength of the temperature and flavor of each substance to be applied allopathically in treatment: a heating medicinal for a cold disease, a cooling medicinal for a hot disease, and so forth. Although the five categories clearly parallel the wuxing, Zhang again emphasizes yin yang theory to serve as a quick clinical reference; a yang medicinal for a yin disease, a yin medicinal for a yang disease.

The Zhenzhu Nang offers a somewhat different categorization system, suggesting Zhang’s efforts towards systemization was still incomplete at the time of his death. This task was left to his disciples. In the preface, Zhang provides a summary of his evolving categorization system:

辨藥性之 氣味陰陽厚薄升降浮沉補瀉六氣十二經 及隨證用藥之法
Differentiate medicinals by their properties of qi (temperature), flavor, yin and yang, thickness, thinness, ascending, descending, floating, sinking, tonifying, draining, the liuqi (six climactic energies), and the twelve channels, in order to follow the method of the proven uses of medicinals. 166
Notable are three differences: the overt inclusion of $yin$ and $yang$, the inclusion of the $liuqi$ (six climactic energies), and the inclusion of the twelve channels. Regarding the first, while the $Yixue Qiyuan$ uses a four stage differentiation of $yin$ and $yang$, the $Zhenzhu Nang$ adopts a six stage differentiation: $chun yin$ 續陰 (pure $yin$), $yin zhongwei yang$ 隱中微陽 ($yin$ more than $yang$), $yin zhongzhi yang$ 隱中之陽 ($yin$ within $yang$), $yang zhongzhi yin$ 陽中之陰 ($yang$ within $yin$), $yang zhongwei yin$ 陽中微陰 ($yang$ more than $yin$), and $chun yang$ 純陽 (pure $yang$). In this model, pure $yin$ and $yang$ have replaced $yang$ within $yang$ and $yin$ within $yin$, but more innovative is his use of the term $zhongwei$ 中微 (more than). Zhang was the first to describe this type of $yin$ $yang$ relationship. He may have intended to synchronize the six pairs of channels with the six stages of $yin$ and $yang$; from $taiyang$ (small intestine & urinary bladder) to $jueyin$ (liver & pericardium). Although there are scattered references in the $Zhenzhu Nang$ to the $liuqi$, there are frequent references to these six channel pairs. Furthermore, one of Zhang’s more enduring contributions is his identification of the $zangfu$ (solid & hollow organs) and their associated $jingluo$ (channels and collaterals) that are influenced by specific medicinals. In a short essay near the end of the $Zhenzhu Nang$ entitled $yinjing baoshi$ 引經報使 (report of envoys that guide [formulas] to a channel), Zhang identifies a total of 22 medicinals that can serve as envoys in a formula to direct its actions to specific body systems. The appendix includes both the 112 medicinals with their complete entries and the section on envoys from the $Zhenzhu Nang$ (see Appendix 5).

Finally, Zhang Yuansu contributed immensely to one of the most outstanding developments in the $bencao$ 本草 (materia medica) genre of medical literature during the Jin dynasty: the redefining of the key functions of commonly used medicinals. This evolution is clearly evident when comparing the works of the Jin doctors Liu Wansu (1166) and Zhang Yuansu (c.1210-1220) to the Northern Song imperially sponsored compendium, $Daguan Bencao$ (1108). Not only did Jin physicians focus their texts on clinically relevant information for a select few substances and introduce new categorization systems to more efficiently implement these medicinals in a clinical setting, they also identified new functions and uses. This refinement in the application of the materia medica was a defining moment in the normal scientific development of classical Chinese medicine.
In the materia medica written by Zhang and in a later Jin materia medica by Wang Haogu 王好古 (fl.1238-1246), the first entry is fangfeng 防風 (Ledebouriellae Radix), while in Liu Wansu’s summary it was recorded second. Therefore, this medicinal was evidently very important to Jin literati doctors. In the Yixue Qiyuan it is the first substance listed under the category of feng sheng sheng (wind [dispelling], rising, generating), and is exemplary of this group of medicinals. Translations of the complete entries for fangfeng by Liu and Zhang are provided below:

**Fangfeng 防風 [entry from the Suwen Bingji by Liu Wansu]:**

療風通用
It is useful for curing penetrating wind.

**Fangfeng 防風 [entry from the Yixue Qiyuan by Zhang Yuansu]:**

氣溫味辛 療風通用 瀉肺實 散頭目中滯氣 除上焦風邪之仙藥也
Its qi is warm, its flavor is acrid. It is useful for curing penetrating wind. It drains lung excess and it disperses the head and eyes when they are afflicted by stagnant qi. It is a xianyao (medicinal of the immortals) for eliminating wind evils of the upper jiao.

主治秘藥云 味甘純陽 太陽經本藥也 身去上風 梢去下風
The Zhuzhi Miyao (Secret Medicinals for Governing Treatment) says: its flavor is sweet, it is pure yang. It is a taiyang channel root medicine. The body [of this medicinal] dispels upper wind, and the tips dispel lower wind. It also says: its qi and flavor are both thin; it is floating and ascending; it is yang. It is used to govern the various winds and dispel dampness. Remove the rootlets.

**Fangfeng 防風 [entry from the Zhenzhu Nang by Zhang Yuansu];**

甘苦 純陽 太陽經本藥 身去上風 梢去下風 與干姜藜芦白蔹芫花相反
Sweet and bitter, pure yang. Taiyang channel root medicine. The body [of this medicinal] dispels upper [region] wind, and the tips dispel lower [region] wind. Mutually incompatible with ganjiang (Zingiber officinallis Rosc., Rhizoma), lilu (Veratri Radix et Rhizoma), bailian (unidentified medicinal), and yuanhua (Daphne genkwa Sieb. Et Zucc., Flos).

The entry for fangfeng in the Daguan Bencao, which quotes numerous classical and contemporary sources, agrees that its flavor is sweet and acrid and that it is a warm substance used for the treatment of wind and is incompatible with the same four medicinals identified by Zhang. However, most of what is included in the Northern Song compendium is markedly different than Zhang’s entries. For example, the Zhenzhu Nang
is the only text to identify the bitter flavor, while the *Yixue Qiyuan* mentions sweet and acrid separately, suggesting Zhang was struggling to determine for himself its genuine flavor. The four character phrase, *liao fengtong yong* 療風通用 (useful for curing penetrating wind), was Liu Wansu’s entire entry on this medicinal, but there was no reference to “penetrating wind” in the *Daguan Bencao*. This demonstrates that Zhang was intentionally building upon the work of Liu. Furthermore, the *Daguan Bencao* does not discuss the treatment of any specific *zangfu* (solid & hollow organs), and although internal wind corresponds to the liver, external wind attacks the lungs first, so in the *Yixue Qiyuan* Zhang emphasizes that the role of *fangfeng* is to drain excess from the lung, which is in the upper *jiao* (body region). According to *shanghan* (cold damage) theory, the early stage of a wind invasion is called *taiyang* and so Zhang also includes this for reference, but the *Daguan Bencao* does not make any reference to classifications such as *yin*, *yang*, thickness, thinness, ascending, descending, floating, or sinking. The use of the main part of the root for wind in the upper *jiao* and the root tips for wind in the lower *jiao* that Zhang details is also not mentioned in the *Daguan Bencao*, which instead focuses on the different places it grows, when to harvest, alternate names, as well as ancient uses. Therefore, the Jin dynasty genre of materia medica literature is unique with respect to previous eras because it limits the entry to clinically relevant information, and more importantly; redefines what is considered clinically relevant.

Given the significance of this medical development, further examples of Zhang’s redefinition of medicinal actions and his clinical reasoning are warranted. Indeed, similar patterns are seen when examining the first medicinal listed under each of the five categories established in the *Yixue Qiyuan*. The medicinal *heifuzi* 黑附子 (*Aconitum carmichaeli* Debx., Radix Lateralis) is listed first under the category *re fu chang* (heating [and warming], floating, enduring), classified as *yang* within *yang*, and is identified as hot, acrid, and pure *yang* (see figure 18). Here Zhang disagrees with Liu regarding its ability to tonify heart fire. Instead, Zhang emphasizes its warming of the kidney and spleen. Zhang describes *fuzi* as a *shengyao* 聖藥 (sagacious medicinal) for eliminating cold and damp, and *fangfeng* as a *xianyao* 仙藥 (medicinal of the
immortals) for eliminating wind, which suggests both of these medicinals were deemed highly efficacious. When quoting from a text in the *Yixue Qiyuan* called the *Zhuzhi Miyao* 主治秘藥 (Secret Medicinals for Governing Treatment), which may have been an earlier version of Zhang’s work on the subject, Zhang introduces a literary device that he frequently uses when describing medicinals to emphasize their clinical utility, just like this one for *fuzi*:

其用有三 去臟腑沉寒一也 補助陽氣不足二也 溫暖脾胃三也  
It has three uses: To dispel sinking cold from the *zangfu* (solid & hollow organs) is the first. To tonify and aid *yang qi* insufficiencies is the second. To warm the spleen and stomach is the third. 

In the *Zhenzhu Nang*, this list of uses is usually reduced to even fewer key functions, although for *fuzi* it adds that it is used as an envoy to the channels to remove obstructions and is incompatible with *fangfeng*. The fact that Zhang considers inclusion of these undesirable combinations to minimize adverse drug reactions important is another indicator that these concise references were meant primarily for clinical use. In the *Daguan Bencao* entry for *fuzi*, it does not mention treatment of the *zangfu*, only symptoms such as headaches and an inability to walk; pathogens like wind, cold, damp, *shanghan* (cold damage), and *huoluan* (sudden turmoil); the usual information on growing regions and harvesting; and identifies that *fuzi* has a strong toxicity and needs to be properly prepared prior to use. 

Since both Liu and Zhang believed heat to be the cause of *huoluan*, neither of them recommends this hot medicinal for that condition. The *Yixue Qiyuan* often includes preparation notes that would be useful for someone processing the raw materials themselves. For example, it notes that *fuzi* should be roasted before using to detoxify the poisons and make it safe for internal use. The *Zhenzhu Nang* does not include any such references. This suggests that by this time medicinals were being purchased that had already undergone the necessary preparations. In addition, the omission of information on growing regions and the times to harvest suggests the evolution of a market economy that was catering to the needs of literati doctors, who could now purchase products ready for use.
The medicinal *huangqi* 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix) is listed first under the category of *shihua cheng zhongyang* (damp transforming and building the center) (see figure 19). In this case, the entries from the *Daguan Bencao* and those from Liu and Zhang have some general consensus on the treatment of various deficiencies and skin lesions. Zhang states that it is a *biyong zhi yao* 必用之藥 (must be used medicine) for skin lesions and itching and there is even some mention of this medicinal benefiting the lung in the *Daguan Bencao*, but not the spleen and stomach, which Zhang emphasizes. Both Liu and Zhang agree that *huangqi* can control perspiration, but this is not mentioned in the official compendium. Zhang adds that it can be used for all types of pain or channel blockages, whereas the *Daguan Bencao* does not emphasize this function and does not mention the channels. In the *Yixue Qiyuan*, Zhang identifies five functions for *huangqi*:

其用有五 補諸虛不足一也 益元氣二也 去肌熱三也 瘡瘍排膿止痛四也 壯脾胃五也

It has five uses: To tonify the various deficiencies and insufficiencies is the first. To benefit the *yuan qi* (source energy) is the second. To dispel muscle heat is the third. To drain the pus from itchy skin lesions and stop the pain is the fourth. To strengthen the spleen and stomach is the fifth.

Zhang is also the first to identify its benefit to the *yuan qi* 元氣 (source energy) associated with the essence of the kidney, which no other source specifically mentions. He concludes the *Zhenzhu Nang* entry by identifying it as incompatible with *biejia* 鱉甲 (*Amyda sinensis* (Weigmann), Carapax), as does the *Daguan Bencao*.

The medicinal fungus *fuling* 茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium) is listed first under the category of *zao jiang shou* (drying [and moistening], descending, receiving), classified as *yang* within *yin* (see figure 20). Liu says this medicinal stops thirst, benefits urination, and is a *taiyin* channel medicinal.
Like Zhang, Liu frequently refers to herbs acting upon specific channels according to their six stages of disease or liujing 六經 (six channels) designation, which pairs the lung and spleen as taiyin channels. In contrast, in the Zhenzhu Nang, Zhang only identifies the Heavenly stems corresponding to the lungs, kidney, urinary bladder, and small intestine, and does not mention the organs themselves. The Daguan Bencao only mentions the kidney in the context of fuling benefiting urination. Zhang and the Daguan Bencao also agree that fuling can be used to treat xiaoke 消渴 (wasting & thirsting), and both describe its adaptogenic properties of balancing body fluids, with Zhang stating it clearly in the Zhenzhu Nang:

小便多則能止之 澀則能利之
If urination is plentiful then [fuling] is able to stop it; [if urination is] inhibited, then it is able to promote it.

Zhang further identifies two medicinals that are mutually incompatible with fuling: bailian 白蔹 (Ampelopsis japonica (Thunb.) Maikin, Radix) and diyu 地榆 (Sanguisorbae Radix). For both fuzi and fuling, the number of incompatible substances have been reduced from seven in the Daguan Bencao to one in the Zhenzhu Nang in the case of fuzi, and from six to two in the case of fuling. For the other medicinals, Zhang’s identification of incompatibilities was consistent with the imperial compendium. This further illustrates the process of normal scientific development, whereby Zhang may have found that certain combinations had been misidentified as problematic while confirming the incompatibility of others based on his clinical experience.

Finally, the medicinal dahuang 大黃 (Rhei Radix et Rhizoma) is listed first under the category of han chen cang (cold [and cooling], sinking, storing), classified as yin within yin (see figure 21). All sources agree that the cold nature of this medicinal drains excess heat, but Liu stops here. In this case, Zhang and the Daguan Bencao are in closer agreement on the other functions of dahuang, which Zhang details in the Yixue Qiyuan:

其用有四 去實熱一也 除下焦濕二也 推陳致新三也 消宿食四也
It has four uses: To dispel excess heat is the first. To eliminate lower jiao dampness is the second. To push out the old and bring in the new is the third. To get rid of impacted food [in the bowels] is the fourth.
Many of these statements are quoted directly from the earliest classic of this genre, the *Shennong Bencao* (Divine Farmer’s Materia Medica). However, Zhang omits other functions related to the invigoration of obstructed blood and instead emphasizes its role as a purgative for constipation caused by heat in the stomach and large intestine. In both of Zhang’s texts he also provides his own method of preparation to help guide the actions of rhubarb root:

> 用之須酒浸入太陽 酒洗入陽明 餘經不用
> Soak it in wine before use and it enters the *taiyang*; wash it with wine and it enters the *yangming*. Don’t use [wine] for the other channels.

This strategy again uses the six stages channel differentiation with the *taiyang* corresponding to the small intestine and urinary bladder and the *yangming* corresponding to the stomach and large intestine. Although the *Daguan Bencao* mentions the latter two organs related to digestive problems and constipation it does not mention the former, which in Chinese medicine are more closely related to urination. If Zhang is suggesting that it can promote urination and thereby drain dampness from the lower *jiao* then this was a novel use that was not confirmed nor promoted by later doctors. Since it was also used to invigorate the channels and relieve pain, this may have been the intended usage for the *taiyang* channels, which would include the neck and back regions.

Zhang Yuansu was a literati doctor who continued the legacy of Liu Wansu by maintaining that the primary imbalance within all under Heaven was excess fire and deficient water. Zhang criticized his colleagues for relying upon old prescriptions for contemporary diseases. Nonetheless, he commonly recommended formulas from the *Shanghan Lun* along with contemporary strategies, such as some of Liu’s innovations as well as formulas by the Northern Song literati physician Qian Yi, which helped to perpetuate the popularity of these prescriptions among later Jin physicians. Zhang turned to the study of medicine after passing the *jinshi* examination at a young age, but he was penalized for using a taboo character. He may have initially been sympathetic to the goals of the peace faction in choosing earth power in succession to fire via the generative instead of the conquest sequence, but after the breach of the peace by the Nansong, it appears he changed his mind and advocated for water to conquer fire. In diagnostics,
Zhang distinguished root from branch symptoms with the former related to the internal organ and the latter to the external flow of the acupuncture channels, and used both *yin yang* and *wuxing* doctrine to explain etiology, pathophysiology, and treatment strategies. One of Zhang’s most influential contributions was in pulse diagnosis, which changed the location of the organs so that the *zang* organs were in the deep position and the *fu* organs were superficial, reversing the arrangement described in the classics. Zhang further contributed to the materia medica genre of medical literature by building on the concise work of Liu Wansu, but adding more details on the clinical actions and highlighting safety concerns while proposing alternative categorization models. This process redefined the actions of commonly used medicinals. Thus Zhang was an important figure in the development of literati medicine during the Jin whose ideas were perpetuated for generations.

**Chapter summary**

The earth phase (1161-1209) of the Jin dynasty corresponds to the long period of stability during the reigns of Shizong and Zhangzong. After the deaths of both Hailing and Gaozong who had remained adversarial, a new peace agreement was reached between the Jin and Nansong that continued to recognize Jin suzerainty over all under Heaven and its legitimate occupation of the center. Shizong’s revitalization of the people’s martial spirit and unbridled support for Confucian learning produced a cultural revival and social tranquility, a trend continued by Zhangzong. However, while the social and political realms were relatively calm the climate continued to be unstable. There were earthquakes, the mysterious growth of “white hair” on the earth, an unusual hail storm, dust storms, drought, disease, crop destruction, forest fires, as well as sightings of dragons and other strange creatures. This prompted Zhangzong to convene a special council to consider the question of the proper elemental-phase of the dynasty.

The question of *wuxing* legitimacy was a dominant theme in the Jin court. The decade long deliberations (1193-1202) to decide upon the proper phase were dominated by officials of the peace faction who wanted to avoid going to war to conquer the
Nansong while still securing their Heavenly mandate. During those ten years the environment continued to display Heaven’s discontent with two dragon sightings, the latter of which caused a mudslide and was followed by a disease outbreak and years of drought. When a giant phoenix and other large colorful birds were spotted having flown up from the southeast it was considered an auspicious sign and Zhangzong took the opportunity to declare the Jin was adopting the power of earth. Despite their efforts to promote peace, the declaration of earth in succession to fire angered the Nansong who suspended tribute, declared war, and made a few minor border incursions to demonstrate their concern with this decision, such that when the peace treaty was reinstated it may have included the Jin’s concession to return to the phase of metal. All three tributary states surrounding the center once again honored Jin suzerainty at the court of Zhangzong before he became ill, appointed a controversial successor, and died before his advisors could convince him to change his mind.

Concern over wuxing legitimacy was also a common theme in the medical discourse of literati physicians during the Jin. Liu Wansu was unremitting in his insistence that the fire and water cosmological imbalance was at the root of current problems, and although in his early work Zhang Yuansu may have been sympathetic towards the goals of the peace faction at court and the invocation of earth power, in his later work Zhang agreed with the arguments of Liu that fire was excess and water deficient, such that the Jin’s inability to conquer the Nansong perpetuated the environmental chaos. Although it is not known if Liu aspired to become a civil servant in his youth, both Zhang and Ji Tianxi were on track to pass the jinshi examination and become government officials, but instead turned to the study of medicine. No works of Ji Tianxi are extant but it is known he wrote some commentaries on the Nanjing and earned the recognition of Shizong and the title of “erudite scholar of medical studies” in 1175, perhaps due to his service in response to a disease outbreak. Liu Wansu was offered a chance to serve Zhangzong and his court, possibly as a member of the special council deliberating the proper elemental-phase, but he declined to become entangled in a debate with the peace faction over the proper course of action.

Both Liu and Zhang conducted normal scientific development to extend and refine the Confucian cosmological paradigm as applied to medicine. Liu criticized his colleagues for having no new methods while Zhang argued you cannot use old formulas for new diseases. Together they promoted the use of contemporary formulas, especially those of the Northern Song literati doctor Qian Yi, while adding some of their own
innovations. This trend did not stop them from selectively promoting classical prescriptions deemed efficacious. Both of these scholar physicians were major contributors to the trend in the materia medica genre of literature to create short and concise reference manuals for clinical practice, as well as proposing new methods of categorization while redefining the actions of medicinals. They both advanced pulse diagnosis by providing an alternative model that paired the organs according to their wuxing correspondences, and Zhang reversed a centuries old tradition by locating the fu organs superficial to the zang. Since Zhang drew directly from the ideas of Liu and then transmitted his ideas to later Jin literati physicians, together Liu and Zhang form the nexus of one current of northern learning during the twelfth century.
CHAPERT 4
METAL, 1209-1224

The elemental-phase of metal corresponds to autumn, to harvest and decline, to the western direction, and to the fracturing and disintegration of a dynasty. Metal also corresponds to weapons of war, and during this phase the Jin becomes increasingly engaged in armed conflict. The Jin’s most formidable enemy was the Mongols, organized under the leadership of Temujin (c.1167-1227) who became Genghis Khan (World Ruler) in 1206 when he united various tribes of the north. According to the History of the Jin, in the first month of the ascension of Weishao (r.1209-1213) to the dragon throne, a feixing (flying star, meteorite) was spotted burning up in the heavens that was described as bearing the mark of a red dragon.¹ This prompted him to name his first reign period (1209-1212) Da’an (Great Security). However, from the very outset of his reign he was forced to manage both internal division and external pressures that continually threatened both his legitimacy and the security of the Jin.

Zhangzong had appointed Weishao as his successor because he had no heir. However, in the second month of 1209, the Jin’s celestial patron Taibai (Venus) appeared in the day after which it was discovered that one of Zhangzong’s concubines, named Fanshi, was pregnant with his offspring.² It was decreed far and wide that if a male child was born then he would become the chu’er (heir apparent, crown prince), but it is not clear if Weishao made this decree in order to bolster his legitimacy by appointing his beloved predecessor’s son as his heir, or if this decree was made for him by officials who intended to impeach Weishao and install the infant on the throne while they ruled in his stead. In either case, the possibility of a direct descendant of Zhangzong being born would have brought Weishao’s own legitimacy further into question and fractured court loyalties.

Weishao’s first year in power was immediately troubled. In addition to the succession crisis there was another startling event. It was reported that the Yellow River, which got its name from the color of the sediment that typically muddied the waters making them opaque, was running clear for more than five hundred miles. This strange occurrence was immediately identified as a bad omen:
An official said: the rivers natural state is muddy, but now it is the opposite: clear. This water has lost its nature. When correct it is as if Heaven moves and Earth is still. If that which should be still moves, then what is this like? It is considered a disaster of unusual dimensions.

Other officials agreed:

It was also said: the Yellow River is clear and a feudal lord becomes the Son of Heaven. At this time we should be fearful that it indicates a cataclysmic change.

Just as everyone feared, a disaster soon followed. In the eleventh month of 1209 there was a series of earthquakes in the northwest of the empire and it was recorded that two or three thousand people were killed. From the comments to the Yellow River anomaly it is obvious that everyone blamed Weishao for the devastation. Certainly many officials were eagerly anticipating the birth of Zhangzong’s son who could restore the rule of primogeniture and secure all under Heaven.

At the beginning of the next year it was time for the royal birth:

At the time of the birth during the first month [of 1210] everyone gathered around Fanshi. The doctor appraised the unborn child’s qi and found it was damaged, so he used medicinals for a harmonizing treatment. Although the pulse was harmonized the fetus had already been lost.

Of course Fanshi was devastated and she vowed to shave her head and become a Buddhist nun. Weishao may have been relieved, but the sadness of the event would have reverberated through his court. Heaven also expressed great displeasure at the outcome of events:

[In the first month of 1210,] the center of the sun shot off a star that was as large as a pen (unit of measure, a big basin), it was the color bi (bluish-green of jade), it traveled westwards gradually like a chariot wheel, its tail was numerous zhang (unit of measure equal to about 10 feet), and it ended with a turbid strike. Reaching the earth it returned upwards and the brightness scattered like fire.
This appears to describe a large meteorite striking the earth and exploding. Soon afterwards there was an even larger seismic event:

地大震 有聲殷殷然
[In the second month of 1210,] there was a powerful earthquake with the sound of rolling thunder.  

Since previously there was a series of devastating earthquakes, this one might have occurred even without the impact of the large meteorite. However, this was the first time a dizhen 地震 (earthquake) was recorded as being da 大 (big, large, powerful). The court records also mention this same big earthquake, which accompanied another kexing 客星 (guest star, meteorite) in the second month whose brightness resembled a red dragon.  

This may indicate a second large meteorite striking the earth and triggering the quake. This was also reminiscent of the feixing (flying star, meteorite) that bore the mark of a red dragon and marked Weishao’s ascension, linking all of these events to his rule. The Jin appears to have been caught in a meteor shower that included at least one very large chunk of space debris that struck the already unstable earth with enough force to unleash this powerful quake. This combination of celestial and terrestrial events escalated through Weishao’s second year on the throne:

四月 校大金儀禮 北方有黑氣 如大道 東西亙天
[In the fourth month of 1210, Weishao] checked the rituals and ceremonies of the Great Jin [because] in the northern direction was a black qi 如大道 extending east and west across the heavens.  

This seems to describe a black smoke trail spreading across the sky, perhaps from another meteorite burning up in the atmosphere, or it could have been something burning on the ground like an oil fire. It may have been the burning villages of the Xixia, which were the first to fall under attack by the Mongol Horde. Although no earthquake was recorded that month, soon thereafter there were more earthquakes in the sixth, seventh, and eighth month of that year, until finally in the ninth month there was another didazhen 地大震 (powerful earthquake).  

That brings the total to at least six major earthquakes in less than a year, and five of these unprecedented series of seismic events occurred after the meteorites struck the earth, which may have acted as a catalyst by further destabilizing the ground. Certainly many officials were interpreting these events as a sign that Weishao did not possess the Tianming 天命 (mandate of Heaven).
These early years of Weishao’s reign were further distressed by drought and extreme economic inflation as grain became increasingly scarce. This period corresponds to the beginning of the climactic cooling phase (1194-1302) that Zhang, et.al., (2007) found correlated with escalations in warfare. In the fourth month of 1210, there were severe droughts in Shandong and Hebei provinces, followed by unrelenting rains that destroyed what remained of the harvest. As a result, it was recorded in the *History of the Jin* that a measure of rice cost more than 1,000 coins. 12 Although it is difficult to estimate what that cost meant to various individuals at the time, as a basic staple in the diet of Jin subjects it is a reliable indicator of a general economic downturn. In 1211, there were strong winds that blew away houses and overturned trees, and then in 1212, there were more droughts in Shandong, Shanxi, and Henan provinces, such that by early 1213 a measure of rice cost 8,000 coins. 13 This certainly indicated a severe economic crisis. The droughts continued that year throughout the realm, and by the end of 1213 the cost for that same measure of rice reached as high as 12,000 coins. 14 This subsistence crisis and extreme degree of hyper-inflation would have ground the Jin economy to a halt. Although the Jin had experienced several droughts in earlier years, this was the first record of its direct and negative impact on the economy. The resulting grain shortage and hyper-inflation was likely a significant factor in the need for the semi-nomadic Mongols to unite in order to ensure their own survival in these difficult times. This further explains their initial strategy of looting and retreating rather than conquering and occupying barren land.

The influence of climate change on the Mongols has been previously considered by historians. Almost thirty years ago, Joseph Fletcher (1986) examined the ecological and social causes that drove ethnologically and linguistically diverse Eurasian tribes to unite under a common identity and obtain dominion over most of Asia, and then soon thereafter disintegrate back to the periphery. Fletcher argues that the culture of pastoral nomadism valued the freedom of movement and challenge of adaptation to new environments, and thus the Mongols were not initially eager to form sedentary government institutions. He adds that migration promoted martial culture, especially the coordinated group hunting tactics used by equestrian archers that provided practical military readiness training during times of peace. Fletcher concludes that the unification of diverse tribes was the only viable means to extort wealth from agrarian societies that could afford to maintain large standing armies. Furthermore, he states this unification was dependent upon the individual charisma and aspirations of the “supratribal ruler” and his
willingness to keep the groups occupied with glorious and lucrative wars lest the various tribes revert back to nomadic pastoralism. Fletcher then cites the work of Gareth Jenkins (1974) who also found that there was a steep decline in the mean annual temperature in Mongolia during the years 1175-1260, which adversely impacted the grasslands, livestock, and game populations. Nonetheless, Fletcher argues that the subsistence crisis only served as a further motive to build a supratribal polity, which he maintains was the inevitable evolution of steppe cultural beliefs in the world conqueror autocratic ideal. However, he fails to explain why they disintegrated back to the periphery. In contrast, Zhang, et.al., (2007) suggest that the Mongols arose due to climactic pressures and disintegrated back to the periphery once the climate improved and the subsistence crisis was over. The simplicity of the latter argument makes it more compelling.

The year 1211 began well enough for the Jin, with the three tributary states surrounding its borders, Nansong, Xixia, and Gaoli, sending envoys in recognition of continued Jin suzerainty, but soon after a typhoon descended from the north. Amongst the court records of Weishao there is an allusion to a "hei qi qi bei fang" 黑氣起北方 (black force rising from the north) in reference to an event called the "dabeige zai" 大悲閣災 (great sadness pavilion disaster) that occurred in the third month of 1211. That was the year the first Mongol army led by Genghis Khan’s son Ögödei crossed the border and slaughtered the Jin army tasked with defending the northwest. The History of the Jin described this disaster by stating that more than ten thousand families were burned to death in their homes and that cities burned continuously for five days. This attack was probably against the western capital at Datong 大同, in northern Shanxi province, which likely served primarily as a military outpost. The next month, Weishao sent an envoy to the barbarian chieftain to request peace, but no agreement was forthcoming. Yet there were no subsequent attacks or occupation of territory immediately following this brutality. Although the Mongol cavalry was formidable on the steppes of their homeland and the open plains of the north, making effective use of their compound bows that generated greater range and penetrating power than the weapons of their adversaries, they still had to learn the lessons of siege warfare necessary to take the walled cities of the Jin intact and capture the resources stored within. Nonetheless, in combination with the recent environmental disturbances, this disaster convinced many that this was a Heavenly referendum on Weishao and his court:
That year (1211) there was a man called Hao Zan who simply said: after [Weishao] had succeeded to the throne, Heaven transformed its appearance repeatedly, fire burned ten thousand families, and winds broke the gates and passes. This is not just a little unusual. It is appropriate [for Weishao] to abdicate the throne, for yielding has virtue. This led someone to ask: are you mad or diseased? Zan said with a big voice: I am neither mad nor diseased, but it is because I give precedence to the gods of the earth and grain while our government ministers are all without any talent.  

In a futile effort of appeasement, Weishao changed the reign period (1212) to Chongqing (Sublime Celebration). That year, Weishao again received tribute missions from Nansong and Xixia, but it was perhaps becoming too treacherous to send missions from Gaoli due to the Mongols. In response to the continual droughts, grain shortages, and storms, Weishao decided to change the reign period (1213) again the next year to Zhining (Reaching Peace), but the end of his brief tenure was near.

In the third month of 1213, there was another celestial sign when the moon, Venus, and the sun appeared closely together in the sky. Following this it was recorded:

In 1213 Xuanzong manifested his virtue and thereupon in his home town white flowers bloomed that resembled a pheasant or heron vine. Purple clouds covered the city for several days.

This marvelous event heralded the rise of Wudubu who became the eighth Jin monarch, ruling as emperor Xun, posthumously known as Xuanzong (r.1213-1224). The story of his ascension is that one morning in the eighth month of 1213 there was a thick fog of blue and black that fell over the land such that the people walked around without being able to see where they were going. The fog lasted for several days before it started to disperse. That same month it was also recorded that the oceans didn’t have tidal shifts. Thereupon Xuanzong’s supporters forcibly removed Weishao from the palace and had him executed after his short five years in power. In the ninth month, when Xuanzong succeeded to the throne, the tides returned. Normally a new reign period begins on the first day of the first month of a year, but immediately after becoming the Son of Heaven, Xuanzong changed the reign period (1213-1217) to Zhenyou (Reaching Peace).
Genuine Blessings) and declared a general amnesty amidst a renewed optimism for the future of the empire.

That optimism was short lived, for that same month the Mongols returned and made minor incursions along the Jin’s northern border in Hebei province, probably in search of grain. Because the History of the Jin was written during the Yuan dynasty (1260-1368), any derogatory references to the Mongols, or even just the Chinese phonetic Menggu 蒙古 (Mongol), were likely omitted from the court records and replaced with Da Yuan 大元 (the Great Yuan dynasty). However, it was not until 1271 that Qubilay Khan (r.1260-1295) declared the founding of the Yuan after bringing Chinese-style governance to the Central Plains. Therefore, to reconstruct the original tone of these documents, all references to “Da Yuan” are translated herein as “the Mongols.” Furthermore, references to the Da Yuan Bing 大元兵 (Great Yuan Army) are translated as “the Mongol Horde” to further capture the meaning of the original reference to them as a “black force rising from the north.” This also assigns them to the water elemental-phase, which corresponds to the color black, the northern direction, and the emotion of fear that they engendered.

The grain shortages and resultant economic strife likely affected the whole of East Asia. Therefore, it not surprising that in the eleventh month of 1213, amidst foul weather and freezing temperatures, the Xixia also broke the peace and conducted raids across the northwest border. Unfortunately for them, they ended up engaged in battles with both the Jin army and the Mongol Horde. At the same time, the Mongols razed Jin territories in the northeast, including the Jin ancestral burial grounds near the northern capital of Shangjing. In an effort to stabilize the realm, Xuanzong canceled all tribute missions in the first month of 1214, but then the Nansong took the opportunity to invade the Jin’s southern border. Xuanzong suddenly found himself engaged in warfare on three fronts. In response, he made the following decree:

命有司復議本朝德運
[In the first month of 1214 Xuanzong] ordered his ministers to reconsider the current dynasty’s deyun (power of the elemental-movements). 26

Once more a special council was formed, this time including ten Han and twelve Jurchen officials, to deliberate on the matter of the appropriate elemental-phase for the Jin. The stakes were even higher as the very existence of the dynasty was being threatened by three different enemies and an unforgiving climate. Despite the heightened
tensions, the evidence demonstrates that the peace faction within the court remained firmly in power and tried to exclude the voices of the war faction from the discussions. Once again, they looked no further than the Kongzi Jiayu (Sayings from the Confucian School) for guidance, which focused on the generation cycle rather than the conquest sequence. The council’s staunch refusal to consider alternative classical sources and interpretations of dynastic succession according to the wuxing suggests the outcome was intentionally limited to either metal or earth. This reflects the continued domination of the peace faction that was unwilling to engage in conquest.

Once more, the details of the proceedings are provided in Jin court documents entitled the Da Jin Deyun Tushuo (Illustrated Discussion of the Great Jin Elemental-Powers & Movements), which were translated and analyzed by Chan Hok-lam (1984). These records confirm that the debate centered on whether to choose metal or earth. Those in favor of metal argued either it was the intention of the founder, or it followed in succession to either the earth phase of Tang or the earth phase of the puppet states they created as a buffer on the Central Plains after first capturing Bianjing. Similar to the previous debate and in support of the earlier decision by Zhangzong on this matter, those in favor of earth argued that the Jin had succeeded the fire of the Song, and that the founder did not intend to invoke an elemental-phase, but chose “metal” because of its strength and resiliency. They further argued that a dynasty’s legitimacy was ultimately based on moral rectitude and political unity. This latter argument by the peace faction freed them to choose whichever element was deemed most appropriate for current circumstances, a nuance that was not lost on their political adversaries. A new argument was thus introduced that suggested the Toba clan, which founded the Tang dynasty, actually identified with the water element. This assertion gave the northern Inner Asian peoples greater legitimacy as rulers of the Central Plains, and further argued that subsequent dynasties had all violated the principles of wuxing succession such that there was no need to even justify the founder’s choice of metal. This clever argument may have been the rebuttal by the war faction, who tried to turn the logic to their favor and suggest the Jin could also choose water and claim the same northern heritage as the Toba, although this statement was not made outright. There was even a lone suggestion of choosing fire, but this was summarily rejected as absurd. In the end there was no clear declaration by Xuanzong regarding his final decision on the matter, but from the extant records it is clear that the majority of the council members favored continuing with metal.
for various reasons. Nonetheless, Chan Hok-lam (1984) found that in 1221 Xuanzong conducted the la 臘 sacrifice at the imperial ancestral temple on the day corresponding to the earth element, whereas previously it had been conducted on the day corresponding to metal. Yet by 1221 the crisis had deepened and there was increasing chaos, which could have disturbed the court proceedings.

Choosing earth would have had two major benefits, only one of which was expounded upon by the council. First was that earth succeeds fire in the generation sequence, and thus Jin follows Song, but the second is that earth conquers water, and the Mongols had also been identified as possessing water power. Certainly the cosmic forces of water appeared to be in a state of excess, for in the sixth month of 1214, the Chaobai River (Hebei province) overflowed causing widespread devastation of towns and villages around the central capital at Yanjing. During this disaster another yellow dragon was spotted in the northwest. This event became known as the baozhenge zai 寶鎮閣災 (treasured post pavilion disaster), 27 which signifies there was a great loss of life due to the flood. Meanwhile, the Mongol Horde continued their onslaught, pressing southwest into Xixia territory and demolishing the city of Lanzhou (Gansu province) in the third month while repeated efforts to broach a peace treaty were rejected. 28 Probably in an effort to recruit soldiers to bolster the Jin army, Xuanzong declared another general amnesty in the sixth month.

All of these events likely contributed to the decision by Xuanzong to relocate the capital once more, this time to Bianjing in the middle of the Central Plains. Unlike the previous relocation from Shangjing to Yanjing, whereby careful planning and construction preceded the relocation of the court, the move from Yanjing to Bianjing happened over a few months in the middle of 1214. 29 The Jin emperor even agreed to a wedding with a Mongol concubine named Wendunshi 溫敦氏 as a way to forge a peace agreement with the northern tribes. 30 Although Bianjing was strategically vulnerable, as demonstrated earlier when the Jin first seized the capital from the Song, it had three advantages amidst the current crisis. First, it symbolized the wuxing process of earth succeeding fire by situating the emperor in the center of the Central Plains. Second, it moved his court far from the northern border where fighting with the Mongols was escalating. Third, it escaped the chaos in Yanjing caused by the floods.

Xuanzong tried to reinvigorate the martial spirit of his people to cope with the crisis, which continued soon after the court moved to Bianjing as the Xixia again attacked
the Jin from the west. In the ninth month of 1214, Xuanzong ordered the army officers to step up their training regimens, and further ordered that all soldiers display their regimental insignias. It is recorded that Taibai (Venus) appeared most vividly that day. The fact that Xuanzong found it necessary to make such decrees might suggest a decline in military discipline and readiness. The once mighty Jin army was taking heavy casualties and being driven back from their shrinking borders. At the same time, they were still able to resist simultaneous attacks on three fronts by the armies of the Nansong, Xixia, and the Mongol Horde, suggesting the Jin army remained a formidable fighting force once mobilized. The increase in martial training may further indicate a bolstering of the army with non-Jurchen soldiers to counter the multiple threats on their borders.

Soon winter was upon the region and Heaven continued to express discontent with cold rains and dabing 大冰 (big ice). Once more the Yellow River ran clear for more than ten days, and it was recorded that xianlin jiejian 纖鱗皆見 (small fish-scales were seen everywhere), possibly indicating a massive die-off of fish from the river. The harsh winter only seemed to embolden the Mongol Horde, which continued to plunder the northwest near the old capital of Yanjing. When spring came in 1215, strong winds damaged structures and stirred up dust storms coupled with locust infestations and an absence of rainfall. The political situation remained dynamic. The crown prince, who had only been born a few months earlier, became sick and then died. In the spring of 1215, the Nansong changed tactics and sent a tribute mission to Jin, perhaps predicting an alliance with the Jin against the growing Mongol threat might be in their best interests. The Xixia, on the other hand, continued its aggression by attacking the Jin along their western border. More frighteningly, the Mongol Horde attacked Yanjing, slaughtering the civilian population and forcing the Jin army tasked with defending the city to surrender. That winter during the tenth month, a thick black fog descended upon the region as the Mongols continued to advance in the northeast. In the west, the Xixia attacked and captured the cities of Bao’an and Yan’an (Shaanxi province), executing members of the royal Wanyan clan. That year the same region experienced crop destruction from locusts, other insects, and drought, leading to such dire conditions that incidences of cannibalism were recorded. Although they were being attacked on two fronts, a tentative peace remained on their southern border with the Nansong. In the second month of 1216, the Mongols laid siege to Taiyuan (Shanxi province) and began working their
way down the mountain passes. Complicating the Jin’s defense, the border troops were succumbing to some type of disease, so Xuanzong dispatched some of his imperial physicians to inspect and treat the soldiers in their garrisons. Thus the imperial medical institutions were still operating successfully during this phase of the Jin.

The Jin continued to be assaulted by both the Xixia and the Mongol Horde throughout 1216, and further suffered from chaotic environmental forces. Looking to Heaven for guidance, it was recorded that Taibai (Venus) appeared during the day in the fourth month of the kui 奎 constellation, and that Muxing 木星 (Wood Star, Jupiter) also appeared during the day in the same constellation in the sixth month. This was followed by a massive locust infestation that destroyed crops in Henan. Xuanzong was so desperate that he ordered his officials out into the fields to capture the insects. The farmers must have been truly amazed to see droves of these officials running about their fields, fighting against the locust swarms, and gathering up the criminal pests to bring them to justice according to the law decreed by Zhangzong in 1208. During the remainder of the year, the Mongols continued to advance through Shanxi and began probing into Henan, while the Xixia strengthened their hold on Shaanxi.

As Xuanzong watched his borders collapse, he decided it was time to change the reign period (1217-1222) to Xingding 興定 (Flourishing Certainty). In the first month of 1217, the Nansong sent another tribute mission to Jin reaffirming the peace. However, in the fourth month they changed tactics again and launched an assault on the Jin’s southern border. Although their first attack was repelled, the Jin once again faced a war on three fronts. The next month, the armies of Nansong attacked again and sacked the city of Yingzhou (Anhui province) just north of the Huai River. During the summer, the Central Plains experienced the unusual phenomenon of hail storms that damaged crops. As the Jin remained engaged with the Xixia and the Mongol Horde along the borders of Henan province, the Nansong began attacking along the coast of Jiangsu province. By the seventh month, the Nansong had their armies camped out along the coastal regions of southern Shandong. Despite this constant onslaught, the Jin was able to hold the Central Plains, and by the ninth month had even pushed back the Mongols to Taiyuan, who then began shifting their forces to the northeast. The Xixia made no further advances beyond Shaanxi in the mountain passes of the west, while the armies of Nansong remained along the coastline in the east. The Jin was able to hold these lines through the winter.
In the spring of 1218, the Mongols surrounded the Xixia imperial city of Xingqing, forcing them to withdraw their armies from engagements in Shaanxi to defend their capital in Gansu province. The Jin took the opportunity to shift some of their forces to attack the Nansong armies in the east. Although battles continued like this throughout the year, the Jin finally got a break in 1219 when the Mongols, under the leadership of Ögödei, withdrew from East Asia and marched west to help in the Persian campaign. This kept the Horde engaged in Central Asia for several years. During this hiatus, the Jin was able to push the Nansong back south of the Huai River and give their armies an opportunity to recuperate and resupply.

Although the Jin enjoyed a brief respite from military conflict, Heaven continued to express displeasure:

黑風晝起，有聲如雷，頃之地大震，壓死者以萬計，雑畜倍之。
[In the fourth month of 1219 in Shanxi province,] a black wind arose at daybreak, there was the sound of thunder, and a moment later there was a powerful earthquake. The people who were crushed to death were calculated to be ten thousand, with various farm animals added to that.

This region had already suffered through years of warfare and crop destruction, so the death and property damage from the quake must have utterly destroyed the will of the people. Making matters worse, the summer brought more droughts and the winter was again severe with cold rains and dabing (big ice). The next year fared no better, for in the first month of 1220 it was recorded that one day the sky was filled with the cry of birds and then a few days later the day became night and there was great thunder, wind, and rain. In the fourth month, a typhoon destroyed government buildings, reportedly blowing one structure more than five hundred steps off its foundation. In the sixth month there was drought, and in the seventh month severe flooding in Henan province. The troubles continued in 1221 with such a long and severe drought that Xuanzong decreed that everyone through out the realm should pray to Heaven for relief. Then another tragedy struck the emperor:

太醫候濟 張子英 治皇孫疾，用藥瞑眩，皇孫不能任，遂不療，罪當死。
[In the tenth month of 1221,] taiyi (grand physicians) Hou Ji and Zhang Ziying treated the imperial grandson’s disease. They used the medicinal Mingxuan (Dark Dazzling), but the imperial grandson was unable to respond [to the treatment] and thus wasn’t cured. [The doctors] were held guilty of causing his death.
The following month, the Xiangguo Si 相國寺 (Temple of the Prime Minister) caught fire and Ögödei returned with the Mongol Horde from the west. First they attacked Yan’an, and the next month they marched down the Yellow River valley and attacked Tongguan. The Jin army was then able to stop their advance and contain them within the mountain passes. The following story is recorded in the History of the Jin at this time:

Prior to this there was a children’s song that said: the green mountains roll on, [children] stroll in the mountains green, completely wasting their time. They are juveniles. These days everyone says it is time the people all become an army, strolling to fight in the mountains and valleys, battles fought endlessly. They must have reached maturity.

Due to the renewed aggression by the Mongols, as well as the cosmic disturbances that continued to plague the empire, in 1222 Xuanzong changed the reign period (1222-1224) to Yuanguang 元光 (Original Brilliance). Ironically, this name foreshadowed the rise of the Mongol’s Yuan 元 dynasty. Yet for the remainder of his reign, Xuanzong was able to secure the Central Plains. A remarkable achievement, given the circumstances.

In the eleventh month of 1223, there were reports of a tiger that was attacking people around the capital and it was feared it was a yaoguai 妖怪 (devilish monster). The tiger was so bold that one day it walked right through the gates of the capital at Bianjing in broad daylight (see figure 22). At the same time, it was reported that foxes and wolves were within the Libu 吏部 (Ministry of Appointments) and that ghosts could be heard crying at night along the imperial carriage routes, startling the crows and magpies that flew off shrieking across the heavens. The next month, Xuanzong died. The History of the Jin provides the following summary of his reign:

Fig. 22: Tiger by a Torrent in rain and wind (13th century)
In remembrance it is said: Xuanzong managed the Jin dynasty’s origins at the end of the cycle. Although he fell short of the ability to boluan fanzheng (bring order out of chaos), he encouraged the essential ambition of planning for order. The vestige of his political actions was the sorrow of the people, but he was able at that time to manage a zhongxing (dynastic resurgence). Thus, although his soldiers were without success, whose [soldiers] were [successful]?

Medicine during the later Jin

Zhang Congzheng

While established literati doctors like Liu Wansu (c.1100-1200) and Zhang Yuansu (c.1140-1220) were flourishing near the Jin’s central capital at Yanjing, another young physician named Zhang Congzheng 張從正 (1156-1228) was gaining a reputation around the southern capital at Bianjing. His style name was Zihe 子和 (Master of Harmony), and he was also known as Dairen 戴人 (Honored Person). Congzheng grew up in Suizhou 睢州 (Henan province) on the outskirts of the capital in a city called Kaocheng 考城 (Examination City), which suggests it was the place where jinshi 進士 (advanced scholar) candidates gathered every three years to take the national level civil service examination during the Song. Thus he grew up immersed in literati culture, which is further exemplified by the title of his collected writings: Rumen Shiqin 儒門事親 (Confucian Duties to Their Parents). This text was posthumously published by his disciples around 1228. In a preface to this book written during the Jiajing 嘉靖 (Honored Peace) reign period (1522-1566) of the Ming dynasty (1368-1644), after comparing his contributions to those of Zhang Yuansu’s disciple Li Dongyuan (1189-1251) and the Yuan dynasty (1260-1368) literati doctor Zhu Danxi 朱丹溪 (1280-1358), it makes the following assertion regarding the title:
Evidently, it was recognized that the text was not only intended to be a medical book, but also a treatise for all members of the educated elite whose mission was to order all under Heaven. This included ordering their family and caring for their parents when they are old and sick. Later in the same preface, the author remarks:

[Confucians] will want to repeatedly read this prescription manual, the various writings of the master describes all kinds of things, secretly serving the emperor, and the emperor was frequently burdened.  

As the Son of Heaven, the emperor was the one foremost responsible for maintaining order, and so any Confucian treatise expounding on the current state of affairs and recommending solutions or treatments is ultimately intended for the emperor. Similarly, in another preface to the work written in 1540, it again describes this book’s relevance to Confucians:

As for the dao of medicine that is greatly esteemed, the utmost is medicine for the state, and the lowest is medicine for people and the bodies to which they are connected.  

This is reminiscent of an assertion made by Sun Simiao 孫思邈 (541-682) in the Beiji Qianjin Yaofang 備急千金要方 (Emergency Prescriptions Worth Thousands in Gold), wherein he stated:

Superior physicians provide medicine for the state, mediocre physicians provide medicine for the people, and inferior physicians provide medicine for disease.  

It appears Jin dynasty physicians were trying to provide medicine for all three. 

Zhang Congzheng was a member of the social elite by virtue of both his scholarly accomplishments and his five years of government service. Charles Buck (2008) found that Zhang Congzheng passed the provincial level juren 舉人 (elevated person) civil
service examination, qualifying him to become a local official and sit for the *jinshi* 進士 (advanced scholar) examination, and only afterwards became self taught in medicine. Congzheng practiced medicine privately until he was recruited as a *taiyi* 太醫 (grand physician) by Xuanzong, serving in this post from 1217 to 1221. At that time, the emperor and his court had just moved south to Bianjing (1214) following economic hyper-inflation and the flooding of the Chaobai River, which led to increasingly frequent Mongol, Xixia, and Nansong incursions. Therefore, Xuanzong desperately needed help in providing relief to both the civilian and military population. From his extant writings it is clear that Congzheng served as an army doctor, like those *taiyi* that were dispatched by Xuanzong to the northwestern front to inspect and treat the soldiers in their garrisons after the Mongols laid siege to Taiyuan (Shanxi) in 1216.

The *Rumen Shiqin* is composed of fifteen *juan* 卷 (scrolls, sections, fascicles) covering the diagnosis and treatment of a wide array of medical conditions. Included are numerous essays arguing for his aggressive methods and critiquing those of others, an innovative categorization method for the materia medica, several case studies that are used to exemplify his methods, and essays that are examples of *kaozheng* 考證 (textual analysis) whereby Congzheng identifies anomalies in the classical medical canon and expounds upon their significance. True to this emerging genre of medical literature, it also has an embedded socio-political discourse, with references to both the medical classics and the Confucian canon to speak of matters beyond the body of the individual.

Some of the later *juan* of this text may not have been written by Congzheng. For example, *juan* thirteen is entitled *Liu Hejian Xiansheng Sanxiao Lun* 劉河間先生三消論 (Mr. Liu Hejian’s Treatise on the Three Wastings) and is therefore attributed to Liu Wansu. This essay might have been included because it was not previously published elsewhere, and numerous references earlier in the text confirm that Congzheng was an admirer of both Liu and Zhang Yuansu. In another example, *juan* fourteen includes an essay on the *siyin* 四因 (four causes [of disease]), much of which is identical to the essay on the same subject by Zhang Yuansu discussed earlier, but with an added commentary. This may have been a later version written by Yuansu or an annotated version by Congzheng. The last several *juan* are also organized differently and are repetitive in several instances, suggesting they were intended to be separate treatises and were appended by his disciples to preserve whatever manuscripts they could compile.
According to his biography in the *History of the Jin*, Zhang Congzheng studied the medical classics as would be expected of all literati physicians, and it compares his style to that of Liu Wansu because they both used cooling medicinals. This of course meant that they both considered excess fire to be a dominant pathogen of the time. However, Zhang Congzheng became most famous for his use of the three methods of *han* (diaphoresis), *xia* (downward draining), and *tu* (emesis), as recorded in his official biography:

> 古醫書有 汗下吐法 亦有不當汗者汗之則死 不當下者下之則死
> 不當吐者吐之則死 各有經絡脈理 世傳 黃帝 岐伯 所為書也
> 從正用之最精 號 張子和 汗下吐法

Ancient medical books have the methods of *han* (diaphoresis), *xia* (downward draining), and *tu* (emesis). They also say if you must not use diaphoresis but you do anyway then the patient will die. If you must not use downward draining but you do anyway then the patient will die. If you must not use emesis but you do anyway then the patient will die. Each of the channels, collaterals, and vessels has a *li* (principle), and this has been passed on for generations in the writings of Huangdi and Qibo. Congzheng used this [method] so fantastically it was called “Zhang Zihe’s *han-xia-tu* method.”

Congzheng had a very broad interpretation of these three methods, but still his emphasis on these strong techniques reflected his aggressive personality. As a Confucian text, the phrase about how the different body systems all have a *li* (principle) reflects the same intellectual current of the early daoxue 道學 (learning of the Way) school and philosophers like Cheng Hao 程顥 (1032-1085) and Cheng Yi 程頤 (1033-1107). Indeed, Zhang Congzheng becomes known as a member of the *sidajia* 四大家 (four great masters) of the Jin dynasty.

*Expelling unwelcome guests & social discourse*

The *Rumen Shiqin* reflects a change in the political climate. During the time Liu Wansu and Zhang Yuansu were writing their texts, the main concern was the continued existence of the Nansong, who refused to acknowledge that fire had been conquered. During the time of Zhang Congzheng, the Mongols and the Xixia got into the fight. Suddenly the Jin was being attacked on three fronts, such that it was no longer a question
of conquering fire, but attacking and purging these three enemies from three directions to defend the center. Paul U. Unschuld (1985) emphasizes how Zhang recognized the importance of climactic influences, but focused on problems caused by *keqi* (guest energies) and strategies to expel these pathogens from the body. The term *keqi* appeared only twice in the seminal classic *Huangdi Neijing Suwen* (Yellow Emperor’s Inner Classic, Basic Questions). The first was in chapter 65 regarding the importance of treating the *ben* (root) instead of the *biao* (branch) of an excess type of disease. The second was at the end of chapter 71, a Wang Bing (c.762) addition. In this passage, after a lengthy discussion on the proper order of the *wuyun liuqi* (five elemental-movements & six climactic influences), the Yellow Emperor asks this important question of his esteemed court physician:

帝曰 假者何如 岐伯曰 有假其氣 則無禁也 所謂主氣不足客氣勝也

The emperor asked: as for a false [elemental-phase suppressing the correct], what does this resemble? Qibo said: if there is false energy then it cannot be endured. What is called the *zhuqi* (governing energy) is insufficient and the *keqi* (guest energy) is victorious.

It is probable that Zhang Congzheng was referencing this passage in his numerous allusions to *keqi* to highlight the argument that the Jin’s governance was suffering from an elemental imbalance caused by guest energies disturbing the natural order of things.

Congzheng argues that until the proper order of the *wuxing* (or *wuyun*) was restored through the expulsion of the unwelcome guests, disharmony would continue under Heaven. As tributary states, the Xixia and Nansong had regularly sent guests in the form of diplomatic envoys to recognize the suzerainty of the Jin and to bestow gifts as tokens of their respect for the emperor. However, when along with the Mongols they sent armies instead of envoys, they disrupted the cosmic balance and were no longer welcome in the Central Plains. Thus the *Rumen Shiqin* can be understood as a commentary on the socio-political turmoil that offered advice to the Son of Heaven on the best course of action. That advice was simply to expel the invaders from the three directions. While Congzheng was an advocate for military action, it may not be fair to argue he was a member of the war faction, since circumstances required military defense instead of offense. Congzheng’s concern over not just the individual, but also the state, is revealed early in his text:
As for the shidafu (scholar-officials) of today, many consider popular opinion to have earlier restrained their heart-minds, and although they might have the correct opinion they may not, and so it goes. The old Luxiang Xianchang (The Six Forms of Prior Experience) said: the foundation of all under Heaven is to be without affairs, the mediocre person disturbs this and [all under Heaven] becomes vexed. I also say: the foundation of the correct qi is to be without chaos, the mediocre physician disturbs this and [the patient’s condition] becomes acute.  

Thus Congzheng places the blame for the current socio-political crisis squarely on the shoulders of Jin officials for their mismanagement of the case.

Like other literati physicians, Zhang Congzheng frequently uses the interjection of classical references from the Confucian canon into his medical discourse to draw attention to larger socio-political issues. For example, in the opening lines of his first essay expounding upon his approach to formula construction, he states:

易曰 方以類聚 是藥之為方 類聚之義也
The Yi [Jing] (Classic of Changes) says: the different directions are grouped together. This is how a medicinal serves in a prescription and this is the meaning of grouping things together.  

The four-character phrase referenced herein is part of an eight-character phrase from the commentary at the end of the received edition of the Yiijing known as the xicishang 繫辭上 (great treatise 1). This phrase also appears in the Liji under the section yueji 樂記 (musical records) and is repeated in other classical texts and histories. The whole phrase is: fang yi lei ju, wu yi qun fen 方以類聚物以群分 (different directions are grouped together, different things can be distinguished from the rest). In the Yiijing, this passage immediately follows a description of the order of the cosmos:

天尊地卑 乾坤定矣
Heaven’s veneration and Earth’s humility, [the trigrams of] Qian (Heaven) and Kun (Earth) are the source of stability [in the cosmos].  

In the Liji 禮記 (Book of Rites), these same eight characters follow a variation of this description:
Therefore, this reference by Congzheng could be understood as describing how the order of all under Heaven and the structure of the government are mirrored in the construction of a medicinal formula, with individual ingredients being grouped together to work towards the common goal of order and stability. Assigning medicinals in a formula the roles of jun 君 (sovereign), chen 臣 (minister), zuo 佐 (assistant), and shi 使 (envoy), had long been established as a common practice, and so this allusion would have been immediately grasped by his peers.

Congzheng continued this discussion by making another classical reference:

或曰 方謂五方也 其用藥也 各据其方
Someone said: As for directions, they are called the five directions. As for their use of medicinals, each [is used] according to its direction.  

He goes on to illustrate how the different regions have different climates that produce different types of diseases. The specific term wufang 五方 (five directions) does not appear in the Huangdi Neijing or the Nanjing 難經 (Classic of Difficulties), although the wuxing correspondences with the four directions and the center are certainly described repeatedly. Instead, this term first appeared in the Liji, in the chapter wangzhi 王制 (royal regulations), wherein it discusses the wufang zhi min 五方之民 (five directions of people) of ancient China:

中國戎夷 五方之民 皆有其性也 不可推移
Those in the Central Kingdom [are surrounded by different peoples such as] the Rong (ancient peoples of the west) and Yi (ancient peoples of the east). There are five directions of peoples and they each have their nature that cannot be forcibly changed.  

The Liji goes on to describe the four barbarian tribes of east, south, west, and north, and thus implies that the fifth direction, the center, is where the civilized people dwell. The Liji emphasized how the different languages of the wufang zhi min are mutually unintelligible and their lifestyles incompatible with the center. This highlights the perception of civilized Confucian society occupying the Central Plains surrounded by
barbarians. Therefore, driving the invading barbarians out of the center and back to the periphery is necessary to restore order to all under Heaven. The philosophy of Zhang Congzheng appears to be the mirror image of the arguments made earlier by the Nansong official Chen Liang 陳亮 (1143-94) who thrice petitioned the court to drive the xieqi 邪氣 (evil energy) of the Jurchen from the center to restore order and end their humiliation.

Zhang Congzheng goes on to describe how various medicinals are also found growing in the different directions:

東方之藻帶 南方之丁木 西方之薑附 北方之參苓 中州之麻黃遠志
莫不輻輳而參尙
The eastern directions has its algae zones, the southern direction has cloves and [aromatic] woods, the western direction has gingers andaconites, the northern directions has roots (ginseng, siler) and fungi (poria), the central district has mahuang (Ephedra sinica Stapf., Herba) and yuanzhi (Polygala tenuifolia Willd., Radix), and there are none that don’t converge [like] spokes on a wheel and whose participation is valued.

Thus if order can be restored to all under Heaven, then those in the civilized center will have easy access to all of the valuable resources surrounding them, and in turn they can share their resources with their neighbors. This is part of the Confucian ideal of governance predicated on the cosmology of the five directions.

Congzheng also twice makes reference to the following passage from the Nanjing, chapter 75, which discusses the sheng 勝 (conquest) sequence to balance excesses among the five elemental-phases:

難曰 經言東方實 西方虛 潟南方 補北方 何謂也
然金木水火土 當更相平 東方木也 西方金也 木欲實 金當平之 火欲實
水當平之 土欲實 木當平之 金欲實 火當平之 水欲實 土當平之
The [75th] Difficulty says: the classics said the eastern direction is excess, the western direction is deficient, drain the southern direction, and tonify the northern direction. What is this called? It is like this: metal, wood, water, fire, and earth, they should mutually promote balance. The eastern direction is wood; the western direction is metal; [and so on]. If wood wants to be full metal should balance it; if fire wants to be full water should balance it; if earth wants to be full wood should balance it; if metal wants to be full fire should balance it; if water wants to be full earth should balance it.

This may have been a message directed to the peace faction that would only consider the sheng 生 (generation) sequence of dynastic succession, reminding them that harmonizing
the barbarian forces from the four directions required different and more aggressive tactics. In his first reference to this passage, Congzheng specifically states:

難經曰 言東方實 西方虛 瀉南方 補北方
此言肝木實而肺金虛 瀉心火 補腎水也
The Nanjing says: [we] say the eastern direction is excess, the western direction is deficient; drain the southern direction, and tonify the northern direction. This says that the liver wood is excess and the lung metal is deficient. Drain the heart fire and tonify the kidney water. 75

Under his discussion of *shan*疝 (hernial disorders), Congzheng continues:

木屬東方 為心火之母也 凡疝者 非肝木受邪 則肝木自甚也
不可便言虛而補之 難經所謂東方實 西方虛 瀉南方 補北方
此言瀉火 木自平 金自清 水自旺也
Wood is in the category of the eastern direction, and is considered to be the mother of heart fire. It is not that the liver wood receives evil and then liver wood becomes extreme by itself, for one cannot ordinarily speak of deficiencies and then tonify them. It was the Nanjing that said the eastern direction is excess, the western direction is deficient, drain the southern direction, and tonify the northern direction. This is called draining fire [so that] wood will become harmonious, metal will become clear, and water will become prosperous. 76

Thus he emphasized what was perceived as the primary cosmic imbalance during his lifetime. The Jin dynasty, representing metal, had become weak was unable to subdue the barbarian invaders of the Xixia and the Mongol Horde. At the same time, considering the Jin to have obtained the power of water, they were still unable to conquer the fire of the Nansong and achieve true political and economic prosperity. Instead the Jin faced annihilation.

A related theme found in Congzheng’s treatise is the role of the junhuo君火 (sovereign fire) versus the xianghuo相火 (ministerial fire). The terms junhuo and xianghuo were first introduced in the Suwen chapters 66 and 68, which are both Wang Bing (c.762) additions, as well as chapters 72 and 73, which were both lost in the Wang Bing edition but included in the Song version. 77 In these chapters, the junhuo was primarily associated with Heaven and the water phase, which was related to the yang energies of the kidney, whereas the xianghuo was primarily associated with the shaoyang (gallbladder, sanjiao) and the wood and fire phases. Notably, neither of these terms appears in either the Lingshu or the Nanjing. Congzheng similarly argues the xianghuo is
associated with the fire phase, which he corresponds both to the sanjiao and the pericardium, as well as the gallbladder and the wood phase, and even compares it to the destructive fire of a dragon. By adding the pericardium to the discussion, he completes a triad of systems associated with the ministerial fire. This may have been an attempt to assign the Jin to the role of the sovereign fire as the supreme ruler of all under Heaven, and the Xixia, Nansong, and even the Mongols to the power of the ministerial fire as subordinates to their suzerainty. Thus he argued the sovereign fire should be promoted, but the ministerial fires subdued.

It is in the second juan of the Rumen Shiqin that Congzheng expounds upon his fundamental approach to medicine and society. He begins by framing the primary yin yang dualities of interior-exterior and excess-deficiency in understanding health and disease and then uses this to critique the practices of other physicians:

良工之治者 先治其實 後治其虛 亦有不治其虛時
粗工之治病 或治其虛 或治其實 有時而幸中 有時而不中
謬工之治病 實實虛虛 其誤人之迹常著 故可得而罪也
惟庸工之病 純補其虛 不敢治其實 舉世皆曰平穩 誤人而不見其迹
渠亦自不省其過 雖絡老而不悔
The way skilled clinicians treat an illness, first they treat the excesses and afterwards they treat the deficiencies, and they also know there are instances when you don’t treat someone’s deficiencies. The way vulgar clinicians treat an illness, maybe they treat the deficiency or maybe they treat the excess, and some of the time they get lucky while some of the time they don’t. The way fake clinicians treat an illness, they add to the excess and deplete the deficiencies, their mistakes result in the relentless suffering and deception of the people and therefore they obtain the rank of a criminal. As for the way mediocre clinicians [treat] an illness, they purely tonify the deficiencies, not daring to treat the excesses. Countless generations have all talked about balancing and stabilizing, but their mistake is that they don’t see the suffering of others, hiding from this they don’t assess their own experiences critically. Although they are entangled in this outdated method they don’t repent.

This timeless critique of the state of medical practice suggests the existence of a diverse spectrum of health care practitioners in the Jin that included religious healers, spirit mediums, specialists in bone setting or tooth extractions, itinerant doctors selling remedies for a myriad of common ailments, government trained doctors working at provincial hospitals and imperial pharmacies, and literati doctors. As Edward L. Davis (2001) found in his study Society and the Supernatural in Song China, members of different social groups sought out the services of a diverse group of healers. So while one
cannot assert that literati doctors only treated members of elite society, it is also difficult to estimate the size and scope of their practices. Regardless, Congzheng is unequivocal when describing the type of physician he reviles the most:

夫粗工之與謬工 非不誤人 惟庸工誤人最深 如鲧湮洪水 不知五行之道

As for [the treatments of] vulgar clinicians and fake physicians, it is not that they don’t harm people, but only a mediocre clinicians’ harming people is the most profound. It is as if Gun (sage king Yu’s father) is obliterated in the flood waters, not knowing the dao of the wuxing (five elemental-phases).

He continues his criticism about those who are unwilling to expel the excess pathogens:

今之醫者曰 當先固其元氣 元氣實 邪則去 世間如此妄人 何其多也

Today’s physicians say that one should first consolidate the yuanqi (source energy), for when the yuanqi is replete then the evil is dispelled. Through the generations it as if these ridiculous people are too plentiful!

He then repeats the same four character phrase about Gun, which was drawn from a Han era book of divination modeled on the Yijing 易經 (Classic of Changes) called the Jiaoshi Yilin 焦氏易林 (Jiaoshi’s Forest of Change, c.100 BC) under the 64th hexagram weiji 未濟 (not yet completed), to emphasize the need for his aggressive approach to the medical and political crisis:

其餘有邪積之人而議補者 皆鲧湮洪水之徒也 今予論吐汗下三法

When people have too much or possess evil accumulations, but there are those who advocate for tonification, all of them are disciples of Gun being obliterated in the flood waters! Now I bestow this treatise on the three methods of tu (vomiting), han (sweating), and xia (downward draining), it is the first treatise to attack the evil, and when the evil is dispelled the yuanqi is spontaneously recovered.

Zhang Congzheng is citing the Confucian classics in reference to the legends of early Chinese history. Gun was the father of Yu, one of the sage kings of the Xia dynasty (c.2000-1500 BC) and the namesake of the Xixia or Western Xia dynasty, which according to Sima Qian obtained the power of the mu 木 (wood) elemental-phase and was conquered by Shang and the power of jin 金 (metal). In a well known story to Confucians of the day, Yu was tasked by the presiding ruler Yao to control the flooding that had tormented them for years. Yu passed the responsibility on to his father Gun, who
constructed dikes that subsequently failed leading to another catastrophe, causing Gun to be disgraced and drowned in the floods that he failed to prevent. Yu then decided to dig a canal to redirect the waters, which required him to move a mountain of earth, but this ultimately saved the kingdom, probably increased agricultural production through improved irrigation, and elevated Yu to the throne. Analyzing this story according to the wuxing: by electing to build dikes, Gun chose to use wood (or metal if they were built of stone) to control water, which violates the rules of the paradigm. Both Yu and literati physicians like Congzheng understood that earth controls water via the ke 克 (subduing, restraining) or the conquering cycle. Thus Zhang Congzheng may also have been an advocate for the dynasty’s choosing of earth power, since it had the benefits to the Jin of succeeding the fire of the Nansong, conquering the water of the Mongols, while the metal of Jin conquered the wood of the Xixia.

Zhang Congzheng was so fond of this metaphor that he celebrated Gun’s father Yu harnessing the power of earth to control water by inventing his own purgative formula named after the sage king:

**Zhang Congzheng’s Yu Gong San 禹功散 (Achievements of Yu Powder):**

- **Heiqianniu 黑牽牛** (Pharbitidis Semen)
- **Huixiang 茴香** (*Foeniculum vulgare* Mill., Fructus)
- **Muxiang 木香** (*Auklandia lappae* Decne., Radix)

The chief medicinal in this formula, *heiqianniu*, is a harsh cathartic used to drive out excess water, in part by inducing diarrhea. This substance is not often used by other Jin physicians and was not included in the concise materia medica of either Liu Wansu or Zhang Yuansu.

Zhang Congzheng’s assertion about an ongoing discussion during his time in reference to the term yuanqi 元氣 (source energy) deserves consideration. At that time it would not have been associated with the Mongol Horde because the Yuan dynasty was not declared until many decades after the fall of the Jin. Despite becoming a fairly common term in modern Chinese medical discourse, classically it was more commonly used in early Confucian and Daoist texts, including: *Chunqiu Fanlu* 春秋繁露 (Spring & Autumn Numerous Revelations), *Lunheng* 論衡 (Measured Discussions), *Qianfu Lun* 潛夫論 (Treatise by a Recluse), *Hanshu* 漢書 (History of the Han Dynasty), and *Hou
(History of the Later Han Dynasty). In the medical classics, a more familiar reference would be to the character yuan (source), which frequently appears in the Neijing, most often in connection with a classification of acupuncture points that are further associated with the earth elemental-phase. This cross over might have occurred at elite social gatherings where medicine was the topic of conversation, but the participants in the discussion were well versed in the mainstream Confucian canon. The character yuan first appears in chapters 39, 58, and 60 of the Huangdi Neijing Suwen, and once again in chapter 21 of the Lingshu, in reference to the acupuncture point guanyuan (ren-4, sealing the source), which is located three cun (proportional inches) below the umbilicus and is the center of the dantian (cinnabar field) that corresponds to the jing (essence) of the kidney and the source of longevity. Therefore, the consolidating of the source qi for the dynasty would also mean to ensure its longevity.

The next appearances of the character yuan is in the titles of chapter 66, Tianyuan ji dalun (great treatise recording the source of Heaven), and chapter 71, liuyuan zhengji dalun (great treatise on the correct record of the six sources), both apocryphal chapters inserted by Wang Bing during the Tang dynasty that emphasized the wuyun liuqi (five elemental-movements and six climactic-energies) theory. In these chapters the yuan is equated with Heaven and the motion of the wuyun, which is responsible for the progression of the seasons that are associated with the liuqi. In two other Wang Bing additions, chapters 67 and 68, there is also reference to a text called the Tianyuan Ce (Heavenly Source Canon). The character yuan appears again only in chapters 72 and 73, those lost in the Wang Bing edition, twice as Tianyuan 天元 (Heavenly source) and once as benyuan 本元 (foundation source). However, in medical texts, the specific binome yuanqi 元氣 first appeared in the Nanjing, chapter 14, during a discussion of a positive prognosis based on a patient’s pulse:

脈有根本 人有元氣 故知不死
The pulse has a root so the person has yuanqi, therefore one knows he will not die.
The term *yuanqi* becomes increasingly common in the literature of the later Jin, and may represent not only the source of the life force within a person, but also the source of legitimacy and prosperity of a dynasty derived from the mandate of Heaven.

Consequently, in the previous passage Congzheng appears to be arguing that the Jin officials were overly concerned with rectifying the moral compass of the center in the belief that a loss of filial piety caused the crisis. The troubles began when the rule of primogeniture was ignored and Prince Weishao took the throne, so it was thought that once the affairs of the emperor and his court were in order the crisis would abate of its own accord and peace and prosperity would spontaneously arise. This would confirm the legitimacy of the dynasty and the recovery of the *yuanqi*. Congzheng thought this approach was ridiculous and argued that the *yuanqi* and the very existence of the dynasty were being threatened by external pathogenic forces that had to be dealt with aggressively first. Only by surviving the incursion and expelling the unwelcome guests could the *yuanqi* be preserved.

Although Congzheng harshly criticized his colleagues for their over reliance on the tonification method he still maintained that sometimes this was a necessary strategy. Regarding Zhang Congzheng’s approach to tonification, he said that the sages used herbs to treat disease and used grains, meats, fruits, and vegetables to nourish the body. 91 Thus he primarily thought that the way one nourishes the body is with good food while medicine was reserved for more serious illness. During a time of severe droughts and grain shortages, the need for tonification was indeed on everyone’s mind. Congzheng even made an allusion to Confucian governance by arguing:

夫谷穀肉果菜之屬 猶君之德教也 汗下吐之屬 猶君之刑罰也
故曰 德教興平之粱肉 刑罰 治亂之藥

The category of grains, meats, fruits, and vegetables is like a ruler’s virtuous teaching. The category of diaphoresis, downward draining, and emesis are like a ruler’s corporal punishment. Therefore it is said, virtuous teaching flourishes with the harmony of millet and meat, and corporal punishment is medicine for the treatment of chaos. 92

However, when his disciple pressed him on the matter later in the text, Congzheng reported he had another tonification method:
予請為言補之法 大抵有餘者損之 不足者補之 是則補之義也
陽有餘而陰不足 則當損陽而補陰 陰有餘而陽不足 則當損陰而補陽
熱則 芒硝大黃 捐陽而補陰也 寒則 乾薑附子 捐陰而補陽也
豈可以熱藥而雲補乎哉 而寒藥亦有補之義也
I asked [Zhang Congzheng] to speak about the tonification method and in general he said that if there is a surplus then decrease it and if there is an insufficiency then tonify it, and this then is the meaning of tonification. If yang has a surplus and yin is insufficient then one must decrease yang and [thereby] tonify yin. If the yin has a surplus and the yang is insufficient then one must decrease the yin and [thereby] tonify the yang. [For example,] if there is heat then mangxiao (Mirabilite) and dahuang (Rhei Radix et Rhizoma) will decrease yang and [thereby] tonify yin. If there is cold then ganjiang (Zingiber officinalis Rosc., Rhizoma) and fuzi (Aconitum carmichaeli Debx., Radix Lateralis) will decrease yin and [thereby] tonify yang. So one can use hot medicinals and call it tonification as well as use cold medicinals and also have the meaning of tonification!

In a clever application of yin yang theory, Congzheng argues that because these two forces are opposite yet complimentary; to reduce one is necessarily to increase the other. Thus to tonify yin he uses medicinals that drain away heat and yang energies, whereas to tonify yang he uses medicinals to drive out excess cold and yin. In this way he remains true to his convictions.

Regarding Congzheng’s three methods of attack and purgation, he actually did not limit himself to just three strategies, but took this classical concept and then applied it more broadly. Yet he must have felt misunderstood, for as he explained:

Moreover my three methods are able to double the methods of the masses. When it is time to use medicine I have [the methods of] pushing, raising, shearing, leading, reducing, increasing, replenishing, and stopping. As for physicians of today, they don’t adopt my methods, but they each look me in the face proudly, smile and say: for emesis [I use] guadi (Cucumis melo, L., Pedicellus) and that is all. For diaphoresis [I use] mahuang (Ephedra sinica Stapf., Herba) and shengma (Cimicifugae Rhizoma) and that is all. For downward draining [I use] badou (Croton tiglium L., Semen), qianniu (Pharbitidis Semen), poxiao (Mirabilite), dahuang (Rhei Radix et Rhizoma), and yuanhua (Daphne genkwa Seib. Et Zucc., Flos), and that is all.

Thus he is saying, unlike his colleagues, when using these three methods of tu (emesis), han (diaphoresis), and xia (downward draining), he does not only mean to induce vomiting, sweating, urination, or defecation. Earlier in the text he explained how the
various disease categories such as *wenbing* 溫病 (warm diseases) of the spring, *rebing* 熱病 (heat diseases) of the summer, *nue* 瘧 (malarial) and *li* 痢 (dysentery) diseases of the autumn, as well as cold pathogens and coughs associated with winter, had all become grouped together under the single category of *shanghan* 傷寒 (cold damage) disorders. Similarly, he argued that his “three methods” had many variations included within this reductionist framework:

所謂三法可以兼眾法者如 引涎 潤涎 嚏氣 追淚 凡上行者皆吐法也
That which I call the three methods can include a multitude of methods. For example, drawing the saliva, straining the saliva, sneezing *qi*, and chasing tears, these are all upward actions and are [equivalent to] the method of *tu* (emesis).

灸 蒸 蒸 漬 洗 燒 灼 刺 導引 按摩 凡解表者皆汗法也
Cautery, steaming, smoking, dredging, washing, ironing, branding, needle insertions, stone-needle lancing, *daoyin* (callisthenic exercises), and *anmo* (massage), these all release the exterior and are [equivalent to] the method of *han* (diaphoresis).

催生 下乳 磨積 逐水 破經 泄氣 凡下行者皆下法也
Inducing labor, promoting lactation, wearing down masses, relieving edema, unblocking the menses, and draining *qi*, these are all downward actions and are [equivalent to] the method of *xia* (downward draining).

From this elaboration it is evident that Zhang Congzheng used a great diversity of methods in his clinical practice. The method of *tu* is the most opaque, in that the techniques for inducing salivation, sneezing, or lacrimation are not elucidated anywhere, nor are the conditions for which such treatments would be appropriate. The method of *han* describes various external techniques, and indeed he often refers to treatments using acupuncture, moxibustion, and bleeding therapy elsewhere in the text, frequently referencing the *Bronze Figure Classic*. He even provides guidelines on a *daoyin* exercise for *shanghan* diseases that ends with diaphoresis:

又有導引一法 可於一閒處用之 先教病人盤腳而坐 次用雙手交十指 攀腦後風池 風府 二穴乃是風門也 向前叩首 凡至於地 如此連點一百二十數 急以葱醋粥辛辣湯投之 汗出立解
There also is a method of *daoyin* (therapeutic exercises): one should use a quiet place. First instruct the patient to cross their legs and sit. Then use both hands, interlock the fingers, and stimulate the two acu-points on the back of the head, [called] *fengchi* (GB-20, wind pool) and *fengfu* (DU-16, wind palace), for these two acu-points are the wind gates. Facing forward, bow the head until you can
almost reach the ground. Repeat this to link the points one hundred and twenty times. Immediately use Congluzhou Xinla Tang (Spicy Scallion & Vinegar Decoction) to cast [the sickness] out. When the sweat comes out [the disease] will be resolved.

Finally his xia methods transcend promoting urination and defecation to include the treatment of women’s diseases. Thus one should not consider Congzheng’s three methods to be self limiting, and since they were first elucidated in the Shanghan Lun, one should not consider Congzheng’s methods to be unorthodox.

Developments in herbalism

Zhang Congzheng also provided his own unique type of materia medica (see Appendix 6). After describing the broad interpretation of his three methods, which is essential to understanding his categorization system, he then lists 106 medicinals arranged in three categories: 36 emetics, 40 diaphoretics, and 30 downward drainers. There actually are a total of 95 different medicinals in Congzheng’s pharmacy because eleven appear in two out of the three categories (none appear in all three). He subdivides his three major categories by temperature and flavor and notes for each category those medicinals that have a slight or great toxicity. When compared to previous Jin materia medica, it reveals Congzheng’s different clinical approach. Out of the 95 different medicinals he lists, only 33 (35%) appeared in Liu Wansu’s yaolue (medicinal summary, 1166), only 39 (41%) were in Zhang Yuansu’s Zhenzhu Nang (Bag of Pearls, c.1220), and only 44 (46%) were in the materia medica from the Yixue Qiyuan (Expounding the Foundations of Medical Studies, c.1210). Even when compared to the more comprehensive Tangye Bencao 湯液本草 (Materia Medica of Decoction, 1246 & 1298) by Wang Haogu 王好古 (c.1210-1310), which included entries on 242 medicinals, it still detailed only 58 (61%) of the substances in Congzheng’s list. The reason is that Congzheng used many more toxic medicinals than other literati doctors, and he also used many more inorganic medicinals
than his contemporaries. In addition to the numerous salts, minerals, and metals, there were also several substances in his pharmacy that remain unidentified by this author.

The most remarkable aspect of Congzheng’s categorization system is that many of the medicinals listed as either an emetic, diaphoretic, or downward drainer, were not described by any other textual source as having these functions. However, he already warned the reader that they should not consider these three categories as limited to the actions of inducing vomiting, sweating, or evacuation of the urine or feces. For example, *dahuang* 大黃 (Rhei Radix et Rhizoma) is listed both as a downward draining substance, a well established usage, as well as an emetic, which most practicing physicians would argue it is not. Similarly *bohe* 薄荷 (*Mentha haplocalyx* Briq., Herba) is listed both as a diaphoretic or exterior releasing medicinal, a common usage for mint, and as an emetic, which is very unusual (see figure 23). The only explanation for his categorization system is to not limit the three methods to their literal meaning. In the case of *bohe*, the aromatic qualities might be used to induce salivation. For *dahuang*, it might be used to empty the stomach by purging downward through the bowels. Elsewhere in the text he also lists substances that have specific *zang* (solid organ) affinities, such as *bohe* for the lung, another established usage, and *dahuang* for the heart, which is uncommon and may be another clue as to its function as an “emetic.” Regardless of these peculiarities, Congzheng’s treatise still represents the trend during the Jin to focus on a more limited number of medicinals and their clinical applications as opposed to the official encyclopedic materia medica published by the Northern Song.

Zhang Congzheng’s formulary was much more direct. In *juan* 12 he details formulas for each of the three methods, and these conform more closely to classical standards. For example, in the section on formulas to induce vomiting, many of the prescriptions include the emetic *guadi* 瓜蒂 (*Cucumis melo*, L., Pedicellus) (see figure 24). In the section on diaphoretics, many of the prescriptions include *mahuang* 麻黃 (*Ephedra sinica* Stapf., Herba) (see figure 25), which is the original source of the chemical ephedrine exploited by
the early 20th century pharmaceutical industry. In the section on downward draining, many formulas include the purgative *dahuang* 大黃 (Rhei Radix et Rhizoma). Although many of these formulas appear to be his own innovations, he also makes use of several classical formulas, such as the various *Chengqi Tang* 承氣湯 (Order the Qi Decoctions) from the *Shanghan Lun* for downward draining. However, he sometimes adds his own modifications. For example, he uses *Guadi San* 瓜蒂散 (Melon Pedicel Powder) from the *Shanghan Lun*, but adds ginseng and licorice. In a few cases the changes are more pronounced, such as in this ever popular exterior releasing formula:

**Zhang Congzheng’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction):**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guizhi 桂枝 (Cinnamomum cassia Blume, Ramulus)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium)</td>
<td>½ liang</td>
</tr>
<tr>
<td>Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Gancao 甘草 (Glycyrrhiza uralensis Fischer, Radix)</td>
<td>7 qian</td>
</tr>
</tbody>
</table>

In this case, he not only completely omits the fresh ginger and jujube dates from the classical diaphoretic formula described in the *Shanghan Lun*, but he also adds in *fuling*, which is commonly used to strengthen the function of the spleen to eliminate dampness by promoting urination, a downward draining action.

Zhang Congzheng also provides a list of formulas for the treatment of the *liuqi* 六氣 (six climactic influences) where he makes further use of both classical and more contemporary prescriptions, again making modifications in several instances. For example, some of the other *Shanghan Lun* formulas he recommends include: *Baihu Tang* 白虎湯 (White Tiger Decoction) to clear heat; *Wuling San* 五苓散 (Five Ingredient Poria Powder) to drain dampness; *Maren Wan* 麻仁丸 (Hemp Seed Pill) to moisten dryness; *Sini Tang* 四逆湯 (Four Rebellions Decoction) to expel cold; and both *Da Chaihu Tang* 大柴胡湯 (Major Bupleurum Decoction) and *Xiao Chaihu Tang* 小柴胡湯 (Minor Bupleurum Decoction) to harmonize the interior and exterior. In addition he uses Zhang Yuansu’s variation of the latter two formulas called *Chaihu Yinzi* 柴胡飲子 (Bupleurum Beverage). Although he no longer recommended it for the treatment of *huoluan* 霍亂 (sudden turmoil), he still used the following *Shanghan Lun* formula, with modification, for the treatment of internal cold:
Zhang Congzheng’s *Lizhong Wan* 理中丸 (Order the Center Pill): 103

*Renshen* 人參 (*Panax ginseng* C.A. Mey, Radix) 1 liang

*Baizhu* 白术 (*Atractylodes macrocephala* Koidz., Rhizoma) 1 liang

*Ganjiang* 乾薑 (*Zingiber officinallis* Rosc., Rhizoma) 1 liang

*Gancao* 炙甘草 (*Glycyrrhiza uralensis* Fischer, Radix) 1 liang

*Fuzi* 附子 (*Aconitum carmichaeli* Debx., Radix Lateralis) 1 liang

Here he uses the dosages preferred by Sun Simiao 孫思邈 (541-682), but adds the hot medicinal *fuzi*, or aconite root, to increase the warming action of the formula. This is similar to the way cinnamon bark and galangal rhizome were added by Wang Tao 王燾 (702-772) to the same basic formula. In addition to these classical prescriptions, he also makes use of the tonic formula *Yihuang San* 益黃散 (Benefit the Yellow Powder) to strengthen the spleen by the late Northern Song physician Qian Yi 錢乙 (1035-1117), 104 as well as several formulas from *Jufang* 局方 (Imperial Formulary) that were also favored by Zhang Yuansu. These include the heat clearing formulas *Liangge San* 涼膈散 (Cool the Diaphragm Powder) and *Bazheng San* 八正散 (Eight Ingredient Rectification Powder), and the blood tonic *Siwu Tang* 四物湯 (Four Substance Decoction). 105 Therefore, Zhang Congzheng’s clinical approach was not a rejection of orthodoxy, but an adaptation to his own methodology.

*The advent of case studies*

To further justify his three methods, Zhang Congzheng provides several stories about people who were accidentally cured of their ailments. These stories are significant because they mark the advent of recording case studies in literati medical literature as a means to support their clinical approaches. From the Jin dynasty onwards, this trend gains momentum and becomes a common feature in later works. Some of the stories presented by Congzheng are bizarre and reveal some of the supernatural beliefs still prevalent during the Jin, while others seem more reasonable. For example the following story stretches credibility:

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I previously experienced in western Xiayi (Henan province) that there was a woman with a disease of abdominal swelling resembling a drum, drinks and food suddenly advanced and suddenly retreated (e.g., indigestion & reflux), cold and heat alternately acted upon [the patient] and at times there was nausea and vomiting. For as long as three years [this condition had persisted]. The expert wizards used talismans and incantations without any results and could only wait for her to die.

Meeting on the tenth month of the farmer’s respite, field workers assembled for a hunt and one dog served unto death and was dismembered at the great tree root and laid out, and they left behind his rotting flesh upon that place. The sick woman accidentally came upon the tree roots and suddenly felt confused and muddleheaded, dizzy and hallucinating, such that she did not recognize other people. So she rested her head on the side of a root and then from within her mouth a worm came out, it strongly resembled a snake, its mouth and eyes both went to work, and it used its tongue to lap up the remains of rotting dog flesh. The people were frightened seeing the long worm, and with two sleeves they bound up her hands and pressed the worm’s head with great strength until it came out of her, and it was perhaps a foot long and as heavy as a catty. They cut it open to inspect it and showed it to various people. The woman was thereupon cured but the worm remained nameless. This correction provided a magnificent source of change, and the treatment method was the same as the method of accidentally inducing vomiting.

While one can imagine the smell of rotting dog flesh could make this woman vomit up a parasitic worm, the notion that this foot long worm initially crawled out of her to eat the dog carcass seems incredible. It is important to note that this story takes place among the peasantry, and so the story may have been embellished with these fantastic details before being recorded in the *Rumen Shiqin*. On the other hand, the following story about a member of elite society is absent any supernatural explanations of events:

Once there was a scholar named Zhao Zhongwen, who while traveling to take the examinations suddenly became ill. His two eyes were red and swollen, his vision became obstructed, and he was unable to continue his journey. He had great pain that was unremitting such that he wanted to kill himself. One day he was with a
colleague complaining of his predicament and they went to sit down inside a tea market. Suddenly he got caught on the window latch and Zhongwen fell down, striking his forehead right in the center, splitting open a gash three or four inches long.

紫血流數升 血止自快 能通路而歸 來日能辨屋脊 次見瓦溝 不數日複故 此不藥不針 誤出血而愈矣 夫出血者 乃發汗之一端也 亦偶得出血法耳 Purple blood flowed profusely out and then the bleeding stopped quickly on its own. He was able to make his way down the road and return [home]. The next day he was able to distinguish the ridge beam [in his house], and thereafter could see the gutters in the roof tiles. Not a few days passed and he continued to improve. This was [a case whereby] no medicine and no needles [were used], but mistaken bleeding cured him. As for the bleeding, it was a form of diaphoresis and also an accidental method of bleeding.

The fact that Congzheng thought these accidents were solid justification of his methods suggests he placed greater importance on observed efficacy rather than theoretical abstractions. This was also part of the gewu zhizhi 格物致知 (investigating things & extending knowledge) movement being emphasized by his Confucian brethren. Rather than force the existing theoretical paradigm to explain observed phenomenon, Congzheng modified an aspect of existing theory to provide a better explanation, and at least in his experience, a more efficacious treatment protocol.

Zhang Congzheng not only included tales of supernatural cures in his text, but on occasion even recommended such a cure, evidencing the prevalence of such beliefs and practices among all segments of society. More remarkable than the mere inclusion of such practices is the conditions for which they were considered appropriate. The following protocol is for the treatment of nueji buyu 瘧疾不愈 (incurable malarial diseases):

夫瘧疾連歲不愈者 可用咒果法治之 果者謂桃杏枣梨栗是也 咒曰 吾從東南來 路逢一池水 水裡一條龍 九頭十八尾 問伊食甚的 只吃瘧疾鬼 As for malarial disease that continues through the years and has been incurable, one can use the incantation and fruits method to treat it. The fruits are called peaches, apricots, dates, pears, and chestnuts. For the incantation one says: I have come from the southeast, while on the road I came upon a pond of water, and inside the water was a dragon with nine heads and eighteen tails. I asked him what he ate, and he only ate malarial disease ghosts.

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The fact that these treatments are recommended for “incurable” diseases reveals that literati doctors were willing to use supernatural methods when there was no known natural treatment that was proven efficacious. Nonetheless, his claim of eighty to ninety percent success with this method also seems to stretch credibility.

Textual critique

There is also an excellent example in the Rumen Shiqin of how Zhang Congzheng was conducting kaoju 考據 (textual critique), or kaozheng 考證 (textual analysis, testing of a diagnosis), on the available corpus of classical medical literature and his patients. In the third juan, he identifies an anomaly in the Huangdi Neijing regarding three characters: ke 咳 (cough), kai 欽 (cough), and sou 嗽 (cough):

嗽與咳一證也 後人或以嗽為陽 咳為陰 亦無考據
且內經咳論 一篇純說嗽也 其中無咳字 由是言之咳即嗽也 嗽即咳也
[The term] sou together with ke is a single diagnosis. Later generations perhaps considered that sou was yang and ke was yin, but this also has no basis in kaoju (textual critique). Moreover, in the Neijing’s treatise on ke (cough), in the entire discussion it purely discusses sou and within it there is no character ke. Following from this one can say that ke is the same as sou, and sou is the same as ke.  

What Congzheng correctly identified was the fact that the character ke 咳 does not appear anywhere in the Huangdi Neijing Suwen, including chapter 38 entitled kailun 欽論 (treatise on cough). However, it does not exclusively use the character sou 嗽. Instead, the character kai 欽 appears in the Suwen a total of 117 times, including some of the Wang Bing (c.762) chapters, as well as 38 times in chapter 38 on cough.  

The character
sou 嗽 actually appears only 6 times in the Suwen, and always as part of a binome; either kaisou 欽嗽 (cough) or chuansou 喘嗽 (wheezing cough). Regarding the Huangdi Neijing Lingshu, there is substantial variation between the electronic version of this text (ctext.org) versus the Siku Quanshu edition of the Lingshu. The character ke 咳 appears 19 times in the electronic version but only twice in the Siku Quanshu edition, whereas kai 欽 appears just twice in the electronic version but twenty-one times in the Siku Quanshu edition. The character sou 嗽 appears just once in the Lingshu at the end of chapter 74 as part of the binome kesou 咳嗽 (cough). Despite this variation, this distinction between the two texts lends further support to the argument by this author that the Suwen and the Lingshu were constructed at different times by different editors. This may be the footprint of the various medical officials at the Northern Song’s Bureau for Revising Medical Texts, or it may represent a larger temporal gap. In either case, it challenges the myth that these two received texts once formed the singular Huangdi Neijing catalogued in the Han Shu. Because the Lingshu was reconstructed from fragments during the Song, it is reasonable to assume that most of the 81 chapters included by the editors were not part of an original Han dynasty manuscript.

Although ke 咳 and kai 欽 are etymologically related and found throughout pre-Song literature, the preference for one or the other is a distinction found in other “Han medical classics.” The Nanjing uses the character kai 欽 just once, but ke 咳 appears three times, which might indicate that some chapters were appended to this classic during the Song. Similarly, the character kai 欽 appears 20 times in the Shanghan Lun with the binome kesou 咳嗽 appearing just once, suggesting the latter essay was added by different authors or editors than those who wrote the former parts of the text. In this part of his discussion, Congzheng even cites the Lunyu 論語 (Analects [of Confucius]) wherein it said: biye zhengming hu 必也正名乎 (one must rectify the names!). In his study of writing and authority in early China, Mark Edward Lewis (1999) demonstrated the profound impact of this concept of the “rectification of names” on the development of Confucian systems of governance. By invoking this phrase while engaging in textual critique, Congzheng thereby affirmed his place among societal elites.

As for the treatment of cough, Congzheng also tried to rectify the classical ideal with his own understanding based on clinical experience. He remarks how the Suwen,
notably in chapter 38, differentiated coughs according to the zangfu (solid & hollow organs), but argued that this was unrealistic because all coughs were fundamentally a problem of the lung. However, since each organ is associated with one of the wuxing, which have correspondences to the liuqi (six climactic influences), Congzheng proposed differentiating coughs according to wind, heat, fire, damp, dry, and cold. Some of his treatment strategies for these six types of cough are similar to the methods of Liu Wansu and Zhang Yuansu, with classical formulas like Baihu Tang 白虎湯 (White Tiger Decoction) for heat, Huanglian Jiedu Tang 黃連解毒湯 (Coptis Relieve Toxicity Decoction) for fire, Wuling San 五苓散 (Five Ingredient Poria Powder) for dampness, and Guadi San 瓜蒂散 (Melon Pedicel Powder) as an emetic for cold phlegm in the chest. However, he often made subtle modifications to the prescription’s ingredients. For example, he added shanzhizi 山梔子 (Gardenia jasminoides Ellis, Fructus) to Liangge San 涼膈散 (Cool the Diaphragm Powder) to increase its ability to clear heat.

This complex process of examining the authoritative literature on a subject, comparing the current model with independent observation of the phenomenon, identifying anomalies and proposing alternative explanations within the existing paradigm, identifying efficacious medical interventions that comply with the current standard of care, and proposing new treatments or modifications to existing treatments based on revised models, epitomizes the process of normal scientific development.

Sudden & emotional turmoil

Zhang Congzheng also expounds upon the condition of huoluan 霍亂 (sudden turmoil) early in his text, signifying the continued importance of this disease category during the Jin. He even dares to begin his essay by questioning the authority of the classical canon:

Master Chao [Yuanfang] was a worthy predecessor, indeed there was nothing improper [in his work]. However his explanations did have mistakes, and as for that which binds a human life, one cannot fail to differentiate [correctly].
Chao Yuanfang 巢元方 (550-630) was the author of the *Zhubing Yuanhou Lun* 诸病源候论 (Treatise on the Origins & Progression of Various Diseases), published by the Northern Song in 1027. As discussed earlier, he had the first detailed essay on the subject of sudden turmoil disorder, one that had been amended by later physicians. Congzheng complains that some of his colleagues have made Chao’s approaches their standard of care, which states that *huoluan* is due to causes such as disharmonies of warmth and coolness, *yin* and *yang*, the clear and the turbid, cold *qi* guests residing in the spleen and stomach, excessive wine and food, spoiled or raw food, wind in the *sanjiao* (three burners), rebellious stomach *qi*, or eating honey during the seventh month. Congzheng concluded this summary by stating he did not believe any of Master Chao’s opinions on the matter of *huoluan*. Instead, he proposed his new model wherein he applied the *wuxing*:

風濕暍三氣合而成霍亂 吐瀉轉筋 此猶書生之鼎足題也
風者風本也 內應足厥陰肝木 湿者雨化也 內應於足太陰脾土
暍者火熱也 內應於手少陰心火 此風濕暍三氣之所生也

The three *qi* of wind, dampness, and heat combine to form *huoluan*. As for vomiting, diarrhea, and muscle cramps, these are only three legs of the problem described in the books. As for wind, wind is the root; interiorly it corresponds to the foot *jueyin* [channel] and liver wood. As for dampness, it is made from the rain; interiorly it corresponds to the foot *taiyin* [channel] and spleen earth. As for heat, it is the heat of fire; interiorly it corresponds to the hand *shaoyin* [channel] and heart fire. [*Huoluan*] is generated from these three *qi* of wind, dampness, and heat.  

Similar to his three methods, Congzheng used a triad of pathologies to explain the chaos, just as the Jin faced enemies on three fronts. These three pathogens were similarly identified by Liu Wansu who once argued this disease was caused by fire, wind, and damp. Although a Jin doctor concerned about heat or fire is not unusual, Congzheng’s use of the character *he* 賽 (heat) is curious. This character appears just once in the *Huangdi Neijing Suwen* in relation to the signs of a malarial disease, and Congzheng similarly distinguishes this form of symptomatic heat from the more abstract concepts of heat and fire. Zhang appears to be deliberately expanding the medical nomenclature.

Zhang Congzheng concluded his discussion of *huoluan* with a quote from the *Huangdi Neijing* in which he emphasized that when the earth phase is deficient, the wood phase will dominate it according to the conquest sequence. He continues by describing a scenario whereby both the wood and fire phases generate excess wind and heat and the earth phase is deficient allowing dampness to accumulate, resulting in the disharmony of
This may again serve as social discourse, whereby the Central Plains, the earth phase, and the digestive system are weak while the excess forces of fire and wind invade, resulting in chaos.

Zhang also lamented over stories about patients whose *huoluan* was mistakenly treated by *fangshi* (prescription masters), such as someone who was given hot medicinals that caused the patient to vomit up blood and die, and another who was given purgatives causing them to die. In the end, for the treatment of *huoluan* he recommends a formula first recorded in the *Shanghan Biaoben Xinfa Leicui* (Collection of Core Methods Related to the Manifestation & Root of Cold Damage) by Liu Wansu: *Liuyi San* (Six to One Powder), composed of six parts *huashi* (Talcum) to one part *gancao* (Glycyrrhiza uralensis Fischer, Radix), plus Congzheng adds fresh ginger as an anti-emetic. Liu wrote that this formula is specifically indicated for *huoluan*, which he first named *Yiyuan San* (Benefit the Source Powder), and noted that it also went by the name *Tianshui San* (Heavenly Water Powder), suggesting it was not Liu’s own innovation.

Although Zhang Congzheng was focused on the aggressive expulsion of invading exterior pathogens, he also considered the role of emotions in generating internal turmoil:

夫天地之氣常則安 隨則病 而況人稟天地之氣
五運迭侵於其外 七情交戰於其中
Thus when the *qi* of Heaven and Earth is constant then there is peace, when it transforms then there is disease. Furthermore, mankind is affected by the *qi* of Heaven and Earth. As the *wuyun* (five elemental-movements) repeatedly invade from the outside the *qiqing* (seven emotions) will wage a war on the inside. He first references the term *qiqing* (seven emotions) that has its roots in the Confucian classics. This term was first described in the *Liji* (Book of Rites) and repeated in the *Kongzi Jiayu* (Sayings from the Confucian School), which was the text the peace faction focused on during the deliberations of the Jin’s special council on the elemental powers. Those seven emotions were in order: *xi* 喜 (joy), *nu* 怒 (anger), *ai* 哀 (sorrow), *ju* 懼 (fear), *ai* 愛 (love), *wu* 惡 (hate), and *yu* 欲 (desire). However, Congzheng turns his focus to a model first proposed in chapter 39 of the *Neijing Suwen* to argue that there are nine emotions:
The root of \( qi \) is one, but when it causes the stirring of emotions it becomes nine. What do we call these nine? They are anger, joy, sadness, fear, cold, heat, fright, consternation, and toil.\(^{132}\)

This list is quite different from the seven emotions described in the *Liji*, and most unusual is the inclusion of cold and heat, which are typically exterior pathogens. The first four emotions listed are essentially the same as in the *Liji*, although they are in a different order and use different characters for two of them, but the last three are completely different. Whereas the *Liji* added love, hate, and desire, Congzheng adds fright, consternation, and toil. This is similar to the list by the Nansong physician Chen Yan 陳言 (fl.1174), whose seven emotions, not including cold and heat, included worry instead of toil. Clearly the source for Congzheng’s model is the *Suwen*, which details the effect of these forces on the \( qi \) of a person’s body:

\[
\text{怒則氣上  喜則氣緩  悲則氣消  恐則氣下  寒則氣收  炙則氣泄  }
\text{驚則氣亂  勞則氣耗  思則氣結}
\]

If there is anger then the \( qi \) ascends; if there is happiness then the \( qi \) slows; if there is sadness then the \( qi \) is depleted; if there is fear then the \( qi \) descends; if there is cold then the \( qi \) is constrained; if there is sunlight then the \( qi \) is drained; if there is fright then the \( qi \) is chaotic; if there is toil then the \( qi \) is consumed; if there is consternation then the \( qi \) is knotted.\(^ {133}\)

This presents essentially the same nine “emotions” in almost the same order as Congzheng, who only made a few alterations and added his commentary. Although he first used the character *shu* 暑 (heat or summer-heat), later in the same essay he also uses *gui* 炙 (heat from sunlight) and *re* 熱 (heat), substituting the three terms without concern for technical consistency.\(^ {134}\) This is similar to his use of *he* 暑 (heat) for sudden turmoil.

In the debate over the role of the emotions in disease, Congzheng also considers the model proposed in the *Huangdi Neijing Lingshu*, chapter 8, entitled *benshen* 本神 (foundation of the spirit):

In the *Lingshu*’s treatise [on this subject,] it is the *shen* (spirit), *yi* (intellect), *hun* (ethereal soul), *po* (corporeal soul), *zhi* (will or intention), and the *jing* (essence) that govern diseases. Thus it is without the four diagnoses of cold, heat, fright, and toil. I accordingly refute this and propagate [this other theory on the subject].\(^ {135}\)
His refutation of the role of the five spirits in emotional diseases presages the current of Confucian thought that flourished under thinkers like Wang Yangming 王陽明 (1472-1529), whose philosophy became associated with the xinxue 心學 (school of the heart-mind) of the late imperial period. Wang argued the xin 心 (heart, mind) and the li 理 (principle) were just two different names for the same concept, as opposed to the Nansong intellectual Zhu Xi 朱熹 (1130-1200) who thought the li 屬於 the Heavenly realm of wuji 無極 (absolutely nothing) and xin 屬於 the Earthly realm of taiji 太極 (great ultimate). Thus for Wang, it is the mind that brings all things into being, for better or worse. The Jin had suffered from climactic chaos leading to toil and warfare on three fronts, generating fright. Therefore, Congzheng emphasized the need to include these “emotions” in any discussion about the role of the mind in health and disease, without invoking the role of different spirits within our body. It can be argued that he believed one should manage their emotions by cultivating morality to remain healthy and balanced and that loss of that moral center leads to chaos within the self, and of course, within the state.

Congzheng continues by discussing his approach to the treatment of emotional disorders, beginning with this statement:

凡此九者 内经有治法 但以五行相胜之理治之
As for these nine, the Neijing has a treatment method that only uses the principles of the mutual conquest cycle of the wuxing to treat them. 136

After detailing these methods, including how each emotion harms a different zang (solid organ), he then argues that actually all emotions are governed by the heart. Congzheng cites the works of Liu Wansu to argue all emotional disorders should be treated by calming the heart fire. 137 He then provides a case study to exemplify this method, using one of Liu’s favorite formulas:

昔余治一書生 勞苦太過 大便結燥 咳逆上氣 時喝喝然有聲 唾嘔鮮血 余以苦劑解毒黃連湯加木香 漢防已 煎服 時時啜之
複以木香槟螂丸泄其逆氣 不月餘而痊
Previously I treated an intellectual for excessive and bitter toil. His defecations were hard and dry, he had a cough with upward rebellion of qi, he would often drink a lot while making noises, and he would spit up and vomit fresh blood. I
used the bitter preparation Jiedu Huanglian Tang (Coptis Relieve Toxicity Decoction) plus muxiang (Auklandia lappae Decne., Radix) and fangji (Stephania terandra S. Moore, Radix), cooked up a dose and had him drink it frequently. I then used in addition Muxiang Binglang Wan (Aucklandia & Betel Nut Pill) to drain his rebellious qi. After no more than a month he recovered.\footnote{138}

In a later passage, he similarly describes the treatment of a woman who had suffered for a year and a half with continuous and unceasing laughter. After numerous physicians tried and failed to treat her disorder, she sought help from Congzheng:

\[\text{以淪鹽成塊者二兩 餘用火燒令通赤放冷 研細以河水一大碗 同煎至三五沸放溫 分三次啜之 以釵探於咽中 吐出熱痰五升 次服大劑黃連解毒湯是也 不數日而笑定矣}\]

[Zhang] used 2 liang of reduced salt blocks and further used fire to burn it until it became red and released its cold. He ground it finely and then used a large bowl of river water [and dissolved the salt into the water]. Together he cooked this until it reached a boil three to five times to release the warmth, then divided it into three [doses] and had her drink it. He then used a hairpin to probe inside her throat and she vomited up five sheng of hot phlegm. Next he had her take a large preparation of Huanglian Jiedu Tang (Coptis Relieve Toxicity Decoction). After just a few days the laughing stopped.\footnote{139}

Here he again used Huanglian Jiedu Tang (Coptis Relieve Toxicity Decoction) to treat a person for an emotional disorder due to an excess of heart fire. Inspired by Liu Wansu, Congzheng also suggested using the related formula, Da Jin Huawan 大金花丸 (Great Jin Dynasty Blossoming Pill),\footnote{140} with dosages of equal amounts to drain fire:

Zhang Congzheng’s Da Jin Huawan 大金花丸 (the Great Jin Dynasty Blossoming Pill):

- **Huanglian** 黃連 (Coptis chinensis Franch., Rhizoma)
- **Huangbai** 黃柏 (Phellodendri Cortex)
- **Huangqin** 黃芩 (Scutellaria baicalensis Georgi., Radix)
- **Dahuang** 大黃 (Rhei Radix et Rhizoma)

Thus it appears he is in agreement with Liu Wansu that the Great Jin dynasty should conquer the fire of the Nansong, or for Congzheng, the three “ministerial fires” of Nansong, Xixia, and the Mongol Horde, to restore order to all under Heaven.
The traitor Song Ziyu

The *Rumen Shiqin* is an outstanding example of how literati used medical texts to engage in socio-political discourse, and this is made most evident when Zhang Congzheng discusses his years of service as an army doctor. In an essay in the second *juan* on attacking or tonifying the *wushi* 五實 (five excesses) or the *wuxu* 五虛 (five deficiencies), Congzheng brings up his enlistment into the army as a *taiyi* and his first posting above the Jiangzi and Huai Rivers on the southern border. In this essay he makes a direct reference to political and military matters. He begins by criticizing the *shidafu* 士大夫 (scholar officials) for failing to understand that one needs to not only tonify deficiencies (a process achieved via the generation sequence of the *wuxing*), but also to attack and destroy the excesses (via the conquest sequence). He equates their practices with deceiving all under Heaven, and then again equates the body with the state. Thus for Congzheng, expelling pathogens from the body is equivalent to expelling foreign invaders from the state.

To explain the difference between the *wuxu* and the *wushi*, Congzheng references historical events from 1130-1132 when the Jin armies drove south and reached all the way to Xiaowang 簫王 (Zhejiang province), just across the Yangzi River from the Nansong capital of Lin’an. During this campaign, the Wanyan generals so frightened the Nansong ruler Gaozong that he fled on a ship into the East China Sea to take temporary refuge at Kunyang 昆陽 (Taiwan Island), believing his dynasty was ending. This was a pivotal moment in the conflict, and Congzheng believed that the Jin should have taken the opportunity to conquer the south after seizing the *Zhongyuan* 中原 (Central Plains). This battle might also have been the inspiration for a painting attributed to a Jin dynasty artist completed in 1195 entitled *The Red Cliff* (see figure 26), which recalls the famous battle at the fall of the Han dynasty that symbolized the northern general Cao Cao’s inability to conquer the territories south of the Yangzi River. In the painting, at the base of the
cliff is a lone boat with an oar man and three passengers, which might symbolize Gaozong and his attendants fleeing to Kunyang. Congzheng first equates the battle at Xiaowang to attacking the excesses and driving Gaozong out to the sea. However, because of their failure to push across the Yangzi and take the capital, instead opting to pull back their armies and consolidate their territorial gains on the Central Plains, Congzheng equates this action with tonifying deficiencies. To reiterate Congzheng’s approach to tonification, it is based foremost on eliminating the excesses. Thus the failure to conquer the south is equated with the mistake of tonifying when the condition called for purgation.

Zhang Congzheng’s discussion of the *wuxu* and *wushi* is important because during his first year in service as a *taiyi*, the tributary state of Nansong broke the peace and attacked the Jin on their southern border, sacking the city of Yingzhou (Anhui province) just north of the Huai River. After this, they marched their army along the Jiangsu coast until they were camped out in southern Shandong. During that time there were hail storms in the summer damaging crops and the winters were becoming more severe. This must have been the time Congzheng refers to when he treated a soldier at Xicheng (Henan province), which is located near Yingzhou on the Huai River border. He uses a case study to explain the application of his theory on *wei* (atrophy) diseases, which he described using the familiar *wuxing* relationships:

> 由腎水不能勝心火 心火上爍肺金 肺金受火制 六葉皆焦 皮毛虛弱 急而薄著則生痿躄 瘢者足不能伸而行也 腎水者乃肺金之子也 令腎水衰少 陽火上炎 腎主兩足 故骨髓衰竭 由使內太過而致

Because the kidney water is unable to conquer heart fire, the heart fire shines upward on lung metal. When lung metal receives the regulation of fire, the six lobes each are scorched, the skin and hair are weak and feeble, if severe they have a diminished sense of touch, and then this creates crippling atrophy. The crippled feet are unable to flex or move. The kidney water is the son of lung metal and [weakened metal] causes the kidney water to be depleted and scant, and accordingly the fire blazes upward. The kidney governs the two feet, therefore if the bones and marrow are depleted and exhausted then the interior becomes excessive and [the disorder] is perpetuated.

Congzheng uses the familiar themes of metal generating water, or the Jin dynasty possessing the power of water, but becoming ineffectual in conquering fire that in turn harms the metal phase. The repetition of this theme is important to contextualize the significance of what follows. He goes on to report:
As for *wei* diseases, they are not fatal. If [the patient] dies then it was a mistaken use of medicine. For example, there was the military officer Song Ziyu, who because he was garrisoned with the army at Xicheng (Henan province) for about five or six months, he suddenly got a *wei* disease. As for his gait, his two feet each didn’t work as they should, so he was crippled and couldn’t walk. He sought me out for treatment. I inspected his pulses on both hands, which were both slippery and had strength. I consulted the *Neijing* (chapter 74) on fire and licentiousness in the interior [and it said] to treat using a type of cold [medicinal] or to use salt water to wash out the heat and lodged phlegm.

This was Congzheng’s first encounter with the military officer Song Ziyu. After considering his treatment options, Congzheng began by purging the fire with cooling medicinals and achieved good results:

兩足漸舉 腳膝漸伸 心降腎升 便繼以黃連解毒湯 加當歸等藥及瀉心湯 涼膈散 柴胡飲子 大作劑煎 時時呷之

[Song Ziyu’s] two feet gradually could be raised and his feet and knees were gradually extended. The heart descended and the kidney was raised. I used in sequence *Huanglian Jiedu Tang* (Coptis Relieve Toxicity Decoction) plus *danggui* (*Angelica sinensis* (Oliv.) Diels, Radix), followed by *Xiexin Tang* (Drain the Heart Decoction), *Liangge San* (Cool the Diaphragm Powder), and *Chaihu Yinzi* (Bupleurum Beverage), large amounts of the prescriptions were prepared and he sipped them often.

Thus he used formulas to conquer fire popularized by Liu Wansu, Zhang Yuansu, and the *Jufang* (Imperial Formulary). As Congzheng concludes this story, which appears very early in the text, he informs his readers of the subtext to his discourse:

予若以此誑人 其如獲罪於天何 此宋子玉之證 所以不得不書也 且示信於來世

To me it seemed that this was a deceptive person, and was it not as if he had committed a crime against Heaven? Such that this diagnosis of Song Ziyu is *bude bushu* (not all that it seems to be). Moreover, the truth will be revealed to later generations.

Indeed, Song Ziyu was a traitor to the Jin. The *History of the Jin* records that in the fourth month of 1217, Song Ziyu led a rebellion against the government in Henan province, amassing an army of over a thousand soldiers by uniting various disaffected groups.
The emperor sent the official Cong Tan 從坦 to deal with the crisis, and by the fifth month he had killed Ziyu and disbanded his followers. It was reported that most of his followers returned to farming, suggesting they were primarily peasants who were suffering due to the climactic stress. As a traitor whose surname was the same as their southern enemy, the rebellion must have been perceived by those like Congzheng to be in support of the Nansong aggression that escalated after this event. Therefore, reading between the lines of this case study on atrophy, Congzheng was arguing the Jin’s border armies in the south had become weak and ineffectual and were initially unprepared for both the breach of the peace by the Nansong and the rebellion of Song Ziyu. However, once properly mobilized, they were able to purge the fire and restore balance. Indeed, over the next few years that Zhang Congzheng served as an army doctor, the Mongols shifted their attention towards the Xixia and then Persia, allowing the Jin to push the Nansong armies back south across the Huai River border and suppress the revolt.

Zhang Congzheng’s last few years in service as a taiyi went from bad to worse. Shanxi was struck by a devastating earthquake in 1219 that killed thousands, and severe storms in 1220 destroyed buildings in Henan, which would have prompted government relief efforts. Then in 1221, the imperial grandson became sick and died after his treatments failed to cure him, and the History of the Jin records that the two doctors who were held guilty of killing the child with a medicinal called Mingxuan 暗眩 (Dark Dazzling) were named Hou Ji 候濟 and Zhang Ziying 張子英. There are no other records on these two men, but the latter name is very close to Congzheng’s style name, Zhang Zihe 張子和. If these are the same person, then this incident may have been the reason that Congzheng left public service to become a lingyi 鈴醫 (bell doctor), a member in the vulgar class of itinerant doctors who peddled their remedies in markets from town to town. It is also possible that Congzheng was condemned for his successful treatment of the traitor Song Ziyu. In either case, this would have at least been a fate better than the death penalty, but one that ostracized him from elite society in his old age. That same year, the Mongols returned and stormed down the mountain passes in the west.

Zhang Congzheng was clearly aware of the ideas of earlier literati physicians, but he adopted his own strategies for dealing with the cosmological crisis. His tactics focused on the three methods of attacking and purging the pathogenic forces and unwelcome
guests invading the center. By frequently interjecting classical references from the Confucian canon into his medical discourse to draw attention to larger socio-political issues, Congzheng’s text epitomizes the genre of Jin literati medical literature. From the classical medical canon, Congzheng again focused on the apocryphal Wang Bing (c.762) additions to the *Huangdi Neijing Suwen* to discuss the proper role of the sovereign fire versus the three types of ministerial fire in order to recover of the *yuanqi* (source energy). Congzheng clarifies that his three methods are a metaphor for purging evils from the three regions of the body, and explains how all of the accepted treatment strategies used by literati doctors can be categorized under these three broader concepts. He even categorizes medicinals by their function using these same three methods. Congzheng details many original formulas, but also recommends those by Qian Yi, Liu Wansu, Zhang Yuansu, and the *Jufang*, as well as many classical prescriptions from the *Shanghan Lun*. More than any other Jin physician, Congzheng provided numerous case studies to justify and illustrate his three methods, including from when he served as an imperial physician to the army. He also was engaged in *kaoju* (textual critique), identifying anomalies in the use of specific characters in the medical classics and proposing new ways to categorize respiratory diseases. Regarding *huoluan* (sudden turmoil), Congzheng argued it was caused by a combination of three pathogenic forces; wind, cold, and damp, which again served as a metaphor for the three enemies attacking the Jin. Congzheng also devotes much of his text to the discussion of emotional turmoil and the need to calm the heart-mind fire, another trend in Jin literati medicine. He also expressed his loyalty through the promotion of the formula *Da Jin Huawan* (Great Jin Dynasty Blossoming Pill) to conquer fire. Despite his devotion and service to the Jin, he met an ignoble end as an itinerant bell doctor.

*Chapter summary*

The metal phase (1209-1224) of the Jin dynasty corresponds to the fracturing and disintegration that resulted from a war on three fronts. The Xixia and Nansong joined the Mongol Horde with relentless attacks to capture dwindling resources amidst a climactic
crisis. Weishao struggled with his own legitimacy from the outset when Zhangzong’s concubine announced she was pregnant and the Yellow River ran clear. After the baby was lost, meteorites struck the earth followed by an unprecedented series of powerful earthquakes. At the same time, the Mongol Horde descended upon the Jin and terrorized villages along their northern borders while also attacking the Xixia, probably in response to the unrelenting droughts causing grain shortages and economic hyper-inflation. It was during this time that the cost for a measure of grain spiked to 1000 coins in 1210, and as high as 12,000 coins in 1213, when Xuanzong succeeded Weishao on the dragon throne. Xuanzong soon had to cope with invasions by the Xixia and Nansong as well as the Mongols. Faced with a war on three fronts, he once more convened a special council to again consider the question of wuxing legitimacy and the proper elemental-phase of the Jin dynasty.

The Jin twice deliberated on the wuxing and dynastic power in response to environmental and political crises, evidencing the close connection perceived by the Jin elite between these phenomena. Once more, the peace faction dominated the discussion by trying to resolve the cosmic imbalances using the generation instead of the conquest sequence, limiting the options again to earth in succession to fire, or metal in accordance with the founder’s intentions. The final decision of the council and Xuanzong is not known. This process may never have been concluded due to the escalating violence in the north coupled with a yellow dragon causing the Chaobai River to overflow, resulting in a massive flood around the central capital at Yanjing. These crises prompted Xuanzong to move his court to the southern capital at Bianjing in 1214. The emperor tried to reinvigorate the Jurchen martial spirit and rally his forces to repel the invaders. A temporary treaty was reached with the Nansong, which they subsequently broke, so the war continued on three fronts until 1218 when the Mongols shifted their attention and armies to Central Asia. This was followed by a massive earthquake that killed thousands in Shanxi, as well as by storms, flooding, drought, and the return of the Mongol Horde in 1221. Despite the chaos, Xuanzong was able to secure the remains of his empire until his death.

Zhang Congzheng’s medical text reflects the socio-political crisis facing the Jin during the early thirteenth century. Using the metaphor of expelling pathogenic invaders according to the three methods of attack, he was describing the invasion of the Jin on three fronts by the Mongols, Xixia, and Nansong, and the need to reinvigorate the Han and Jurchen martial spirit to purge these unwelcome guests from the Central Plains.
Drawing on classical sources, Congzheng argued for rectifying the cosmic *wuxing* imbalances and recovering the *yuanqi* (source energy) of the dynasty. He proposed a new strategy of categorizing diseases, treatments, and medicinals according to the three methods of *han-tu-xia* (diaphoresis-emesis-downward draining), introducing his own innovations along with recommending other classical and contemporary formulas. Congzheng even used his case study of the traitor Song Ziyu as a metaphor in his text for the challenges facing the Jin dynasty.
CHAPTER 5
WATER, 1224-1234

The elemental-phase of water corresponds to winter, to storage and death, the northern direction, and the collapse and destruction of a dynasty. After the death of Xuanzong, his third son, Ningjiasu 宁甲速, became the ninth Jin emperor who ruled as emperor Shouxu 守緒, posthumously known as Aizong 哀宗 (r.1224-1234). He inherited a severely troubled empire that remained threatened by enemies on three fronts. In the north was their most formidable foe, the Mongol Horde, which had recently returned from their Persian campaign intent on conquering all of East Asia. Two of the three tributary states surrounding the Central Plains that had previously paid homage to Jin suzerainty, the Xixia in the west and the Nansong in the south, were in rebellion and launching raids into Jin territory, but failed to hold any ground. Gaoli, the third tributary state on the Korean Peninsula, had been cut off from the Jin by the Mongols and were struggling to secure their own kingdom. Complicating the political chaos, the Jin had suffered through numerous environmental disasters, the cumulative effect of which was a severe food shortage leading to hyper-inflation, with the resultant social unrest threatening the dynasty’s stability from within. Many questioned whether the Jin dynasty had already lost the Tianming 天命 (mandate of Heaven).

From the moment Aizong succeeded to the throne and declared his first reign period (1224-1231), entitled Zhengda 正大 (Correct Greatness), hundreds of officials memorialized him on the numerous crises facing the Jin. ¹ Heaven also sent messages to the new emperor, but these appeared to be mixed. For instance, several passages from the History of the Jin recount stories that describe good harvests that year:

邠州節度使移剌术納阿卜貢白兔詔曰 得賢臣輔佐 年穀豐登 此上瑞也
Binzhou provincial governor Yilashu Na’abu sacrificed a white rabbit and announced: we have obtained virtuous vassals and assistants and the annual grain harvest is plentiful. This is highly auspicious. ²

This announcement may have simply been part of a ritual to promote good harvests and not an actual agricultural report. It was also not the first reference to a white rabbit. The same region of Binzhou (Shandong province) presented Xuanzong with a white rabbit in 1217, ³ and then again in 1222 a white rabbit was caught that was also interpreted by
officials as an auspicious sign. This was likely due to the white color being revered by the Jin, which was the color of the metal phase. However, in these previous instances no plentiful harvests were forthcoming.

Another story surrounds the predictions of Wu Zhen (fl.1213-1231), a humble farmer who became interested in the study of numbers and divinatory practices. He had once been summoned to Xuzhuo (Jiangsu province) by an official of Xuanzong for consultation, which earned him a good reputation. It was recorded: *qizhan ruxiang* 其占如響 (his divinations were like echoes), such that whatever Wu predicted was repeated with a future occurrence. In 1224, Aizong summoned him to Bianjing. While Wu Zhen waited for his audience with the emperor, he spoke with a friend:

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待詔東葉門 其友王鉉問禎曰 朝廷若問國祚修短 子何以對
禎曰 當以實告之 但更言周過其歷 秦不及期 亦在修德耳
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[As Wu Zhen] waited as ordered at the east-side gate, his friend Wang Xuan asked Zhen saying: it seems the imperial court has questions about the kingdom and throne to repair its shortcomings, what will the master reply? Zhen said: one must be honest in what one tells people but change the words. [For example,] the Zhou dynasty exceeded their history but the Qin dynasty was not as good a period, and they also tried to repair their elemental-power.

Despite his rural background, it appears Wu was savvy enough to know he needed to be careful how he phrased his predictions for the court. His candid words further demonstrate that the issue of *wuxing* legitimacy remained a topic of discussion among both court officials and the rural populace. Wu also invoked the succession of Zhou (fire) to Qin (water) as described by Sima Qian (c.100 BC), suggesting he too thought the Jin possessed the power of water. It may even have been that Aizong attempted to reconvene the special council to consider the question of *wuxing* legitimacy that fell apart when Xuanzong relocated to Bianjing, and thereby complete the task and repair the wrongs.

The story continues:

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時久旱祈禱不應 朝廷為憂 禎忽謂鉉曰 足不令日早歸 恐為雨阻
鉉曰 萬里無雲 赤日如此 安得有雨 禎笑曰 若是 則天不誠也
天何嘗不誠 既而東南有雲氣 須臾蔽天 平地雨注二尺 衆皆驚嘆
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During this time of long droughts [the people] prayed for relief, but there was no answer [from Heaven] and the imperial court became worried. Zhen suddenly called to Xuan saying: one surely cannot order the sun to rise again; it is fear that holds back the rain. Xuan said: for ten thousand miles there is not a cloud, the naked sun is right there, how can there be rain? Zhen smiled and said: if it is like
this, then Heaven is not sincere, but how can Heaven be insincere? As he said this, clouds were already forming in the southeast and quickly covered the heavens. Across the earth two feet of rain poured down and the multitudes all exclaimed in admiration.  

Although these stories of white rabbits and magicians suggest there was an end to the drought, other passages tell of continuing troubles. During the month of Aizong’s ascension, there was a wind storm that blew off doors and roof tiles, stirring up a yellow cloud of dust that blocked out the sun. During the storm, Aizong came upon a boy dressed in coarse clothing outside the palace gates who looked as though he might either laugh or cry. In response Aizong said:

吾笑 笑將相無人 吾哭 哭金國將亡
If I laugh, my laughing shall be alone. If I cry, I will cry for the Jin kingdom, which shall be lost.

Another story illustrating the dire circumstances faced by the subjects of Jin concerns the empress dowager Rensheng 仁聖:

仁聖又夢乞丐萬數其後 心惡之 占者曰 后為天下母 百姓貧窮 將誰訴焉 遂勅京城設粥與冰藥以應之
Rensheng dreamed she was being confronted by ten thousand or more beggars. Her heart reviled it, so she interpreted the dream and said: I have become the mother of all under Heaven and the common people are destitute and poor, so how can I complain? Thereupon she ordered that in the capital city [the government] provide porridge and give ice and medicine to help them cope.

Given the prior history of the dynasty, these latter tales provide a more believable interpretation of the events during the first month of Aizong’s reign.

The most pressing matter for Aizong was the war on three fronts. In the third month of 1224, General Wanyan Heda 完顏合達 of the royal clan was awarded the Jinhufu 金虎符 (Seal of the Metal Tiger) for his meritorious service on the battlefield defending Yan’an. At that time, the Jin armies in the mountain passes to the west were able to push back against the Mongols and Xixia to recapture this city. This explains why that winter in the tenth month, the Xixia sent envoys to Aizong to repair diplomatic relations, believing the tides of war were shifting in favor of the Jin. The next month the following announcement was made:
Deputy of the left Zhang Xingxin said: earlier the emperor decreed that within the empire, [corporal] punishment shall not be given to officials so that they shall govern according to their sense of honor.  

From its founding, the Jin had maintained the Jurchen custom of flogging officials for wrongdoings, a practice considered abhorrent to Han Confucians. Thus with this new decree, it appears Aizong believed that his best hope for a dynastic resurgence was to embrace these customs. Unfortunately, Heaven remained unappeased. In the first month of 1225, it was recorded that there was a *jin* 禽 (evil force) of yellow and black.  

No further details are provided, but over the next few years further droughts were reported along with several hailstorms and locust infestations damaging crops.

In the ninth month of 1225, a peace treaty was reached between the Jin and Xixia:

A peace agreement was reached with the kingdom of [Xi]xia. They will consider an older brother’s duties to be those of the Jin dynasty, and they each will use our current kingdom’s year names and dispatch envoys and return with betrothals, and all of our kingdom’s records shall honor [Xixia] as a younger brother.

It was further announced that this peace agreement would extend to the ally of the Xixia in the far south of Yunnan province, the Dali 大理 kingdom (937-1253). As a condition of the peace, all tribute missions were suspended indefinitely. Following this treaty, which secured the Jin’s entire western flank followed by the apparent retreat of the Mongols after the Jin’s military success within the mountain passes to the northwest, Aizong became emboldened to strike back at the Nansong:

The people of [Nan]song casually violate our border, so I will use our light cavalry and attack them. I hope to punish them so their wounds will encourage goodness in order to stop them [from harming] our people, and that is all. The people of [Xi]xia come and go as vassals of our court and are now honored as our younger brother in peace. I can no longer tolerate this disgrace [by the Nansong]. We must achieve peaceful relations so as to secure our people. [However,] I still want to use the military, so high ranking officials should do so in all cases. This is my plan.
There might have been a real possibility for peace at that moment, for that same year the new Nansong ruler Lizong 理宗 (r.1225-1264) might have been eager to begin his reign by securing the peace. However, by attempting to broach a peace treaty by attacking them first, Aizong may have undermined his own plan by provoking the new monarch into continuing the war. Under the leadership of General Yila Pu’a 移剌蒲阿, the Jin army conducted punitive raids, capturing thousands of horses and killing thousands of people along its southern border. Not surprisingly, Lizong ordered the Nansong army to retaliate, and they plundered villages north of the Huai River and killed hundreds of Jin soldiers. 17 The chance for peace was gone.

While the Jin was engaged in a war of attrition in foul weather with the Nansong, the Mongols launched a full scale offensive against the Xixia in early 1227. Before the Jin could respond in support of their new ally, the Xixia dynasty was extinguished. 18 Once more the Jin stood alone against the Mongol Horde. After his overtures for a peace treaty were rejected, Aizong convened his generals to discuss battle plans as the Horde advanced once more through the western mountain passes. 19 Three proposals were considered: the first was to go on the offensive, the second was to reinforce its defensive lines, and the third was to retreat and abandon the mountain passes altogether. In the sixth month of that year Taibai (Venus) entered the jing constellation and a large earthquake shook the Central Plains, followed by another quake the next month in Shaanxi province. In the eighth month strong winds caused several building to collapse, followed by an early frost that damaged the grain before it could be harvested. 20 Just then fate intervened, for that was when Genghis Khan died. According to the Inner Asian tanistry tradition, the Horde offensive was recalled as the tribal leaders returned to the Mongol capital of Qaraqorum to bury their leader and decide upon his successor. After a lengthy process it was eventually decided that Ögödei (r.1229-1246) would become the Great Khan, but it wasn’t until two years later that he returned with his armies to conquer the Jin.

The chilly climate remained on the offensive. The Jin endured severe cold through out the spring of 1228, with snowstorms that destroyed all the new leaves on the trees, and as summer approached, rain and hail destroyed mulberry trees followed by yet another drought. 21 That summer, Aizong pardoned various criminals and reduced the crimes of those guilty of capital offenses in the hope that his benevolence would appease Heaven, but to no avail. Due to an extreme cold in Shanxi province during the winter of
1228, Aizong granted the army officers extra supplies of firewood and coal, as well as silver for other expenses and to keep up their morale as they guarded the northwest border. Things remained relatively calm during most of 1229, but that winter it was reported that the Mongol Horde had returned and were camped out in Gansu province. Aizong dispatched an envoy to offer as tribute goats, wine, coins, and silk in a request for peace. The Mongols accepted the offering, but only delayed their offensive operations until the summer of 1230. The Mongols made a two pronged attack towards the Jin capital at Bianjing. One column moved into the mountain passes from the west and met little resistance as they captured cities around Chang’an (Shaanxi province), while the other column came down from the north, but their advance was stalled by the Jin army as they marched on Weizhou (Henan province). With fierce determination, the Jin held off the Mongols for yet another year. Finally, the city of Weizhou succumbed to the Mongols, and then in the fall of 1231 the armies of Nansong attacked the Jin’s lightly defended southern border after forging an alliance with the Horde. At the same time, the Mongol’s western column forced their way past Luoyang and onto the Central Plains, advancing on Bianjing.

While the Jin armies retreated to defend the capital, Aizong changed the reign period (1232) to Kaixing (Initiating Resurgence), probably hoping that this might initiate a turn of the tide that threatened to wash over Bianjing and annihilate the Jin dynasty. Surprisingly, during the first three months of spring, heavy snows blanketed the region. The snow banks grew so thick they brought the fighting to a halt. But this only delayed the inevitable, giving the Jin time to ponder how the frozen landscape symbolized their final phase of existence. Once the snows began to melt, Bianjing was attacked mercilessly. Many of the city’s people threw themselves into the “River of Sorrow” to escape the horror as the Mongols razed the city to the ground. In the fifth month, the summer was as cold as winter, and there was another earthquake in the ninth month. Meanwhile, the Nansong armies scrambled to grab territories around the fallen capital they had long yearned to recover, but had been to weak to succeed on their own.

During the fighting, Aizong managed to flee east to Shandong with the remnants of his court and a mass of refugees from Bianjing. He changed the reign period (1232-1234) to Tianxing (Heaven’s Resurgence), but the slaughter continued into the next year. In the sixth month of 1233, torrential rains covered the ground with several feet of water and many people died in the resulting flood waters. Once the waters drained

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there were several months of drought. Aizong did his best to provide relief to his loyal subjects who had endured so much hardship:

設四隅和糧官及惠民司 以太醫數人更直 兵人官給以藥
仍擇年老進士二人為醫藥官

[In the eighth month of 1233, Aizong] arranged for the four corners to all buy up [grain] for officials at the Huiminsi (Office for Benefiting the People) so that the taiyi (grand physicians) could help the many people, and so soldiers and officials could be given medicine. They further selected two senior jinshi (advanced scholar) personnel to become yiyao guan (officials of medicine and pharmacy).  

Once this was accomplished, Aizong once more turned to the Nansong to reach a peace agreement, making one final argument for an alliance:

大元滅國四十 以及西夏 夏亡及於我 我亡必及於宋
唇亡齒寒 自然之理 若與我連和 所以為我者亦為彼也

The Mongols have already extinguished forty kingdoms, most recently the Xixia, and just as the loss of the [Xi]xia was felt by Aizong, so the loss of Aizong would be felt by the [Nan]song. [He added] chunwang chihan (without the lips the teeth get cold). This is a natural principle, so it seems we should join together in peace. That which is mine is also considered yours.

However, the Nansong had already made their pact with the Mongols and rejected Aizong’s final plea for help. That winter, the combined Mongol and Nansong armies attacked Aizong’s temporary capital in Shandong, and his broken and battered army could no longer resist. By the spring of 1234, he was surrounded and grossly outnumbered, so Aizong hanged himself in the Youlan Xuan (Hidden Orchid Pavilion).  

When the crown prince Chenglin 吳麟 heard the news, he took the imperial title of Mo (the End) and with great sadness gave the dead emperor his temple name “Aizong,” meaning the “sorrowful ancestor.” Although his reign probably lasted only hours, the shortest reign in all of Chinese history, he still was assigned the reign period Shengchang (Flourishing Prosperity) and was posthumously awarded the temple name Zhaozong (r.1234). Mo cried as the city walls fell around him in flames. The Jin was lost.
Li Dongyuan 李東垣 (1180-1251), who became known by this name late in his life, was also known as Li Gao 李杲 (Li the Brilliant) and Li Mingzhi 李明之 (Li the Enlightened One). He was born into a very wealthy family from Zhending 真定 (Hebei province) near the central capital at Yanjing, which guaranteed his place among social elites. Li eventually took an interest in the study of medicine and sought out the most renowned teacher he could find, which was Zhang Yuansu (c.1140-1220) who lived in the nearby town of Yizhou (or Yishui). Li paid Zhang a thousand in gold to become his student. Angela Ki-che Leung (2003) argues the Yuan dynasty witnessed the strengthening of the master-disciple relationship, whereas earlier it was common to study under different teachers. However, it is further evident that this trend began during the Jin dynasty. This provided literati doctors with gainful employment in their field, just as jinshi 進士 (advanced scholar) degree holders without a post turned to education and training of the next generation of examination candidates. Not only did Li Dongyuan study exclusively with Zhang Yuansu, but one of Li’s disciples, named Luo Tianyi 羅天益 (c.1220-1300), also studied only with Li. Luo was further provided with food, lodging, and money to care for his family by Li so that he could focus on his medical studies. It also appears that Li’s first disciple, Wang Haogu 王好古 (c.1210-1310), also studied exclusively with Li and then became a medical scholar in his own right, while acknowledging his lineage extended to Zhang Yuansu. Although the need for financial support suggests Luo may have been from a more humble background, he still managed to assert his elite status as a ruyi 儒醫 (Confucian physician) after gaining some social recognition, perhaps due to his association with Li. For example, Luo criticized physicians of lower social status whom he called fuyi 福醫 (fortunate doctors) or suyi 俗醫 (vulgar doctors), remarking that their clinical efficacy was not equal to the scholarly tradition of mingyi 明醫 (intelligent doctors).
Assuming Li was around 31 years old when Zhang Yuansu died (c.1220), Li would have already earned his reputation as a *ruyi* among Jin elites by the time of Zhang Congzheng’s death in 1228, when Li was about 48 years old. Because he did not need a career to support himself, he only maintained a limited clinical practice. According to his biography in the *Yuan Shi* (History of the Yuan dynasty), none of his acquaintances dared to call him a doctor because of his high social standing. Unlike other literati physicians, Li probably limited his clientele to other elites, including government officials and their servants. One of his patients may have been his close friend Yuan Haowen (1190-1257), a celebrated Jin poet and high official who passed the *jinshi* civil service examination in 1221. Yuan was also a historian whose preservation of court records contributed immensely to the compilation of the *History of the Jin*. In the preface to the *Piwei Lun* (Treatise on the Spleen & Stomach), which was published in 1249 just before Li’s death, Yuan praised Li’s benevolence and service during the aftermath of the fall of Bianjing in 1232, suggesting he might have been one of the scholar physicians recruited by Aizong to provide relief to the suffering of the refugees after the court fled east to Shandong. This might have been when Li began to be called Dongyuan (Eastern Wall), as he tended to the sick and suffering behind the walls where the Jin made its last stand. As Yuan Haowen recounts:

> 往者遭壬辰之變 五六十日之間 為飲食勞倦所傷而歿者 將百萬人
> 皆謂由傷寒而歿 後見明之辨內外傷及飲食勞倦傷 一論而後知世醫之誤
> Returning to those who encountered the transformations of *renchen* (1232), when during those fifty to sixty days there were those damaged by food, drink, toil and weariness, and those that died numbered a million people. In all cases it was determined to be *shanghan* (cold damage) that caused their deaths. Afterwards, I saw clearly how to differentiate interior and exterior damage, as well as damage from food and drink, toil and weariness. From this idea I later understood the mistakes of generations of physicians.

Scholars such as A.K. Leung (2003), Yang Shou-zhong and Li Jian-yong (1993) have interpreted this passage as an attempt to analyze a great epidemic that occurred after the fall of Bianjing to the Mongols. However, the *History of the Jin* records no such epidemic, which thus demands that this passage be reinterpreted to uncover its real significance. It is probable that the million who died in 1232 were not victims of a *shanghan* disease, but died at the hands of the Mongol Horde as they vanquished the last capital of the Jin. Thus the reference to the exterior pathogenic influence known as “cold damage” was serving
as a metaphor for the Mongols, who were the dark force that arose from the north. Furthermore, the interior damage to the digestive system and the earth elemental-phase was a metaphor for the Jin, which was unable to protect the Central Plains from a foreign invasion. Of course, the Mongols would have seized all the stored grain and other food supplies from Bianjing, as well as from Aizong’s last stand in Shandong, leaving any survivors of the battle to starve to death. Therefore, Li Dongyuan’s premise that the primary goal of medicine at that time should be to nourish the spleen and stomach and support the earth elemental-phase must also be understood as a rallying call for a Jin zhongxing 中興 (dynastic resurgence).

It was in the decades after the death of both his teacher and the last Jin emperor that Li Dongyuan became a prolific writer of medical treatises. Prior to this, he would have had little time to engage in such endeavors. Sometime after the Mongols sacked Yanjing in 1215, it is probable that Li Dongyuan fled from his native place near the former capital in Hebei province to the new capital at Bianjing, and from there fled to Shandong with remnants of the court and other refugees in 1232. Following the fall of the Jin, the Mongols turned their aggression towards Gaoli, and after another decade of warfare had conquered the entire Korean Peninsula by 1241. That same year witnessed the death of Ögödei, which once again drew back the Mongol Horde to Qaraqorum to decide upon his successor. This left the Central Plains essentially abandoned by its conquerors from 1234 until 1251, the year Li died and when Mongke (r.1251-1259) became the next Khan after a bloody and prolonged khuriltai (succession council).

This turbulent period of Li Dongyuan’s life can be partially reconstructed from events in the life of his friend, Yuan Haowen. Peter K. Bol (1987) found that Yuan remained in Shandong from 1234 until 1238, and so it is likely that Li also stayed there for these four years. In the power vacuum created after the Horde’s departure, several local warlords arose alleging their loyalty and service to the Mongol conquerors. While in Shandong, Yuan appealed to the warlord of that region, a Khitan named Yelu Chucai 耶律楚材 (1189-1243), for the perpetuation of literati culture and civil order. Yuan even convinced him to hold civil service examinations in 1237-1238, and to exempt the literati from labor and tax obligations. Li eventually returned home to his native place in Zhending, perhaps around 1238 with Yuan. Bol further found that Zhending became the headquarters of the most powerful warlords who ruled northern China during the Mongol’s absence, including Shi Tianni 史天倪 (1197-1225) and his bother Shi Tianze.
史天澤 (1202-1275). Both Li and Yuan may have continued working together to promote literati culture, while Li continued to practice medicine, teach his disciples, and write his books until his death.

Although precise dating of the extant works of Li is difficult, from numerous case records he includes to elucidate his clinical methods, it clear most if not all of them were written during this interregnum. In addition to the *Piwei Lun* in three *juan* 卷 (scrolls, sections, fascicles), he also wrote *Yixue Faming* 醫學發明 (Medical Innovations) and *Huofa Jiyaoy* 活法機要 (Essential Mechanisms & Methods of Life), both in a single *juan*, and *Lanshi Micang* 蘭室秘藏 (Secret Book Kept in the Orchid Chamber) and *Neiwai Shang Bianhuo Lun* 內外傷辯惑論 (Treatise Clarifying Internal & External Injury), both in three *juan*. Li also contributed to the materia medica genre in a text called *Yaoyong Faxiang* 藥用法象 (Rules on the Use of Medicinals), which is no longer extant, but portions of it were preserved in the works of his disciple, Wang Haogu. Of these five, the only book that can be dated with certainty is the *Piwei Lun* (1249), based on Yuan Haowen’s preface. That was the same year a school for literati learning was established in Zhending. In 1252, the year after Li Dongyuan’s death, Yuan Haowen visited Qubilay before his rise to Khan (1264) and was presented as one of the “talented men of China.” Yuan successfully petitioned Qubilay to become “the great patron teacher” of the *ru* 儒 (Confucians, literati) (Bol, P.K., 1987). Despite the gains in preserving literati culture during this period, Li’s medical writings reveal his loyalties remained with the Jin.

**Yin fire & collapse of the center**

Li Dongyuan, like other literati doctors, makes frequent references to the classical medical canon and then provides his own interpretation of the passages. For example, in the opening passages of the *Yixue Faming*, he references sections of the *Huangdi Neijing Lingshu* and *Suwen*, focusing in on chapter 5 of the *Suwen*, which he then revises and builds upon by adding his own descriptions of what happens when there is an imbalance of the cosmic forces:
The first part of each section draws on the source text, but Li then adds his remarks. Initially he only adds details to the appearance of the discharge, or the difficulty evacuating the bowels, but at the end he makes a noteworthy statement. Here Li identifies the role of both the kidneys and the liver as filters that are meant to remove waste products from the body, but can become so overwhelmed by the turbidity that they fail to perform this function, leading to an internal rebellion of the body systems. Prior to this, the kidneys primary function was understood to be the storage of jing 精 (reproductive essence) and to serve as the foundation of yin and yang, while the liver stored blood and helped regulate the flow of qi. Li’s description of their function represents an extension of knowledge regarding organ physiology that is consistent with our modern understanding of the role of the liver and kidneys as filters to remove waste from the blood.

Following this insight, Li describes the process of rebellion and introduces a concept that becomes a cornerstone of much of his thinking:

If stomach qi rebels upwards there might be such symptoms as nausea, vomiting, and hiccups. It is the evil of yinhuo (yin fire) that overflows upwards, and so the qi one [needs to] draw in cannot enter. Therefore, food cannot be swallowed. 

The pathogenic agent of yinhuo 隱火 (yin fire) appears to be an original concept introduced by Li. This term does not appear in any of the Han medical classics, instead one finds in chapter 5 of the Suwen the assertion that shuiweiyin huoweiyang 水為陰火

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為陽 (water is *yin* & fire is *yang*). In contrast, Li describes a dark and menacing type of fire. In chapter 18 of the *Nanjing* there also appears the term *shaoyin huo* 少陰火, but this is an unambiguous reference to the heart and its acupuncture channel. Additionally, in chapter 71 of the *Suwen*, one of the frequently cited Wang Bing 王冰 (c.762) additions, the terms *shang shaoyin huo* 上少陰火 (upper *shaoyin* fire) and *xia shaoyin huo* 下少陰火 (lower *shaoyin* fire) are mentioned in succession a total of five times each, referencing the heart above and the *yang* energies of the kidney below. However, none of these classical sources refer to Li’s concept of *yinhuo*.

In the essay entitled *yinshi laojuan lun* 飲食勞僥論 (treatise on food, drink, toil, and weariness) of the *Yixue Faming*, which is the precise phrasing used by Yuan Haowen to describe the death of a million people at Yanjing in 1232, Li provides the conditions under which the *yin* fire arises and the *yuanqi* 元氣 (source energy) is lost. Thus Li appears to be using this medical essay to discuss the greater socio-political crisis. Nearly identical passages are found in other texts: the *Piwei Lun*, the *Neiwai Shang Bianhuo Lun*, and a related passage in the *Lanshi Micang*. The following comes from the *Yixue Faming*:

苟飲食失節 寒溫不適 則脾胃乃傷 又善怒憂恐而損耗元氣
既脾胃氣衰 元氣不足而心火獨盛 心火者陰火也

If one loses dietary regularity and cold and warm are not taken properly, then this damages the spleen and stomach. Furthermore, joy, anger, worry, and fear can decrease and squander the *yuanqi*. Since the spleen and stomach qi declines, the *yuanqi* is insufficient, and the heart fire alone flourishes. As for the heart fire, it is the *yin* fire.

In the first part of this passage, Li identifies only four out of the five emotions that correspond to the *wuxing*, leaving out sadness, which is associated with the metal phase. This may suggest that only metal, or the Jin dynasty, cannot squander the *yuanqi*. The passage continues:

起於下焦 其系系於心 心不主令 相火代之 相火 下焦包絡之火
元氣之賊也 火與元氣不兩立 一勝則一負 脾胃氣虧則下流於腎肝
陰火得乘其土位

[The *yin* fire] arises from the lower *jiao* and it becomes entangled with the heart. The heart loses it governing power and the ministerial fire rules on its behalf. The ministerial fire is the encircling fire of the lower *jiao*, and is the thief of the *yuanqi*.
The [yin] fire and the yuanqi together cannot stand, one will conquer and one will be defeated. If the spleen and stomach qi is deficient then it negatively impacts the kidneys and liver, and the yin fire obtains domination of the earth position. Thus Li is also associating the yin fire with the heart, with imbalanced fire and earth elemental-phases, and with a ministerial fire that has usurped the power of the sovereign fire, stealing the yuanqi and conquering the center. This is consistent with the arguments made by Zhang Congzheng regarding the tension between the sovereign and ministerial fire and builds upon the same concern with an excessive fire phase shared by Zhang Yuansu and Liu Wansu. Within the model of an embedded socio-political discourse, Li might be concerned that the Mongols had become the new pathogenic agent of yin fire, which stole the center corresponding to the earth phase, and that the warlordism and lack of governance within the Central Plains was further being taken advantage of by the Nansong as it gradually recaptured lost territories.

From this discussion of the state of medical and political affairs, Li concludes:

此皆脾胃之氣不足所致也 然而外感風寒所得之證 頗同而實異
內傷脾胃乃傷其氣 外感風寒乃傷其形 傷其外 為有餘 有餘者瀉之
傷其內 為不足 不足者補之

This is all the result of the spleen and stomach qi being insufficient. Thus exteriorly one is affected by syndromes of wind and cold. Some are quite similar while others are really different. If interiorly the spleen and stomach are damaged then this damages a person’s qi. If exteriorly one is affected by wind and cold then this damages their form. If there is damage to the exterior then this is considered an excess. If there is an excess then drain it. Damage to the interior is considered an insufficiency. If there is an insufficiency then tonify it.

The references to exterior pathogens can still be interpreted as the armies of the Mongols and the Nansong, while the internal deficiencies describe the Central Plains, which had been beaten down from years of warfare and famine. Although Li becomes most well known for his use of supplementation, he was not opposed to expelling excess forces. However, overall his strategies are in stark contrast to those of Zhang Congzheng who adamantly expressed his opposition to using supplementing medicinals. Moreover, in the Huofa Jiyao, Li continued to recommend the formula Jin Huawan 金花丸 (Jin Dynasty Blossoming Pill), which is the alternative name and method of preparation of the fire clearing formula Huanglian Jiedu Tang 黃連解毒湯 (Coptis Relieve Toxicity Decoction).
evidencing his continued support of the argument that an excess of fire threatened the chances of a Jin resurgence.

**Li Dongyuan’s Jin Huawan 金花丸 (Jin Dynasty Blossoming Pill):**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huanglian 黃連 (Coptis chinensis Franch., Rhizoma)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Huangbai 黃柏 (Phellodendri Cortex)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Huangqin 黃芩 (Scutellaria baicalensis Georgi., Radix)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Shanzhiziren 山梔子仁 (Gardenia jasminoides Ellis, Fructus)</td>
<td>1 liang</td>
</tr>
</tbody>
</table>

This repeated discussion by Li of the need for tonification of the spleen and stomach leads in three of his texts to the introduction of Li’s most famous formula: **Buzhong Yiqi Tang 補中益氣湯 (Tonify the Center & Benefit the Qi Decoction).** In the fourth text, the *Lanshi Micang*, Li recommends a slightly different formula: **Tiaozhong Yiqi Tang 調中益氣湯 (Harmonize the Center & Benefit the Qi Decoction).** The latter formula also appears in the *Piwei Lun*, but was modified slightly by removing the last ingredient listed below. Both of these formulas are intended not only to strengthen the digestive system but also to raise the righteous qi to counteract pathogenic influences. The order of the medicinals listed varies in the different texts, but has been changed below to synchronize the sequence for the purpose of comparative analysis. Dosages also vary between texts and therefore are not included:

**Li Dongyuan’s Buzhong Yiqi Tang 補中益氣湯 (Tonify the Center & Benefit the Qi Decoction):**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Renshen 人參 (Panax ginseng C.A. Mey, Radix)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Baizhu 白术 (Atractylodes macrocephala Koidz., Rhizoma)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Chaihu 柴胡 (Bupleurum chinense D.C., Radix)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Shengma 升麻 (Cimicifugae Rhizoma)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Jupi 橘皮 (Citrus reticulate Blanco, Pericarpium)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Danggui 當歸 (Angelica sinensis (Oliv.) Diels, Radix)</td>
<td>50 liang</td>
</tr>
</tbody>
</table>

**Li Dongyuan’s Tiaozhong Yiqi Tang 調中益氣湯 (Harmonize the Center & Benefit the Qi Decoction):**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Renshen 人參 (Panax ginseng C.A. Mey, Radix)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Cangzhu 苍术 (Atractylodis Rhizoma)</td>
<td>50 liang</td>
</tr>
<tr>
<td>Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)</td>
<td>50 liang</td>
</tr>
</tbody>
</table>
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
Shengma 升薑 (Cimicifugae Rhizoma)
Jupi 橘皮 (Citrus reticulata Blanco, Pericarpium)
Muxiang 木香 (Auklandia lappae Decne., Radix)
Huangbai 黃柏 (Phellodendri Cortex)

The base formula for both of these is the same, Sijunzi Tang 四君子湯 (Four Gentleman Decoction), which is a qi tonic whose exact composition was negotiable. It could be composed of either the first four medicinals of the first prescription above, or Liu Wansu’s version whereby fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium) is substituted for zhigancao, or an alternative version as described in the Jufang (Imperial Formulary) whereby fuling is substituted for huangqi, which in both cases is more effective for draining dampness. In the second of Li’s formulas he substitutes cangzhu for baizhu, which is also more effective for draining dampness, so he accomplishes the same therapeutic goal with this variation on the four gentleman theme. Importantly, all of these medicinals were readily available in the north because they were locally grown. Due to the chaos caused by the fall of the Jin, which would have negatively impacted trade routes with the south limiting the importation of medicinals and driving up prices, Li made far less use of imported substances. Price inflation on imported medicinals might have been less of a problem for Li’s relatively affluent clientele, and notably the one section where many southern imported medicinals are frequently used is in formulas for excessive drinking of alcohol, 52 which appears to have been a common problem among elites.

The name of this base formula used extensively by Li Dongyuan, the “Four Gentleman Decoction,” is obviously based on their being four ingredients, but it might also have originally been inspired by the following passage from the text Dengxizi 邓析子 (Master Dengxi, c.500 BC) discussing four sage kings:

治世之禮 簡而易行 亂世之禮 煩而難遵 上古之樂 質而不悲
當今之樂 邪而為淫 上古之民 質而敦樸 今世之民 詐而多行
上古象刑 而民不犯 教有墨劓不以為恥 斯民所以亂多治少也
堯置敢諫之鼓 舜立誹謗之木 湯有司直之人 武有戒慎之銘
此四君子者聖人也
The li (rites, ceremonies, etiquette) of an ordered world are simple and easy to put into action. The li of a chaotic world is vexed and difficult to follow. The joys of
ancient times were plain but not sad. The joys of the current times are evil and become licentious. The people of ancient times were plain and simply kind. The people of the current world are cheaters and are always moving around. The form of punishment of ancient people was such that the people didn’t commit crimes, they were taught about corporal punishment and disfigurement such that they didn’t want to be disgraced. These people [of today] are the reason there is much chaos and little order. When Yao (r.2356-2255 BC) became the leader he roused those who dared to admonish. When Shun (r.2255-2205 BC) took his place he used wood against those who slandered. When Tang (r.1766-1753 BC) was there the people in the ministry were fair. When Wu (r.1122-1115 BC) was there his motto was vigilance. These four gentlemen were sages.

By emphasizing the use of formulas based on the “four gentleman,” Li may have been further alluding to the need for another sage king to come forth and order all under Heaven, bringing an end to the decades of turmoil. It is also possible that he had become aware of the philosophical treatises of the Nansong scholar Zhu Xi 朱熹 (1130-1200), who was inspired by the four masters of the Northern Song who also sought to better understand the cosmos for the purpose of bringing order to the world. Li had several other formulas similar to Buzhong Yiqi Tang and based on the “four gentleman” that are included in the appendix, and the order of the medicinals in the prescriptions has again been changed for ease of comparison (see Appendix 7). All of these formulas build upon the same base, and many of them make use of the chaihu and shengma combination to raise the righteous yang qi, which becomes another common feature of Li’s creations. Li often details numerous modifications that can be made to these formulas depending upon clinical circumstances.

Case studies & social discourse

Li Dongyuan also provided numerous case studies to elucidate the clinical application of these prescriptions, studies that further illuminate the nature of his clientele and the problems he helped people overcome. In many cases, there is also an embedded social discourse that is characteristic of literati medicine. The following case study involving a local official comes from the Piwei Lun:
In the year wushen (1248) at the beginning of the sixth month, the pivotal judge Bai Wenju was 62 years old and he simply had a spleen and stomach deficiency and depletion disease, but at that time he developed an eye sickness and his body, face, and eyes were all yellow (jaundiced). His urine was sometimes yellow, sometimes white, his defecation was irregular, he was drinking and eating less, there was shortness of breath and shallow breathing, he was lethargic and fond of lying down, and his four limbs were unresponsive. Reaching the middle of the sixth month, his eye sickness was getting worse, and doctors used Xiegan San (Drain the Liver Powder) with frequent administrations, but going forward the sickness became more severe.

予謂大黃 牽牛 雖能除溼熱 而不能走經絡 下咽不入肝經 先入胃中 大黃苦寒 重虛氣胃 牽牛其味至辛 能瀉氣 重虛肺本 嗽大作 蓋標實不去 本虛愈甚
I said that dahuang and qianniu (the chief ingredients in Xiegan San), although they are able to eliminate dampness and heat, they are unable to go to the channels and collaterals. When they go down the throat they don’t enter the liver channel, but first enter into the stomach. Dahuang is bitter and cold and seriously weakens the qi of the stomach. The flavor of qianniu is acrid, which is able to drain qi, but seriously weakens the lung’s foundation and a cough is largely produced. Thus the branch is excessive, but it is not eliminated. The root is deficiency, but the cure is extreme.

This case study highlights another of Li’s concerns, which is that harsh purgatives and other strong medicinals to eliminate excesses must first be absorbed through the stomach and digestive system that consequently suffers from the actions of these medicinals, even though they were not the target organ. Li and like minded physicians were concerned about the potential of adverse reactions to medicinals and advocated alternative approaches to treatment with lower risks. This is a problem that persists today due to an over-reliance on concentrated synthetic chemicals that attack diseases, but can harm patients, such that adverse reactions to pharmaceuticals has become a leading cause of death in the United States (Lazarou, J., Pomeranz, B.H., & Corey, P.N., 1998; World Health Organization, 2002). Thus Li proposed a safer treatment for Bai Wenju that combined the various actions of medicinals, and he even provided his readers with details on the construction of this formula:

Li Dongyuan’s Qingshen Yiqi Tang 清神益氣湯 (Clear the Spirit & Benefit the Qi Decoction):
Fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium) 2 fen
Shengma 升麻 (Cimicifugae Rhizoma) 2 fen
Zexie 澤瀉 (Alisma palntag-aquatica L. var. orientale Samuels, Rhizoma) 3 fen
Cangzhu 苍术 (Atractylodis Rhizoma) 3 fen
Fangfeng 防風 (Ledebouriellae Radix) 3 fen
Shengjiang 生薑 (Zingiber officinale Rosc., Rhizoma recens) 5 fen

These medicinals are able to go to the channels, eliminate damp-heat, but don’t protect. Therefore, they don’t drain the root zang (solid organs), [but] they tonify the lung, spleen, and stomach, the foundational central qi that is deficient and feeble.

Qingpi 青皮 (Citrus reticulata Blanco, Pericarpium Viride) 1 fen
Jupi 橘皮 (Citrus reticulate Blanco, Pericarpium) 2 fen
Shenggancao 生甘草 (Glycyrrhiza uralensis Fischer, Radix recens) 2 fen
Baishaoyao 白芍藥 (Paeonia lactiflora Pall., Radix) 2 fen
Baizhu 白术 (Atractylodes macrocephala Koidz., Rhizoma) 2 fen
Renshen 人參 (Panax ginseng C.A. Mey, Radix) 5 fen

These medicinals all are able to protect the root, but don’t go to the channels. Those that don’t go to the channels don’t promote the channels and collaterals struck by evils. Those that protect are able to tonify the yuanqi of the zang.

Huangbai 黃柏 (Phellodendri Cortex) 1 fen
Maimendong 麥門冬 (Ophiopogonis Tuber) 2 fen
Renshen 人參 (Panax ginseng C.A. Mey, Radix) 2 fen
Wuweizi 五味子 (Schisandra chinensis (Turcz.) Baill., Fructus) 3 fen

These medicinals dispel seasonal floating heat and damp through evaporation.

From this we can see how Li remains concerned over the protection of the yuanqi and at the same time identifies the need to eliminate evil influences from the body, and by extension from the Central Plains.

Another case study from the Lanshi Micang details how Li also once treated the wife of Bai Wenju, and this case may reveal an embedded socio-political discourse more clearly:

Bai Wenju’s first wife had a constant white vaginal discharge that had been leaking for a long time, and various medicinals were ineffective. Upon examination [I found] that her pericardium chi [position on the right hand] pulse was weak and that the white vaginal discharge continued to flow without stopping.
[Wang] Shuhe [in the Maijing (Pulse Classic)] said: when there is beng (collapse, the death of an emperor) in the center for many days it becomes a white vaginal discharge that leaks downward, at times it is plentiful, white, and slippery, and the blood is withered. As for the beng in the center, the illness began when the blood collapsed, and after a while then the blood was scant. Compounding this was the loss of the yang. Therefore, white and slippery things drained downward without stopping.  

For this problem Li prescribed Bujing Guzhen Tang (Tonify the Channels & Stabilize the Truth Decoction), which combined warm tonics for the center with purgatives to expel the white discharge. Interesting is the use of the term beng (collapse, the death of an emperor) in relation to the center. The earliest definition of this term is found in the Liji (Book of Rites, c.500-220 BC), which first detailed the use of various terms for the deaths of people from different social standing:

天子死曰崩 诸侯曰薨 大夫曰卒 士曰不禄 庶人曰死  
When the Son of Heaven dies it is called beng, when various princes [die] it is called hong, when government ministers [die] it is called zu, when [other] scholar-officials [die] it is called lu, and when ordinary people [die] it is called death.  

Although the death of a monarch is the most common usage in classical literature, the Shuoyuan (Discussions in the Garden, c.100 BC) built upon this meaning to make a broader statement about the mandate of Heaven:

夫國必依山川 山崩川竭 亡之徵也  
A state depends upon the mountains and rivers, for if the mountains beng (collapse) and rivers dry up, this is a sign [the state shall be] lost. 

The term eventually was adopted into the medical nomenclature, but it only appears four times in the Huangdi Neijing Suwen, and does not appear in either the Lingshu or the Nanjing. The first example in chapter 7 of the Suwen only describes the result of a conflict between yin and yang. It is only the second example in chapter 44 of the Suwen that directly referred to female anatomy, the baoluo (the uterus and related structures), and described frequent urination and bleeding. The last two examples are in Wang Bing (c.762) additions, and are part of the binome bengkui (collapse, crumble apart). Chapter 70 of the Suwen describes collapse as a result of an emotional shock, but...
chapter 69 describes a situation similar to that in the *Shuoyuan*, whereby changes in the environment portend disaster:

泉涌河衍 滝澤生魚 風雨大至 土崩潰 鱗見於陸 病腹滿溏泄腸鳴
反下甚而太谿絕者 死不治
The springs gush and the rivers overflow, ponds dry up and fish are born, great wind and rain arrives and the earth *bengkui* (crumbles apart), fish scales are seen on the shore. There are diseases of abdominal fullness, noncoagulative discharge, and intestinal cries. If [the disease] urgently reverses downwards then *taixi* (KD-3, the great stream) is extinguished and [the patient] will die. Don’t treat them.

From 1210 onwards there had been an increase in seismic activity, drought, a collapse of agricultural production leading to hyper-inflation, typhoons, floods, and then during the harsh and icy winter of 1214 while Xuanzong and the Jin were under the Mongol’s onslaught, the Yellow River ran clear and fish scales were seen everywhere. Li and other literati may have believed in retrospect that these were signs of the dynasty’s imminent collapse, and thus used this term more frequently to draw attention to the crisis.

Li’s treatment strategy also diverged from other classical sources. The *Zhubing Yuanhou Lun* (c.600) first described several different types of *beng* under the category of *fuke* 婦科 (women’s diseases), including the five colors of vaginal discharge to correspond with the *wuxing*; white, yellow, red, green, and black. ⁶¹ The *Waitai Miyao Fang* (c.752) provided a few treatment strategies, using primarily warming medicinals to drive out excess cold with either astringing agents to stop the discharge or blood invigorating agents to remove blockages. ⁶² This included two types of medicated wines using either *chuanxiong* 川芎 (*Ligusticum wallichii* Hort., Radix) or *dingxiang* 丁香 (*Eugenia caryophyllata* Thunb., Flos). In contrast, Li’s strategy involved using warm medicinals to tonify the deficient earth phase, strengthen the spleen and stomach, and then expel the damp pathogenic forces. The term *beng* also appears in another case study by Li. In that case, the wife of Guo Dafang 郭大方 (c.1247) was treated for unremitting menstrual bleeding described as *baobeng* 暴崩 (sudden & violent collapse, or the sudden & violent death of an emperor), which Li diagnosed as being due to *qi* deficiency of the heart, spleen, and stomach, and prescribed *Huangqi Danggui Renshen Tang* 黃耆當歸人參湯 (*Astragalus, Angelica, & Ginseng Decoction*). ⁶³ This time he only used tonics.
Li’s concern over Heaven’s continued discontent is made evident in several other case studies. Although the Mongol Horde had moved the focus of their wrath onto the Korean Peninsula, warlords continued to act with impunity on the Central Plains during the years following the fall of the Jin, bringing a continuation of the chaos rather than the order of good governance. Exacerbating the political disunity was the climate, which remained extreme. The year 1243 appeared to have been particularly difficult, and even caused Li Dongyuan to become very sick with what he described as a spleen and stomach illness due to a flourishing of yin that overpowered the yang. As he records in the Piwei Lun, he was not alone in his suffering:

癸卯歲六七月間 淫雨陰寒 逾月不止 時人多病泄利 乃虛多成五泄故也
During guimao (1243), between the sixth and seventh month, there were torrential rains, darkness and cold, and for more than a month it did not stop. At that time people had many diseases of diarrhea and dysentery, and thus were deficient and many developed the five [types of] diarrhea.

In another case study from the Lanshi Micang, the extreme weather continued in the winter and caused a case of luanji 攣急 (acute spasms) in a military officer of Lingshou 靈壽 county (Hebei province):

癸卯冬大雪時因事到真定 忽覺有風氣暴至
During guimao (1243) in the winter, heavy snow caused an affair when it arrived at Zhending. Suddenly while asleep there was a wind qi that violently arrived.

Li’s concern over the Heavenly and Earthly imbalances tormenting the north Central Plains was expressed in his own unique application of wuxing 五行 (five elemental-phases) theory. In the Lanshi Micang, in an essay entitled piwei xusun lun 脾胃虛損論 (treatise on deficiency & depletion of the spleen & stomach), Li begins by noting how draining medicinals can harm the stomach and cites an unknown passage from the Neijing about how those who secure the grain will prosper while those whose grain vanishes will be lost. This appears to be a reference to the severe grain shortage and resultant hyper-inflation that the Jin had endured. Li then leads the discussion to the following conclusion:
Therefore, the blood must be nurtured and the stomach must be warmed. If the blood is nurtured and the stomach warmed then the regong (constructive) and wei (protective) are thereby moved and eternally possess the Tianming (mandate of Heaven). As for the grains, they are the great authority of the body. The [Shang] Shu and Zhouli both say: metal, wood, water, fire, earth, and grains alone must be cultivated, so as to receive the nurturing of the five zang (solid organs). 68

This brief passage has two important themes. First, Li equates warming the stomach to harmonize the body as an essential prerequisite to possessing the Tianming 天命 (mandate of Heaven), a clear reference to the socio-political crisis facing the Central Plains at that time and the need for a new Son of Heaven to secure Heaven’s mandate and revive the Jin dynasty. Second, Li chose to focus on the unique inclusion of grains as one of the “six elemental-phases”, which is not surprising given his emphasis on strengthening the digestive system. Of course this is in stark contrast to those like Liu Wansu who chose to emphasize Wang Bing’s inclusion of two fire elements in their discussions of the “six phases.” This same list of six phases appears in other early literature, including the Huainanzi 淮南子 (Master of Huainan, c.139 BC) and the Chunqiu Zuozhuan 春秋左傳 (Spring & Autumn of Zuo’s Teachings, c.500 BC). 69

Regarding Li’s citation, in the Shangshu 尚書 (Esteemed Book, c.500 BC) this list of six phases, including grains, is attributed to the sage king Yu (r.2205-2197 BC) in regards to good governance by means of nourishing the people and harmonizing the wuxing. 70 Therefore, Li is again calling for a new sage king to become the Son of Heaven, secure the mandate of Heaven, and to restore order to the Central Plains.

Fire subdues the earth

Li Dongyuan’s inclusion of grains among the wuxing is not his only unusual application of this fundamental theory of Confucian cosmology. While most literati doctors of the Jin focused on the sheng 勝 (conquest) sequence when describing the problems facing all under Heaven, as opposed to the government’s special council on dynastic succession that focused exclusively on the sheng 生 (generative) sequence, Li focused on the single occurrence of a phrase from chapter 75 of the Nanjing, which stated:
"zi nengling mu shi 子能令母實 (the son is able to cause the mother to have excess)."  
This phrase does not appear in the *Huangdi Neijing Suwen* or *Lingshu*, wherein the more common mother-son relationship implies the opposite, that the mother will cause the son to be excessive via the generative sequence, which can be subdued via the conquest sequence. This chapter is the same as the one twice cited by Zhang Congzheng, where it explains the assertion that “the eastern direction is full, the western direction is empty, drain the southern direction, and tonify the northern direction.” Although the emphasis in the *Nanjing* is to tonify the phase of water to conquer fire, the rest of the explanation of the mother-son relationship is a bit convoluted, and clearly lies outside the mainstream of medical theory. Importantly, this chapter concludes:

经曰 不能治其虚 何问其余 此之谓也
The classics say: if you cannot treat their deficiencies, how can you ask about their surpluses? This is what it is being discussed.

While Congzheng focused on the surpluses, Li is responding by focusing on the deficiencies. Although Li similarly finds that the heart and fire phase are excessive and are even subduing the lung and metal phase, he is most concerned how the deficiency of the earth phase is contributing to the excess of fire.

A clear example of how this dynamic manifests comes from the *Lanshi Micang*, wherein Li makes the following argument while discussing the indications for the formula *Caodoukou Wan* 草豆蔻丸 (Alpinia Pill):

子能令母实 以致肺金大肠相辅而來克心乘脾胃 此大複仇也
The son is able to cause the mother to have excess. This extends to the mutual assistance of the lung metal and large intestine that returns to subdue the heart, which is dominating the spleen and stomach. This is the great repetitive cycles of enemies. The classics say: a great conquest must have a great recovery; this is the eternal principle.

A similar argument is twice made in the *Piwei Lun*, including once as part of the description of a formula by the same name as above, but with some variation:

治脾胃虚而心火乘之 不能滋荣上焦元气 遇冬肾舆膀胱之寒水旺时
子能令母实 致肺金大肠相辅而來克心乘脾胃 此大复其仇也
经云 大胜必大复
In the treatment of spleen and stomach deficiency, when the heart-fire dominates it, one is unable to nourish the rong (constructive) and the yuanqi of the upper jiao. Encountering winter, it is the time for the cold water of the kidney and urinary bladder to prosper, the son is able to cause the mother to have excess, leading to the lung metal large intestine to mutually assist and return to restrain the heart, which is dominating the spleen and stomach. This is the great recovery of its enemy. The classics say: a great conquest must have a great recovery.  

The repeated phrase from “the classics” is certainly not cited verbatim, making the identification of the original source difficult. However, in both the Zhanguo Ce (Warring States Intrigues, c.200 BC) and the Shiji (Historical Records, c.80 BC), which chronicle the divisive era known as the Warring States Period (c.500-220 BC), they record how King Xuan of the state of Qi achieved a dasheng (great conquest) over the state of Yan, but two years after this defeat arose King Zhao as the next ruler of Yan. Thus a great conquest was followed by a great recovery, and this event specifically occurred near the old central capital of the Jin at Yanjing, close to Li’s hometown of Zhending. Therefore, it again appears that Li is suggesting that the metal of Jin has the opportunity to recover from its defeat, subdue the fire of the Nansong and the yin fire of the Mongols and warlords, and finally achieve a dynastic resurgence. Since metal is the son of earth, Li is arguing it has the capacity to cause the earth phase to be replete, but if the earth phase continues to suffer from deficiency, this only encourages the fire to dominate both metal and earth even further. One must also consider that since Li was a close acquaintance of Yuan Haowen and other high officials, he was also aware of the deliberations of the special council on the wuxing and the preference for choosing either metal, to be consistent with the intentions of the founder, or earth, in succession to the fire of Song. Thus he describes the close association between metal and earth and their mutual ability to conquer fire, even though this technically violates the rules of the orthodox cosmological paradigm.

In the Yixue Faming, Li further extended this argument. He began by suggesting a generative cycle imbalance between fire and earth:

心火乘於土位 胃氣弱而下陷於陰中 故米谷入而不得升 反降而為飧泄也

The heart fire dominates the earth position, and the stomach qi is feeble and collapses into the dark center. Therefore, rice and grains enter but cannot be raised. Contrarily they descend and become diarrhea with undigested food.
Rather than fire generating or nourishing earth, it is conquering, such that by attempting to succeed the fire of the Nansong by invoking earth, the Jin instead has lost ground to their southern enemy. Thus the son caused the mother to have excess. Li then extends this argument again:

盛冬乃水旺之時 水旺則金旺 子能令母實 肺者腎之母
When winter flourishes it is the time for water to prosper, and when water prospers then metal prospers. The son is able to cause the mother to have excess. The lung is the mother of the kidneys.

Here he describes the unusual circumstance whereby metal and water both prosper via the generative sequence, but in reverse. Instead of metal generating water, water generates metal. Although one could argue in this case that since water conquers fire, by subduing the fire phase it no longer has the capacity to conquer metal, Li emphasizes that the son is causing the mother to generate a surplus. Given the failure of invoking earth or metal by the Jin, Li and other literati may also have been returning to the argument that the Jin possessed the power of water. Consistent with the poems of his friend Yuan Haowen, Li must have at least seen these difficult times as corresponding to the water phase; a cold and dark winter. In his study of Yuan’s “Poems of Death and Disorder,” Stephen H. West (1995) remarks how Yuan’s poems lamenting the decline and fall of the Jin have been praised as unparalleled in their expression of despair. Yuan makes many “water” references in his verses, which West argues symbolizes the impending death of culture and civilization. However, West further argues it was Yuan’s intention to protect culture and preserve civilization through classical references to cycles of chaos and order, dynastic rise and fall. Li seems to take this concept further and optimistically suggests that a dynastic resurgence could bring the Central Plains out of despair.

In the Piwei Lun, Li returns again and again to the idea that fire is subduing earth. Several examples are found in the essay entitled piwei shengshuai lun 某意勝衰論 (treatise on the conquering & declining of the spleen & stomach), but they also appear scattered through out the text. The following excerpts represent some of the more direct references:

蓋心主火 小腸主熱 火熱來乘土位 乃濕熱相合 故煩躁悶亂也
Actually the heart governs fire and the small intestine governs heat, fire and heat come to dominate the earth position, and then damp heat is created. Therefore there is vexation, irritability, depression, and chaos.
心火旺則肺金受邪，金虛則以酸補之，次以甘溫及甘寒之劑
於脾胃中瀉心火之亢盛，是治其本也

If heart fire prospers then lung metal receives the evil, and if metal is deficient then use the sour flavor to tonify it, and next use preparations that are sweet and warm or even sweet and cold in order to drain the overbearing and flourishing heart fire from within the spleen and stomach (earth). This is treating the root.

今飲食損胃，勞倦傷脾，脾胃虛則火邪乘之，而生大熱，當先於心分補脾之源，蓋土生於火，兼於脾胃中瀉火之亢甚，是先治其標，後治其本也

Nowadays drinks and food deplete the stomach, toil and weariness damage the spleen, and when the spleen and stomach are deficient then fire evils dominate them and generate a great heat. One must first separate the heart [influence] to tonify the source of the spleen, [because] actually earth is generated by fire. Yet simultaneously, one must drain the extreme overbearing of fire within the spleen and stomach. To do this one first treats the branch and then later treats the root.

Of course there are even more examples, making it clear that although Li’s primary strategy was to supplement the earth phase, the goal of subduing fire remained a goal of all Jin dynasty physicians. This discussion leads to the introduction of the formula

Bupiwei Xieyinhuo Shengyang Tang 補脾胃瀉陰火升陽湯 (Tonify the Spleen & Stomach, Drain Yin Fire, & Raise the Yang Decoction), which covers all of Li’s primary concerns. Even in the Yixue Faming, at the end of the preparation instructions for his signature formula, Buzhong Yiqi Tang, Li adds:

夫脾胃虛者，因飲食勞倦，心火亢甚而乘其土位，其次肺氣受邪，鬱用黃芪最多，甘草人參次之

As for spleen and stomach deficiency, it causes the diet to toil and labor. If the heart fire is very extreme then is dominates the earth position, and after that the lung qi receives the evil, and so next one must use a really big amount of huangqi, gancao, and renshen.

Even though he is concerned about excess fire, he still recommends the use of warm medicinals to nourish the spleen, stomach, and lung, or earth and metal, believing their deficiency to be the root of the excess fire. Thus his references to an excess of yin fire and a deficiency of earth and metal are merely another way of identifying this grand cosmological imbalance and call for a Jin dynastic resurgence on the Central Plains.
Textual critique

Li Dongyuan further describes the crisis of the period with another classical allusion. In the *Piwei Lun*, he uses a change in the use of characters in medical nomenclature over time to direct his reader to the deeper meaning of the passage. Here Li cites chapter 69 of the *Huangdi Neijing Suwen*:

土不及 四維有埃云 潤澤之化不行 則春鳴條鼓拆之政
四維發振拉飄騰之變 則秋有肅殺霖淫之復

When earth is inadequate, the *siwei* (four social bonds, four limbs) are sullied and [due to] the changes of moistening they cannot move. Then in the spring the government cries and the drums are torn apart. If the *siwei* produce changes of quakes, drags, floats, and gallops, then in the autumn there is a return of grave killing and continual rains.

The term *siwei* 四維 (four social bonds, four limbs) appears only nine times in the *Suwen*, and does not appear in the *Lingshu* or *Nanjing*. The first appearance is in chapter three, but all the others appear in Wang Bing additions. In the same essay above, Li Dongyuan also refers to the *sizhi* 四肢 (four limbs [of the body]), which is the more commonly used term to refer to the four limbs of the body. This term is based on the older version, *sizhi* 四支 (four limbs, four branches [of a tree]), which also frequently appears in the classics. The term *sizhi*四肢 appears six times in chapter 73 of the *Suwen*, which was lost in the Wang Bing addition, but no where else in the *Suwen*. In contrast, this same term appears often in several different chapters of the *Lingshu*, as well as five times in the *Nanjing*, and eight times in the *Shanghan Lun*. This again illustrates a difference in the terminology used in these texts and supports the argument that they were written during different eras.

The fact that Li used these terms together suggests he was intentionally distinguishing between them and wanted to point readers towards the deeper moral debate on how to preserve Confucian civilization in a time of political and environmental turmoil. According to the *Guanzi* 管子 (Master Guan) by Guan Zhong 管仲 (c.645 BC), the *siwei* are: *li* 禮 (propriety), *yi* 義 (justice), *lian* 廉 (honesty), and *chi* 耻 (modesty). Guan prefices these moral principles with the following scenario:
The state has four social bonds. If the first bond is lost then there is deviance; if the second bond is lost then there is danger; if the third bond is lost then there is overturning; and if the fourth bond is lost then there is extermination. Deviance can be made upright; danger can be made safe; overturning can be made to rise up; but extermination is a mistake from which one cannot recover.

This concept is discussed further in the *Shiji* (Historical Records, c.100 BC) wherein it was argued in agreement with Guan Zhong that if the *siwei* are not promoted then: *guo nai meiwang* 國迺滅亡 (the state thereupon is destroyed). Therefore, Li’s inclusion of this passage appears to be an allusion to the disharmonies under Heaven when the *siwei* are lost due to poor political governance, and by extension, if the *siwei* are restored then so will political order and climactic harmony be restored to the individual body and the Central Plains.

Another example of textual analysis is found in Li Dongyuan’s frequent use of the term *man* 悚 (befuddlement). For example in the *Yixue Faming*, Li cites chapter 34 of the *Lingshu*, on the *wu-luan* 五亂 (five types of turmoil), with the first sentence coming from the classic and the second sentence Li’s own definition:

> 清濁相干 亂於胸中 是為大惵 惵者感也
> The clear and turbid are mutually dependent, and when there is turmoil inside the chest this becomes a great *man* (befuddlement). This befuddlement is an emotional state.

In both the *Yixue Faming*, when discussing his signature formula *Buzhong Yiqi Tang*, as well as in the *Piwei Lun*, when discussing the related formula *Qingshu Yiqi Tang* 清暑益氣湯 (Clear Heat & Benefit the Qi Decoction), Li continues to discuss the problem of *man*. For example, in the latter text:

> 且心包與心主血 血減則心無所養 致使心亂而煩 病名曰惵 惵者心惑而煩悶不安也
> Both the pericardium and the heart govern blood, and if the blood is reduced then the heart is without that which nurtures it. This results in heart chaos and vexation and the disease is given the name *man* (befuddlement). *Man* is when the heart is confused, vexed, moody, and not at peace.
The term *man* does not appear anywhere in the *Suwen* or the *Nanjing*, but it appears 19 times in thirteen different chapters of the *Lingshu*. Thus it is also possible that Li was trying to highlight this textual anomaly between the *Suwen* and *Lingshu*, once more suggesting these two texts were composed during different historical periods and were not part of a singular Han dynasty work. Notably in other sections of his texts, Li frequently references those exact same chapters of the *Lingshu* that refer to *man*, indicating he had read them closely and thought them relevant to his own understanding of the classics. Li may even have been befuddled over these differences between the two halves of the *Huangdi Neijing*. This discussion by Li of *man* was also part of the ongoing debate on the role of emotions as causes of disease, and Li may have been further arguing for inclusion of this emotional state along with the other “seven emotions”, “nine emotions”, and “five emotions.” Moreover, Li may have believed that “befuddlement” was the primary emotional state during the time of uncertainty in which he lived.

*Developments in diagnosis & sudden turmoil*

Regarding the field of diagnosis, Li Dongyuan left only a few clues about the pulse system he preferred. The clearest evidence of his pulse method is found in a chapter of the *Piwei Lun* where he provides a diagram of the relationship between the five *zang* (solid organs), the four seasons, the 12 Earthly branches, and the pulse positions (see figure 27). He begins by citing chapter 29 of the *Suwen*, which explained that the spleen and the earth phase do not correspond to a season of their own, but flourish during the last 18 days of each season to govern the transformation from one season to the next. This is followed by the diagram that places the *wuxing* in the center, with the characters for the 5 *zang* organs within circles arranged according to the *sheng* (generative) cycle, with the heart and fire phase at the top, moving clockwise. Surrounding this are the 12 Earthly branches arranged in sequence, with the corresponding branch marked with the season and the limb. Outside each organ/phase is a description of other correspondences such as flavors and temperatures for tonification and drainage, as well
as the pulse positions using the *wuxing* model. Because he only includes the five primary *zangfu* (solid & hollow organs), the pericardium and *sanjiao* (three warmers) are left out of the model, and thus there is no mention of what corresponds to the right *chi* 位置. However, from the case study about Bai Wenju’s first wife, it is known that he found the pericardium pulse in the *chi* position, most likely the right *chi*:

**Li Dongyuan’s Pulse Model:**

<table>
<thead>
<tr>
<th>Position:</th>
<th>Cun (distal)</th>
<th>Guan (middle)</th>
<th>Chi (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right:</td>
<td>lung &amp; large intestine</td>
<td>spleen &amp; stomach</td>
<td>pericardium &amp; <em>sanjiao</em></td>
</tr>
<tr>
<td>Left:</td>
<td>heart &amp; small intestine</td>
<td>liver &amp; gallbladder</td>
<td>kidney &amp; urinary bladder</td>
</tr>
</tbody>
</table>

This model is similar to that of his teacher Zhang Yuansu, who left out the pericardium from his model but included the *mingmen* 命門 (life gate) in the deep position of the right *chi* together with the *sanjiao* superficially. It is also similar to the model of Liu Wansu because there is no indication of which, if any, organ is found in the deep, superficial, proximal, or distal location. It is nearly identical to the model of Chen Yan, except it might not have included the *sanjiao* in the right *chi* position.

Surprisingly, Li had very little to offer on the causes or treatment of *huoluan* 霍亂 (sudden turmoil), even though he spent most of his pages devoted to problems of the digestive system and was concerned about political and environmental chaos. Although the *Piwei Lun* frequently uses the term *luan* 乱 (chaos, turmoil) to describe pathology, the binome *huoluan* is not mentioned in that text. In the *Huofa Jiyao*, there is a section on dysentery for which Li primarily recommends warming formulas for acute diarrhea from spleen dampness, although he also makes use of a few cooling medicinals. In this text he does not mention the term *huoluan*, but he does frequently refer to *baoxie* 暴泄 (sudden & violent discharge). 97 Although not stated outright, he may have considered these to be equivalent disorders. The only mention of *huoluan* disorder by Li is found in the *Yixue Faming*, but even then the chapter whose heading includes *huoluan* along with abdominal fullness does not discuss the topic, and none of the prescriptions detailed in that chapter are indicated for *huoluan*, nor are they for any type of vomiting or diarrhea. 98 Instead, in the very next section he includes just one formula that is described as useful in the treatment of *huoluan*, 99 and from this it is evident that Li returned to the original idea from the *Shanghan Lun* that the disease is caused by cold. That formula was *Jiangfu Tang* 藥附湯 (Ginger & Aconite Decoction), which was originally described in the *Shanghan*
Lun for the recovery stage of a similar illness, and is composed of just the two herbs in the name, both of which are used to drive out excess cold, with the dried ginger also descending the rebellious stomach qi to stop vomiting.

Li Dongyuan stressed the importance of strengthening the earth elemental-phase and raising the qi in order to subdue the yin fire and recover the yuanqi (source energy), metaphorically calling for a zhongxing (dynastic resurgence) of the Jin dynasty. Most of Li’s original formulas are constructed from the same basic ingredients and with the shared intent of tonifying the spleen and stomach, the corresponding organs of the earth phase. Similar to Zhang Congzheng, Li uses many case studies to illustrate his strategies, while in contrast he often uses them to highlight his concerns over the use of harsh purgatives and other strong medicinals that have the potential to do harm. In contrast to Liu Wansu’s promotion of six elements with two fire phases using Wang Bing (c.762) as his authority, Li promoted six elements by adding grains in accordance with a passage from the Confucian classics. Li was further concerned that instead of fire generating earth, it was subduing it, which had to be perceived as an extreme imbalance according to wuxing doctrine. He then tied this into discussions about the cause of emotional disturbances. Li’s discussion of the siwei (four social bonds) and man (befuddlement) further highlight differences between the Suwen and Lingshu, challenging the myth that the received editions formed a singular Han dynasty text. From Li’s case studies, it is further known that the cold and foul weather continued during the interregnum between the Jin and Yuan, and his preference for warm tonics is evident in his treatment of huoluan (sudden turmoil), with a return to emphasizing cold as the causative factor.

Wang Haogu

One of Li Dongyuan’s most renowned disciples was Wang Haogu 王好古 (c.1210-1310), also known as Wang Haizang 王海藏 and Wang Jinzhi 王進之. However, like other Jin physicians, the exact dates of his life and the publication of his texts remain uncertain. The problem stems in part from the anarchic period between the Jin and Yuan.
dynasties, when dates were rendered using the system of stems and branches within a sixty year cycle rather than referring to the reign periods established by emperors, which are more precise. Wang composed four works that are extant: *Tangye Bencao* (Materia Medica of Decoction), *Yinzheng Lueli* (Summary of Yin Diagnoses with Examples), *Yilei Yuanrong* (Supreme Commander of the Medical Fortress), and *Cishi Nanzhi* (These Matters that are Hard to Understand). All four of these texts include prefaces written by Wang, but only one of them, the *Cishi Nanzhi*, indicates a reign period of the Yuan dynasty. The *Yinzheng Lueli* was also prefaced by four of his disciples, Huangfu Fu, Zhang Dun, Song Tinggui, and Zhang Ke, and includes a postscript by Wu Cheng written in 1864 during the Qing dynasty (1636-1911) that highlights some of the problems regarding the reconstruction of Wang’s history.

Wu Cheng centers his critique on plausible longevity. He states that Wang Haogu was from Zhaozhou (Hebei province), was born during the Jin and survived into the Yuan, and according to his disciples he became a *jinshi* (advanced scholar). He was most likely to young to have taken the civil service examination during the Jin, so this must have been in Shandong during the 1237-1238 examinations offered by the warlord Yelu Chucai. Wu suggests that Wang may have taken the exam at *Benzhou* (Honshu island, Japan) where he was also a professor, but this seems incredible, unless *Benzhou* was an old name for that region in Shandong not included in the *History of the Jin*. Wu states that when Wang was young he studied with both Li Dongyuan and Zhang Yuansu. Although Wu doesn’t mention it, one of the pieces of evidence that would be used to support the Wang-Zhang connection is a single comment attributed to “Haizang” about the medicinal *baizhu* (Atractylodes macrocephala Koidz., Rhizoma) in Zhang Yuansu’s *Zhennzhou Nang* (Bag of Pearls). This would suggest that Wang was already an accomplished pharmacist and recognized medical scholar during the later years of Zhang’s life, placing his birth decades before c.1200, perhaps closer to c.1180. However, this lone comment could have been inserted by editors during later publications or revisions, or it could even be attributed to someone who Wang styled himself after. Wu continues his critique by adding that Wang’s disciples met him at Bianjing around 1232, during the Mongol siege of the Jin capital, and later returned to study with him in
Hebei province, \(^{103}\) which could also be consistent with a birth date of c.1180. However, the *Cishi Nanzhi* is the only text whose publication date is relatively unambiguous, dated to the year 1308 at the beginning of the *Zhida* 至大 (1308-1312) reign period, \(^{104}\) which would make Wang nearly 130 years old.

Wu Cheng identifies other problems regarding the sequence of Wang’s texts. He remarks that the *Yinzheng Lueli* was supposedly published one year prior to the *Yilei Yuanrong*, \(^{105}\) which was dated to the year *dingyou* 丁酉 (1237 or 1297), \(^{106}\) but instead the *Yinzheng Lueli* was dated to either the year *renchen* 壬辰 (1232 or 1292) by Wang or *guimao* 癸卯 (1243 or 1303) by his disciples, \(^{107}\) such that five years is the smallest possible time span between these texts. The *Tangye Bencao* has two prefaces, both written by Wang. The first is dated to the year *wuxu* 戊戌 (1238 or 1298), and the second to the year *bingwu* 丙午 (1246 or 1306), \(^{108}\) which suggests he made some additions or alterations to the text between publication of the two editions. More confusing, the first preface of the *Tangye Bencao* mentions the *Yilei Yuanrong* and the *Yinzheng Lueli*, which indicates it was written after these texts, whereas the second preface mentions none of Wang’s other works. Wu concludes that there must be an error in the information somewhere, \(^{109}\) because otherwise his longevity is too fantastic, having been born sometime between 1180-90 to make him old enough to have studied with Zhang Yuansu, while still surviving until at least 1308 when he wrote the preface to his last text. Furthermore, the reported sequence of publication is not consistent with the dates given.

To rectify this uncertainty, a few accommodations are needed. The concept of lineage and the master-disciple relationship was of growing importance in the late Jin. Therefore, the most likely explanation for Wang’s frequent references to the teachings of Zhang Yuansu is that his teachings were transmitted to his disciple Li Dongyuan, who in turn passed them on to Wang. Once the assertion that Wang studied directly under Zhang is rejected, the dates begin to make more sense. Accepting the premise of longevity, and considering the proposal that Liu Wansu was also a centenarian, it is herein suggested that Wang was born around 1210, making him 20 years the junior to his teacher Li, and died around 1310, sometime after publishing his final text. Thus he was still a young man in his early twenties during the final years of the Jin when he encountered the four young men at Bianjing who would one day become his disciples. This also may have been the first time he met Li, following him first to Shandong where he passed the adhoc
examinations, and then back to Zhending around 1238, which was near his own native place in Hebei province. There he studied with Li until 1251 when his teacher died, and only afterwards took on his own disciples.

The remaining problem is rectifying the first preface of the Tangye Bencao with the other texts to establish a logical timeline of publication dates. The best possible explanation is that the two prefaces were reversed, with the second preface written first, and the first written second. This explains the mention of the Yilei Yuanrong and Yinzheng Lueli in the first preface (written last) but not the second (written first). Using the later dates for both of these texts within the allotted sixty year time span, then the Yinzheng Lueli would have been published five years prior to the Yilei Yuanrong instead of just one, and was then republished by his disciples in 1303. Wang likely began the Tangye Bencao during the latter years of his teacher’s life, as it both includes many chapters attributed to Li and builds upon the legacy of his teacher, Zhang Yuansu. As Li did not publish a materia medica of his own, this might originally have been a collaborative project between Wang and Li. Wang’s decision to reprint the Tangye Bencao fifty years later may have been an effort to rectify his earliest work with his many years of clinical experience. The Cishi Nanzhi, although short and concise, further evidences the maturity of a senior scholar and practitioner. Therefore, the following publication dates are proposed for Wang’s texts:

- **Tangye Bencao, 1st edition** 1246
- **Yinzheng Lueli, 1st edition** 1292
- **Yilei Yuanrong** 1297
- **Tangye Bencao, 2nd edition** 1298
- **Yinzheng Lueli, 2nd edition** 1303
- **Cishi Nanzhi** 1308

**Developments in materia medica**

The Tangye Bencao, written in three juan, is a synthesis of developments in the materia medica genre of medical literature by Jin literati physicians. The first juan is a collection of essays divided into five sections, with the first two sections brief introductory essays. The next two sections are the longest and are both attributed to Li Dongyuan, entitled *yaolei faxiang* 藥類法象 (categorization of medicinals by function & form) and *yongyao xinfá* 用藥心法 (core methods of medicinal use), respectively. 110 In
the former section there is a list of 100 medicinals, organized into the same five categories used by Zhang Yuansu in the *Yixue Qiyuan* (Expounding the Foundations of Medical Studies) for 106 medicinals, according to their nature based on the five climactic influences (see Appendix 4). For Wang and Li, they are: wind dispelling (20 medicinals), heating and warming (20 medicinals), damp transforming and building (21 medicinals), drying and moistening (21 medicinals), and cold and cooling (18 medicinals). This list includes one less drying or moistening herb and five less cold and cooling herbs, the omission of which can be explained in part as having been incorrectly categorized. This version credited to Li also provides less detail on the actions of each medicinal than Zhang Yuansu’s original essay, primarily including only temperature and taste. This suggests that Li continued to focus on reducing the amount of information down to what he perceived as the most clinically relevant details.

The fifth section of the first *juan* is given the same title as the text and is attributed to Wang, while the second and third *juan* are the formal materia medica. Wang’s materia medica details the qualities of 242 medicinals, arranged according to the traditional taxonomic categories: *caobu* 草部 (herb section) with 108 medicinals; *mubu* 木部 (tree section) with 54 medicinals; *guobu* 果部 (fruit section) with 9 medicinals; *caibu* 菜部 (vegetable section) with 12 medicinals; *migubu* 米穀部 (rice & grain section) with 10 medicinals; *yushibu* 玉石部 (precious stone section) with 20 medicinals; *qinbu* 禽部 (bird section) with 1 medicinal; *shoubu* 獸部 (animal section) with 10 medicinals; and *chongbu* 蟲部 (insect section) with 18 medicinals. Although this materia medica is concise compared to the imperially commissioned *Daguan Bencao* (1108), it is much more comprehensive than the materia medica of Zhang Yuansu. Additionally, its arrangement is more systematic compared to the relatively random order of medicinals in some of the other Jin texts of this genre.

The format of most entries is similar for each medicinal in the *Tangye Bencao* (see Appendix 8). Listed first are the temperature, flavor, and degree of toxicity, sometimes with elaboration. Notable is that no specific source is cited as the authority for this information, which Wang presents as the agreed upon standard of the field. For some entries, Wang includes Zhang Yuansu’s designation according to his *yin yang* categorization system, such as pure *yang* or *yin* within *yang*. Many, but not all, of the medicinals include which channels they enter into or have an effect upon, a trend begun
earlier but applied much more extensively by Wang. This opening section is then followed by commentaries drawn from an array of sources. Most often cited first are the two essays attributed to Li Dongyuan in the first juan, the yaolei faxiang and the yongyao xinfù, as well as other comments by Li, as well as the Zhenzhu Nang 珍珠囊 (Bag of Pearls) by Zhang Yuansu. Thus Wang’s lineage is given preference.

In addition to these Jin texts, Wang references a variety of other sources. Also frequently cited are commentaries from imperially sponsored Northern Song texts like the Daguan Bencao (1108), Bencao Tujing 本草圖經 (Illustrated Classic of the Materia Medica, 1063), and less often, the Jufang 局方 (Imperial Formulary). Wang also draws on some private Northern Song texts, including the Huoren Shu 活人書 (Book on the Life of Man, 1090) by Zhu Gong and Bencao Yanyi 本草衍義 (Dilatations on the Materia Medica, 1120) by Kou Zongshi. There are also references to several classical sources, including: Shennong Bencao 神農本草 (Divine Farmer’s Materia Medica), Shanghan Lun, Nanjing, Yaoxing Lun 藥性論 (Treatise on the Nature of Medicinals) by Zhen Quan 甄權 (c.540-643), and Bencao Shiyi 本草拾遺 (Gleanings of the Materia Medica) by Chen Cangqi 陳藏器 (c.739), but all of these sources are mentioned much less frequently than the Jin dynasty authors. There are also a few unidentified sources, such as Bieshuo 別說 (Distinguishing Discussions), Jiyao 機要 (Essential Mechanisms), and Shixi 時習 (Seasonal Practices), and some scattered references to other unidentified people. Of course, there are frequent commentaries by Wang Haogu.

Most remarkable, the Tangye Bencao represents a change in the standards of the field designed to improve clinical outcomes. This text does not give preference to the ancient texts in the way the Daguan Bencao does, which always presents information chronologically, and Wang actually excludes all information that is not based on current practices and demonstrated efficacy. The prioritization of information is arranged from most current first, focusing on the findings by Jin physicians like Li Dongyuan and Zhang Yuansu, while the older information is presented last. Except for the most commonly used or locally available medicinals, Wang usually omits information on the places the medicinals grow or the best times to harvest, but includes details on common adulterants that might appear on the markets, such as muxugen 幫根根 (alfalfa roots), which some disreputable merchants tried to sell as a substitute for huangqi 黃芪.
Wang also highlights current debates in the field of medicine, such as whether medicinals like *fangfeng* 防風 (Ledebouriellae Radix) \(^{115}\) and *fuling* 茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium) \(^{116}\) can drain away the healthy *yuanqi* 元氣 (source energy) or *zhengqi* 真氣 (genuine energy) while eliminating pathogenic wind and dampness, if *fangfeng* can also be used to drain dampness, \(^{117}\) as well as Li’s contention that warm medicinals like *huangqi* 參 能 clear *yin* fire or deficient heat while still being categorized as pure *yang*. \(^{118}\) Like Zhang Yuansu, Wang includes those medicinals that should not be combined to avoid adverse reactions, but also discussed beneficial combinations such as *heifuzi* 黑附 子 (*Aconitum carmichaeli* Debx., Radix Lateralis) with *baizhu* 白术 (*Atractylodes macrocephala* Koidz., Rhizoma) to eliminate cold and damp. \(^{119}\) Based on these features, this text represents the culmination of developments in the field of materia medica literature during the Jin dynasty.

*Yin poison & restoring the center*

The *Yinzheng Lueli* provides the first direct glimpse into Wang’s political ideology, albeit through the words of his disciples. This reveals his conservative view on how best to restore order. In the preface to this text, the following assertion is made:

As for all physicians, if they deviate from their core arts then what they conceal must be the killing of people. As for Confucians, if they deviate from their core arts then what they conceal must be the neglecting of all under Heaven. This is like Wang Anshi of the Song, for when he deviated the harm done was severe. \(^{120}\)

Wang Anshi 王安石 (1021-1086) was a very controversial figure both during and after his lifetime. He was a high official of the Northern Song who initiated a series of reforms that were eventually repealed after his death because they were so strongly opposed by most conservative elites. He tried to reform the civil service examination that was based on the study of classical literature and poetry to instead emphasize economic, legal, and military matters to better reflect the duties of an official, but conservatives were concerned this threatened the perpetuation of Confucian moral idealism. He initiated the
Green Sprouts Act to help farmers with low-interest loans, but opponents argued it made farmers dependent on the state, and that the state should not be involved in money lending for profit. He supported the development of local militias to decrease the size of the military, and for the government to provide weapons and training to farmers for local self-defense, policing, and to serve as reserve forces for the standing army, prompting concerns over the reliability of these farmer-soldiers. He created the Service Exemption Act that increased state tax revenue by shifting the burden of the poor from corvée labor to cash payments, which was intended to diminish local corruption and exploitation of workers, but critics said it simply increased the burden on the poor. He initiated a land survey to rectify tax registers to the annoyance of local officials, and implemented a trade policy that favored small merchants and stabilized prices, but angered big merchants and professional guilds. That Wang Haogu and his disciples thought all of these reforms caused severe harm is evidence of their strong conservative Confucian values.

A predominant theme in the *Yinzeng Lueli* is a pathogenic force called *yindu* 阴毒 (*yin* poison). This contrasts with Li Dongyuan’s emphasis on *ynhuo* 阴火 (*yin* fire), which referred primarily to the heart and the fire elemental-phase as a metaphor for the Nansong and the general chaos caused by the Mongols. Wang describes *yin* poison as an externally contracted cold disease, and advocated using warm and supplementing medicinals to eliminate this cold. The pathogen of *yin* poison likely still served as a metaphor for the Mongol Horde led by Mongke, which returned in 1251 to the Central Plains and marched south to conquer the Nansong. However, like the Jurchen before them, their cavalry tactics that were so effective on the steppes and the Central Plains proved problematic in the southern terrain of mountains, marshes, and waterways. Mongke died on his failed campaign, and after another four years of internal fighting over succession, Qubilay Khan (r.1264-1294) became the next ruler of the Mongols.

In 1272, Qubilay started construction of a new capital near Yanjing called Dadu 大都 (Great Capital), and issued an edict declaring the Mongol dynasty in China would be known as the Da Yuan 大元 (Great Source). Chan Hok-Lam (1991) found that this name was adopted after Qubilay received a memorial on the subject by Liu Bingzhong 劉秉忠 (1216-1274), which according to the imperial edict was based on the passage *Qianyuan* 乾元 (Heavenly source) from the *Yijing* (Book of Changes). David Morgan (2007) argues that this may have been suggested by his advisor as a way of gaining the
allegiance of the Chinese population. It is clear from the medical literature of the time that this segment of the elite population was expressly concerned over the recovery of the *yuanqi* (source energy). By declaring his dynasty the Yuan, Qubilay attempted to gain legitimacy by asserting that the *yuanqi* had indeed been recovered. In 1279, Qubilay was finally able to topple the Nansong, and all under Heaven was again united. However, there remained pockets of resistance, even among northerners whose allegiance still remained with the Jin. The fact that Wang was publishing his texts initially without reference to reign periods of the Yuan suggests either the lack of a centralized administration that communicated this information to the general population, or a continuing loyalty to the previous dynasty.

Further evidence of Wang’s loyalty to the Jin is found in a case study from the *Yinzheng Lueli*. Although he might have been accused by the Mongols of aiding the enemy, Wang provided medical care to a military officer of the royal Wanyan clan of the Jin. In the opening passage, Wang states:

脾印將軍完顏公之子小將軍病傷寒六七日寒熱間作腕後有癰三五點鼻中微血出醫以白虎湯柴胡等藥治之不愈

The spleen is the image of a Wanyan military general. The military general Gongzhi Zixiao’s disease was *shanghan* (cold damage). For six or seven days there was alternating chills and fever, lesions on the dorsal aspect of the wrist at three to five spots, and from inside the nose a little blood came out. A doctor used *Baihu Tang* (White Tiger Decoction) and medicinals like *chaihu* (bupleurum) to treat it, without a cure.

In this unusual opening sentence, Wang equates the spleen, which corresponds to the earth elemental-phase and the center, with a royal Wanyan general. Similar to his teacher Li, Wang argued that the center was invaded by a *yin* or cold pathogen, which is also why the heat clearing formula *Baihu Tang* proved ineffective. Thus this patient is a metaphor for the Jin that had fallen to the cold poison of the northern barbarians, but Wang remained hopeful that the condition could be reversed and the patient saved:

及余診之兩手脈沉澀胸膈間及四肢按執之殊無大熱此內寒也
問其故因暑熱臥殿角之側先傷寒次大渴飲冰酪水一大碗
At the time I examined him, his two wrist pulses were deep and choppy and when I palpated from his torso to his four limbs there was no great heat. This was internal cold. I asked him what happened. [He said] because of the summer heat, he was lying on his side in a corner of the palace when first he was damaged by the cold. Next he had a great thirst and drank a large bowl of iced milk and water.
His external condition was slight but the internal damage was severe. The disease had come from the outside inward and become completely *yin*. Therefore first there was the rash and bleeding [exteriorly] and later the internal *yin* was prominent and there was alternating chills and fever. The spleen also had [been damaged by *yin*] but in no way was this alternation of chills and fever due to a *shaoyang* disorder. I gave repeated doses of *Tiaozhong Tang* (Harmonize the Center Decoction) and he was cured. 

In another section of the text Wang provided the five ingredients of this formula, which is a combination of *Sijunzi Tang* (Four Gentlemen Decoction) and *Lizhong Wan* (Order the Center Pill). In a strategy reminiscent of Li Dongyuan, Wang used warm and supplementing medicinals to drive out the internal cold and restore the *qi* of the center. From a broader socio-political perspective, Wang is arguing for driving out the Mongols from the Central Plains and restoring the Jin. If this general who was lying around a palace on hot summer days drinking iced milk was real, he may have been a local warlord. Wang may have hoped this member of the royal Wanyan clan would become the next Son of Heaven and achieve a dynastic resurgence.

Wang has several discussions about *huoluan* 霍亂 (sudden turmoil) in the *Yinzheng Lueli*. In the first instance, he explains an apparent contradiction in the theory of applying moistening medicinals for damp diseases. He begins with this passage:

> 予嘗云 大便耎者宜湯 大便結者宜丸 以丸蜜潤也
> 仲景治霍亂吐下 脾濕大勝而用丸 何也
>

In my experience, if defecation is loose it is appropriate to use decoctions. If defecation is knotted it is appropriate to use pills, as the pill has honey that is moistening. [However] when Zhongjing treated *huoluan* (sudden turmoil) vomiting and diarrhea, [he said] if spleen dampness has a great conquest then use pills, why is this? 

In accordance with strategies from the *Shanghan Lun*, and similar to the advice of other literati physicians, Wang also recommends the use of the formula *Lizhong Wan* (Order the Center Pill) to treat *huoluan*. However, since there is diarrhea, there is no apparent need to moisten the bowels. Instead, there is a need to dry the dampness. To resolve this issue, Wang points out that the loss of fluids from the diarrhea causes muscle cramps, and explains further:
When the downward draining of diarrhea is already plentiful it depletes the *yin*, decreases the blood, and rebels to create withered dryness. If there is dryness then as a result one is unable to bend and stretch [the joints from the muscle cramps]. Therefore dampness remedies use a moistening action and also use pills.

Reaching a compromise between earlier proponents of either heat or cold as the dominant pathogen responsible for *huoluan*, Wang argues that both are equally possible and returns to *Shanghan Lun* formulas for therapy:

- 邪梢高者居陽分 則為熱 熱多飲水者 五苓散以散之
- 邪梢下者居陰分 則為寒 寒多不飲水者 理中丸以溫之

The evil whose branches reside high are distinguished as *yang*, and this then becomes heat. For those with heat who drink lots of water, disperse them using *Wuling San* (Five Ingredient Poria Powder). The evil whose branches reside below are distinguished as *yin*, and this then becomes cold. For those with cold who don’t drink lots of water, warm them using *Lizhong Wan* (Order the Center Pill). Similarly for *shaoyin* [types of sudden turmoil], if it enters interiorly and joins together with the hand channels it become heat. Drain [the heat] with *Da Chengqi Tang* (Major Order the Qi Decoction). If it joins together with the foot channels it becomes cold. Warm [the cold] with *Sini Tang* (Four Rebellions Decoction).

Once again, Wang Haogu strives to synthesize the diversity of ideas being promulgated during the Jin dynasty on the causes of sudden turmoil. Yet in each of the four examples, he uses a classical prescription rather than any of the more contemporary solutions.

*Developments in formulas*

The *Yilei Yuanrong* is an encyclopedic collection of both classical and contemporary formulas in 12 *juan*. These are arranged by therapeutic categories, usually preceded by a base formula, and followed by numerous variations of that base formula. Sometimes Wang includes dosages, indications, and preparation instructions, but often omits everything but the formula’s name and its ingredients. This format helps him emphasize the similarities and differences between related formulas, demonstrating the continuity between classical and contemporary strategies. Wang also explains the
military metaphor of the book’s title by first stating that medicine can serve to protect people from attacks, and then rhetorically asks:

良醫之用藥 獨不若臨陣之用兵乎
As for a good physician’s use of medicine, how can it alone not be as good as the use of an army deployed in battle? 128

This alludes to the desperation of the times, when death from sickness was perhaps less likely than death from warfare. Wang argues for constant vigilance in protecting the body from both violence and disease. He then refers to his time in Henan province when the Jin capital of Bianjing was falling to the Mongols, and how he and his friends suffered from the difficulties of war, including how the attacks continued even after employing the various methods of purgation. 129 Here Wang uses the same medical metaphor for the Mongol Horde as did Zhang Congzheng and Li Dongyuan. These unwelcome guests withstood all attempts to eliminate them as the population succumbed to their pathogenic invasion. Perhaps Wang also feared that the medical developments of the previous centuries would be lost in the turmoil, so he became determined to compile this encyclopedic formulary to protect this knowledge within a metaphorical medical fortress.

Predictably, the Yilei Yuanrong begins with a summary of shanghan (cold damage) theory and principles of treatment, and first lists the formula Zhongjing Guizhi Tang 仲景桂枝湯 ([Zhang] Zhongjing’s Cinnamon Twig Decoction). The five ingredients are the same as in the original treatise preserved by Cheng Wuji, followed by twenty different variations of this prescription. 130 Some of these modifications are from the Shanghan Lun, but many are not, including these two versions by Zhu Gong:

**Zhu Gong’s Huoren Yangdan Tang** 活人陽旦湯 (Sunny Morning Decoction [from the Book on] the Life of Man): 131
*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus)
*Shaoyao* 芍藥 (*Paeonia lactiflora* Pall., Radix)
*Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix)
*Huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix)

**Zhu Gong’s Huoren Yindan Tang** 活人陰旦湯 (Cloudy Morning Decoction [from the Book on] the Life of Man): 132
*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus)
*Shaoyao* 芍藥 (*Paeonia lactiflora* Pall., Radix)
*Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix)
In both of these, Zhu added the heat clearing medicinal *huangqin* to this otherwise warming prescription. The first version uses the simplified three ingredient *Guizhi Tang*, minus the ginger and jujubes, whereas the second version retains the *dazao* (jujube dates) and *jiang* (ginger), but uses the hotter dried ginger instead of fresh. Wang’s text does the same for all of the other major categories of formulas from the *Shanghan Lun*, in sections arranged according to the traditional six divisions of *yin* and *yang*: *taiyang*, *shaoyang*, *yangming*, *taiyin*, *shaoyin*, *jueyin*. Later chapters also include formulas for miscellaneous diseases.

Because it was discussed in the *Shanghan Lun*, Wang Haogu also includes a brief discussion of *huoluan* (sudden turmoil) under the section on *taiyang* disorders. He first give the classical perspective, which states if the pathogens are in the upper *jiao* (body region) there is vomiting, if in the lower *jiao* there is diarrhea, and if in both then there is both vomiting and diarrhea, adding that in the case of the latter there is an imbalance between the clear and turbid energies of the body. He then briefly discusses the approaches of Zhang Yuansu and Liu Wansu, whom Wang states both liked using heat clearing formulas like *Liangge San* (Cool the Diaphragm Powder) for this disorder. However, the use of these specific formulas for *huoluan* is not evident from their writings and may represent an oral tradition passed down through Li Dongyuan.

Under *yangming* formulas, Wang Haogu remarks that the three *Chengqi Tang* (Order the Qi Decoctions) treat subtly different types of clinical presentations, such as excess without a sense of fullness, or great excess and fullness, or excess with slight fullness, and corresponds the three formulas to various *yang* channels. However, he assigns *Tiaowei Chengqi Tang* (Harmonize the Stomach & Order the Qi Decoction) to both the *yangming* stomach and large intestine channels, as well as the *zhengyang* (upright *yang*), which is not a standard channel reference. Zhengyang is a county in Henan province, and since all three of these formulas are purgatives, Wang might have been alluding to the need to once more expel the invaders to bring order to the Central Plains, similar to the methodology of Zhang Congzheng.
In the seventh *juan*, Wang returns to *taiyin* diseases with an examination of the formula *Lizhong Wan* (Order the Center Pill) from the *Shanghan Lun*. He notes how Zhang Zhongjing used it for *huoluan*, and how it was modified by various doctors over time, such as Qian Yi who reduced the amount of ginger, which can be overwhelming, and called it *Wenzhong Wan* (Warm the Middle Pill). Wang notes that Zhu Gong added *zhishi* 枳實 (*Citrus aurantium* L., *Fructus*) to better regulate the stomach *qi* and called it *Zhishi Lizhong Wan* (Aurantium Fruit Order the Center Pill). After this discussion, he begins to present variations of *Sijunzi Tang* 四君子湯 (Four Gentleman Decoction), which he thus argues was based on the construction of *Lizhong Wan*. Among the variations that Wang details are the following:

**Qian Yi’s *Qianshi Yigong San* 錢氏異功散 (Master Qian’s Distinguished Merit Powder):**

- *Renshen* 人參 (*Panax ginseng* C.A. Mey, *Radix*)
- *Chenpi* 陳皮 (*Citrus reticulate* Blanco, *Pericarpium*)
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, *Radix*)
- *Fuling* 茯苓 (*Poria cocos* (Schw.) Wolf, *Sclerotium*)
- *Baizhu* 白术 (*Atractylodes macrocephala* Koidz., *Rhizoma*)

**Wang Haogu’s *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction):**

- *Renshen* 人參 (*Panax ginseng* C.A. Mey, *Radix*)
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, *Radix*)
- *Baizhu* 白术 (*Atractylodes macrocephala* Koidz., *Rhizoma*)
- *Sharen* 砂仁 (*Amomi Fructus*)

**Yijian *Sijunzi Tang* 易簡四君子湯 (Easy & Simple Four Gentlemen Decoction):**

- *Renshen* 人參 (*Panax ginseng* C.A. Mey, *Radix*)
- *Fuling* 茯苓 (*Poria cocos* (Schw.) Wolf, *Sclerotium*)
- *Baizhu* 白术 (*Atractylodes macrocephala* Koidz., *Rhizoma*)
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, *Radix*)

After this last variation from the *Jufang*, but with Wang lowering the dosage of the *gancao*, he presents this “simple” version as the base formula for making several more modifications. For example, one variation removes *renshen* and adds cinnamon bark while reducing the *gancao* by half, while another option is to remove the *gancao* and add *zhishi*, *jupi* 橘皮 (*Citrus reticulate* Blanco, *Pericarpium*), and *banxia* 半夏 (*Pinellia*...
ternate (Thunb. Breit., Rhizoma), which he called *Liujunzi Tang* 六君子湯 (Six Gentleman Decoction). Later in the eleventh juan, he makes the following statement:

四君子湯 合四物湯 為八珍湯
*Sijunzi Tang* combined with *Siwu Tang* (Four Substance Decoction) becomes *Bazhen Tang* (Eight Treasures Decoction).

Earlier, Liu Wansu had combined these two into a formula named *Bawu Tang* 八物湯 (Eight Ingredients Decoction). However, this may be the earliest reference to the name *Bazhen Tang* 八珍湯 (Eight Treasures Decoction), which remains the common name for this treasured prescription today. It is also amusing to note the fact that there was widespread disagreement on exactly who were the “four gentlemen,” which is echoed in the debates over who were the “four masters” of medicine during later centuries.

**Textual critique**

Wang Haogu’s final contribution to medical literature was the *Cishi Nanzhi*. Given that he used a reign period of the Yuan dynasty in his preface, he may have resolved himself late in life to the “difficult matter” of accepting the Mongols as the new rulers of the Central Plains. By the time this book was written in 1308, a form of centralized government was installed through the efforts of Qubilay Khan, who died in 1294. By the end of the thirteenth century, any last hopes for a Jin dynastic resurgence were laid to rest. In his last text, Wang turned to resolving questions that he had after years of study, identifying inconsistencies in the medical classics that so many physicians relied upon as their authority. In the first preface to the *Cishi Nanzhi*, Wang described how for many years he read medical books, especially admiring the *Shanghan Lun*, but had failed to find a teacher who could help him understand the deeper meaning of the medical classics. Finally, he found Li Dongyuan and became his disciple. Afterwards, Wang was better able to make sense of the inconsistencies he found in the classical texts and make them relevant to his current understanding of medical theory and practice.

In the second preface, written by a southerner named Jing 荊 (c.1300), the author again states that the difficult matters addressed by Wang are based in part on what he learned from his teacher Li Dongyuan. He recounts how the first emperor of Qin
burned the books of Confucius but spared those on medicine, and how later these classics were checked and verified to understand the discussions between Huangdi and Qibo and to uncover the mysteries of the *wuyun liuqi* 五運七氣 (five elemental-movements & six climactic influences). This is, of course, was a reference to the chapters added to the *Huangdi Neijing Suwen* by Wang Bing (c.762), as it is only these chapters that specifically use that phrase. These chapters provided Jin physicians with the authority to question the classics and add their own commentaries, as well as add their own ideas to the textual tradition of medicine. Jing even cites the words of the Tang dynasty emperor Yinzong 興宗 (r.756-763), who reportedly proclaimed:

醫者意也 思慮精則得之 此之謂歟

Medicine is a concept that must be carefully considered to achieve the essence. This is what I am speaking about. ^145

These were the words that authorized Wang Bing to make changes and additions to the seminal classic, a tradition embraced by Jin scholars as they strived to raise the standard of care.

One of the difficult matters Wang Haogu spends much time discussing is the *jingluo* 經絡 (channels & collaterals) system. These channels are used both specifically in acupuncture as well as generally in medical theory as the mechanism that integrates the various organs and body systems. As argued earlier, this system evolved slowly over many centuries before being codified in various texts published during the Northern Song. However, there remained several inconsistencies within these texts on which Wang focused. For example, Wang asked why, if only the six *yang* channels go to the head, do *yin* channels and organs have correspondences in the sensory orifices of the head. Wang concluded that there are many more pathways than the twelve primary *jing* 經 (channels, meridians) that account for this, and he further considered the eight extraordinary channels as pathways to the head, even positing a relationship between the sensory orifices and the brain. ^146 He then described the circulation of the twelve primary channels as a continuous circuit, and argued that the system of the ten Heavenly stems and twelve Earthly branches are the reason the system begins with the lung channel and ends with the liver. ^147 After discussing the primary channels in depth, he turned to the collaterals.
Wang tackled the inconsistencies in the description of the primary channel divergences known as the luo絡 (collaterals or connecting vessels). He begins by describing how the twelve primary channels of the zangfu (solid & hollow organs) have these connecting vessels, as well as the ren任 (conception) and du督 (governing) channels, and that there is also a daluo大絡 (great connecting vessel) of the spleen. Therefore, he states that altogether the various classics say that there are fifteen luo channels. However, he also notes that there is also a daluo of the stomach, which is named xufu虚里 (empty interior), that penetrates through the diaphragm to the lung and emerges exteriorly below the left breast. Therefore, Wang asserts, there are actually sixteen luo channels. Although he does not cite his source, he is referring to chapter 18 of the Huangdi Neijing Suwen that uses the exact same description of the daluo of the stomach as described by Wang. The term daluo appears just twice in the Suwen, in chapter 18 as just detailed, as well as chapter 63 that discusses the opposite side needling technique and describes how pathogens enter into the channel system and can maker their way into the daluo, but it does not specify a related organ and thus could be interpreted as meaning all of the primary channels have a daluo. The Nanjing only mentions a daluo of the spleen. However, it was the Huangdi Neijing Lingshu that became the principal authority on the acupuncture channel system.

In the Lingshu, the term daluo appears eleven times. The first two occurrences are in chapter 4, which simply describes the location of the daluo of the spleen as being between the foot shaoyang (gallbladder) and foot taiyang (urinary bladder) channels. The next three occurrences are in chapter 10, which is the first section to describe the daluo of the hand yangming (large intestine) and hand shaoyang (sanjiao) channels as arising from between the five fingers and converging at the elbows. However, at the end of this chapter, it describes the 15 channel divergences that begin at the luo (connecting) points of the 12 zangfu, plus the luo for the ren and du, and then finally includes the daluo of the spleen that emerges three cun 寸 (proportional inches) below the armpit. This chapter also states that if the spleen daluo has excess then the entire body is painful, and if deficient then all of the joints become loose. It was this chapter on the pathways of the channels that specifically concluded that there are just 15 luo channels. Chapter 19 of the Lingshu added that the daluo of the spleen can be used for pathogens in the sanjiao causing intestinal pain and difficult urination.
Despite this one assertion limiting the number of luo channels to 15, the Lingshu has many other references that challenge this assumption. Chapter 27 mentions the daluo once, without mentioning any organ, regarding blood circulation. Both chapters 38 and 62 describe how the extraordinary chong (penetrating) vessel flows into the daluo of the foot shaoyin (kidney) channel, which shares a pathway through the abdomen. Chapter 60 of the Lingshu describes how food and drink first enter the stomach, and then from the stomach the qi and blood derived from the food enters into the daluo of the five zang and six fu. This passage could be interpreted as describing a flow from the daluo of the spleen and stomach to the other organs, or it could also be asserting that essentially all of the zangfu have a daluo. Finally, chapter 75 states that in cases of heat causing madness, one should inspect the daluo of the foot yangming (stomach) channel, and if it is found to be deficient then tonify, but if there is bleeding or excess then drain. Wang Haogu’s final assessment is that only the daluo of the spleen and stomach should be considered part of the distinct sixteen luo channel system, with all other examples part of the broader concept of channel divergences that integrate body systems.

Wang Haogu’s discussion of channels leads him to the question of the structure and function of one of the more mysterious organs in the Chinese medical system, the sanjiao (three warmers). Wang argues that there are actually two sanjiao. The first one correlates with the hand shaoyang channel, and the second is called the foot sanjiao and is connected with the foot taiyang (urinary bladder) channel. This latter assertion is purportedly based on a passage from the Lingshu, but no such passage exists in the extant edition. The difficulty he is addressing is that the sanjiao is not only an anatomical reference to the different regions of the body (e.g., above the diaphragm, between the diaphragm and the umbilicus, and below the umbilicus), encompassing all of the zangfu (solid & hollow organs) and related tissues and structures of the body, but also represents a specific channel of energy classified as the hand shaoyang that is paired with both the foot shaoyang (gallbladder) channel and the hand jueyn (pericardium) channel. Furthermore, the sanjiao and pericardium also correspond to the fire elemental phase together with the heart and small intestine, making fire the only phase with four related organs instead of just two. Wang may have chosen the foot taiyang channel to contain the second foot sanjiao channel because it traverses the entire length of body from the head, down the back, and to the toes, plus all of the associated points of the zangfu are located on this channel, essentially according to the anatomical location of each organ within the
torso. For example, located on this channel are the points: *feishu* 肺俞 (UB-13, lung association), *xinshu* 心俞 (UB-15, heart association), *ganshu* 肝俞 (UB-18, liver association), *pishu* 脾俞 (UB-20, spleen association), and *shenshu* 腎俞 (UB-23, kidney association). Later in the text, Wang uses the *sanjiao* as a model to discuss the application of medicinals, identifying substances that target the three different regions of the body. For example, the heat clearing agents *huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix) for the upper *jiao*, *huanglian* 黃連 (*Coptis chinensis* Franch., Rhizoma) for the middle *jiao*, and *huangbai* 黃柏 (*Phellodendri Cortex*) for the lower *jiao*. Thus Wang sought to clarify the different ways the term *sanjiao* is used in medicine.

Wang also continued a trend begun two centuries earlier, which was the integration of *wuxing* and *shanghan* theory. Following a general introduction to *shanghan* diseases, Wang has four essays whose titles were derived from three similar passages in *the Huangdi Neijing*, found in chapters 3 and 5 of the *Suwen* and chapter 74 of the *Lingshu*. The most direct is from *Suwen* 5, which stated:

冬傷於寒 春必溫病 春傷於風 夏生飱泄 夏傷於暑 秋必痎瘧 秋傷於濕 茌生欬嗽
[1.] If in winter one is damaged by cold then in spring one must have *wenbing* (warm disease). [2.] If in spring one is damaged by wind then in summer it generates bowel leakage. [3.] If in summer one is damaged by heat then in autumn one must have malarial diseases. [4.] If in autumn one is damaged by dampness then it alternately generates a cough.

The *Lingshu* changed the last phrase to read: “then in winter it generates a cough,” which is the phrase used by Wang. Wang begins each of these four essays by relating these cycles of pathology to the *wuxing*, sometimes more extensively, other times only superficially. The following two examples illustrate his efforts. The first essay describes what happens when one is damaged by cold in the winter:

火勝而水虧 水既已虧 則所勝妄行 土有餘也
所生受病 木不足也 所不勝者侮之 火太過也
火土合德 湿熱相助 故為溫病
If fire conquers then water is defeated. If water has already been defeated then [fire,] which has conquered, acts erratically and earth has a surplus. [Earth,] which is generated [by fire,] receives the disease and wood is insufficient [to conquer earth]. [Water,] which was conquered [by fire,] then insults [earth] and fire is
excessive. If fire and earth combine their powers, dampness and heat assist each other and therefore there is *wenbing* (warm disease).\textsuperscript{158}

The second example describes what happens when one is damaged by dampness in the autumn:

秋令不及 所勝妄行 故火得以炎上而克金 心火既形於肺 故肺氣逆而為咳 所不勝者侮之 木氣上行與火同 得動而不息也 所生者受病 故腎水虧也

If the season of autumn doesn’t arrive [on time], that which conquers [the corresponding element of metal] acts erratically and therefore fire is able to flame upwards and subdue metal. The heart fire already forms [heat] in the lung and therefore the lungqi rebels and becomes a cough. [Wood,] which cannot be conquered [by metal,] then insults [metal] and the wood qi moves upwards and joins together with fire, and if this action continues without rest then what is generated [by metal] receives the disease and therefore kidney water is defeated.

Therefore, one of the difficult matters that Wang Haogu thought remained unresolved was how to integrate these two systems into a consistent and logical theory of pathophysiology. It is doubtful Wang’s analysis served to end this debate among his peers. Wang’s *wuxing* discussion might also be referring to the greater cosmological disturbances identified by earlier Jin physicians.

Wang Haogu spends many pages devoted to discussing difficult matters regarding classical formulas.\textsuperscript{160} An example is his essay on *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction), wherein he remarks that the formula is used to induce perspiration, but that the source text states that if there is no sweating then don’t use this formula, but that if the sweating is plentiful then it should be used.\textsuperscript{161} Wang argues that it’s proper use is based on understanding the relative balance of the *rong* 榮 (constructive) and *wei* 衛 (protective) energies due to their function in controlling perspiration. Thus, its function is not to release excess pathogens from the exterior, but to nourish the interior deficiencies that resulted in the body’s inability to combat the invasions. In addition to clarifying the classics, Wang may also have been engaging in social discourse, using many of the same themes adopted by his predecessors during the Jin dynasty.

Wang Haogu was one of the first great synthesizers of medical developments during China’s middle period. In the *Tangye Bencao*, he brought together diverse ideas on the classification of medicinals and developed the trend to create more practical clinical reference manuals. Moreover, Wang focused on current usages and omitted all
other extraneous information deemed irrelevant to practicing physicians. In the *Yinzheng Lueli*, Wang argued that both cold and heat could cause *huoluan* (sudden turmoil) and recommended appropriate warming or cooling prescriptions. In the *Yilei Yuanrong*, he classified and organized a myriad of ancient and contemporary formulas and arranged them so that they could be analyzed according to the base formulas from which they were constructed. This allowed physicians the ability to compare and contrast the diverse approaches of generations of physicians. It also facilitated the application of formulas in a clinical setting by demonstrating the method of modifying base prescriptions to match the myriad patterns of disease they might encounter. In the *Yinzheng Lueli*, and to a greater extent the *Cishi Nanzhi*, Wang tried to reconcile theory with practice by identifying inconsistencies in the classical literature and proposing resolutions that remained true to the orthodox paradigm.

* Luo Tianyi

The last of Li Dongyuan’s disciples was Luo Tianyi 羅天益 (c.1220-1300), also known as Luo Qianfu 羅謙甫. Similar to Li’s other disciple, Wang Haogu, the exact dates of Luo’s life are not known and must be reconstructed from available information found in the single text he compiled: *Weisheng Baojian* 衛生寶鑒 (Precious Mirror for Protecting Health). Included in the extant edition of this text are eight prefaces that help establish a timeline of his life. The first was written during the *Zhiyuan* 至元 (Reaching the Source) reign period (1264-1295) of Qubilay Khan, the period during which the Nansong was conquered and the Yuan dynasty was officially declared. The exact year given was the winter of *xinsi* 辛巳 (1281), rather than the 17th year of the reign period. This provides the earliest known date of publication. The second preface was written by an imperial censor two years later, during the same reign period in the year *guiwei* 癸未 (1283), indicating the book and its author had already received high recognition within the Yuan court. The third preface was by Luo Tianyi, but it did not include any date,
so it is not entirely clear if this was added after the second preface or if it was even written before the first.

Luo studied with Li Dongyuan for ten years, so the latest period that this could have happened would have been c.1240-1250. Since it is doubtful Li would have invested so much effort in an adolescent, it is likely he was at least twenty years old when he began his studies. This would mark his year of birth around 1220, during the final tumultuous years of the Jin dynasty. Luo would have studied side by side with Wang Haogu and must have died sometime after 1281, but given a reasonable life span of eighty years, he may have died as late as 1300. He did not maintain loyalty to the Jin, as those who were born earlier, perhaps because he was only a teenager when the dynasty fell. This must have contributed to his decision to serve the new rulers of the Central Plains by becoming a *taiyi* (grand physician) with the Yuan army. Many of the case studies he included in his text describe his travels and treatments while serving with the military. His devoted service to the Mongols must have been a factor in his text receiving official recognition by the Yuan court, an honor that was not bestowed upon the works of any other physician born or active during the Jin.

The remaining five prefaces of the *Weisheng Baojian* evidence Luo’s legacy. The next four prefaces were all written during the fifteenth year (1418) of the Yongle (Perpetual Happiness) reign period (1403-1425) by various court officials and imperial physicians when the book was republished by the Ming dynasty government. The last preface was written during the Hongzhi (Grand Order) reign period (1488-1506) of the Ming, in the seventh year (1495), indicating it remained a valued text through out the fifteenth century. Yet despite being honored by two consecutive dynasties, his legacy was not as influential or far reaching as that of earlier Jin physicians.

The writings of Luo Tianyi apparently lost popularity during the last imperial dynasty. The Manchu Qing dynasty (1636-1911) claimed to be the successors of the Jurchen Jin dynasty, such that Nurhaci first adopted the dynastic title Hou Jin (Later Jin), and then changed it to the Da Jin (Great Jin) in 1621. This title endured for fifteen years until 1636 and the declaration of the Da Qing (Great Qing), which is the name they retained after conquering the Ming dynasty in 1644. When the Qianlong emperor (r.1736-1796) commissioned the *Qinding Siku Quanshu* (Complete Collection in Four Treasuries for the Emperor to Admire, 1782), it included a
medical collection with works from all the other Jin physicians, although the work attributed to Zhang Yuansu was actually written by Liu Wansu, but excluded Luo Tianyi. This could be interpreted as a condemnation of his lack of loyalty to the dynasty that produced both Luo’s medical lineage and the political lineage of the Manchu court.

Luo Tianyi’s military service appears to have influenced his medical and political philosophy, as evidenced by the following passage from his own preface:

言天者必有驗于人 論病者則以及于國
驅馳藥物 如孫呉之用兵 條派病源 若神禹之行水
Those who speak of Heaven must have examined it among men. Those who discuss disease then [must have] extended it to the state. Expelling [the disease] quickly with medicinals is like the use of the army by [the military scholars] Sun and Wu (c.500 BC); lined up and dispatched [against] the origins of disease, just like the divine Yu’s directing of the water.

Here Luo again draws the parallel between medical and political theory, with medicine serving both to order the body and the state. He also equates classical military strategy with the actions of the sage king Yu of the Xia dynasty (c.2000-1500 BC), who, after the failure of the dikes built by his father Gun, decided to move a mountain of earth and dig a canal to redirect the floodwaters and save the kingdom. Zhang Congzheng had earlier used the same metaphor to suggest the earth power of the Jin could overcome the onslaught of the water phase embodied by the Mongols. Luo Tianyi turns it to his favor by suggesting the movement of water (xing shui 行水 in the above passage) placed the Yuan in succession to both earth and metal, which washed away any pathogenic influences, recovered the source qi, and secured the mandate of Heaven.

Synthesis & accommodation

The Weisheng Baojian is composed of 25 juan and covers a diverse array of medical conditions and treatment strategies. It begins with three juan dedicated to general medical theory. Much of the first juan discusses appropriate use of classical formulas, especially using diaphoretics when the disease is on the exterior and purgatives when on the interior. This is also framed as choosing treatment according to the season, which serves as a metaphor for the condition of the patient and the relative season of their illness. Luo argues that excessive sweating depletes the yang and the exterior whereas
excessive downward draining depletes the *yin* and the interior, such that even appropriate treatment can be dangerous for the patient’s health. This echoes similar concerns by his teacher, Li Dongyuan, who was concerned about the effects of strong medicinals on the digestive system. Luo then delves into more controversial topics.

In the second *juan*, Luo makes a provocative assertion using the logic of the *wuxing* when he suggests that draining fire damages the spleen and stomach. Luo argues that this is not because of the cold nature of the medicinals, as his teacher Li Dongyuan suggested, but because the earth elemental-phase that corresponds to the spleen and stomach is the son of fire, and to drain fire one needs to drain the son. \(^{169}\) This is also contrary to a discussion in the *Cishi Nanzhi* by Wang Haogu wherein he directly argued against the idea that draining the son to eliminate excess in the mother harms the son, stating that this is only a metaphorical strategy and should not be taken literally. \(^{170}\) From this discussion it is evident that Confucian lineages had their intellectual limitations, with each disciple pursuing a different path. Luo’s diversion from the ideas of Li and Wang may also reflect his change in loyalties to the Yuan.

At the end of the third *juan*, Luo criticizes the *fuyi* (fortunate doctors) because they don’t understand pulse diagnosis, have not read medical books, and they are therefore likely to harm people through their use of inappropriate formulas because they cannot make an accurate differential diagnosis. \(^{171}\) As their name implies, sometimes these doctors get lucky, but Luo does not believe one should gamble with health. Although his concern for the welfare of his patients is genuine, this is clearly an attempt to assert his place among the social elite as a member of the literati tradition of medicine.

*Juan* four through twenty-five focus on various diseases and discusses appropriate prescriptions, often with a detailed analysis of the ingredients. Luo begins with a discussion on harm to the spleen and stomach caused by an unregulated diet, clearly in honor of his teacher. Besides the standard *Shanghan Lun* formulas, and other classical prescriptions like *Huanglian Jiedu Tang* (Coptis Relieve Toxicity Decoction), which is detailed twice, \(^{172}\) he also included many of his own innovations and modifications. His integrative approach mirrors Jin medicine. Luo used several of the formulas from the *Jufang* (Imperial Formulary), including the tonics *Sijunzi Tang* (Four Gentlemen Decoction) \(^{173}\) and *Siwu Tang* (Four Substance Decoction), \(^{174}\) as well as the heat clearing formulas *Liangge San* (Cool the
Diaphragm Powder) and Bazheng San 八正散 (Eight Ingredient Rectification Powder), and of course he adds several formulas from his teacher Li, such as Buzhong Yiqi Tang 補中益氣湯 (Tonify the Center & Benefit the Qi Decoction), Tiaozhong Yiqi Tang 調中益氣湯 (Harmonize the Center & Benefit the Qi Decoction), Danggui Buxue Tang 當歸補血湯 (Angelica Tonify the Blood Decoction), and Runchang Wan 潤腸丸 (Moisten the Intestines Pill). This latter formula by Li was actually a modification of one by his teacher, Zhang Yuansu, and Luo also includes Zhang’s Chaihu Yinzi 柴胡飲子 (Bupleurum Beverage). In the section on children’s diseases, he includes Qian Yi’s Xieqing Wan 瀉青丸 (Drain the Green Pill), Daochi San 導赤散 (Guide Out the Red Powder), Xiehuang San 瀉黃散 (Drain the Yellow Powder), Xiebai San 瀉白散 (Drain the White Powder), and Dihuang Wan 地黃丸 (Rehmanniae Pill), reflecting the strong influence Qian Yi had on Jin physicians. Finally, Luo includes several formulas by Zhu Gong from the Huoren Shu 活人書 (Book on the Life of Man), a text admired by many Jin medical scholars. Thus like Wang Haogu, Luo’s work is also a synthesis of Jin literati medicine.

Although Luo Tianyi had no original contribution to the materia medica genre, he does carry on the tradition of his lineage. In juan twenty-one, there is a section entitled yaolei faxiang 藥類法象 (categorization of medicinals by function & form), which is the same title as a parallel section in the Tangye Bencao by Wang Haogu and attributed to Li Dongyuan, and which is very similar to the parallel section in the Yixue Qiyuan by Zhang Yuansu entitled the yaolei fajia 藥類法家 (method of grouping categories of medicinals) (See Appendix 4). In this section, Luo includes the same summary of 100 medicinals using the same classification system: wind dispelling (20 medicinals), heating and warming (20 medicinals), damp transforming and building (21 medicinals), drying and moistening (21 medicinals), cold and cooling (18 medicinals). Although Luo provides more details on the actions of each medicinal than did Wang and Li, he still does not provide as much as Zhang in the original essay. Nonetheless, this categorization system clearly remained popular into the Yuan.

Interestingly, in juan thirteen, Luo also includes the formula Caodoukou Wan 草豆蔻丸 (Alpinia Pill) with the same discussion of its application according to wuxing
theory used by Li Dongyuan. However, when he gets to the quote about a great conquest being followed by a great recovery, he changes the characters to read:

故經云 大乘必大複 理之常也
Therefore the classics say: *dasheng* (the Greater Vehicle, or Mahayana Buddhism) must have a great return. This is the eternal principle. 185

Thus he avoids any suggestion that the once vanquished Jin could achieve a dynastic resurgence, as in the original passage that argued a great conquest is followed by a great recovery, and refers instead to the philosophy of Buddhism and the belief in reincarnation. The two terms are homophonous, *dasheng* 大勝 (great conquest) and *dasheng* 大乘 (Greater Vehicle), but this simple change is yet another example of his political ideology in support of the Yuan dynasty and against a Jin resurgence.

An example of Luo’s innovative approach to formula construction is found in *juan* sixteen, where he first provides his own version of a classic prescription from the *Shanghan Lun*:

**Luo Tianyi’s *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction).** 186

*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus)

*Baizhu* 白术 (*Atractylodes macrocephala* Koidz., Rhizoma)

*Shaoyao* 芍藥 (*Paeonia lactiflora* Pall., Radix)

*Gancaozhi* 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)

Luo’s version includes the base formula from the standard prescription, minus the ginger and jujubes, but he adds *baizhu* to tonify the spleen and stomach internally while resolving the exterior pattern. A similar modification was made by Zhang Congzheng who added *fuling* 茯苓 (*Poriria cocos* (Schw.) Wolf, Sclerotium) instead of *baizhu*, which also tonifies the spleen. This version by Luo appears to be influenced by his teacher Li, who also made extensive use of this spleen and stomach strengthening medicinal in his formulas. Furthermore, Luo was recommending this formula for diarrhea, which explains his modification to strengthen the digestive system and dry the dampness.

That same *juan* continues with a discussion of *huoluan* (sudden turmoil), including a case study exemplifying Luo’s approach to this disorder. 187 He began by summarizing what had become the standard approach described by Wang Haogu, which stated that if in addition to vomiting and diarrhea there is heat and thirst then use *Wuling San* 五苓散 (*Five Ingredient Poria Powder*), and if there is cold and no thirst then use
Lizhong Wan 理中丸 (Order the Center Pill). He also mentions Liu Wansu’s approach of using Banxia Tang 半夏湯 (Pinellia Decoction). Luo adds that if during the summer one is struck by an externally contracted heat pathogen causing huoluan, with symptoms of abdominal pain, a strong thirst, vexation, dryness, coldness of the four limbs, spontaneous cold sweats, and spasms in the feet, then he recommended the formula Xiangru San 香薷散 (Mosla Powder):

Luo Tianyi’s Xiangru San 香薷散 (Mosla Powder): 188
Houpo 厚朴 (Magnolia officinalis Rehd. Et Wils, Cortex)
Huanglian 黃連 (Coptis chinensis Franch., Rhizoma)
Xiangru 香薷 (Mosla chinensis Maxim., Herba)

This formula uses its namesake to release the pathogen from the exterior, the aromatic quality of the magnolia bark to regulate the digestive system, and the strong heat clearing action of the huanglian, which is also known today as an effective antibiotic. Luo then provides a case study for which this prescription, with modifications, was appropriate:

Consider the honorable school attendant, who at the age of seventy-nine during the Zhiyuan reign period in the year bingyin (1266), in the sixth month at the start of the fourth day, was struck by a heat poison [causing] huoluan vomiting and diarrhea. He was losing consciousness through out the day and then went into a coma in the middle of the night. I was asked to treat him. Upon examination his pulse was flooding, large, strong, and for each breath it beat seven to eight times (or twice as fast as normal), his head was hot as fire, his feet were cold as ice, half of his body was paralyzed, and he clenched his jaw tightly. 189

Luo remarks how he compared this case with the chapter from the Huangdi Neijing on the five turmoils, and argues the simple hot or cold differentiation in this case was insufficient because of the mixed symptoms. Therefore, neither Wuling San nor Lizhong Wan was appropriate. The key difference for Luo was that this was a type of extreme summer-heat attacking the body from the exterior, which required the exterior resolving medicinals of Xiangru San not found in any other standard approach.

Notably, Luo Tianyi was not the only literati doctor to recommend such a formula. A nearly identical prescription, plus one ingredient, used for the treatment of huoluan is
found in the *Su Shen Liangfang* (Su [Shi] & Shen [Kuo]’s Excellent Prescriptions, 1075), which was co-authored by the famous Northern Song literatus Su Shi (1036-1101). Su is known to have had a profound influence on Confucian learning during the Jin. Apparently, Luo Tianyi was also reading Su Shi’s medical contributions and integrating these ideas into his treatments. The original formula was:

**Su & Shen’s *Shensheng Xiangru San* 神聖香薷散 (Divine Sagacity Mosla Powder):**

- **Xiangrade** 香薷德 (*Mosla chinensis* Maxim., Herba)
- **Xinhoupo** 新厚朴 (*Magnolia officinalis* Rehd. Et Wils, Cortex)
- **Chuanhuanglian** 川黃連 (*Coptis chinensis* Franch., Rhizoma)
- **Baibiandou** 白扁豆 (*Dolichos lablab* L., Semen)

Thus it appears that Su Shi influenced the medical practices of at least one literati physician born during the Jin dynasty.

Luo then contrasts the above case of *huoluan* with one that was caused by internal damage requiring a different approach. In the spring of 1268, he was traveling with the Mongol army as they prepared to attack Xiangzhou (Hubei province), which was at that time occupied by the Nansong army. One day some of the soldiers consumed wine, meat, and milk, giving them *huoluan* vomiting and diarrhea. The next day they fetched Luo for help:

Their pulses were floating and scattered and when pressed were without strength, so what had caused the damage had already been purged. I promptly used half a bowl of freshly drawn water and harmonized [their condition] with *Guiling Baizhu San* (Cinnamon, Poria, & Atractylodes Powder), administered very slowly, and they were a little more peaceful. I also broke up the earth on the shady side of a wall to make a hole about two feet or so [deep] and mixed it up with some of the freshly drawn water, and then waited a while for the liquid to settle. This is called *Dijiang* (Earth Broth) and I used one cup of the clear [broth] and again harmonized them by administering this until gradually their *qi* was harmonized. The vomiting and diarrhea thereupon stopped and at night they were able to sleep peacefully. The next day they were slightly parched and thirsty, so I used Master Qian’s *Baizhu San* (Atractylodes Powder) and had them consistently take this, which was an excellent cure.
As opposed to the earlier case that required the pathogen be eliminated, here Luo is trying to restore the health and strength of the Mongol soldiers who were struggling to recover from their sickness, so he uses warm and tonifying medicinals. However, he also classifies the original disease as heat, which is evident from his follow up discussion on the use of *Dijiang* 地漿 (Earth Broth):

\[
\text{或問用地漿者何也 予曰 坤為地 地屬陰 土平曰靜順 感至陰之氣}
\]

\[
\text{又於牆陰 貯以新汲水 取重陰之氣也 陰中之陰 能瀉陽中之陽}
\]

\[
\text{今霍亂因暑熱內傷而得之 故痹論云 陰氣者靜則神藏 躁則消亡}
\]

Someone asked: why use *Dijiang* (Earth Broth)? I said: *kun* (trigram for earth) is earth, earth is categorized as *yin*, the level earth is called *jingshun* (peaceful arrangement), which has the feeling of *yin qi*. Also on the shady side of a wall and stored in the freshly drawn water is a heavy *yin qi*, so this *yin* within *yin* is able to drain the *yang* within *yang*. Today, *huoluan* is caused by summer heat and heat causing internal damage. Therefore, the *Bilun* (Treatise on Painful Obstruction) says: when the *yin qi* is calm then the spirit is stored, when it is agitated then [the spirit] withers and dies.

Seeing as the Mongol army was on a campaign to conquer the fire of the Nansong, Luo might also have been suggesting that only the *yin* of the water phase corresponding to the Yuan could bring harmony to the turmoil on the Central Plains by finally extinguishing the fire in the south. After this case study, Luo details a formula that is identical to *Liuyi San* 六一散 (Six to One Powder), which was recommended by both Liu Wansu and Zhang Congzheng for *huoluan*. This formula was also known as *Yiyuan San* 益元散 (Benefit the Source Powder), but Luo augments the name to *Xuanming Yiyuan San* 宣明益元散 (Intelligent Declaration to Benefit the Source Powder), which in this case may be another tribute to the Yuan dynasty.

Formula names and their indications was one of the ways literati doctors engaged in socio-political discourse through the medium of medical literature, and Luo Tianyi continued this trend. He had two different formulas by the same name, *Sheng Jin Dan* 勝金丹 (Conquer Metal Pill), as well as another completely different formula called *Sheng Jin San* 勝金散 (Conquer Metal Powder), and still another called *Cun Jin San* 寸金散 (Shorten Metal Powder), all of which eliminate excess. In each of these cases, the term *jin* 金 (metal) could be referring to the Jin dynasty. Therefore, these formulas appear to be an allusion to the conquering of the Jin by the Yuan and the assertion that
there should no longer be a *Da Jin Huawan* 大金花丸 (Great Jin Dynasty Blossoming Pill), which is notably absent from Luo’s text (although he does mention *Huanglian Jiedu Tang*). In contrast, the very last entry in the *Weisheng Baojian* is that same formula for *huoluan*, this time simply called *Yiyuan San* 益元散 (Benefit the Source Powder), or possibly he meant: *Yi Yuan San* (Benefit the Yuan Dynasty Powder). Therefore, Luo concludes his work by stating that this entire text was for the benefit of the Yuan dynasty.

Luo Tianyi was the last literati doctor born during the Jin dynasty, but he shifted his loyalty to the Yuan. However, Luo still used the same classical references and literary devices as the others to support his decision. Even though Luo relied on many of the same classical and contemporary formulas as other Jin doctors, some of his ideas were very different from both his teacher and fellow student. As for *huoluan* (sudden turmoil), Luo may have been inspired by the Northern Song scholar Su Shi who recommended a similar treatment for the externally contracted type of this disease. Luo further used many case studies to exemplify his approach and legitimize his methods, following the trend set in motion by Zhang Congzheng and Li Dongyuan. Therefore, although he was born a subject of the Jin dynasty, Luo also became the first literati doctor of the Yuan.

*Chapter summary*

The water phase (1224-1234) of the Jin dynasty corresponds to its disintegration and destruction as Aizong struggled in vain to secure the Central Plains. Aizong appeased Confucians by repealing the Jurchen policy of applying corporal punishment upon officials, but the Mongol Horde, Xixia, and Nansong, continued their invasions of the Jin’s collapsing borders. Against all odds, the Jin army was initially able to repel the Mongols in the west, allowing Aizong to reestablish a peace treaty with the Xixia as well as their southern ally the Dali. He then attempted to force the submission of the Nansong with punitive attacks on their territory, but this only heightened the conflict. With the Jin’s attention directed to the south, the Mongols attacked and destroyed the Xixia, bringing that dynasty’s two hundred year long reign to an abrupt end. Just as the Mongols
were preparing to storm down the mountain passes and attack Bianjing, the Mongol leader Genghis Khan died and the offensive was recalled as the tribal leaders returned to their capital at Qaraqorum to decide upon his successor. During that time, the climate became increasingly cold and icy, exacerbating the subsistence crisis. Soon the Mongol Horde returned and attacked the Jin in force, with two columns from the north and west, both converging on Bianjing. The Jin army put up a stern defense and held back the onslaught for another year before being forced back to secure the capital. The attack on the capital came in the spring of 1232, after unseasonably heavy snow storms blanketed the region for months and stalled the fighting. The attack was merciless, but somehow Aizong and his court were able to flee to Shandong with other refugees, escaping the slaughter. Torrential rains caused flooding and again stalled the fighting, but in 1234, after the Jin tried and failed to form an alliance with the Nansong against the Mongols, Aizong committed suicide and the Jin was lost.

The trajectory of medical development established during the twelfth century continued its momentum into the period between the fall of the Jin and the founding of the Yuan dynasty. Li Dongyuan came from a wealthy family near the old central capital at Yanjing, hired Zhang Yuansu to be his teacher, and later fled to Bianjing and on to Shandong along with the court and his friend Yuan Haowen during the final years of the Jin. After the Mongols turned their aggression back towards the northeast and local warlords filled the void, Li eventually returned to his hometown where he practiced and taught medicine while writing books and promoting literati culture. Li promoted the idea of strengthening the center the raising the *qi* as a call for a Jin dynastic resurgence. During that time he took on at least two disciples, Wang Haogu and Luo Tianyi, both of whom went on to publish their own works. Similar to his teacher Li who was concerned with *yin* fire, Wang expounded on the problem of *yin* poison, both of which served as a metaphor for the Mongols and their destruction of the Jin. In 1272, Qubilay Khan declared the Mongol’s dynasty would be known as the Great Yuan, and in 1279 the Mongols finally conquered the Nansong and became the rulers of East Asia, and beyond. While Wang Haogu remained loyal to the Jin, even once treating a surviving Jurchen military officer and member of the Wanyan royal clan, Luo Tianyi shifted his loyalty to the Yuan and served as an imperial physician to the Yuan army. Although officials in the Yuan and Ming courts gave high praise to Luo and his work, the Manchu of the Qing dynasty who self identified as descendants of the Jurchen deliberately excluded his work.
from their own official collection due to his change in loyalties. Therefore Luo was both the last of the Jin literati physicians and the first of the Yuan.
CONCLUSION

This study of literati medicine of the Jin 金 dynasty (1115-1234) has demonstrated that physicians born or active during this period were engaged in the process of normal scientific development through the extension and refinement of the Confucian cosmological paradigm. This process was generally referred to as gewu zhizhi 格物致知 (investigating things & extending knowledge) and inexorably included kaoju 考據 (textual critique) of the available corpus of classical medical literature. Moreover, Jin literati doctors were fully engaged in elite society through an embedded socio-political discourse in their writings. This movement was neither a reaction against Northern Song 北宋 (960-1127) medical orthodoxy nor a scientific revolution, but part of an ongoing process of drawing both inspiration and authority from classical literature while interpreting and modifying it according to current philosophical trends and clinical experience. These physicians then added to the accumulated body of knowledge through textual production. The vibrant intellectual environment of the Jin is evidenced by the diverse debates and discussions over the application of the classical paradigm to explain contemporary experiences, especially when the observed reality did not completely align with the wisdom in ancient texts. Important medical developments during the Jin include the refinement of tongue and pulse diagnosis, the invention of new categorization systems for the materia medica coupled with a revised understanding of the key functions of medicinals, and dosage and ingredient modifications of classical formulas leading to the promotion of contemporary prescriptions. Together, these transformations defined literati medicine of the Jin dynasty.

To contextualize the works of the middle period, an alternative model of the trajectory of early Chinese medical development has been proposed. This model argues that the classical medical canon promulgated by Northern Song dynasty officials at the Jiaozheng Yishu Ju 校正醫書局 (Bureau for Revising Medical Texts) represents their idealized conception of elite Tang 唐 dynasty (618-907) medicine. This is especially important when analyzing the “Han medical classics,” which differ markedly from genuine Han 漢 dynasty (206 BC-221) medicine as revealed through the excavated texts. Using the frequency of character usage as an analytical tool, coupled with an examination of the content of these texts, leads to the conclusion that the received editions of the
Suwen 素問 (Basic Questions) and Lingshu 靈樞 (Divine Pivot) were not originally two halves of a singular Han dynasty text known as the Huangdi Neijing 黃帝內經 (Yellow Emperor’s Inner Classic). A plausible explanation of the evidence is that the Lingshu represents a synthesis of Song best practices in the field of acupuncture, while the Suwen represents the editorial decisions of the Sui 隋 dynasty (581-618) and Tang dynasty scholars Yang Shangshan 楊上善 (c.600) and Wang Bing 王冰 (c.762), filtered through Song officials who deleted any supernatural references and imposed strict adherence to the 81 chapter structure of the Suwen, Lingshu, as well as the Nanjing 難經 (Classic of Difficulties). In addition, the evidence suggests the Shanghan Lun 傷寒論 (Treatise on Cold Damage) synthesized related ideas from the Tang on externally contracted illnesses and recommended formulas that were updated to ensure they offered the most reliable treatment options consistent with current best practices of Northern Song medical elites. Out of all the Han medical classics, the Shennong Bencao 本草經 (Classic of Herbs) appears to be the closest example of genuine Han dynasty medicine, which further explains why much of the clinical information contained therein was no longer considered relevant by Jin dynasty literati physicians.

There were several anomalies in the Han medical classics regarding the frequency of character usage identified in this study. The terms wuyun liuqi 五運六氣 (five elemental-movements & six climactic energies) and taixu 太虛 (the great void) are found almost exclusively in the Wang Bing additions to the Suwen so often cited by Jin literati doctors, revealing not only an evolution of medical theory, but also changes to the structure and content of this seminal text during the Tang. The use of lun 論 (treatise, essay, discussion) is found more often in the titles of the Suwen chapters, suggesting this text was a compilation of diverse sources, whereas the Lingshu presents as a more singular and coherent construction with only a few appendages. A strong preference was found for rong 榮 in the Suwen over ying 营 in the Lingshu for the constructive energies that are paired with the wei 衛 (protective energies). Similarly, Zhang Congzheng 張從正 (1156-1228) identified the difference in usage of the various characters for cough, with kai 欽 (cough) preferred in the Suwen and ke 咳 (cough) in the Lingshu. Furthermore, Li Dongyuan 李東垣 (1189-1251) pointed his readers towards the term siwei 四維 (four social bonds, four limbs), which only appeared in the Suwen while sizhi 四肢 (four limbs)
was preferred in the *Lingshu, Nanjing, and Shanghan Lun*. Li’s frequent use of the term *man* (befuddlement) also highlights the fact that this term does not appear in the *Suwen*, but does appear several times in the *Lingshu*. Altogether, this supports the argument that the *Suwen* and *Lingshu* were not part of a singular Han dynasty text. Further support of this argument is found by comparing the *Lingshu* to other texts in the field of acupuncture.

The rapid evolution of acupuncture during the Song can be described quantitatively by using the number of channels and acu-points identified in texts as they were published over time. Excavated texts from the Han (168 BC; c.118 BC) suggest only a few locations on eleven channels that might be used to treat conditions distal to that location. Excavated Tang texts (c.800) detail 57 acu-points on roughly the same eleven channels. The *Bronze Figure Classic* (1026) details 167 acu-points on twelve primary channels, which includes the addition of a pericardium channel, as well as referencing the *ren* (conception) and *du* (governing) channels regarding their named acu-points. However, the pathways of the heart and pericardium channels were reversed in subsequent texts, and the *Bronze Figure Classic* described all twelve channels beginning at the fingers and toes and flowing separately towards the torso in the same directional flow as the five *shu* (transporting) acu-points. The *Nanjing*, which was published in 1027 by the Bureau, not only described the same twelve primary channels, but also introduced the fifteen *luo* (connecting) and the *bamai qijing* (eight extraordinary channels) to the list of energetic pathways. The *Zhenjiu Jiayi Jing* (Systematic Acupuncture & Moxibustion Classic), published in 1069 by the Bureau, was the first text to provide detailed descriptions of the internal and external pathways of all the channels mentioned in earlier publications, which now included a continuous and interconnected circuit of flow through the twelve channels, plus twelve *jingjin* (sinew channels), and the location of 350 named acu-points. However, the earlier model of channel flow was retained in the description of the five *shu* (transporting) points, with the added radical for flesh in this character that represents a modification in the nomenclature. All of these developments and more were subsequently included in the *Lingshu*, published in 1090 by the Bureau based on a fragmentary copy and revised in 1155, but the character for *shu* (transporting) was again modified to include the radical for a vehicle to emphasize the original meaning of the term. Even after this, some of the
details of the acupuncture channel system were debated by Jin doctors like Liu Wansu 劉完素 (c.1100-1200) and Wang Haogu 王好古 (c.1210-1310), such as the names and locations of the acu-points, the pathways of the channels, the number of luo 絕 (connecting) channels, the different meanings of the sanjiao 三焦 (three warmers), and Wang even posited a relationship between the sensory orifices and the brain. However, no further changes were allowed to the “Han medical classics” after the Song.

Jin literati physicians had access to a rich classical literary tradition in medicine thanks to the efforts of the Northern Song court. They immersed themselves in those texts, and then tried to extend and refine the Confucian cosmological paradigm to align classical knowledge with contemporary experiences. Although he was following the trajectory initiated during the previous dynasty, Cheng Wuji 成無己 (c.1060-1157) is foremost responsible for the preservation and promotion of the Shanghan Lun and its formulas by means of his annotated edition. Cheng’s text influenced physicians both during the Jin and for subsequent generations unto the present. Cheng and his predecessors worked towards the integration of wuxing 五行 (five elemental-phase) theory with the treatise’s six stages of disease and evolving systems of pulse diagnosis. Cheng was an early proponent of the cosmological view that fire was in a state of excess and needed to be conquered by water.

Liu Wansu was an outspoken advocate for the need to conquer fire, emphasizing the formula Huanglian Jiedu Tang 黃連解毒湯 (Coptis Resolve Toxicity Decoction) to clear heat from the entire body. Liu focused on Wang Bing’s wuyun liuqi doctrine that argued there are actually two fire phases, amounting to a total of six elemental-phases, with fire also serving as the sixth external pathogenic force. These ideas further served as metaphors for the socio-political situation, since the Nansong dynasty’s continued claim to the power of fire threatened the Jin’s power of metal according to the conquest sequence of the wuxing. Among Liu’s other contributions, he used the five colors of the wuxing to differentiate five types of diarrhea involving various organs, noting that black stools are the most difficult to treat. Liu further described zhuanran 傳染 (contagious diseases), and Li Qingsi 李慶嗣 (fl.1150-1153) apparently responded to a disease outbreak by implementing a type of quarantine, which evidences a keen awareness of the transmission of infectious diseases, albeit cloaked within the metaphors of climactic influences. Another literati physician named Ji Tianxi 紀天錫 (fl.1161-1189), who
applied *wuxing* theory in his commentaries to the *Nanjing*, may also have been honored for his service in responding to a disease outbreak. Together, Cheng, Li, Ji, and Liu represent the early phase of Jin medical development.

The *wuxing* diagnosis of excess heart fire was emphasized by both Liu Wansu and Zhang Yuansu 張元素 (c.1140-1220) during the middle period, which further contributed to the debate on the role of emotions in disease. Liu also started a debate on the roles of the *junhuo* 君火 (sovereign fire) and the *xianghuo* 相火 (ministerial fire) that was joined by Zhang Congzheng, who also discussed the importance of emotions in disease manifestation and progression. Although Li Dongyuan was most concerned with strengthening the depleted earth, and even advocated adding grains as the sixth elemental-phase, he also expressed concern over the *yinho* 陰火 (*yin* fire) and the emotion of befuddlement. Li further used the doctrine from the *Nanjing* that the son is able to cause the mother to have excess to promote his theory that weakness in earth can cause excess in fire. In contrast, Wang Haogu wrote about an externally contracted cold pathogen called *yindu* 隱毒 (*yin* poison) and returned to the goal of integrating *wuxing* and *shanghan* theory. In addition to describing a clinical reality, these ideas simultaneously served as metaphors for the broader socio-political crisis.

The various explanations and treatment recommendations proposed for the disease *huoluan* 霍亂 (sudden turmoil), characterized by the sudden onset of abdominal pain, vomiting, and diarrhea, serve as an example of how Jin doctors extended and refined the orthodox paradigm. Unlike the Western scientific paradigm, Confucianism allowed doctrinal debates to remain unresolved and be transmitted equally, such that new ideas never replaced old ones, they only added to the vast body of knowledge from which one was free to pick and choose. Cheng Wuji remarked that only a few die from the damp type of the disorder whereas many die from the dry type, followed by Liu Wansu who asserted that eight or nine out of ten will survive the damp type, but all will succumb to the dry type. The willingness of Jin physicians to move from a general statement about prognosis to a quantifiable assertion suggests that not only were these doctors engaged in clinical practice and observing the effects of this sickness on the population, but also that despite the various efforts to understand and treat this disorder it remained a leading cause of death. Liu Wansu argued that *huoluan* is caused by excess heat and dampness and involves the *sanjiao* 三焦 (three burners) channel, and he cautioned how the pulse
will present as weak and sluggish after the severe loss of fluids, which can mislead physicians as to the nature of the pathogen. Zhang Yuansu reiterated Liu’s views while emphasizing the close relationship between huoluan and emotional turmoil. Zhang Congzheng argued huoluan was caused by the simultaneous attack of three pathological guests: wind, dampness, and heat. In contrast, Li Dongyuan returned to the original idea from the Shanghan Lun that the disease is caused by cold. Wang Haogu considered that both heat and cold could cause the disease, and described the mechanism whereby the diarrhea depletes body fluids causing the muscles to cramp.

Jin literati physicians extended and refined the use of observations of the tongue and palpation of the radial pulse in support of a differential diagnosis. Building on the few scattered references in the classics, Cheng Wuji advanced tongue diagnosis by detailing the changes in the tongue coating and its significance. As a result, tongue diagnosis became a more complete system during the Jin that considered how the color, moisture, and thickness of the coat, coupled with changes to the color and shape of the tongue body, correlated with the presence of specific pathological influences. Liu Wansu used a pulse model not found in the Suwen, Lingshu, Nanjing, or the Maijing 脈經 (Pulse Classic), which located each of the paired zangfu 脏腑 (solid & hollow organs) at one of the six positions on the radial artery at the left and right wrists. Liu’s pulse model was similar to a system described by the southerner Chen Yan 陳言 (fl.1174), as well as the system used by Li Dongyuan. However, it was Zhang Yuansu who defined this new pulse system most clearly, including the reversal of the superficial and deep positions of the zangfu from the model detailed in the classics. Altogether, these developments represent a profound transformation in the field of diagnostics.

Jin literati doctors introduced new categorization systems for the materia medica together with a revised understanding of the key functions of medicinals. Jin doctors relied upon medicinals that were relatively easy to acquire, and likely maintained modest apothecaries stocked with around 100 substances. When additional resources were required, they would refer their patients to the Jufang 局方 (Imperial Pharmacy), where it is likely they also purchased their private stock. Liu Wansu’s concise summary of 65 medicinals represents the items he kept on hand, just as the little over 100 detailed in Zhang Yuansu’s texts represents the medicinals he most often prescribed. These texts mark a defining moment in the bencao 本草 (materia medica) genre of medical literature,
when official collections like the encyclopedic *Daguan Bencao* 大觀本草 (1108) with 1,744 entries became too large to be clinically expedient, and the need for a new type of quick reference list emerged. From these more manageable pharmacies, Jin literati doctors created new ways to organize the medicinals according to the properties identified and verified. This process resulted in a new understanding of the function of several important medicinals, specification of the target organs, the use of certain medicinals as envoys to direct the action of a formula, while highlighting and revising incompatibilities to reduce adverse reactions. Zhang Congzheng was innovative in his categorization of 95 different medicinals as emetics, diaphoretics, or downward drainers, but this system did not become popular, and his aggressive methods suggest he was less concerned about adverse reactions. In contrast, Li Dongyuan was very concerned that because they must be ingested, all medicinals have an effect upon the stomach, spleen, and the earth elemental-phase, and not just their target organs. Finally, Wang Haogu included 242 medicinals in his materia medica, which was better organized, remained more clinically focused than the *Daguan Bencao*, and reflected the new understandings of commonly used substances identified by Jin doctors. This included Zhang Yuansu’s *yin yang* categorization system, organ and channel affinities, and Wang even described current debates over the newly revised functions of medicinals, evidencing the ongoing process of normal scientific development.

Part of the developmental process was modifications of dosages and ingredients to classical formulas, leading to the promotion of contemporary prescriptions. The trend to use reduced dosages and make modifications to classical prescriptions is evidenced in the various interpretations of *Guizhi Tang* 桂枝湯 (Cinnamon Twig Decoction). Starting from relatively large dosages of 2 to 3 *liang* 雲 (amounting to ~60-90 grams of a substance) in the classics, Northern Song physicians began reducing these dosages by half while minimizing the importance of the fresh ginger and jujubes. Jin physicians like Liu Wansu lowered dosages further, measured in *qian* 錢 (amounting to ~6-9 grams of a substance) instead of *liang*. Known for his more aggressive methods, Zhang Congzheng used dosages as high as 1 *liang* (~30 grams), which still represents a significant reduction from Pre-Jin sources, and both he and Luo Tianyi 羅天益 (c.1220-1300) made significant modifications to the ingredients. Finally, Wang Haogu catalogued many more variations of this and other classical formulas.
Without exception, all Jin literati doctors recommended classical formulas like *Guizhi Tang*, but at the same time they were using and inventing contemporary prescriptions. For example, several formulas that first appeared in the *Jufang* (Imperial Formulary) were often recommended, including several versions of *Sijunzi Tang* 四君子湯 (Four Gentlemen Decoction). This highlighted a debate over which medicinals could best serve as the four gentlemen. As Wang Haogu pointed out, this formula was considered a modification of the *Shanghan Lun* formula *Lizhong Wan* 理中丸 (Order the Center Pill), and further served as part of the social discourse on how rulers like the original four gentlemen of antiquity might bring order to the Central Plains. Similarly, Zhang Yuansu’s *Runchang Wan* 潤腸丸 (Moisten the Intestines Pill) and *Chaihu Yinzi* 柴胡飲子 (Bupleurum Beverage) were modifications of *Shanghan Lun* formulas that were subsequently embraced by later Jin physicians. Zhang Yuansu’s promotion of the *wuxing* color coded prescriptions of Qian Yi 錢乙 (1035-1117) further refined treatment options for *wuxing* diagnoses, shaping contemporary practices. Because they were originally intended for children, these formulas also used smaller dosages than the classical norm, but were adopted for adults during the Jin. Wang Haogu’s cataloging of the evolution of many classical prescriptions into their contemporary manifestations suggests there is no meaningful distinction to be made between orthodox and contemporary formulas, which instead form a continuum of literati medicine through time.

The prominence of *wuxing* theory in the scholarly discourse of Jin doctors is a reflection of the larger conversation by Jin scholars and officials on dynastic legitimacy. This debate revolved around the concept of the *Tianming* 天命 (mandate of Heaven), which is revealed through expressions of nature. Those expressions were recorded in the official histories under the specific heading “*wuxing*,” and many actions taken by the Jin court correlate with these environmental events. This is especially important to understand Jin history, because it was the only Chinese dynasty to be named after one of the *wuxing*: metal. The births of emperors or founding of dynasties were deemed auspicious if they were heralded by a celestial event, such as the five colored cloud seen at the birth of the Jin founder Wanyan Aguda and the yellow dragon in the sky sighted upon his ascension to the throne. Another yellow dragon was spotted ascending into Heaven prior to Shizong’s usurpation of the throne from Hailing, which ushered in the
longest period of political stability. A white dragon was spotted in 1174 following Shizong’s revival of Jurchen culture, which flew past the emperor’s quarters and dragged its tail on the ground as it flew northwards. Another dragon was spotted in 1194 near the capital after Zhangzong formed the special council to consider wuxing legitimacy, and the sighting of the large colorful birds and the phoenix in 1202 prompted the announcement of the earth elemental-phase as the new cosmic patron. The birth of Xuanzong in 1213 was accompanied by the blooming of white flowers and purple clouds and his ascension to the throne witnessed the lifting of a heavy fog and the returning of the tides. Despite these marvelous events, the Jin was plagued by ominous signs from Heaven.

The many environmental challenges faced by the Jin must have been perceived by the literati as a threat to the Jin’s legitimacy, which is derived from Heaven’s mandate. The 1138 earthquakes followed by three days of plundering dragons prevented Xizong from moving the central capital to Yanjing, and the great heat wave of 1142 followed by drought, famine, storms, and earthquakes preceded Xizong’s assassination. The solar eclipse of 1158 followed by harsh winters, earthquakes, and a typhoon was interpreted as a sign Hailing had not been properly filial and needed to take action against the fire of the Nansong to restore balance, but he was defeated in 1161 amidst a devastating flood. To generate good fortune, Shizong made an offering of ganoderma fungus to the ancestors in 1165 following earthquakes, a destructive storm, and locust infestations near the capital. However, this was followed by more earthquakes, storms, and the mysterious growth of white hair on the earth. Shizong then took steps to revive the Jurchen martial spirit and support Confucianism, possibly as a means to promote harmony under Heaven to stave off further disasters. However, in 1171 there was an epic hail storm, followed by dust storms, disease outbreaks, and drought, prompting the 1174 decree reviving Jurchen language and culture. Still droughts, dust storms, locusts, floods, earthquakes and wildfires plagued the remainder of Shizong’s reign. When Zhangzong took the throne he was faced with strange events. In 1190, unusual eggs washed ashore followed by drought and famine for two years, leading up to the birth of crab-like parasitic creatures in 1192. The next year he announced the formation of the special council to consider the question of wuxing legitimacy.

Importantly, when the wuxing council was formed, the Jin enjoyed recognition of its suzerainty by all three tributary states surrounding its borders. This makes it evident that the crisis they were responding too was environmental, not political. In 1195, another
dragon caused a massive mud slide, followed by years of drought, dust storms, earthquakes, and famine. Locust infestations at the capital in 1208 prompted Zhangzong to amend the legal code to criminalize these pests. The *feixing* 飛星 (flying star, meteorite) of 1209 that announced the ascension of Weishao also proclaimed his demise, just as the clear waters of the Yellow River foreshadowed a cataclysm. It began with a series of earthquakes that killed thousands, and then in the spring of 1210 at least one massive meteorite struck the earth and exploded, setting off another series of seismic events. Then the years of drought and famine culminated in hyper-inflation, which further motivated the Mongols and Xixia 西夏 dynasty (c.1000-1227) to invade their borders in search of the dwindling grain supplies. During the reign of Xuanzong, the weather began turning colder and icy while the droughts, dust storms, and locust infestations continued unabated, with the famine so extreme that cannibalism was reported. The 1214 flooding of the Chaobai River was accompanied by a yellow dragon sighting, prompting him to move the central capital from Yanjing to Bianjing amidst escalating Mongol aggression. In 1216, the desperate emperor ordered his officials into the fields to arrest locusts. In 1217, there were hail storms in the summer. In 1219, a severe earthquake caused thousands to be crushed to death in collapsing structures, and in 1220 a massive storm destroyed more buildings. In 1223, a tiger walked into the capital in broad daylight, followed by the death of Xuanzong, suggesting the power of nature now ruled all under Heaven. Following the conquest of the Xixia by the Mongols in 1227, Aizong witnessed unusually heavy snow and hail storms into the spring of 1228, followed by an extremely cold winter. Again in the spring of 1232, heavy snows blanketed the region for three months, delaying the Mongol attack on the last Jin capital. This was followed by torrential rains and flooding in 1233, followed by the death of the last Jin emperor the following year. It is also known the cold weather continued until at least 1243. It was clear to all that the world was in chaos.

Finally, this study has argued that Jin literati physicians were engaged in a dialogue among their peers in elite society about how best to *boluan fanzheng* 撥亂反正 (bring order out of chaos). This was accomplished through an embedded socio-political discourse in their medical texts. This reveals a strong self identification by the majority of literati physicians of this era as loyal subjects of the *Da Jin* 大金 (Great Jin dynasty), the dominant East Asian regional power of the twelfth century. For example, Cheng Wuji cited the story of the legendary physician Bianque 扁鵲 (Wayfaring Magpie) while
expounding on the condition of *buren* 不仁 (numbness, insensitivity, inhumanity) despite the term not being used in any classical version of the story, suggesting it served as a critique on the Jin policy of flogging officials. This was perceived as a violation of the natural order within the Confucian cosmological paradigm, and Cheng hoped to civilize the Jurchen. Liu Wansu promoted the practice of using the names of formulas to express his socio-political views, most obviously in the transformation of the formula *Huanglian Jiedu Tang* to drain fire, into the formula *Da Jin Huawan* 大金花丸 (Great Jin Dynasty Blossoming Pill) to defeat their southern adversary the Nansong 南宋 dynasty (1127-1279) whose continued claim to the power of fire threatened to conquer the metal of Jin. This formula name would have been an unambiguous reference to the ruling dynasty by any contemporary reader. Liu added another formula called *Jin Gangwan* 金剛丸 (Jin Dynasty Resolute Pill) to strengthen the water phase, because water conquers fire according to *wuxing* theory. Although Zhang Yuansu may have been initially sympathetic to the argument of the peace faction at court that the Jin should invoke the power of earth, he later embraced the ideas of Liu Wansu and argued fire was in excess while water and metal were deficient. Had the Jin conquered the south, as it was believed they should have given the unconditional surrender and capture of the last two emperors of the Northern Song, they would have enveloped the most economically and agriculturally productive region of East Asia to become the largest Chinese Empire ever known at that time.

However, dreams of imperial expansion collapsed with the grain harvest. Zhang Congzheng became less concerned with excess fire and instead advocated using the three methods to purge the three unwelcome *keqi* 客氣 (guest energies) from the body and the state, as the Jin became engaged in war on three fronts. He also continued to recommend using the formula *Da Jin Huawan* (Great Jin Dynasty Blossoming Pill) while criticizing the *shidafu* 士大夫 (scholar-officials) for their failures to bring order. Yet those who Congzheng most reviled he equated to disciples of the legendary Gun 銘 of the Xia 夏 dynasty (c.2000-1500 BC), who was obliterated in the flood waters he failed to prevent and thus squandered the *yuanqi* 元氣 (source energy) of the dynasty. His formula *Yu Gong San* 禹功散 (Achievements of Yu Powder), which drains water and honors Gun’s father Yu 禹 who succeeded in controlling the floods, speaks to Congzheng’s hope that
current officials will emulate this sage king. Unfortunately, even the attack and purgation method was ineffective in eliminating the unwelcome guests from the Central Plains.

The period after the fall of the Jin, but before the establishment of the Yuan dynasty (1260-1368), was dominated by warlordism. Li Dongyuan survived the fall of Bianjing to the Mongol Horde in 1232, and the death of the last Jin emperor in 1234, but remained a loyal subject advocating for a zhongxing 中興 (dynastic resurgence) by promoting the formula Buzhong Yiqi Tang 補中益氣湯 (Tonify the Center & Benefit the Qi Decoction) and its many variations to secure the yuanqi. Li’s undying loyalty was further expressed by including Liu Wansu’s modification of Huanglian Jiedu Tang called Jin Huawan (Jin Dynasty Blossoming Pill) in his writings. In contrast, Luo Tianyi shifted his loyalties and served as a taiyi 太醫 (grand physician) to the Yuan army, and recommended formulas such as Sheng Jin Dan 勝金丹 (Conquer the Jin Dynasty Pill) and Sheng Jin San 勝金散 (Conquer the Jin Dynasty Powder), which eliminate excess and appear to be a call to eliminate any last vestiges of hope for a Jin dynastic resurgence. Luo even concludes his text with the formula Yi Yuan San 益元散 (Benefit the Yuan Dynasty Powder), to finally end the turmoil and bring order out of chaos. The political implications of Luo’s work is likely the reason it was excluded from the Qing dynasty’s Siku Quanshu 四庫全書 (Complete Collection in Four Treasuries, 1782) by the Manchu government, who traced their origins to the Jurchen people and the Jin dynasty. These examples paint a rich portrait of a socio-political discourse embedded into the medical texts of Jin literati physicians.

The legacy of Jin literati medicine

The legacy of Jin literati medicine was long lasting and profound. The impact of their ideas was immediately evident in the works of literati doctors during the subsequent Yuan dynasty, when the first reference to the “four masters” was put forth. This was clearly an allusion to the four masters of the Northern Song, first identified by the
Nansong Confucian philosopher Zhu Xi 朱熹 (1130-1200) as part of the movement self identified as the daoist 道 (learning of the Way), which also endeavored to extend and refine the Confucian cosmological paradigm. The first scholar to identify four masters of Jin medicine was Zhu Danxi 朱丹溪 (1280-1358), also known as Zhu Zhenheng 朱震亨, who described in the preface to his Gezhi Yulun 格致餘論 (Extra Treatises Based on Investigation & Inquiry) his intellectual influences:

又四年而得羅太無諱知悌者為之師 因見河間戴人東垣海藏諸書
After 4 more years [of studying medicine], I obtained the teachings of Luo Taiwu, taboo name Zhidi, and for this reason I looked upon all the books of [Liu] Hejian (a.k.a. Liu Wansu), [Zhang] Dairen (a.k.a. Zhang Congzheng), [Li] Dongyuan (1189-1251), and [Wang] Haizang (a.k.a. Wang Haogu). ¹

Any texts written by Luo Zhidi 羅知悌 (c.1300) are no longer extant. Although there is no direct evidence, Zhu Danxi’s teacher may have been related to Luo Tianyi 羅天益 (c.1220-1300), which would provide a direct link in the lineage. Nevertheless, it is clear that Zhu admired the works of these four literati doctors of the Jin, and he commented how they were the first to realize the role of the xianghuo 相火 (ministerial fire) in many diseases, which Jin doctors accused of trying to usurp the junhuo 君火 (sovereign fire).

Just as Zhu Xi synthesized the works of the Northern Song philosophers whom he identified as the four masters, Zhu Danxi continued the task of synthesizing the works of Jin dynasty physicians. This parallel was identified in a preface written in 1542 by Gao Min 高賓 to the Danxi Zhifa Xinyao 丹溪治法心要 (Danxi’s Essential Treatment Methods), wherein this scholar stated it clearly and simply:

醫學之有丹溪 猶吾儒之有朱子
Those who study medicine have [Zhu] Danxi, just as we Confucians have Master Zhu [Xi]. ²

Despite these obvious parallels, Zhu Danxi would later be subsumed into the lists of four masters of the Jin and Yuan period by later medical scholars, which had the effect of diminishing the importance of some of the other Jin doctors. There was another parallel as well, for just as the Jin doctors used medical literature as a vehicle for a socio-political discourse, so did Zhu Danxi. The best example comes from the concluding remarks of the Gezhi Yulun:
遂取東垣方藳手自抄錄，乃悟治病人當如漢高祖縱秦暴，周武王縱商之後。有 üzerine retrieved [Li] Dongyuan’s prescriptions and copied them myself by hand. Only then did I understand treating patients should be similar to how Han Gaogu (r.206-195 BC) overcame Qin’s cruelty, and how the Martial King of Zhou overcame the Shang’s cruelty thereafter.

To put this phrase into context, the essay begins by questioning the methods of Zhang Congzheng, who proposed that diseases were the result of external evil influences that must be strongly attacked and purged from the body. It has been argued that this was a metaphor for the invasion of the Mongols, Xixia, and Nansong during the fall of the Jin and the recommendation that they be attacked and purged from the Central Plains. After the Jurchen were defeated, Li Dongyuan argued for the need to internally strengthen to promote a Jin dynastic resurgence. By the time the Mongols had subjugated all of China, Zhu subsequently realized that both of their ideas were correct. It was time again to strengthen internally in order to attack and purge. Just as the two exemplary dynasties of the past, the Zhou (c.1000-220 BC) and Han (206 BC-221), were able to overcome the cruelty of oppressive regimes, so too must the Yuan dynasty be overthrown. Therefore, after arguing for the importance of supplementation, Zhu Danxi reconsiders Zhang Congzheng’s advice and concludes:

於是定為陰易乏，陽易亢，攻擊宜詳審，正氣須保護。
Thus it was decided to consider that yin is easily exhausted, and yang is easily excessive, attacking and assaulting is suitable if one carefully examines [the situation], the zhengqi (righteous energy) must be able to defend and protect.

Significantly, there is no discussion of recovering the yuanqi (source energy), for the Yuan dynasty had already made that claim. Instead, Zhu states the zhengqi (righteous energy) must be called upon to defend and protect Chinese civilization against external evils just as Zhang had argued a century earlier. Therefore, the transmission of these texts among scholars, for whom medicine was but one of many ways to bring order out of chaos, was in large measure due to these underlying political themes embedded into the medical discourse.

Zhu also built upon the logic of Liu Wansu and Zhang Yuansu to accomplish the goal of restoring Confucian civilization, arguing one cannot use old formulas to treat modern diseases. In the final essay of the Gezhi Yulun, Zhu further cites the works of Luo Tianyi to argue:
Using old formulas to treat today’s diseases, this is correct according to [the idea of] dismantling a worn out house [to fix] a broken new house. Its timbers and wood must not be the same, [for if they] do not again pass through a craftsman’s hands, how is one able to use them? 

In other words, old formulas are like worn out houses that need not be completely abandoned, because in the hands of skilled craftsman, or in this case a skilled physician, many useful elements can be taken from them and reworked into new parts to repair or treat a relatively new house or disease. Carrying the logic further, only a foolish carpenter or physician would build a new house entirely out of worn out materials, or only use old prescriptions without modification. In politics, only a foolish official would completely abandon the wisdom transmitted via the Confucian classics, whereas the future success of the realm depended on new interpretations and applications of the ancient teachings.

A contemporary of Zhu Danxi was Hua Shou滑壽 (c.1300-1360), who also was profoundly influenced by the Jin medical masters. In a preface to the *Shisi Jing Fahui*十四經發揮 (Exposition on the Fourteen Channels) provided by the Hanlin academician Song Lian 宋濂 (1310-1381), an alternative list of four masters from the Jin dynasty is offered:

> 若金之 張元素 劉完素 張從正 李杲 四家 其立言垂範 殆或庶幾者乎

Now as for the Jin [dynasty’s] Zhang Yuansu (c.1140-1220), Liu Wansu, Zhang Congzheng, and Li Gao (a.k.a. Li Dongyuan), the four masters, they established words that have been passed down and used as a model. Dangerous perhaps, but who else is similar to these men?

Song thus specifies these four Jin doctors, now including Zhang Yuansu instead of Wang Haogu, as the “four masters.” This may have been because Hua Shou considered himself part of Li Dongyuan’s lineage, which he traced back to Zhang, whereas Wang was only one of Li’s disciples along with Luo Tianyi. Especially intriguing is the statement that their works might also be “dangerous,” an assertion that again points towards the embedded socio-political discourse in their texts.

In addition to these four masters, Hua also recognized the contributions of other Jin dynasty literati doctors in the *Nanjing Benyi*難經本義 (Genuine Meaning of the Classic of Difficulties, 1341). Besides citing the *Shiji* 史記 (Historical Records, c.100 BC)
to attribute the *Nanjing* 難經 (Classic of Difficulties) to Qin Yueren 秦越人 (407-310 BC), also known as Bianque, as well as considering that additions were made during the Tang dynasty (618-907) to its 81 chapters, Hua Shou provides a list of twenty influential physicians and their texts that he used in compiling his commentary. Hua begins the list with Zhang Zhongjing 張仲景 (142-220), Wang Shuhe 王叔和 (265-316), Sun Simiao 孫思邈 (541-682), and Wang Tao 王燾 (702-772), and then includes four Jin literati doctors among some other Song physicians. Those four Jin doctors and their texts were: Li Dongyuan and his *Neiwai Shanghan Bian* 內外傷寒辨 (Differentiating Internal & External Cold Damage), Wang Haogu and his *Cishi Nanzhi* 此事難知 (These Matters that are Hard to Understand), Ji Tianxi and his *Nanjing Zhu* 難經注 (Commentary on the *Nanjing*), and Zhang Yuansu and his *Yaozhu Nanjing* 藥注難經 (Medicinal Commentary on the *Nanjing*). Both Ji and Zhang’s texts on the *Nanjing* are no longer extant, but Hua still provides another informal list of four masters of the Jin dynasty.

Hua continued the momentum of the Jin in regards to pulse diagnosis, embracing the new model that organized the organ systems according to the *wuxing*:

**Hua Shou’s Pulse Model:**

<table>
<thead>
<tr>
<th>Position</th>
<th>cun (distal)</th>
<th>guan (middle)</th>
<th>chi (proximal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right</td>
<td>metal</td>
<td>earth</td>
<td>ministerial fire</td>
</tr>
<tr>
<td>Left</td>
<td>fire</td>
<td>wood</td>
<td>water</td>
</tr>
</tbody>
</table>

Although he does not specify any difference between the superficial and deep positions relative to the paired organs, his use of only the corresponding element is simple and elegant. Hua’s model makes it clear how the elements on both wrists proceed from proximal to distal according to the generative sequence, while the conquest sequence is described alternating left to right, distal to proximal.

In a postscript to Hua Shou’s *Du Suwen Chao* 讀素問鈔 (The Value of Reading the *Suwen*), written by Cheng Wenjie 程文傑 during the *Jiajing* 嘉靖 (Auspicious Serenity) reign period (1522-1566), Cheng emphasized the parallels between medicine and Confucianism:
Physicians have the *Suwen* just as we Confucians have the four books. If one doesn’t read the *Suwen* then one cannot understand the source of disease; if one doesn’t read the four books then one cannot know the principles of the *dao*. Cheng goes on to assert that Hua Shou’s commentary on the *Suwen* is comparable to the commentaries on the four books of Confucianism by Cheng Hao 程顥 (1032-1085), Cheng Yi 程頤 (1033-1107), and Zhu Xi. Thus by the Ming 明 dynasty (1368-1644), literati medicine was a widely recognized field, and identifying parallels between Confucian philosophers and literati doctors was becoming routine.

The impact of Jin and Yuan literati medicine was not limited to China. Zhu Danxi’s doctrine of supplementing *yin*, together with Li Dongyuan’s tonification of the spleen and stomach, formed a doctrine that spread to Japan. During the middle of the Muromachi period (1333-1568), several Japanese physicians traveled to China where they learned about the latest developments in Chinese medicine and philosophy. The most notable of these was Tashiro Sanki 田代三喜 (1465-1537), who went on a twelve year (1486-1498) visit and mastered the medicine developed by the “four masters.” However, it was the teachings on supplementation promoted by Li and Zhu, together with the revival of the *Shanghan Lun* (Japanese: *Shokanron*), which were most influential on Tashiro Sanki. He then returned to Japan and founded the *Goseihoha* 後世方派 (Latter-Day Method School), also known as *Rishu Igaku* 李朱医学 (School of Li-Zhu Medicine) (Ozaki, N.T., 1980). This cross cultural exchange resulted in the distinct trajectories Japanese medicine followed up until the present, where the impact of this period in East Asian medical development remains evident.

Also during the Ming, Zhou Shenzhai 周慎斋 (1508-1586) wrote the *Yijia Mi’ao* 醫家秘奧 (Secrets and Myths of the Medical Masters) in which he emphasized the treatment strategies described by various Jin physicians. This included key prescriptions from the *Shanghan Lun* and the Jufang (Imperial Formulary). Although he did not specifically identify four masters, he clearly admired the various works of the Jin literati doctors, reiterating the argument that fire was subduing metal, which is unable to generate water, which thus fails to conquer fire. Among the prescriptions frequently recommended by Zhou was Li Dongyuan’s *Buzhong Yiqi Tang* (Tonify the Center &
Benefit the Qi Decoction). Zhou’s highlighting of this formula may further have been a way of supporting the new Han rulers of the Central Plains.

Li Shizhen 李時珍 (1518-1593) was a famous Ming dynasty naturalist best known for his massive 52 juan compilation entitled Bencao Gangmu 本草綱目 (Grand Compendium of the Materia Medica). This text was published in 1590 and included entries for 1,892 substances, not all of which were identified as having medicinal value, plus thousands of prescriptions. Early in the text, Li Shizhen included the yinjing baoshi 引經報使 (guiding channel application report), which he acknowledged came from Zhang Yuansu’s Zhenzhu Nang 珍珠囊 (Bag of Pearls) as the first formal example of using specific medicinals to direct the actions of a formula. However, Li made a few changes, such as removing d huo 獨活 (Angelica pubescens Maxim., Radix) from the heart channel list but retaining it under the kidney. There are also two essays in the Bencao Gangmu discussing the medicinal categorization methods of Li Dongyuan and Zhang Congzheng. In the voluminous entries on specific substances, Li Shizhen follows the Jin precedent and begins by emphasizing his own opinions on each subject first, but then goes on to cite various other scholars more or less chronologically, resulting in an outstanding encyclopedia but a cumbersome clinical reference. In the entries for medicinals emphasized by Jin literati doctors he often cites Zhang Yuansu, Wang Haogu, and Li Dongyuan, and then inserts his own contributions next to these other scholars, as though he wanted to be identified as a member of their group. Jin literati doctors were also referenced in Li Shizhen’s preface to his Qijing Bamai Kao 奇經八脈考 (Study on the Eight Extraordinary Channels), wherein he lists the many influential physicians who contributed to contemporary knowledge of acupuncture channel theory, including four masters of the Jin: Cheng Wuji, Zhang Yuansu, Ji Tianxi, and Li Dongyuan, plus the Yuan doctors Zhu Danxi and Hua Shou.

In one instance, the mention of Jin doctors is notably absent. Li also wrote the Binhu Maixue 瀬湖脈學 (Bin Hu’s Pulse Study) wherein he expressed concern over the perpetuation of the teachings from a text called the Maijue 脈訣 (Pulse Secrets), which appears to be the same text referenced or written by Zhang Yuansu. Li emphasized that it was not written by Wang Shuhe, author of the Maijing 脈經 (Pulse Classic), and suggests
it was composed sometime during the Song dynasty. His disdain for the text is evident in the preface:

李時珍曰 宋有俗子 杜撰脈訣 鄙陋紕謬 醫家習誦以為權舆
逮臻頌白 脈理竟昧
Li Shizhen said: during the Song dynasty a vulgar person fabricated the Maijue (Pulse Secrets), which was scornfully erroneous. Medical masters recited it as though it was authoritative and thereby it was promulgated, but the principles of the pulse remain concealed.

Although Zhang is not recognized as the original author, nor as one of its advocates, it is still evident that not only did Li prefer the older pulse systems, but also that the system promoted by Zhang was very popular by the Ming dynasty.

Another Ming medical scholar named Sun Yikui 孫一奎 (c.1520-1600) argued for a more flexible interpretation of the Jin and Yuan medical masters in his text, Yizhi Xuyu 醫旨緒餘 (Supplemental Trends in Medicine). In an essay called the buzhi fangshuo 不執方說 (failing to grasp formula explanations), Sun asserts:

素難 本草 仲景 潔古 守真 東垣 丹溪 諸書
不可以語此秘密 醫何容易談也
If the Su[wen], Nan[jing], [various] Bencao, and the various books of [Zhang] Zhongjing, [Zhang] Jiegu (a.k.a. Zhang Yuansu), [Liu] Shouzhen (a.k.a. Liu Wansu), [Li] Dongyuan, and [Zhu] Danxi, are unable to reveal these [formula] secrets, then how can medicine be easy to discuss?

In the subsequent and more detailed essay called Zhang Liu Li Zhu Hua liumingshi xiaozhuan 張劉李朱滑六名師小傳 (profiles of the six famous teachers; [the two or three] Zhang, Liu, Li, Zhu, and Hua), Sun provides a summary of medical history and the contributions of these physicians. This essay also raises another question, which is: did some of the inconsistencies in identifying the four masters stem from the surname “Zhang?” Sun actually discusses the contributions of Zhang Zhongjing, Zhang Yuansu, and Zhang Congzheng, as well as Wang Haogu who was not included in the essay title, so perhaps he should have referred to eight famous teachers.

Sun Yikui began this essay by stating that Zhang Zhongjing was the first to describe the use of formulas, so his book is considered the ancestor of all prescription manuals. He goes on to remark how Zhu Danxi’s senior disciple, Liu Zonghou 劉宗厚
(c.1330-1400), imitated Zhongjing’s strategies rather than those of his teacher. Sun then
states that Zhang Congzheng had keen insights into medical practice, but later
generations focused only on his use of attack and purgation. Sun adds that because Zhu
Danxi criticized Congzheng’s methods, this caused people to be afraid of using the three
methods just like they would fear a tiger. Sun felt this was an injustice done to Zhang,
and wrote:

予惟人之受病 如寇入國 不先逐寇而行拊循 適足以養寇而擾黎元也
戴人有見於是 故以攻疾為急 疾去而後調養 是得靖寇安民之法矣
I alone [believe] that when a person suffers from a disease it is like bandits
entering the state. If one first doesn’t pursue the bandits then their actions will
continue, and this is sufficient to be considered supporting the bandits and
disturbing the source. [Zhang] Dairen (Congzheng) saw things this way and so he
attacked the disease urgently, and after the disease departed he would harmonize
and nourish. In this way his method was to pacify the bandits and secure the
people. 21

This statement again reveals the embedded socio-political discourse in Zhang’s texts
identified by Sun, who goes on to state:

彼拘拘然進調補而謦攻擊 是猶治國專用賞而不用罰也
Those that rigidly adhere to the advancement of harmonizing and tonfiying, but
avoid attacking, are just like those who order the state by using rewards, but don’t
use punishments. 22

Sun concludes that such actions invite disaster.

Sun next turns to the ideas of Liu Wansu, asserting that those who say he was
only good at treating fire failed to comprehend his ideas. Sun argues that Liu’s strategy
was to tuichen zhixin 推陳致新 (push out the old & establish the new), which caused
many to be upset because they did not understand his strategies. Sun adds that Wang
Haogu, the senior disciple of Li Dongyuan, was the only one that understood Liu’s
explanation of why there were two types of fire among the wuxing, the sovereign and
ministerial fire. Similarly, Sun argues that people failed to understand the teachings of Li
Dongyuan by believing he only focused on supplementing the spleen and stomach, noting:

彼當金元擾攘之際 人生斯世 疲於奔命 未免勞倦傷脾 夷思傷脾
飢飽傷脾 何莫而非傷脾也者
There was much trouble during the time of the Jin and Yuan dynasties, and people
who were alive at this time were always running for their lives. They couldn’t

400
avoid toil, exhaustion, and damage to the spleen. Worrying damages the spleen, hunger and over eating damages the spleen, so of course everyone had damaged spleens.  

Again, Sun acknowledges the embedded socio-political discourse in these texts. Finally, Sun remarks that contemporary medical practitioners follow Zhu Danxi’s ideas on yang being excess and yin being deficient, but again fail to understand what he meant. Sun argues that Zhu was describing the excessive consumption of alcohol warping people’s desires and depleting their essence, leading to blazing fire causing the blood to overflow, resulting in emaciation and a violent death. Sun said that when his contemporaries see someone with deficiency, they immediately use remedies to nourish yin and descend fire. Since they fail to correctly identify the problem, they do more harm than good. Sun adds Hua Shou to his list of great masters of the Jin and Yuan period, whom he likens to Zhu Danxi because of his efforts to synthesize earlier ideas.  

The composition of the list of four masters changed again in the Yizong Bidu (Medical Masters that Must Be Read), composed by the Ming scholar Li Zhongzi 李中梓 (1588-1655). In an essay entitled sidajia lun (treatise on the four great masters), Li included the famous Han dynasty physician credited with writing the Shanghan Lun in his revised list:

仲景張機 守真劉完素 東垣李杲 丹溪朱震亨 其所立言醫林最重 名曰四大家 以其各自成一家言
As for Zhongjing Zhang Ji, Shouzhen Liu Wansu, Dongyuan Li Gao, and Danxi Zhu Zhenheng, it is their words that have been established in the forest of medicine as the most important. They are called the sidajia (four great masters), and they each established a doctrine of their own.  

Li Zhongzi then summarizes and critiques the contributions of these four doctors.  

Li began by asserting that Zhongjing’s 397 methods and 113 formulas augmented discussions from the Neijing and unified its teachings. He argued that of all the liuqi (six environmental factors), it was cold that was the most harmful. Li discussed how Zhang stated in winter one is damaged by shanghan (cold damage), in spring by wenbing (warm diseases), and in summer by rebing (heat diseases), but later generations did not understand these ideas and only focused on shanghan. However, he then discussed how Liu Wansu looked deeper and focused on heat diseases, rather than cold, and thus became one of the masters of his generation. Next, he discussed how Li Dongyuan differentiated
internal damage whereby the *yuanqi* (source energy) becomes insufficient due to externally contracted *xieqi* (evil or pathogenic energy). He further described how Dongyuan differentiated internal harm caused by excess food and drink, from deficiency due to toil and weariness, both of which injure the spleen and stomach. Li Zhongzi noted how Dongyuan specifically prescribed *Buzhong Yiqi Tang* for these problems. Thus his use of tonification augmented the heat clearing methods of Liu Wansu and Zhang Yuansu, earning him recognition as one of the masters of the era. Next, Li discussed how Zhu Danxi expounded on kidney *yin* and blood deficiency causing heat as another manifestation of internal damage requiring a different treatment strategy. Li notes that Zhu combined tonification with heat clearing medicinals, earning him recognition as one of the masters of the period. However, Li Zhongzi concludes that there were severe limitations to each of their approaches. He argues Zhongjing used too many harsh medicinals, Wansu used too many bitter and cold medicinals, Dongyuan used too many tonifying and ascending medicinals, and Danxi used too many clearing and descending medicinals. What Li found most significant was how Danxi also included the methods of the other masters in his texts, providing the most complete system of medicine.

Zhao Minke 趙敏可 (1567-1628), another late Ming physician, wrote a text entitled *Yiguan* 醫貫 (Medical Lineages, 1617) in which he drew on the works of his predecessors from the Song, Jin, and Yuan dynasties. Following a chapter on *shanghan* diseases and standard treatment protocols according to Zhang Zhongjing, Zhao discusses *wenbing* diseases and begins by noting how Jin physicians Liu Wansu and Zhang Congzheng added cooling medicinals to these classical strategies, and how Wang Haogu promoted a blending of old and new formulas. In a chapter on blood diseases, Zhao again remarks how Liu Wansu used cooling medicinals to clear fire, Li Dongyuan focused on warming the spleen and stomach, and Zhu Danxi nourished *yin* to balance the excess of *yang*. In summary, Zhao used the *wuxing* to explain how these physicians tried to use water to conquer fire. Zhao also mentions how he got the idea of sweat being a part of the blood from reading Dongyuan’s *Lanshi Micang* 蘭室秘藏 (Secret Book Kept in the Orchid Chamber). In addition to several other references to these Jin and Yuan doctors, Zhao cites a few of the Northern Song physicians who inspired them, like Kou Zongshi 寇宗奭 (c.1120), Zhu Gong 朱肱 (c.1090), and Qian Yi 錢乙 (1035-1117). Zhao frequently recommends Dongyuan’s signature formula, *Buzhong Yiqi Tang*, for a
variety of conditions, and even has an entire essay devoted to this one formula wherein he adds a few of his own modifications. 29

The continuing importance of Li’s Buzhong Yiqi Tang is evident in Qing dynasty (1636-1911) medical texts as well. In the Gujin Mingyi Fang Lun (Treatise on Past & Present Famous Physicians & Prescriptions, 1675) by the Qing dynasty scholar Luo Mei 鮮美 (c.1662-1722), the first formula presented is Buzhong Yiqi Tang, 30 suggesting it had become the most famous of all. Several other original prescriptions by Li are also included, along with many from the Shanghan Lun, Qian Yi’s Liuwei Dihuang Wan 六味地黃丸 (Six Flavor Rehmannia Pill) to nourish kidney yin, and several formulas from the Jufang, including: Sijunzi Tang (Four Gentleman Decoction) and Siwu Tang 四物湯 (Four Substance Decoction) to nourish qi and blood.

While many continued to criticize the disproportionate use of tonics in medicine, it is evident this remained a valued strategy for many others.

Qing medical scholars continued to discuss the importance of these medical masters of the Jin and Yuan. In a preface written during the Qing dynasty to Zhu Danxi’s Mai Yin Zheng Zhi 脉因証治 (Pulse, Etiology, Diagnosis, & Treatment [Manual]), after noting the contribution of Zhang Zhongjing to medicine, it stated:

但四家自河間 東垣而外子和 文多缺略 未為全書 丹溪著作
類出門人紀載
Only the four masters from [Liu] Hejian (Wansu), [Li] Dongyuan, and also [Zhang] Zihe (Congzheng), wrote much but lacked coherence, and had not yet synthesized their books. As for [Zhu] Danxi in his literary works, he organized the written records of these men. 31

Thus the list had been reduced to Liu Wansu, Zhang Congzheng, Li Dongyuan, and Zhu Danxi, although this trope of the “four masters” was not meant to be definitive or limiting. Nonetheless, many medical historians would focus on this construction alone, as though it was somehow the most authoritative.

Ke Qin 柯琴 published his Shanghan Laisu Ji 傷寒來囌集 (Cold Damage Revival Collection) in 1674, and in his own preface to the text he acknowledged the contributions of Cheng Wuji to the shanghan tradition. 32 However, in another preface written by his friends Li Nuo 李諾 and Chu Zhong 楚重, they argued that Liu Wansu, Zhang Yuansu, Li Dongyuan, Wang Haogu, and Zhu Danxi deviated from the original
meaning of Zhang Zhongjing. This places Ke Qin and his friends among the scholars who identified with the Hanxue (Han learning) movement, founded by Gu Yanwu (1613-1682) and Wang Fuzhi (1619-1692). These early Qing scholars praised the works of the Han for their plain language, intellectual rigor, and lack of metaphysical pretense (J.D. Spence, 1999), attempting to reconstruct the classics by stripping away later interpretations. In medicine, this movement was starkly contrasted with the wenbing xuepai (warm disease school of learning), which continued to embrace innovation and development.

An excellent example of the discussions on the four masters of Jin-Yuan medicine by a proponent of the Hanxue movement is found in the essays of Xu Dachun (1693-1771). Xu published the Yixue Yuanlei Lun (Treatise on the Origins and Categories of Medical Study) in 1757, and included his own essay entitled the sidajia lun (treatise on the four great masters), with the following opening remarks:

The dao of medicine has been obscured for a long time. People of the Ming discussed the four great masters, indicating Zhang Zhongjing, Liu Hejian, Li Dongyuan, and Zhu Danxi. It is said these four men established everlasting medical doctrines, but this is truly ignorant and absurdly ridiculous.

Xu continues by heaping praises on the achievements of Zhang Zhongjing as an erudite scholar of the Han dynasty whose works have never been surpassed. In contrast, he criticizes the reductionist ideas of the other three who failed to achieve anything meaningful and misunderstood the teachings of the Han classics. Xu concludes his essay by expressing concern that contemporary doctors will continue to be led astray by the ideas of the Jin and Yuan masters and fail to study more deeply the works of Zhang Zhongjing. Moreover, Xu argued the use of guiding medicinals in a formula, as advocated by Zhang Yuansu and Li Dongyuan, was misguided. Instead, he affirmed his devotion to the Shennong Bencao (Divine Farmer’s Materia Medica) as an authentic Han classic. Xu’s analysis is colored by his apparent rejection of medical developments since the Song and his almost fanatical reverence for what he believed to be Han learning.

In contrast, proponents of the warm disease school argued the Jin and Yuan masters were instrumental in the advancement of medicine. One of the key figures in the
wenbing school, and a contemporary of Xu Dachun, was Ye Tianshi 叶天士 (1667-1746). In a compilation of material by his disciples entitled Linzheng Zhinan Yi’an 臨證指南醫案 (Summary of Diagnoses & Guide to Medical Case Studies), his student Li Zhiyun 李治運 (c.1765) states:

仲景所著 傷寒金匱 直啟靈蘭之秘 泄玉版之文
至若 河間 東垣 丹溪 亦迥出 凡流合仲景秘 為四大名家
There was [Zhang] Zhongjing who wrote the Shanghan [Lun] and Jingui [Yaolue], and who diligently revealed the secrets of the Linglan (Divine Orchid) and divulged the inscriptions on the Yuban (Jade Tablets). Reaching to the time of [Liu] Hejian, [Li] Dongyuan, and [Zhu] Danxi, they also brought forth the inaccessible and merged together the secrets of Zhongjing to become the four great and famous masters.

Thus Li cites the same four masters as Xu Dachun, but argues that without the efforts of the Jin and Yuan physicians the deeper meaning of the Han classics would be lost. Considered together, these two passages by Xu and Li epitomize the conflict between the Han learning and warm disease schools.

Many proponents of the wenbing school of learning adopted Liu Wansu explicitly as the founder of the movement because of his emphasis on heat and fire as pathogenic agents. This provided them an intellectual lineage that stretched back centuries, helping them compete with the school of Han learning. Another key figure in the wenbing current was Wu Jutong 吳鞠通 (1758-1836), who authored the Wenbing Tiaobian 溫病條辨 (Differentiation of Warm Diseases) in 1798. In the first preface to the text, written by Wang Tingzhen 汪廷珍 (c.1813), Liu Wansu is singled out for veneration:

惟金源劉河間守真氏者 獨知熱病 超出諸家 所著六書 分三焦論治
而不墨守六經 庶几幽室一镫 [燈] 中流一柱
Only the Jin dynasty’s original Liu Hejian, master Shouzhen, was alone able to understand heat diseases, exceeding all other various masters and writing six books. He distinguished the sanjiao (three burners) and discussed treatments, but didn’t use his ink to protect the liujing (six channels) [which dominated shanghan theory]. He was just like a single lamp in a secluded room or a pillar in a stream.

The warm disease school not only adopted Liu’s emphasis on pathological heat, but also used the sanjiao to organize their diagnostic strategies, as emphasized in the above
passage. This was used in direct contrast to the model from the *Shanghan Lun* that emphasized the *liujing* 六經 (six channels), from *taiyang* to *jueyin*.

The rise of the *wenbing* school also reinvigorated the discussion of *huoluan* 霍亂 (sudden turmoil). Marta E. Hanson (2011) found that the *wenbing* proponent Wang Shixiong 王士雄 (1808-1864) described an 1862 disease epidemic as *huoluan*, which was first reported as *sha* 痧 (acute disease), and later as *Manzhou bing* 滿州病 (Manchurian disease). Wang argued it was an ancient pathogen that became newly virulent. In his 1862 revision of his *Huoluan Lun* 霍亂論 (Treatise on Sudden Turmoil, 1838), Wang detailed the causes of polluted water, dense populations, and the chaos of the Taiping Rebellion that followed the rapid transformation of areas like Shanghai from a coastal village to an international metropolis, causing hot and turbid *qi* in the earth. A Western contemporary of Wang in China, John Snow (1813-1858), identified the disease as “cholera,” although he was unable to microscopically identify the organism. Decades afterwards, the medical doctor and historian Lee T’ao (1936) stated that contemporary medical authorities all agreed that true cholera was introduced to China between the summer and autumn of 1821 from the West, resulting in an epidemic, followed by forty-six other outbreaks between 1821 and 1936. Therefore, T’ao concluded that *huoluan* as described in the classical literature was caused by a different and as yet unidentified microscopic organism(s). However, he still translated *shanghan* as the infectious disease known as typhoid, even while admitting there was no evidence for such a claim. Many of the challenges of translating ancient Chinese medical concepts into modern Western scientific vocabularies had yet to be hurdled.

Finally, Chinese medicine during the early twentieth century was once again in conflict with competing ideas. The promotion of Western medicine, first by missionaries who intended to use it to demonstrate the superiority of their religious ideologies, and later by colonialists who used medicine as a tool of empire building, challenged Chinese medical practitioners to integrate new knowledge into their traditional cosmology. Several of these Chinese physicians were initially successful, and were poised to create an innovative methodology that merged Western and Eastern practices without abandoning the Confucian cosmological paradigm. One such physician was Zhang Xichun 张錫純 (1860-1934), who wrote the *Yixue Zhongzhong Canxi Lu* 醫學衷中參西錄 (Record of Thoughts on Chinese Medicine Combined with Western Medicine). In the
tici 題詞 (dedications, inscriptions) to this work, one of his disciples identified Zhang Xichun as a member of a new incarnation of the old literary trope:

醫界群推第一人 先生與江蘇 陸晉笙 楊如侯 廣東劉蔚楚
稱當今 張陸楊劉四大家
From amongst all the types of physicians I advocate for one person, mister [Zhang Xichun], who together with Jiangsu [physicians] Lu Jinsheng and Yang Ruhou, and Guandong [physician] Liu Weichu, are praised today as Zhang, Lu, Yang and Liu: the sidajia (four great masters). 38

Thus a new group of “four masters” was identified. However, this was not meant to suggest that only four physicians were making contributions to medical development during the early twentieth century. In fact, in the same essay there is a reference to the san Zhang 三張 (three Zhang’s), which recalls the frequent mention of Zhang Zhongjing, Zhang Yuansu, and Zhang Congzheng, in medical discussions:

三張名譽又津津 又與慈溪張生甫 嘉定張山雷 稱為名醫三張
The three Zhang’s also enjoy famous reputations. [Zhang Xichun] is further praised together with Cixi (Zhejiang) [physician] Zhang Shengfu, and Jiading (Jiangsu) [physician] Zhang Shanlei, as one of the three famous physicians named Zhang. 39

Moreover, tying together this modern movement with medical trends begun a thousand years prior, there are several references in the preface to Zhang Xichun’s text to the Northern Song scholar Fan Zhongyan 范仲淹 (989-1052) with the statement: buwei liangxiang biwei liangyi 不為良相必為良醫 (if one doesn’t become a good official, one must become a good physician). 40

From this brief survey of post-Jin references to the contributions of these medical masters it is evident that their impact was profound. It is also evident that the concept of “four masters” should not be taken as a literal numerical indicator. Therefore, those later historiographical trends that limit discussion to Liu, Zhang, Li, and Zhu, obscure more than they illuminate. A more intriguing argument is that this concept was a literary trope identifying the waxing involvement of literati in a diverse array of endeavors as the opportunities for government service waned. This frames the medical developments during the Jin as part of a larger Confucian intellectual movement that spanned China’s middle period, which could be called the Period of the Four Great Masters (c.1000-1400).
Period of the Four Great Masters (c.1000-1400)

This novel periodization being proposed for the study of Chinese intellectual history describes the extension of literati endeavors from the philosophical, to the medical, to the artistic, as they became increasingly excluded from government service. However, they never abandoned the Confucian obligation to bring order out of chaos. Although this trend has been limitedly identified by various scholars within specific dynastic periods, linking these three periods together into a single cohesive movement has so far eluded mainstream historiography. The first phase of this period occurred during the Northern Song. It began with the gradual shift away from the public sphere, as the number of jinshi 進士 (advanced scholar) degree holders vastly exceeded the number of official government posts available. This situation led them into the private sphere, where they expounded upon the structure and order of the universe, commented on the classical Confucian canon to make the learning relevant to contemporary needs, constructed educational arenas to prepare the next generation for the examinations and public service, and disseminated their ideas to serve their curriculum via the burgeoning publication industry.

The second phase occurred during the Jin. Because Jurchen were favored over Han in the examinations, this placed even greater limitations on government service. Many literati turned to the study of medicine after being unable to achieve the jinshi degree or an official post, which offered an alternative avenue for examination success and government service. Furthermore, medicine provided the opportunity to fulfill the Confucian goals of ordering the world and caring for humanity. Literati medicine was further supported by an officially sponsored classical medical canon. This allowed scholars the chance to expound upon the structure and order of the universe, comment on the classical medical texts to make the learning relevant to contemporary needs, construct educational arenas to prepare the next generation for success on the medical examinations and clinical practice, and disseminate their ideas in publications to serve their curriculum.
The third phase occurred during the Yuan. During this period, the examinations were suspended by the Mongols until 1315, but even after being reinstated the Han were mostly excluded from government service. As a result, many literati turned to art and became increasingly involved in landscape painting, which provided a forum for expressing their comments and concerns over the order of things and a vehicle to disseminate their ideas. The parallels between these three phases, coupled with the subsequent references to four masters for each phase, defines the periodization of these four centuries.

The “four masters” of Yuan landscape painting is again a literary trope used to identify engagement in the field by the educated elite. James Cahill (1977) remarked that these sidajia 四大家 (four great masters) were active in the southern provinces where they demonstrated aloofness to Mongol rule while bringing literati painting to full maturity. Cahill notes that the south was the center of anti-Mongol sentiment and the origin of rebellion, which eventually toppled the Yuan and established the Ming. Just like literati during the Jin dynasty, these masters were inspired by the Northern Song scholar Su Shi 蘇軾 (1037-1101), who in addition to dabbling in medicine argued that painting should not merely represent forms, but should instead serve as a medium for self-expression. Although the four masters of painting are commonly identified as Huang Gongwang 黃公望 (1269-1354), Wu Zhen 吳鎮 (1280-1354), Ni Zan 倪瓚 (c.1301-1374), and Wang Meng 王蒙 (1308-1385), sometimes the group alternatively included others such as Sheng Mou 盛懋 (fl.1310-1360), and they drew inspiration from earlier artists like Gao Kegong 高克恭 (1248-1310) and Zhao Mengfu 趙孟頫 (1254-1322).

Many similarities are evident between the four masters of Jin medicine and Yuan painting. Susan E. Nelson (1980) found that the four masters were celebrated during the Ming and Qing as outstanding in their ability to draw upon the works of earlier painters while demonstrating unprecedented spontaneity and expressive freedom. Nelson also noted that Ni Zan was originally not included among the four masters because his degree of spontaneity and freedom transcended the works of the others, who were best understood in terms of what came before. Nelson (1983) further found that in addition to asserting their individualism, the Yuan masters were the first to make a systematic study of earlier models. Furthermore, some Ming scholars argued that their painting styles reflected the political situation of Mongol occupation, which forced literati to become
reclusive rather than serve the barbarians, with the resultant eremitism helping them crystallize their talents. The Yuan masters asserted that literati artists must first be of high moral character, and secondly they must carefully study the ancients in congruence with all forms of Confucian learning. Just as critics of Jin medicine were found among the Qing proponents of the Hanxue (school of Han learning), Nelson (1986) found that like-minded scholars also criticized the Yuan painters for the “unstudied spontaneity” of their signature styles, which deviated from classical norms. Thus just like the Jin medical masters, Yuan painters drew upon earlier developments while extending the medium to reflect their individual experiences and political opinions, and were subsequently both revered and reviled.

Inclusion and exclusion from the group of four masters, for both Jin physicians and Yuan painters, was due in part to their political ideology. Li Chu-Tsing (1993) argued that Zhao Mengfu has been poorly understood, not only because his style was much more diverse than the others, but also because his decision to serve the Yuan court in 1286 excluded him from that group. While they actually had little choice in the matter, Yuan literati prided themselves on their refusal to serve the Mongol court. Therefore, they criticized Zhao for his accommodations to the foreign barbarian rulers. This is similar to how Luo Tianyi was excluded from the group of medical masters because of his service to the Yuan as an army doctor. Although Jin literati doctors were primarily Jin loyalists, with some like Zhang Congzheng even serving the court as medical officials, their political activism in striving to order the world from the private sphere was a core feature of their texts. Sandra Jean Wetzel (1996) argues that although Sheng Mou was a professional painter, his work shared many characteristics of those by Yuan literati painters, including thematic content and personal expression. Wetzel found that one of the earliest references to four masters of the Yuan included Sheng Mou for his landscapes, Wu Zhen for his bamboo paintings, Yue Yangao 岳彦高 for his grass script calligraphy, and Zhang Wenmao 張文茂 for his unique calligraphic style. Wetzel concludes that because Sheng Mou regularly earned a living as a professional painter, allowing his patrons to specify the subject of his works, this likely precluded his continued inclusion among the four masters as the concept became dominated by the private literati tradition. Thus not only were there more than four masters of Yuan painting, but they were also distinguished by the socio-political discourse embedded in their works.
The embedded discourse in their works became part of their signatures, and built upon the tradition perpetuated under the Jin dynasty. Shi-Yee Liu (2010) describes how the earliest phase of Chinese scroll painting (c.400) was characterized by narrative images that interpreted a literary or historical theme, and thereby revealed a political, philosophical, or moral perspective. Liu examined the scroll entitled *A Diplomatic Mission to the Jin* (c.1150-60) attributed to the Jin court painter Yang Bangji 楊邦基 (c.1110-1181, *jinshi* 1139), which depicts Nansong officials being escorted through mountain passes in the north by Jurchen horsemen, and accompanied by Jurchen musicians. Liu concludes that it represents the advanced phase of narrative landscape painting, and argues this painting integrates the aesthetics of Northern Song court painting established by scholars like Su Shi. Liu shows how the subject matter is overtly political, being explicitly meant to both celebrate the recognition of Jin suzerainty by their tributary state as well as disgrace the Nansong. Maxwell K. Hearn (2009) asserts that Jin literati landscape painting perpetuated the traditions of the Northern Song and promoted the idea that painting should serve a greater purpose than merely accurately representing forms, whereas the Nansong was influenced by emperor Huizong’s decision to promote a return to the Tang dynasty painting styles.

Hearn argues that after the fall of the Jin, the southern Yuan artists were reunited with the northern tradition that had served the overtly political goals of magnifying the grandeur and order of the state. They then proceeded to transform the style with covert messages embedded in images of ancient trees and winter groves, which served as metaphors for their own integrity, strength, and endurance in the face of adversity due to the Mongol conquest. Hearn further argues that these literati artists developed landscape painting to serve as a medium of exchange between like-minded individuals. This trend again mirrors Jin medical developments.

A brief description of some other ways Yuan literati painters embedded a socio-political discourse in their works helps to clarify this argument. A classic exemplar of Ni Zan’s style of painting is *The Rongxi Studio* 容膝齋 (see figure 28), which depicts an
empty pavilion in the foreground surrounded by tall trees reaching upwards towards a
distant background that is separated from the foreground by water. Although Hearn (2009)
doesn’t differentiate the empty from the inhabited pavilion sheltered by old trees, he
affirms it as representing a gathering place of true literati in the wilderness who have
removed themselves from the chaos of the world to pursue self cultivation and moral
purity. The emptiness of the pavilion could also symbolize the absence of legitimate
rulers, a place the literati want to return to, but must wait until the barbarians are expelled.

Another theme that is repeated by not only Ni Zan in other paintings, but also by
artists like Wu Zhen in *The Old Fisherman* (1342) (see figure 29) and Sheng Mou in his
*Noble Scholar in an Autumn Grove* (c.1350) (see figure 30), is the sharp separation of the
landscape into a foreground and background. In these paintings, the trees again serve as
metaphors for the literati who are reaching towards reunification, while the water
represents the Mongols who have imposed the separation. Importantly, these trees often
come close to, but always fail to touch, the background, as the dream of returning to Han
rule and reunifying the Central Plains remained elusive.
Therefore, the *Period of the Four Great Masters* (c.1000-1400) is a valid framework for broadly understanding China’s middle period, spanning the Northern Song, Jin, and Yuan dynasties, and specifically for understanding intellectual history. What this periodization reveals is the trajectory of Confucian elite activities from the public to the private sphere while maintaining their core purpose to order the world. As the literati became increasingly excluded from government service they turned to other pursuits to fulfill their moral and civil obligations. The first phase of this trajectory remained focused on studying and interpreting the Confucian canon and success in the examinations, with all of the masters successfully achieving the *jinshi* degree. The second phase focused on studying and interpreting the classical medical canon as literati became increasingly unable to achieve the *jinshi* degree, but found an alternative track for examination success and public service. The third and final phase of this period focused on studying and interpreting landscape painting as literati became disengaged from public service and were increasingly reclusive. In all cases, the goal of their efforts was to support the perpetuation of Confucian civilization, and to *bolulu fanzheng* (bring order out of chaos).
APPENDIX 1

Selected formulas with ingredients from the *Shanghan Lun* (Treatise on Cold Damage) as presented by Cheng Wuji 成無己 (c.1060-1157) in the *Shanghan Mingli Lun* 傷寒明理論 (Treatise Enlightening the Principles of Cold Damage), in the essay *yaofang lun* 藥方論 (treatise on medicinal prescriptions): ¹

**Guizhi Tangfang** 桂枝湯方 (Cinnamon Twig Decoction):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guizhi 桂枝 (<em>Cinnamomum cassia</em> Blume, Ramulus)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Shaoyao 芍藥 (<em>Paeonia lactiflora</em> Pall., Radix)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Gancaozhi 甘草炙 (<em>Glycyrrhiza uralensis</em> Fischer, Radix Preperata)</td>
<td>2 liang</td>
</tr>
<tr>
<td>Shengjiang 生薑 (<em>Zingiber officinale</em> Rosc., Rhizoma recens)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Dazao 大棗 (<em>Ziziphus jujubae</em> Mill., Fructus)</td>
<td>12 pieces</td>
</tr>
</tbody>
</table>

**Mahuang Tangfang** 麻黃湯方 (Ephedra Decoction):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahuang 麻黃 (<em>Ephedra sinica</em> Stapf., Herba)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Guizhi 桂枝 (<em>Cinnamomum cassia</em> Blume, Ramulus)</td>
<td>2 liang</td>
</tr>
<tr>
<td>Gancaozhi 甘草炙 (<em>Glycyrrhiza uralensis</em> Fischer, Radix Preperata)</td>
<td>2 liang</td>
</tr>
<tr>
<td>Xingren 杏仁 (<em>Prunus armeniaca</em> L., Semen)</td>
<td>70 pieces</td>
</tr>
</tbody>
</table>

**Da Qinglong Tangfang** 大青龍湯方 (Major Green Dragon Decoction):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahuang 麻黃 (<em>Ephedra sinica</em> Stapf., Herba)</td>
<td>6 liang</td>
</tr>
<tr>
<td>Guizhi 桂枝 (<em>Cinnamomum cassia</em> Blume, Ramulus)</td>
<td>2 liang</td>
</tr>
<tr>
<td>Gancaozhi 甘草炙 (<em>Glycyrrhiza uralensis</em> Fischer, Radix Preperata)</td>
<td>1 liang</td>
</tr>
<tr>
<td>Xingren 杏仁 (<em>Prunus armeniaca</em> L., Semen)</td>
<td>40 pieces</td>
</tr>
<tr>
<td>Shengjiang 生薑 (<em>Zingiber officinale</em> Rosc., Rhizoma recens)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Dazao 大棗 (<em>Ziziphus jujubae</em> Mill., Fructus)</td>
<td>10 pieces</td>
</tr>
<tr>
<td>Shigao 石膏 (<em>Calcium Sulfate</em>, Gypsum)</td>
<td>1 chicken-egg sized block, crushed.</td>
</tr>
</tbody>
</table>

**Xiao Qinglong Tangfang** 小青龍湯方 (Minor Green Dragon Decoction):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahuang 麻黃 (<em>Ephedra sinica</em> Stapf., Herba)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Gancaozhi 甘草炙 (<em>Glycyrrhiza uralensis</em> Fischer, Radix Preperata)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Guizhi 桂枝 (<em>Cinnamomum cassia</em> Blume, Ramulus)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Shaoyao 芍藥 (<em>Paeonia lactiflora</em> Pall., Radix)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Wuweizi 五味子 (<em>Schisandra chinensis</em> (Turcz.) Baill., Fructus)</td>
<td>½ sheng</td>
</tr>
<tr>
<td>Xixin 細辛 (<em>Asari Herba cum Radice</em>)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Ganjiang 乾薑 (<em>Zingiber officinallis</em> Rosc., Rhizoma)</td>
<td>3 liang</td>
</tr>
<tr>
<td>Banxia 半夏 (<em>Pinellia ternate</em> (Thunb.) Breit., Rhizoma)</td>
<td>½ sheng</td>
</tr>
</tbody>
</table>
**Da Chengqi Tangfang** 大承氣湯方 (Major Order the Qi Decoction):

- Zhishi 枳實 (*Citrus aurantium* L., Fructus) 5 pieces
- Houpo 厚朴 (*Magnolia officinalis* Rehd. Et Wils, Cortex) ½ jin
- Mangxiao 芒硝 (Mirabilite) 3 ge
- Dahuang 大黃 (Rhei Radix et Rhizoma) 4 liang

**Da Chaihu Tangfang** 大柴胡湯方 (Major Bupleurum Decoction):

- Chaihu 柴胡 (*Bupleurum chinense* D.C., Radix) ½ jin
- Huangqin 黃芩 (*Scutellaria baicalensis* Georgi., Radix) 3 liang
- Zhishi 枳實 (*Citrus aurantium* L., Fructus) 4 pieces
- Shaoyao 芍藥 (*Paeonia lactiflora* Pall., Radix) 3 liang
- Shengjiang 生薑 (*Zingiber officinale* Rosc., Rhizoma recens) 5 liang
- Banxia 半夏 (*Pinellia ternate* (Thunb.) Breit., Rhizoma) ½ sheng
- Dazao 大棗 (*Ziziphus jujubae* Mill., Fructus) 12 pieces

**Xiao Chaihu Tangfang** 小柴胡湯方 (Minor Bupleurum Decoction):

- Chaihu 柴胡 (*Bupleurum chinense* D.C., Radix) ½ jin
- Huangqin 黃芩 (*Scutellaria baicalensis* Georgi., Radix) 3 liang
- Renshen 人參 (*Panax ginseng* C.A. Mey, Radix) 1 liang
- Gancao炙 甘草炙 (*Glycyrrhiza uralensis* Fischer, Radix Preperata) 3 liang
- Banxia 半夏 (*Pinellia ternate* (Thunb.) Breit., Rhizoma) ½ sheng
- Shengjiang 生薑 (*Zingiber officinale* Rosc., Rhizoma recens) 3 liang
- Dazao 大棗 (*Ziziphus jujubae* Mill., Fructus) 12 pieces

**Zhizichi Tangfang** 梔子豉湯方 (Gardenia & Fermented Bean Decoction):

- Zhizi 梔子 (*Gardenia jasminoides* Ellis, Fructus) 14 pieces
- Xiangchi 香豉 (*Glycine max* (L.) Merr., Semen Preparatum) 4 ge

**Guadi sanfang** 瓜蒂散方 (Melon Pedicle Powder):

- Guadi 瓜蒂 (*Cucumis melo* L., Pedicellus) 1 fen
- Chixiaodou 赤小豆 (*Phaseolus calcaratus* Roxb., Semen) 1 fen

**Da Xianxiong Tangfang** 大陷胸湯方 (Minor Sinking Into the Chest Decoction):

- Gansui 甘遂 (*Euphorbia kansui* Liou, Radix) 1 qian
- Mangxiao 芒硝 (Mirabilite) 1 sheng
- Dahuang 大黃 (Rhei Radix et Rhizoma) 6 liang
<table>
<thead>
<tr>
<th><strong>Banxia Xiexin Tangfang</strong> 半夏瀉心湯方 (Pinellia Drain the Heart Decoction):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Huanglian</strong> 黃連 (Coptis chinensis Franch., Rhizoma)</td>
</tr>
<tr>
<td><strong>Huangqin</strong> 黃芩 (Scutellaria baicalensis Georgi., Radix)</td>
</tr>
<tr>
<td><strong>Banxia</strong> 半夏 (Pinellia ternata (Thunb.) Breit., Rhizoma)</td>
</tr>
<tr>
<td><strong>Ganjiang</strong> 乾薑 (Zingiber officinalis Rosc., Rhizoma)</td>
</tr>
<tr>
<td><strong>Renshen</strong> 人參 (Panax ginseng C.A. Mey, Radix)</td>
</tr>
<tr>
<td><strong>Gancaozhi</strong> 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata)</td>
</tr>
<tr>
<td><strong>Dazao</strong> 大棗 (Ziziphus jujubae Mill., Fructus)</td>
</tr>
</tbody>
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<thead>
<tr>
<th><strong>Yinchenhao Tangfang</strong> 茵陳蒿湯方 (Artemesia Decoction):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yinchenhao</strong> 茵陳蒿 (Artemesiae Herba)</td>
</tr>
<tr>
<td><strong>Zhizi</strong> 梔子 (Gardenia jasminoides Ellis, Fructus)</td>
</tr>
<tr>
<td><strong>Dahuang</strong> 大黃 (Rhei Radix et Rhizoma)</td>
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</tbody>
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<thead>
<tr>
<th><strong>Baihu Tangfang</strong> 白虎湯方 (White Tiger Decoction):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zhimu</strong> 知母 (Anemarrhena asphodeloides Bge., Rhizoma)</td>
</tr>
<tr>
<td><strong>Shigao</strong> 石膏 (Calcium Sulfate, Gypsum)</td>
</tr>
<tr>
<td><strong>Gancaozhi</strong> 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata)</td>
</tr>
<tr>
<td><strong>Gengmi</strong> 粳米 (Oryzae Semen)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Wuling Sanfang</strong> 五苓散方 (Five Ingredient Poria Powder):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fuling</strong> 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium)</td>
</tr>
<tr>
<td><strong>Zhuling</strong> 豬苓 (Polyporus umbellatus (Pers.) Fr., Sclerotium)</td>
</tr>
<tr>
<td><strong>Baizhu</strong> 白术 (Atractylodes macrocephala Koidz., Rhizoma)</td>
</tr>
<tr>
<td><strong>Zexie</strong> 澤瀉 (Alisma palntago-aquatica L. var. orientale Samuels, Rhizoma)</td>
</tr>
<tr>
<td><strong>Guizhi</strong> 桂枝 (Cinnamomum cassia Blume, Ramulus)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Li Zhong Wanfang</strong> 理中丸方 (Order the Center Pill):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renshen</strong> 人參 (Panax ginseng C.A. Mey, Radix)</td>
</tr>
<tr>
<td><strong>Baizhu</strong> 白术 (Atractylodes macrocephala Koidz., Rhizoma)</td>
</tr>
<tr>
<td><strong>Gancaozhi</strong> 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata)</td>
</tr>
<tr>
<td><strong>Ganjiang</strong> 乾薑 (Zingiber officinalis Rosc., Rhizoma)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sini Tangfang</strong> 四逆湯方 (Four Rebellions Decoction):</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gancao</strong> 甘草 (Glycyrrhiza uralensis Fischer, Radix)</td>
</tr>
<tr>
<td><strong>Ganjiang</strong> 乾薑 (Zingiber officinalis Rosc., Rhizoma)</td>
</tr>
<tr>
<td><strong>Fuzi</strong> 附子 (Aconitum carmichaeli Debx., Radix Lateralis)</td>
</tr>
</tbody>
</table>
**Zhenwu Tangfang** 真武湯方 (Perfected Warrior Decoction):

Fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium) 3 liang
Baizhu 白术 (Atractylodes macrocephala Koidz., Rhizoma) 2 liang
Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix) 3 liang
Shengjiang 生薑 (Zingiber officinale Rosc., Rhizoma recens) 3 liang
Fuzi 附子 (Aconitum carmichaeli Debx., Radix Lateralis) 1 piece, 8 slices

**Jianzhong Tangfang** 建中湯方 (Construct the Center Decoction):

Jiaoyi 膠饴 (Hordeum vulgare, L., Saccharum Granorum, Maltose) 1 sheng
Gancaozhi 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 1 liang
Guizhi 桂枝 (Cinnamomum cassia Blume, Ramulus) 3 liang
Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix) 6 liang
Dazao 大棗 (Ziziphus jujubae Mill., Fructus) 12 pieces
Shengjiang 生薑 (Zingiber officinale Rosc., Rhizoma recens) 3 liang

**Piyao Wanfang** 脾藥丸方 (Spleen Medicine Pill)
[also known as Maziren Wan 麻子仁丸 (Hemp Seed Pill)]:

Maziren 麻子仁 (Cannabis sativa L., Semen) 2 liang
Xingren 杏仁 (Prunus armeniaca, L., Semen) 1 sheng
Zhishi 枳實 (Citrus aurantium L., Fructus) ½ jin
Houpo 厚朴 (Magnolia officinalis Rehd. Et Wils, Cortex) 1 chi
Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix) ½ jin
Dahuang 大黃 (Rhei Radix et Rhizoma) 1 jin

**Didang Tangfang** 抵當湯方 (Taken a Beating Decoction):

Shuizhi 水蛭 (Hirudo seu Whitmania) 30 pieces
Mengchong 虻蟲 (Tabanus) 30 insects
Taoren 桃仁 (Prunus persica (L.) Batsch., Semen) 30 kernels
Dahuang 大黃 (Rhei Radix et Rhizoma) 3 liang
APPENDIX 2

The *yaolue* 藥略 (medicinal summary) from chapter 32 of the *Suwen Bingji Qiyi Baoming Ji* 素問病機氣宜保命集 (Collection on the Appropriate Qi for Saving Lives based on Disease Mechanisms from the *Suwen*) by Liu Wansu 劉完素 (c.1100-1200): ¹

*Qianghuo* 羌活 (Notopterygii Radix et Rhizoma):
治支節痛 太陽經風藥也
Treats limb and joint pain, it is a *taiyang* channel wind medicinal.

*Fangfeng* 防風 (Ledebouriellae Radix):
療風通用
It is useful for curing penetrating wind.

*Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix):
和中調諸藥
Harmonizes the center and balances the various medicinals.

*Rougui* 肉桂 (*Cinnamomum cassia* Blume, Cortex):
通氣助陽
Opens up the *qi* and helps the *yang*.

*Guizhi* 桂枝 (*Cinnamomum cassia* Blume, Ramulus):
閉汗和表
Stops sweating and harmonizes the exterior.

*Mahuang* 麻黃 (*Ephedra sinica* Stapf., Herba):
發太陽太陰經汗
Releases *taiyang* and *taiyin* channel sweating.

*Taoren* 桃仁 (*Prunus persica* (L.) Batsch., Semen):
滋血破血
Nourishes the blood and cracks the blood.

*Huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix):
瀉肝氣
Drains liver *qi*.

*Xionghuang* 雄黃 (Realgar):
去風
Dispels wind.
**Baizhi** 白芷 (Angelicae Dahuricae Radix):
治正陽明頭痛
Treats and corrects *yangming* headache.

**Zhimu** 知母 (Anemarrhena asphodeloides Bge., Rhizoma):
泄腎火助陰
Drains kidney fire and aids *yin*.

**Shigao** 石膏 (Calcium Sulfate, Gypsum):
瀉肺火 是陽明大涼藥
Drains lung fire and is a *yangming* great cooling medicinal.

**Banxia** 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma):
去痰
Dispels phlegm.

**Chaihu** 柴胡 (Bupleurum chinense D.C., Radix):
治少陽 厥陰 寒熱往來
Treats *shaoyang* and *jueyin* alternating cold and heat.

**Shaoyao** 芍藥 (Paeonia lactiflora Pall., Radix):
止脾痛 安太陰
Stops spleen pain and calms the *taiyin*.

**Renshen** 人參 (Panax ginseng C.A. Mey, Radix):
補氣和中
Tonifies *qi* and harmonizes the center.

**Guadi** 瓜蒂 (Cucumis melo, L., Pedicellus):
治濕在上頭 吐藥
Treats dampness residing above in the head, an emetic medicinal.

**Chidou** 赤豆 (Phaseolus calcaratus Roxb., Semen):
利小便
Benefits urination.

**Xingren** 杏仁 (Prunus armeniaca, L., Semen):
潤肺除燥
Moistens the lung and eliminates dryness.

**Cangzhu** 苍术 (Atractylodis Rhizoma):
溫中 去濕熱 強胃
Wars the center, dispels dampness and heat, and strengthens the stomach.
**Caowu** 草烏 (*Aconitum japonicum*, Thunb., Radix):
頭熱 行經
[Treats] head heat and moves the channels.

**Nanxing** 南星 (*Arisaematis Rhizoma*):
治風痰須用
For treating wind phlegm one must use it.

**Tianma** 天麻 (*Gastrodia elata*, Blume, Rhizoma):
治頭風
Treats head wind.

**Shenqu** 神曲 (*Massa Fermentata*):
消食強胃
Promotes digestion and strengthens the stomach.

**Baizhu** 白术 (*Atractylodes macrocephala* Koidz., Rhizoma):
苍术同
Same as *cangzhu*

**Chenpi** 陳皮 (*Citrus reticulate* Blanco, Pericarpium):
益氣
Benefits *qi*.

**Zhishi** 枳實 (*Citrus aurantium* L., Fructus):
治心下痞
Treats masses below the heart.

**Zhike** 枳殼 (*Citrus aurantium* L., Fructus Immaturus):
利胸中氣 消痞
Benefits center of the chest *qi* and removes masses.

**Huanglian** 黃連 (*Coptis chinensis* Franch., Rhizoma):
瀉心火
Drains heart fire.

**Baifuling** 白茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium):
止渴 利小便 太陰經藥
Stops thirst, benefits urination, a *taiyin* channel medicinal.

**Kutingli** 苦葶藶 (*Descurainiae seu Lepidii, Semen*):
瀉肺火
Drains lung fire.
**Jiegeng** 桔梗 (*Platycodon grandiflorum* (Jacq.) A. DC., Radix):
治咽喉痛 利肺气
Treats throat pain and benefits lung *qi*.

**Dahuang** 大黄 (*Rhei Radix et Rhizoma*):
瀉實熱
Drains excess heat.

**Houpo** 厚朴 (*Magnolia officinalis* Rehd. Et Wils, Cortex):
治脹滿 厚腸
Treats swelling and fullness and favors the intestines.

**Huangqi** 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix):
止汗 治諸氣虛不足
Stops sweating and treats various *qi* deficiencies and insufficiencies.

**Binglang** 槟榔 (*Areca catechu* L., Semen):
破氣下行
Unblocks the *qi* and has a downward movement.

**Jingjie** 荊芥 (*Schizonepeta tenufolia* Briq., Herba seu Flos):
清利頭目
Clears and benefits the head and eyes.

**Wumeirou** 烏梅肉 (*Prunus mume* (Sieb.) Sieb et Zucc., Fructus):
助脾收胃飲食
Aids the spleen and [helps] the stomach accept drinks and food.

**Chenxiang** 沉香 (*Aquilaria agallocha* Roxb., Lignum cum resina):
益氣和神
Benefits the *qi* and harmonizes the spirit.

**Roudoukou** 肉豆蔻 (*Myristica fragrans* Houtt., Semen):
治大腸 腸滑
Treats the large intestine and intestinal slipperiness (diarrhea).

**Fuzi** 附子 (*Aconitum carmichaeli* Debx., Radix Lateralis):
補命及心火
Tonifies from the life [gate of the kidney] to the heart fire.

**Poxiao** 朴硝
寒鹹去燥
It is cold and salty and dispels dryness.
**Zhizi** 梔子 (*Gardenia jasminoides* Ellis, Fructus):
除煩 利氣 行小便
Eliminates vexation, benefits the *qi*, and promotes urination.

**Danggui** 當歸 (*Angelica sinensis* (Oliv.) Diels, Radix):
補三陰血不足
Tonifies the three *yin* and blood insufficiencies.

**Chuanxiong** 川芎 (*Ligusticum wallichii* Hort., Radix):
太陽頭痛
For *taiyang* head pain.

**Dihuang** 地黃 (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix):
補腎真陰不足 脐下痛
Tonifies the kidneys and true *yin* insufficiencies, and for pain below the navel.

**Bixie** 萈薢 (*Dioscorea hypoglauca* Palib., Rhizoma):
補腎不足
Tonifies kidney insufficiencies.

**Duzhong** 杜仲 (*Eucommia ulmoides* Oliv., Cortex):
壯筋骨兩全
Strengthens both the sinews and bones altogether.

**Niuxi** 牛膝 (*Achyranthes bidentata* Bl., Radix):
補筋益脾
Tonifies the sinews and benefits the spleen.

**Congrong** 棗蓉 (*Cistanche deserticola* Y.C. Ma., Herba):
益陽道及命門火衰
Benefits the *yang* pathways reaching to the *mingmen* (life gate) fire declining.

**Shayuanjili** 沙苑蒺藜 (*Tribulus terrestris* L., Fructus):
補腎水真陰
Tonifies kidney water and true *yin*.

**Buguzhi** 破故紙 (*Psoralea corylifolia* L., Fructus):
補命門不足
Tonifies *mingmen* (life gate) insufficiencies.

**Wuweizi** 五味子 (*Schisandra chinensis* (Turcz.) Baill., Fructus):
補五臟氣不足
Tonifies the five *zang* (solid organs) *qi* insufficiencies.
Badou 巴豆 (Croton tiglium L., Semen):
去濕之過藥
A proven medicinal to dispel dampness.

Xīxin 细辛 (Asari Herba cum Radice):
少陰頭痛不足
For shaoyin head pain and insufficiencies.

Shengma 升麻 (Cimicifugae Rhizoma):
陽明經和解藥
A medicinal to harmonize and unbind the yangming channel.

Shetui 蛇蜕 (Serpentis Exuviae):
去皮膚風燥
Dispels skin wind and dryness.

Huixiang 茴香 (Foeniculum vulgare Mill., Fructus):
利小便 補腎 去沉寒 助陽
Benefits urination, tonifies the kidneys, dispels sinking cold, and aids the yang.

Kulianzi 苦楝子 (Melia toosendan Sieb. Et Zucc., Fructus):
去小腹痛
Dispels lower abdominal pain.

Guangmao 廣茂 (unidentified medicinal):
去積聚
Dispels masses and accumulations.

Ganjiang 乾薑 (Zingiber officinallis Rosc., Rhizoma):
益氣和中
Benefits the qi and harmonizes the center.

Shengdihuang 生地黃 (Rehmannia glutinosa (Gaertn.) Libosch., Radix):
涼血
Cools the blood.

Moyao 没藥 (Commiphora myrrha Engl., Resina):
除血痛 和血之勝藥也
Eliminates blood pain, it is a successful medicinal for harmonizing the blood.

Diyu 地榆 (Sanguisorba officinalis L., Radix):
治下部有血
Treats bleeding from the lower sections [of the body].
Zexie 澤瀉 (Alisma plantago-aquatica L. var. orientale Samuels, Rhizoma):
治少陰不渴而小便不利及膀胱中有留
Treats shaoyin without thirst and difficult urination as well as urine retention in the bladder.
Selected formulas with ingredients from the *Xiao’er Yaozheng Zhijue* 小兒藥證直訣 (Craft of Medicinal Treatment for Children) by Qian Yi 錢乙 (1035-1117) recommended by Jin dynasty literati physicians:

**Dihuang Wan 地黃丸 (Rhemanniae Pill):**
- *Shudihuang* 熟地黃 (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix Preperata) 8 qian
- *Shanyurou* 山萸肉 (*Cornus officinalis* Sieb. et Zucc., Fructus) 4 qian
- *Ganshanyao* 乾山藥 (*Dioscorea opposita* Thunb., Radix) 4 qian
- *Zexie* 澤瀉 (*Alisma palntago-aquatica* L. var. *orientale* Samuels, Rhizoma) 3 qian
- *Mudanpi* 牡丹皮 (*Paeonia suffruticosa* Andr., Cortex) 3 qian
- *Baifuling* 白茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium) 3 qian

**Xieqing Wan 瀉青丸 (Drain the Green Pill):**
- *Danggui* 當歸 (*Angelica sinensis* (Oliv.) Diels, Radix)
- *Longnao* 龍腦 (Borneol Camphor)
- *Chuanxiong* 川芎 (*Ligusticum wallichii* Hort., Radix)
- *Shanzhiziren* 山梔子仁 (*Gardenia jasminoides* Ellis, Fructus et Semen)
- *Chuandahuang* 川大黃 (Rhei Radix et Rhizoma, Sichuan variety)
- *Qianghuo* 羌活 (*Notopterygii Radix et Rhizoma*)
- *Fangfeng* 防風 (*Ledebouriellae Radix*)

**Anshen Wan 安神丸 (Calm the Spirit Pill):**
- *Mayaxiao* 馬牙硝 (Sodium sulphate, Mirabilite) 5 qian
- *Baifuling* 白茯苓 (*Poria cocos* (Schw.) Wolf, Sclerotium) 5 qian
- *Maimendong* 麥門冬 (*Ophiopogonis Tuber*) 5 qian
- *Longnao* 龍腦 (Borneol Camphor) 1 zi
- *Hanshuishi* 寒水石 (Alabaster, Gypsum calcite) 5 qian
- *Zhusha* 朱砂 (Cinnabar) 1 liang
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix) 5 qian

**Xiexin Tang 瀉心湯 (Drain the Heart Decoction):**
- *Huanglian* 黃連 (*Coptis chinensis* Franch., Rhizoma) 1 liang

**Daochi San 導赤散 (Guide Out the Red Powder):**
- *Shengdihuang* 生地黃 (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix)
- *Gancao* 甘草 (*Glycyrrhiza uralensis* Fischer, Radix)
- *Shengmutong* 生木通 (*Akebiae Caulis Recens*)

425
Yihuang San 益黃散 (Benefit the Yellow Powder): 6
Chenpi 陳皮 (Citrus reticulate Blanco, Pericarpium) 1 liang
Dingxiang 丁香 (Eugenia caryophyllata Thunb., Flos) 2 qian
Hezi 訝子 (Terminalia chebula Retz., Fructus) 5 qian
Qingpi 青皮 (Citrus reticulata Blanco, Pericarpium Viride) 5 qian
Gancaozhi 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 5 qian

Xiehuang San 瀉黃散 (Drain the Yellow Powder): 7
Huoxiangye 藿香葉 (Agastaches seu Pogostemi Herba seu Folium) 7 qian
Shanzhiziren 山梔子仁 (Gardenia jasminoides Ellis, Fructus et Semen) 1 qian
Shigao 石膏 (Calcium Sulfate, Gypsum) 5 qian
Gancao 甘草 (Glycyrrhiza uralensis Fischer, Radix) 3 liang
Fangfeng 防風 (Ledebouriellae Radix) 4 liang

Ejjiao San 阿膠散 (Ass-hide Glue Powder): 8
Ejjiao 阿膠 (Equus asinus L., Gelatinum Corri) 5 qian
Shunianzi 鼠麴子 (Arctium lappa L., Fructus) 2 qian, 5 fen
Gancaozhi 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 2 qian, 5 fen
Madouling 馬兜鈴 (Aristolochiae Fructus) 5 qian
Xingren 杏仁 (Prunus armeniaca, L., Semen) 7 pieces
Nuomi 糯米 (polished glutinous rice)

Xiebai San 瀉白散 (Drain the White Powder): 9
Digupi 地骨皮 (Lycii Cortex Radicis) 1 liang
Sangbaipi 桑白皮 (Morus alba L., Cortex Radicis) 1 liang
Gancaozhi 甘草炙 (Glycyrrhiza uralensis Fischer, Radix Preperata) 1 qian
APPENDIX 4

List of the 106 medicinals in five categories from the *yaolei fajia* 藥類法家 (method of grouping categories of medicinals) in the *Yixue Qiyuan* 醫學啟源 (Expounding the Foundations of Medical Studies, c.1210) by Zhang Yuansu 張元素 (c.1140-1220).  
Medicinals followed by an asterix (*) were not included in similar essays in the *Tangye Bencao* 湯液本草 (Materia Medica of Decoction, 1246, 1298) by Wang Haogu 王好古 (c.1210-1310) ² and the *Weisheng Baojian* 衛生寶鑑 (Precious Mirror for Protecting Health, 1281) by Luo Tianyi 羅天益 (c.1220-1300): ³

**Feng sheng sheng** 風升生 (wind [dispelling], rising, generating):
- *Fangfeng* 防風 (Ledebouriellae Radix)
- *Qianghuo* 麻樞 (Notopterygii Radix et Rhizoma)
- *Shengma* 升麻 (Cimicifugae Rhizoma)
- *Chaihu* 柴胡 (*Bupleurum chinense* D.C., Radix)
- *Gegen* 葛根 (*Peurariae Radix*)
- *Weilingxian* 威靈仙 (*Clematidis Radix*)
- *Xixin* 細辛 (*Asari Herba cum Radice*)
- *Duhuo* 獨活 (*Angelica pubescens* Maxim., Radix)
- *Xiangbaizhi* 香白芷 (*Angelicae Dahuricae Radix*)
- *Shunianzi* 鼠粘子 (*Arctium lappa* L., Fructus)
- *Jiegeng* 桔梗 (*Platycodon grandiflorum* (Jacq.) A. DC., Radix)
- *Gaoben* 藁本 (*Ligusticum sinense* Oliv., Radix et Rhizoma)
- *Chuanxiong* 川芎 (*Ligusticum wallichii* Hort., Radix)
- *Manjingzi* 蔓荊子 (*Viticis Semen*)
- *Qinjiao* 秦艽 (*Gentianae Qinjiao Radix*)
- *Tianma* 天麻 (*Gastrodia elata*, Blume, Rhizoma)
- *Mahuang* 麻黃 (*Ephedra sinica* Stapf., Herba)
- *Jingjie* 荊芥 (*Schizonepeta tenufolia* Briq., Herba seu Flos)
- *Bohe* 薄荷 (*Mentha haplocalyx* Briq., Herba)
- *Qianhu* 前胡 (*Peucedani Radix*)

**Re fu chang** 熱浮長 (heating [and warming], floating, enduring):
- *Heifuzi* 黑附子 (*Aconitum carmichaeli* Debx., Radix Lateralis)
- *Ganjiang* 乾薑 (*Zingiber officinallis* Rosc., Rhizoma)
- *Ganshengjiang* 乾生薑 (*Zingiber officinale* Rosc., Rhizoma recens)
- *Chuanwutou* 川烏頭 (*Aconitum carmichaeli* Debx., Radix)
- *Liangjiang* 良薑 (*Alpinia officinarum* Hance, Rhizoma)
**Shi hua cheng zhongyang** 濡化成中央 (damp transforming and building the center):

- **Huangqi** 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
- **Renshen** 人參 (Panax ginseng C.A. Mey, Radix)
- **Gancao** 甘草 (Glycyrrhiza uralensis Fischer, Radix)
- **Danggui** 当歸 (Angelica sinensis (Oliv.) Diels, Radix)
- **Shudihuang** 熟地黃 (Rehmannia glutinosa (Gaertn.) Libosch., Radix Preperata)
- **Banxia** 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma)
- **Baizhu** 白术 (Atractylodes macrocephala Koidz., Rhizoma)
- **Cangzhu** 苍术 (Atractylodis Rhizoma)
- **Jupi** 橘皮 (Citrus reticulate Blanco, Pericarpium)
- **Qingpi** 青皮 (Citrus reticulata Blanco, Pericarpium Viride)
- **Huoxiang** 藿香 (Agastaches seu Pogostemi Herba)
- **Binglang** 槟榔 (Areca catechu L., Semen)
- **Guangshu** 防己 (Curcuma zedoria (Berg.) Roscoe, C., Rhizoma)
- **Jingsanleng** 京三棱 (Sparganium stoloniferum Buch.-Ham., Rhizoma)
- **Ejiao** 阿膠 (Equus asinus L., Gelatinum Corri)
- **Hezi** 胡子 (Terminalia chebula Retz., Fructus)
- **Taoren** 桃仁 (Prunus persica (L.) Batsch., Semen)
- **Xingren** 杏仁 (Prunus armeniaca, L., Semen)
- **Damainie** 大麥糵 (barley sprouts)
- **Zicao** 紫草 (Arnebiae seu Lithospermi Radix et Herba)
- **Sumu** 苏木 (Caesalpinia sappan L., Lignum)
Zao jiang shou 燥降收 (drying [and moistening], descending, receiving):
Fuling 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium)
Zexie 泽泻 (Alisma palntago-aquatica L. var. orientale Samuels, Rhizoma)
Zhuling 猪苓 (Polyporus umbellatus (Pers.) Fr., Sclerotium)
Huashi 滑石 (Talcum)
Qumai 瞿麥 (Dianthus superbus et chinensis L., Rhizoma)
Cheqianzi 車前子 (Plantaginis Semen)
Mutong 木通 (Akebiae Caulis)
Dengcao 灯草 (Juncus effusus L., Medulla)
Tongcao 通草 (Tetrapanax papyrifera (Hook.) K. Koch., Medulla) *
Wuweizi 五味子 (Schisandra chinensis (Turcz.) Baill., Fructus)
Baishaoyao 白芍藥 (Paonia lactiflora Pall., Radix)
Sangbaipi 桑白皮 (Morus alba L., Cortex Radicis)
Tianmendong 天門冬 (Asparagus cochinchinesis (Lour.) Merr., Tuber)
Maimendong 麥門冬 (Ophiopogonis Tuber)
Xijiao 犀角 (Rhinoceri Cornu)
Wumei 烏梅 (Prunus mume (Sieb.) Sieb et Zucc., Fructus)
Mudanpi 牡丹皮 (Paonia suffruticosa Andr., Cortex)
Digupi 地骨皮 (Lycii Cortex Radicis)
Zhike 枳殼 (Citrus aurantium L., Fructus Immaturus)
Hupo 華珀 (Succinum)
Lianqiao 連翘 (Forsythia suspensa (Thunb.) Vahl, Fructus)
Zhishi 枳實 (Citrus aurantium L., Fructus)

Han chen cang 寒沉藏 (cold [and cooling], sinking, storing):
Dahuang 大黃 (Rhei Radix et Rhizoma)
Huangbai 黃柏 (Phellodendri Cortex)
Huangqin 黃芩 (Scutellaria baicalensis Georgi., Radix)
Huanglian 黃連 (Coptis chinensis Franch., Rhizoma)
Shigao 石膏 (Calcium Sulfate, Gypsum)
Caolongdan 草龍膽 (Gentianae Radix)
Shengdihuang 生地黄 (Rehmannia glutinosa (Gaertn.) Libosch., Radix)
Zhimu 知母 (Anemarrhena asphodeloides Bge., Rhizoma)
Hanfangji 漢防己 (Stephania terandra S. Moore, Radix)
Yinchenhao 茵陳蒿 (Artemesiae Herba)
Poxiao 朴硝 (Mirabilite)
Gualougen 瓜蒌根 (Trichosanthes kirilowii Maxim., Radix)
Muli 牡蠣 (Ostreae Concha)
Xuanshen 玄參 (Scrophulariae Radix)
Kushen 苦參 (Sophora flavescens Ait., Radix) *
Chuanlianzi 川楝子 (Melia toosendan Sieb. Et Zucc., Fructus)
Xiangchi 香豉 (Glycine max (L.) Merr., Semen Preparatum)
Diyu 地榆 (Sanguisorba officinalis L., Radix)
Zhizi 梔子 (Gardenia jasminoides Ellis, Fructus)
Badou 巴豆 (Croton tiglium L., Semen) *
Baijiangcan 白僵蠶 (Bombyx Batryticatus) *
Shengjiang 生薑 (Zingiber officinale Rosc., Rhizoma recens) *
Duzhong 杜仲 (Eucommia ulmoides Oliv., Cortex) *
APPENDIX 5

Entries on 112 medicinals from the *Jiegu Laoren Zhenzhu Nang* 潔古老人珍珠囊 (Old Man Jiegu’s Bag of Pearls) by Zhang Yuansu 張元素 (c.1140-1220), ¹ as well as the *yinjing baoshi* 引經報使 (guiding channel application report): ²

**Fangfeng** 防風 (*Ledebouriellae Radix*):
甘苦 純陽 太陽經本藥 身去上風 稍去下風 與干姜藜芦白蔹芫花相反

**Guangqiong** 貫芎 (*Ligusticum wallichii* Hort., *Radix*):
辛 純陽 少陽本藥 治頭痛頸痛

**Xixin** 細辛 (*Asari Herba cum Radice*):
辛 純陽 主少陰苦頭痛
Acrid, pure *yang*. Governs *shaoyin* [channel] bitter headaches.

**Baizhi** 白芷 (*Angelicae Dahuricae Radix*):
辛 純陽 陽明經本藥 去遠治正陽 陽明頭痛
Acrid, pure *yang*. *Yangming* channel root medicine. Travels to the remote [regions of the body in order to] treat and correct the *yang* and for *yangming* headaches.

**Huangqin** 黃芩 (*Scutellaria baicalensis* Georgi., *Radix*):
苦 陰中微陽 酒炒上頸 主上部積血 東垣曰瀉肺火而解肌
Bitter, *yin* more than *yang*. Wine fried it ascends to the neck. Governs upper region blood accumulations. [Li] Dongyuan (1189-1251) says it drains lung fire and unbinds the muscles. In case of heat in the lung with difficulty breathing, and urgent digestion, bitter is used to drain it.

**Gancao** 甘草 (*Glycyrrhiza uralensis* Fischer, *Radix*):
生甘平 炙甘溫 純陽 補血養胃 柔去腎經之痛 與遠志大戟芫花甘遂海藻相反
Sweet and balanced when fresh, sweet and warm when honey-fried, pure *yang*. Tonifies the blood and nourishes the stomach. The tips dispel pain of the kidney channel. Mutually incompatible with *yuanzhi* (*Polygala tenuifolia* Willd., *Radix*), *daji* (*Euphorbiae seu Knoxiae Radix*), *yuanhua* (*Daphne genkwa* Sieb. Et Zucc., Flos), and *haizao* (*Sargassii Herba*).
**Danggui 当归 (Angelica sinensis (Oliv.) Diels, Radix):**

Yang more than yin. The head [of this medicinal] cracks the blood, the body invigorates blood, and the tail stops bleeding. Treat the upper [region] by soaking in wine; treat the exterior by washing it with wine. Chewing the sugar colored [root] is very acrid and is able to break through the most stubborn [diseases]. Mutually incompatible with *puhuang* (Typhae Pollen) and *haiiao* (Sargassii Herba).

**Lianqiao 连翘 (Forsythia suspensa (Thunb.) Vahl, Fructus):**

Bitter and balanced, yin more than yang. As for all of the types of guest heat, in no case is [this medicinal] unable to eliminate [the guests]. Also treats hand and foot shaoyang (sanjiao and gallbladder channel) ulcerations, fistulas, carbuncles and swellings.

**Huanglian 黄连 (Coptis chinensis Franch., Rhizoma):**

Bitter, pure yin. Drains heart fire and masses below the heart. Wine fried or soaked in wine, it ascends to the neck and releases the upper [region]. Mutually incompatible with *yuanhua* (Daphne genkwa Sieb. Et Zucc., Flos), *juhua* (Chrysanthemi Flos), *jiangcan* (Bombbyx), and *kuanhua* (Tussilago farfara L., Flos).

**Cangzhu 苍术 (Atractylodes Rhizoma):**

Sweet and acrid, yang more than yin. As for all lung deficiencies, in no case is this [medicinal] unable to eliminate [the problem]. [Entering] the foot yangming and taiyin [channels] it is able to build the stomach and calm the spleen.

**Qianghuo 羌活 (Notopterygii Radix et Rhizoma):**

Sweet and bitter, pure yang. [Treats] taiyang channel headache. As for dispelling all bone and joint aches and pains, in no case is this [medicinal] unable to eliminate [these problems]. Also able to warm the gallbladder, and is a taiyang wind [dispelling] medicinal.

**Baizhu 白术 (Atractylodes macrocephala Koidz., Rhizoma):**

Bitter, sweet and warm, yang more than yin. As for the spleen suffering from warmth and urgent digestion, bitter is used to dry it. Also benefits the waist and the blood around the navel. It has the same function as *cangzhu*. [Wang] Haizang (c.1210-1310) says: *cang*[zhu] and *bai*[zhu] both have the [function] of stopping strange discharges.
**Shengdihuang 生地黄** (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix):

甘寒 陰中微陽 涼血 補不足血 治頸已上酒浸 惡見母 蕃薯相反
Sweet and cold, *yin* more than *yang*. Cools the blood, tonifies insufficient blood. Treats neck stiffness and the upper [region] when soaked in wine. Antagonizes *jianmu* (unidentified medicinal), and is mutually incompatible with *wuti* (unidentified medicinal).

**Baishaoyao 白芍藥** (*Paeonia lactiflora* Pall., Radix):

甘酸 陰中之陽 曰補赤散 飲肝補脾胃 酒浸行經止中部腹痛
Sweet and sour, *yin* within *yang*. White (*bai* 白, errata) [peony] tonifies and red disperses. Drains the liver and tonifies the spleen and stomach. Wine soaked it invigorates the channels and stops central region abdominal pain. Mutually incompatible with *shihu* (Dendrobii Herba) and *xiaoshi* (Nitrokalite, saltpeter).

**Renshen 人參** (*Panax ginseng* C.A. Mey, Radix):

甘苦 陽中微陰 養血補胃氣瀉心火 喘嗽勿用之短氣用之 與藜芦相反
Sweet and bitter, *yang* more than *yin*. Nourishes the blood, tonifies stomach *qi*, and drains heart fire. For wheezing and coughing do not use it. For insufficient *qi* use it. Mutually incompatible with *lilu* (Veratri Radix et Rhizoma).

**Chaihu 柴胡** (*Bupleurum chinense* D.C., Radix):

苦 陰中之陽 去往來寒熱 膽痹非柴胡稍子不能除 與皂莢藜芦相反
Bitter, *yin* within *yang*. Dispels alternating chills and fever. As for gallbladder obstruction, there is no case when *chaihu* even slightly (or tips and seeds) is not able to eliminate [the obstruction]. Mutually incompatible with *zaojia* (*Gleditsia sinensis* Lam., Fructus) and *lilu* (Veratri Radix et Rhizoma). It is a medicinal that travels to the channels of shaoyang and jueyin.

**Huangqi 黃芪** (*Astragalus membranaceus* (Fisch.) Bge., Radix):

甘 純陽 益胃氣去肌熱 諸痛用之 與鳖甲相反
Sweet, pure *yang*. Benefits stomach *qi* and dispels muscle heat. Use it for all types of pain. Mutually incompatible with *biejia* (*Amyda sinensis* (Weigmann), Carapax).

**Gegen 葛根** (*Peurariae Radix*):

甘 純陽 止渴升陽解酒毒 陽明經之本藥也
Sweet, pure *yang*. Stops thirst, raises the *yang*, and resolves alcohol poisoning. A root medicine of the *yangming* channel.

**Zexie 澤瀉** (*Alisma plantago-aquatica* L. var. *orientale* Samuels, Rhizoma):

鹹 陰中微陽 滲泄止渴泄伏水
Salty, *yin* more than *yang*. For oozing discharges, stops thirst, and discharges stagnant water.
Shengma 升麻 (Cimicifugae Rhizoma):
甘苦 陽中微陰 主脾胃 解肌肉間熱 脾痹非升麻梢不能除
Sweet and bitter, yang more than yin. Governs the spleen and stomach, unbinds the muscles and flesh and separates heat. As for spleen obstruction, in no case are shengma branch tips unable to eliminate [the obstruction]. As for hand and foot yangming (large intestine and stomach) [channels] damaged by wind, guide to [those channels] by using this medicinal.

Banxia 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma):
苦辛 陰中之陽 除痰涎 胸中寒痰 治太陽痰厥頭痛
Bitter and acrid, yin within yang. Eliminates phlegm spittle and middle of the chest cold phlegm. Treats taiyang phlegm [leading to] loss of consciousness and headaches. Mutually incompatible with black sheep blood, beijia (Amydae sinensis (Weigmann), Carapax), zaojia (Gleditsia sinensis Lam., Fructus), and xionghuang (realgar).

Jiegeng 桔梗 (Platycodon grandiflorum (Jacq.) A. DC., Radix):
辛苦 陽中之陰 療咽喉痛利肺氣治鼻塞為舟楫之劑
Acrid and bitter, yang within yin. Cures sore throat, benefits lung qi, treats nasal obstruction, and serves as a transportation vessel in medicinal preparations. Mutually incompatible with caolongdan (Gentianae Radix).

Manjingzi 蔓荊子 (Viticis Semen):
苦辛 陰中之陽 涼諸經血止頭痛主目睛內痛
Bitter and acrid, yin within yang. Cools the blood in all of the channels, stops headache, and manages internal pain of the eyeball. Mutually incompatible with shigao (Gypsum).

Zhike 枳殼 (Citrus aurantium L., Fructus Immaturus):
苦酸 陰中微陽 破氣泄肺中不利之氣
Bitter and sour, yin more than yang. Unblocks the qi and discharges the lungs struck by unbenefical qi.

Zhishi 枳實 (Citrus aurantium L., Fructus):
苦酸 純陰 去胃中濕熱 消心下疼痞
Bitter and sour, pure yin. Dispels the stomach struck by dampness and heat. Eliminates aching masses below the heart.

Houpo 厚朴 (Magnolia officinalis Rehd. Et Wils, Cortex):
苦 陰中之陽 去腹脹厚腸胃
Bitter, yin within yang. Dispels abdominal distention and favors the intestines and stomach.

Zhizi 梔子 (Gardenia jasminoides Ellis, Fructus):
苦 純陰 去心懊惱煩躁
Bitter, pure yin. Dispels mental irritation, anger, vexation and agitation.
**Jupi** 橘皮 (*Citrus reticulate* Blanco, Pericarpium):

**Bitter and acrid, *yin* within *yang*. Benefits lung *qi*. If it has a sweet flavor then it is nourishing, without [a sweet flavor] then it drains the spleen, enlivens people, and treats belching.

**Wuweizi** 五味子 (*Schisandra chinensis* (Turcz.) Baill., Fructus):

**Sour, *yin* more than *yang*. Treats cough and tonifies the true *qi*. Mutually incompatible with *weirui* (unidentified medicinal) and *wutou* (*Aconitum carmichaeli* Debx., Radix).

**Zhimu** 知母 (*Anemarrhena asphodeloides* Bge., Rhizoma):

**Bitter, *yin* more than *yang*. A cooling the kidney channel root medicine. To ascend to the neck and invigorate the channels, each [slice of *zhimu*] is fried in wine.

**Ganjiang** 干薑 (*Zingiber officinallis* Rosc., Rhizoma):

**Acrid, pure *yang*. The classics say: for cold extremes which are vigorous, use the acrid flavor to disperse them. For the appearance of fire after the slightest hardship, thence stop and don’t continue [using this medicinal].

**Mahuang** 麻黃 (*Ephedra sinica* Stapf., Herba):

**Bitter and sweet, *yin* within *yang*. Discharges defensive [*qi*] struck by excess, dispels constructive [*qi*] struck by cold. Discharges sweating of the *taiyang* and *shaoyang* [channels] and enters the *taiyin* [channels].

**Gaoben** 藁本 (*Ligusticum sinense* Oliv., Radix et Rhizoma):

**Acrid and bitter, *yang* more than *yin*. A *taiyin* channel root medicine. Treats the summit of extreme pain, with brain and tooth aching. Mutually incompatible with *qingxiangzi* (unidentified medicinal).

**Diyu** 地榆 (*Sanguisorba officinalis* L., Radix):

**Bitter, sweet and sour, *yang* within *yin*. Treats bleeding in the lower region. Mutually incompatible with *maimendong* (*Ophiopogonis Tuber*).

**Dahuang** 大黃 (*Rhei Radix et Rhizoma*):

**Bitter, pure *yin*. For heat extremes which are vigorous, use bitter to disperse it. When soaked in wine it inters the *taiyang* channels, washed in wine it enters the *yangming* channels. If it is for the remaining channels [then] don’t use wine. Its nature is to move and not to hold.
Duhuo 獨活 (Angelica pubescens Maxim., Radix):
甘苦 陰中之陽 頭眩目暈非此不能除 足少陰行經藥
Sweet and bitter, *yin* within *yang*. As for being light headed or dizzy with visual impairment this [medicinal] in no case is unable to eliminate it. This medicinal invigorates the foot *shaoyin* (kidney) channel.

Wuzhuyu 吳茱萸 (Evodiae Rutacarpae Fructus):
辛 陽中微陰 溫中下氣腹痛 溫胃 與丹參 硝石 五石英相反
Acrid, *yang* more than *yin*. Warms the middle and descends qi [to treat] abdominal pain. Mutually incompatible with *danshen* (*Salvia miltiorrhiza* Bge., Radix), *xiaoshi* (Nitrokalite), and the five [types of] *shiying* (silica, stone flower).

Chi 豆豉 (Glycine max (L.) Merr., Semen Preparatum):
苦鹹 純陰 去心中懊憹 傷寒頭痛 煩躁
Bitter and salty, pure *yin*. Dispels the heart struck by regrets and disappointments, cold damage head ache, agitation and restlessness.

Huangbai 黃柏 (Phellodendri Cortex):
苦辛 陰中之陽 治腎水膀胱不足 諸痿厥腰膝無力
Bitter and acrid, *yin* within *yang*. Treats kidney water and urinary bladder insufficiency and every [type of] flaccidity and impairment of the lower back and knees [which are] without strength.

Fangwei 防尾 (unidentified medicinal):
辛苦 陽中之陰 泄濕氣 與細辛相反

Chuanwutou 川烏頭 (*Aconitum carmichaeli* Debx., Radix):
辛 純陽 去寒濕風痹 血痹 行經 與半夏瓜蔞相反 與附子同
Acrid, pure *yang*. Dipels cold-damp-wind painful obstruction, blood painful obstruction, and invigorates the channels. Mutually incompatible with *banxia* (Pinelliae Tuber) and *gualou* (Trichosanthis Fructus). Similar to *fuzi* (*Aconiti Radix Lateralis*).

Qujiang 瞿薑 (*Dianthus superbus et chinensis* L. Rhizoma):
辛 陽中微陰 利小便為君
Acrid, more *yang* than *yin*. For benefiting urination its serves as the ruler [of a formula].

Shunianzi 糇粘子 (*Panicum milaceum* Semen):
辛 純陽 潤肺 散氣 主風毒腫 利咽膈
Acrid, pure *yang*. Moistens the lung, disperses the *qi*, governs wind poison swellings, benefits the throat and diaphragm.
**Baidoukou** 白豆蔻 (**Amomum cardamomum** L., Fructus):  
辛 純陽 散肺中滯氣 主積冷氣 止吐逆反胃  
Acrid, pure yang. Disperses the lung struck by stagnant qi, governs accumulations of cold qi, stops vomiting and rebellious counter-flow of the stomach (nausea).

**Maimendong** 麥門冬 (**Ophiopogonis Tuber**):  
甘 陽中微陰 治肺中伏火 生脈保神 強陰益精 與苦參相反  
Sweet, more yang than yin. Treats lung struck by hidden fire, generates the pulse and protects the spirit, empowers the yin and benefits the essence. Mutually incompatible with kushen (**Sophorae Radix**).

**Fuling** 茯苓 (**Poria cocos** (Schw.) Wolf, Sclerotium):  
甘淡 純陽 渗泄止渴伐腎邪 小便多則能止之 澀則能利之 白入辛壬癸 赤入丙  
Sweet and bland, pure yang. For oozing discharges, stops thirst, and attacks kidney pathogens. If urination is plentiful then it is able to stop it, if difficult then it is able to benefit it. White [poria] enters the [channels corresponding to] xin (eighth Heavenly stem), ren (ninth Heavenly stem), and gui (tenth Heavenly stem). Red [poria] enters bing (third Heavenly stem). Mutually incompatible with bailian (**Vitis pentaphylla**, Thunb., Radix) and diyu (Sanguisorbae Radix).

**Shudihuang** 熟地黃 (**Rehmannia glutinosa** (Gaertn.) Libosch., Radix Preperata):  
甘苦 陰中微陽 大補血虛不足 通血脈 益氣力 忌蘿卜  
Sweet and bitter, yin more than yang. Strongly supplements blood deficiency but doesn’t move [the blood]. Unblocks the blood vessels and benefits the qi power. Antagonizes luobo (creeping diviners, radishes or turnips).

**Ejiao** 阿膠 (**Equus asinus** L., Gelatinum):  
甘 純陽 補肺 補虛 安胎 止痢  
Sweet, pure yang. Tonifies the lungs, nourishes deficiencies, calms the fetus, and stops dysentery.

**Sumu** 苏木 (**Caesalpinia sappan** L., Lignum):  
甘鹹 陽中之陰 破死血及血脹欲死  
Sweet and salty, yang within yin. [For someone] beaten to death and bleeding with bloody swellings and wants to die.

**Zhuling** 豬苓 (**Polyporus umbellatus** (Pers.) Fr., Sclerotium):  
甘苦 陽中之陰 滲泄止渴 又治淋腫  
Sweet and bitter, yin within yang. For oozing discharges, stops thirst, and also treats urinary [disorders] with swelling (edema).
**Rougui 肉桂 (Cinnamomum cassia Blume, Cortex):**
Sweet and bitter, pure yang, a taiyang channel root medicine. Dispels the protective [energies] struck by wind evils. For autumn and winter lower region abdominal pain, in no case is cinnamon unable to eliminate it. As for liquid decoctions, to release cold use guizhi (cinnamon twig), to tonify the kidneys use rougui (cinnamon bark). Avoid fresh scallions.

**Caolongdan 草龍膽 (Gentiana Radix):**
Bitter, pure yin. Drains liver fire, stops pain in the eyes, and soaked in wine it has an ascending movement.

**Muxiang 木香 (Auklandia lappae Decne., Radix):**
Acrid, pure yang. Harmonizes the stomach qi, cures middle and lower jiao (burner, region) qi [that is] knotted and blocked with stabbing pain.

**Shigao 石膏 (Calcium Sulfate, Gypsum):**
Acrid and sweet, yin within yang. Stops yangming headache, stops wasting and thirsting [disorder], heat stroke, and tidal fever.

**Gansui 甘遂 (Euphorbia kansui Liou, Radix):**
Sweet, pure yang. For water knotted within the chest, in no case is this [medicinal] unable to eliminate it. Mutually incompatible with gancao (Glycyrrhizae Radix).

**Tiannanxing 天南星 (Arisaematis Rhizoma):**
Bitter, similar to banxia (Pinelliae Tuber).

**Jinlingzi 金鈴子 (Melia toosendan Sieb. Et Zucc., Fructus):**
Sour and bitter, yin within yang. For the heart [gripped by] violent pain, in no case is this [medicinal] unable to eliminate it.

**Shenqu 神曲 (Massa Fermentata):**
Acrid, pure yang. Benefits the stomach qi.

**Honglanhua 紅藍花 (Carthamus tinctorius L., Flos):**
Bitter, yin more than yang. Enters the heart and nourishes the blood, also treats dizziness from blood [disorders] and bad blood that isn’t completely [causing] twisted chest pain.
**Digupi 地骨皮 (Lycii Cortex Radicis), 1st entry:**
Bitter, pure *yin*. Cools bone heat, soaked in wine it dispels bone steaming [so that] in no case is this [medicinal] unable to eliminate it.

**Gualougen 瓜蒌根 (Trichosanthes kirilowii Maxim., Radix):**
Bitter, pure *yin*. For the heart struck by a withering thirst, in no case is this [medicinal] unable to eliminate it.

**Qinjiao 秦艽 (Gentianae Qinjiao Radix):**
Bitter, *yin* more than *yang*. Goes to the *yangming* channels [to treat] wind-damp painful obstruction, and still treats mouth ulceration poisons.

**Tongcao 通草 (Tetrapanax papyriferus (Hook.) K. Koch, Medulla):**
Sweet, pure *yang*. Drains the lung, benefits urination, unblocks *yin* orifice inhibition.

**Mudanpi 牡丹皮 (Paeonia suffruticosa Andr., Cortex):**
Bitter and acrid, *yin* more than *yang*. Cools bone steaming, also treats intestinal and stomach indigestion and bleeding, nose bleeding, and vomiting blood. For hand *jueyin* (pericardium) and foot *shaoyin* (kidney), it treats bone steaming when there is no sweating.

**Digupi 地骨皮 (Lycii Cortex Radicis). 2nd entry:**
As for the hand *shaoyang* (sanjiao) and foot *shaoyin* (kidney), [this medicinal] treats [these channels] if there is sweating and bone steaming.

**Hupo 號珀 (Succinum):**
Sweet, pure *yang*. Benefits urination, clears the lungs, also eliminates blood stasis and calms the *hun* (ethereal soul) and *po* (corporeal soul).

**Jianghuang 薑黃 (Curcuma longa L., Rhizoma):**
Acrid.
**Muli** (Ostreae Concha):

Salty, softens abdominal lumps and masses, also treats *dai* (girdle) [channel or vaginal] discharge, warm miasmas, ulcerations, and swellings. Serves to soften hardness and is a remedy for restrained inhibition.

**Wutonglei** (Firmiana simplex, (L.) W.F. Wright, Semen seu Folium):

Salty, for the treatment of scrofular lumps, in no case is this [medicinal] unable to eliminate it.

**Caodoukou** (Alpinia katsumadai Hayata, Semen):

Acrd, pure *yang*. Benefits the spleen and stomach, dispels cold, and also treats migratory cold leading to heart and stomach pain.

**Badou** (Croton tiglium L., Semen):

Acrd, pure *yang*. Dipels the stomach struck by dampness, breaks up abdominal obstructions and masses knotted together. It cuts open what is closed and lays siege to the gates. Not to be used lightly in treatment.

**Fushen** (Poria cocos (Schw.) Wolf, Sclerotium Paradadicis):

Sweet, pure *yang*. Cures wind dizziness. For heart deficiency, in no case is this [medicinal] unable to eliminate it.

**Shukuihua** (Alcea Flos):

Yin more than *yang*. Treats *dai* (girdle) [channel or vaginal] discharge. Red [flowers] treat red [discharge], white [flowers] treat white [discharge].

**Binglang** (Areca catechu L., Semen):

Acrd, pure *yang*. Unblocks *qi* stagnation, drains the chest struck by intimidating *qi*.

**Kushen** (Sophora flavescens Ait., Radix):

Bitter, pure *yin*. It’s *qi* sinks to dispel dampness. Mutually incompatible with *tusizi* (Cuscutae Semen).

**Huoxiang** (Agastaches seu Pogostemi Herba):

Sweet and bitter, pure *yang* with a little *yin*. Tonfies the defensive *qi*, benefits the stomach *qi*, promotes the digestion of drinks and food, and also treats vomiting rebellion and *huoluan* (sudden turmoil).
Qingpi 青皮 (*Citrus reticulata* Blanco, *Pericarpium Viride*):
Bitter, acrid, and salty, *yin* within *yang*. Governs *qi* stagnation, breaks up knotted masses. It is a *shao* *yi*n channel draining medicinal. *Chenpi* (old peel) treats up high, *qingpi* (green peel) treats down low.

Ganjuhua 甘菊花 (*Chysanthemum morifolium* Ramat., *Flos*):
Bitter, pure *yang*. Nourishes the blood of the eyes.

Yinchenhao 茵陳蒿 (*Artemesiae Yinchenhao Herba*):
Bitter and sweet, *yin* more than *yang*. Treats cold damage and disperses yellow (jaundice).

Dingxiang 丁香 (*Eugenia caryophyllata* Thunb., *Flos*):
Acrid, pure *yang*, dispels excess within the stomach, and also treats kidney *qi* and *bentun* (running piglet) pain.

Dazao 大棗 (*Ziziphus jujubae* Mill., *Fructus*):
Sweet, pure *yang*, warms the stomach.

Tianmendong 天門冬 (*Asparagi cochinchinensis* (Lour.) Merr., *Tuber*):
Sweet and bitter, *yin* within *yang*. Preserves lung *qi*, treats blood heat invading the lung, ascending wheezing, and preserves the *qi*.

Shengjiang 生薑 (*Zingiber officinale* Rosc., *Rhizoma*):
Acrid, pure *yang*. Benefits the spleen and stomach, disperses wind and cold. Splendid!

Jin 金 (Gold):
Acrid and bitter, *yin* more than *yang*, cools the heart.

Jingsanleng 京三棱 (*Sparganium stoloniferum* Buch.-Ham., *Rhizoma*):
Bitter and sweet, *yin* within *yang*. Breaks up [stagnant] *qi*. Governs old addictions, intestinal obstructions and blockages, abdominal masses, *qi* tied into lumps, and blood vessels that don’t flow. Don’t use [this medicinal] in cases of *qi* deficiency.

Gaoliangjiang 高良薑 (*Alpinia officinarum* Hance, *Rhizoma*):
Acrid, pure *yang*. Warms and unblocks the spleen and stomach.
**Kuandonghua** 款冬花 (*Tussilago farfara* L., Flos):
辛甘 純陽 溫脾止嗽
Acrid and sweet, pure *yang*. Warms the spleen and stops cough.

**Xiangfuzi** 香附子 (*Cyperus rotundis* L., Rhizoma):
甘苦 陽中之陰 快氣
Sweet and bitter, *yang* within *yin*, quickens the *qi*.

**Heifuzi** 黑附子 (*Aconitum carmichaeli* Debx., Radix Lateralis):
辛 純陽 治脾中大實 腎中寒甚 通行諸經 與防風相反
Acrid, pure *yang*. Treats the spleen struck by a great excess, the kidney struck by extreme cold, and unblocks and invigorates all of the channels. Mutually incompatible with *fangfeng* (Ledebouriiellae Radix).

**Baiji** 白及 (*Bletilla striata* (Thunb.) Reichb. F., Rhizoma):
甘苦 陽中之陰 止肺澀 白薑同

**Shuxi** 蜀膝 (*Cyathulae officinalis* K.C. Kuan, Radix):
辛 純陽 破血
Acrid, pure *yang*. Breaks up blood [stasis].

**Shegan** 射干 (*Belamcanda chinensis* (L.) DC., Rhizoma):
苦甘 陽中之陰 去胃中瘡瘍
Bitter and sweet, *yang* within *yin*. Dispels the stomach struck by abscesses and ulcerations.

**Weilingxian** 威靈仙 (*Clematidis* Radix):
甘 純陽 去風 去大腸之風 通十二經絡
Sweet, pure *yang*. Dispels wind, dispels large intestine wind, and unblocks the twelve channels and collaterals.

**Madouling** 馬兜鈴 (*Aristolochiae Fructus*):
苦 陰中微陽 利小便 主肺熱 安肺氣 補肺
Bitter, *yin* more than *yang*. Benefits urination, governs lung heat, calms lung *qi*, and tonifies the lung.

**Dengcao** 燈草 (*Juncus effuses* L., Medulla):
甘 純陽 利小便
Sweet, pure *yang*, benefits urination.

**Huluba** 葫蘆巴 (*Trigonella foenum-graecum* L., Semen):
苦 純陰 治元氣虛冷 及腎虛冷
Bitter, pure *yin*. Treats source *qi* deficiency cold proceeding to kidney deficiency cold.
**Baifu zi 白附子 (Typhonium giganteum Engl., Rhizoma):**
Acrid and bitter, pure *yang.* Warms the middle for blood obstruction, invigorates medicinals powerfully, and governs wind strike [leading to] loss of voice. Thus it invigorates and doesn’t stop.

**Huaihua 槐花 (Sophora japonica L., Flos):**
Acrid, pure *yang,* cools heat of the large intestine.

**Huai shi 槐實 (Sophora japonica L., Fructus):**
Acrid, same as above (Huaihua 槐花).

**Chenxiang 沉香 (Aquilaria agallocha Roxb., Lignum):**
Sweet, pure *yang.* Supplements the kidneys, and also dipels evil *qi* and harmonizes the center. [Li] Dongyuan (1189-1251) says it is used to support every [type of] *qi,* ascending it reaches Heaven, descending it reaches [underground] springs, with this medicine serving as an envoy.

**Tanxiang 檀香 (Santalum Album L., Lignum):**
Sweet and bitter, *yang* more than *yin.* Governs central abdomen *huoluan* (sudden turmoil) struck by evil, and guides stomach *qi* that has ascended [downward to aid the] intake of food.

**Ruxiang 乳香 (Boswellia carterii Birdw., Resina):**
Sweet, pure *yin,* and resolves pain in the channels.

**Chuanlianzi 川楝子 (Melia toosendan Sieb. Et Zucc., Fructus):**
Sweet, pure *yang.* Enters the heart, governs upper and lower region abdominal pain.

**Zhuye 竹葉 (Bambusae Folium):**
Bitter, *yin* more than *yang,* cools the heart channel.
**Shanzhuyu** 山茱萸 (*Cornus officinalis* Sieb. et Zucc., Fructus):

酸 陰中之陽 溫肝 又能強陰益精 經云 滑則氣脱 澀則可以收之

Sour, *yin* within *yang*. Warms the liver, also able to fortify *yin* and benefit the essence. The classics say: if [the pulse is] slippery then the *qi* is leaking, if choppy then one is able to gather it, and *shanzhuyu*’s choppiness can be used to gather slipperyness.

**Shujiao** 蜀椒 (*Zanthoxylum bungeanum* Maxim., Pericarpium):

辛 純陽 明目 又溫中 止精洩

Acrid, pure *yang*. Brightens the eyes, also warms the middle and stops essence emissions.

**Zhusha** 朱砂 (*Cinnabar*):

苦 純陰 涼心熱非此不能除

Bitter, pure *yin*. For cooling heart heat, in no case is this [medicinal] unable to eliminate [the problem].

**Longgu** 龍骨 (*Draconis Os*):

甘 純陽 固大腸脫

Sweet, pure *yang*, consolidates large intenstine leakage.

**Chishizhi** 赤石脂 (*Halloysitum Rubrum*):

甘酸 陽中之陰 固脫 白石脂同

Sweet and sour, *yang* within *yin*, consolidates leakage. Similar to *baishizhi* (white stone resin).

**Xiongqiong** 芎藭 (*Ligusticum wallichii* Hort., Radix):

辛 純陽 散諸經之風

Acrid, pure *yang*. Disperses wind from all the channels.

**Qiangen** 茜根 (*Rubia cordifolia* L., Radix):

苦 陰中微陽 去諸死血

Bitter, *yin* more than *yang*, dispels various deadly bleeding [disorders].

**Aiye** 艾葉 (*Artemesia argyi* Levl. et Vant., Folium):

苦 陰中之陽 溫胃

Bitter, *yin* within *yang*, warms the stomach.

**Wangbuliuxing** 王不留行 (*Vaccaria segetalis* (Neck.) Garcke., Semen):

苦甘 陽中之陰 奶子導引 利瘍瘓 主治痢

Bitter and sweet, *yang* within *yin*. Guides the flow of breast milk, benefits ulcerations and sores, governs the treatment of dysentery.
**Yinjing baoshi** 引經報使 (report of envoys that guide [formulas] to a channel):

足太陽膀胱經 芳活 藁本
Foot taiyang urinary bladder channel: qianghuo, gaoben.

足少陽膽經 柴胡 青皮
Foot shaoyang gallbladder channel: chaihu, qingpi.

足陽明胃經 升麻 葛根 白芷 石膏
Foot yangming stomach channel: shengma, gegen, baizhi, shigao.

足太陰脾經 芍藥 白者補 赤破經 升麻 苍术 葛根
Foot taiyin spleen channel: shaoyao (white nourishes, red for broken channels), shengma, cangzhu, gegen.

足少陰腎經 獨活 桂 知母 細辛
Foot shaoyin kidney channel: duhuo, gui, zhimu, xixin.

足厥陰肝經 三焦 独活 知母 黄連 細辛
Foot jueyin liver channel: chaihu, wuzhuyu, chuanxiong, qingpi.

手太陽小腸經 芳活 藁本
Hand taiyang small intestine channel: qianghuo, gaoben.

手少陽三焦經 柴胡 連翘 上地骨皮 中青皮 下附子
Hand shaoyang sanjiao channel: chaihu, lianqiao, upper: digupi, middle: qingpi, lower: fuzi.

手陽明大腸經 白芷 升麻 石膏
Hand yangming large intestine channel: baizhi, shengma, shigao.

手太陰肺經 白芷 升麻 加蔥自亦能走經 桔梗
Hand taiyin lung channel: baizhi, shengma, plus congbai (Allium Pstulosum L., Bulbus) is also able to go to this channel, jiegeng.

手少陰心經 獨活 黃連 細辛
Hand shaoyin heart channel: duhuo, huanglian, xixin.

手厥陰心包經 柴胡 牡丹皮
Hand jueyin pericardium channel: chaihu, mudanpi.
APPENDIX 6

List of 106 medicinals in three categories from the *Rumen Shiqin* (Confucian Duties to Their Parents) (1228) by Zhang Congzheng 張從正 (1156-1228).

1. *Tu 吐* (emetics): ¹
   
   以本草考之吐藥之
   
   Use the materia medica to check the action of these emetic medicinals:

*Emetics that are* bitter and cold include:
- *Douchi* 豆豉 (*Glycine max* (L.) Merr., Semen Preparatum)
- *Guadi* 瓜蒂 (*Cucumis melo* L., Pedicellus)
- *Chamo* 茶末 (*Camellia sinensis* (L.) Kuntze, Folium)
- *Zhizi* 梔子 (*Gardenia jasminoides* Ellis, Fructus)
- *Huanglian* 黃連 (*Coptis chinensis* Franch., Rhizoma)
- *Kushen* 苦參 (*Sophora flavescens* Ait., Radix)
- *Dahuang* 大黃 (*Rhei Radix et Rhizoma*)
- *Huangqin* 黃芩 (*Scutellaria baicalensis* Georgi., Radix)

*Emetics that are* acrid, bitter, and cold include:
- *Yujin* 鬱金 (*Curcumae Tuber*)
- *Changshan* 常山 (*Dichora febrifuga* Lour., Radix)
- *Lilu* 藜蘆 (*Veratrum nigrum* L., Radix et Rhizoma)

*Emetics that are* sweet, bitter, and cold include:
- *Dihuang* 地黃 (*Rehmannia glutinosa* (Gaertn.) Libosch., Radix)

*Emetics that are* bitter and warm include:
- *Muxiang* 木香 (*Auklandia lappae* Decne., Radix)
- *Yuanzhi* 遠志 (*Polygala tenuifolia* Willd., Radix)
- *Houpo* 厚朴 (*Magnolia officinalis* Rehd. Et Wils, Cortex)

*Emetics that are* acrid, bitter, and warm include:
- *Bohe* 薄荷 (*Mentha haplocalyx* Briq., Herba)
- *Yuanhua* 芫花 (*Daphne genkwa* Seib. Et Zucc., Flos)

*Emetics that are* acrid and warm include:
- *Gujingcao*穀精草 (*Eriocauli Flos*)
- *Conggenxu* 葱根鬚 (*Allium pstulosum* L., Radix)

*Emetics that are* acrid and cold include:
- *Qingfèn* 輕粉 (*Calomelas*)
[Emetics that are] acrid, sweet, and warm include:
Wutou 烏頭 (Aconitum japonicum, Thunb., Radix)
Fuzi 附子 (Aconitum carmichaeli Debx., Radix Lateralis)

[Emetics that are] sour and cold include:
Jinfan 晉礬 (Alumen)
Lufan 綠礬 (Alumen)
Jizhi 餅汁 (unidentified medicinal)

[Emetics that are] sour and balanced include:
Tonglu 銅綠 (Copper)

[Emetics that are] sweet, sour, and balanced include:
Chixiaodou 赤小豆 (Phaseolus calcaratus Roxb., Semen)

[Emetics that are] sour and warm include:
Fanjiang 飯漿 (thick broth?)

[Emetics that are] sour, acrid, and cold include:
Danfan 膽礬 (Alumen)

[Emetics that are] sour and cold include:
Qingyan 青鹽 (green salt)
Baimiyin 白米飲 (white rice liquid)

[Emetics that are] acrid, salty, and warm include:
Zaojiao 皂角 (Gleditsia sinensis Lam., Fructus)

[Emetics that are] extremely salty and cold include:
Cangyan 滄鹽 (dark blue salt)

[Emetics that are] sweet and cold include:
Yaxiao 牙硝 (Saltpeter, niter)

[Emetics that are] sweet, slightly warm or even cold include:
Shenlutou 參蘆頭 (unidentified medicinal)

[Emetics that are] sweet, acrid, and hot include:
Xieshao 蝎梢 (scorpion tail)

凡此三十六味 惟常山膽礬瓜蒂有小毒 藜蘆苑花輕粉烏附尖有大毒
外二十六味 皆吐藥之無毒者 各對證擢而用之 此法宜先小服 不滿
枳漸加之

As for these 36 flavors, only changshan, danfan, and guadi have slight toxicity, while lila, yuanhua, qingfen, wu[tou] and fu[zi] have great toxicity. The other 26 flavors each are an emetic medicinal without toxicity. They each should match the
diagnosis to be selected and used. For this method it is appropriate to begin with a small dosage, don’t overfill, and the zhi[shi] (trifoliate organge) can be gradually added.

2. Han 汗 (diaphoretics): 
以本草校之 [汗藥]
Use the materia medica to verify [the action of these diaphoretic medicinals]:

- Jingjie 荆芥 (Schizonepeta tenufolia Briq., Herba seu Flos)
- Xiangbaizhi 香白芷 (Angelicae Dahuricae Radix)
- Chenpi 陈皮 (Citrus reticulate Blanco, Pericarpium)
- Banxia 半夏 (Pinellia ternate (Thunb.) Breit., Rhizoma)
- Xixin 細辛 (Asari Herba cum Radice)
- Congzhu 苍术 (Atractylodis Rhizoma)

These [diaphoretic medicinals are] acrid and warm.

- Shujiao 蜀椒 (Zanthoxylum bungeanum Maxim., Pericarpium)
- Hujiao 胡椒 (Piper nigrum, L., Fructus)
- Zhuyu 茱萸 (Cornus officinalis Sieb. et Zucc., Fructus)
- Dasuan 大蒜 (Allium sativum L., Bulbus)

These [diaphoretic medicinals are] acrid and very hot.

- Shengjiang 生薑 (Zingiber officinale Rosc., Rhizoma recens)

This [diaphoretic medicinal is] acrid and slightly warm.

- Tianma 天麻 (Gastrodia elata, Blume, Rhizoma)
- Congbai 葱白 (Allium pstulosum L., Bulbus)

These [diaphoretic medicinals are] acrid and balanced.

- Qingpi 青皮 (Citrus reticulata Blanco, Pericarpium Viride)
- Bohe 薄荷 (Mentha haplocalyx Briq., Herba)

These [diaphoretic medicinals are] acrid, bitter, and warm.

- Fangji 防己 (Stephania terandra S. Moore, Radix)
- Qinjiao 秦艽 (Gentianae Qinjiao Radix)

These [diaphoretic medicinals are] acrid and even bitter.

- Mahuang 麻黃 (Ephedra sinica Stapf., Herba)
- Renshen 人参 (Panax ginseng C.A. Mey, Radix)
- Dazao 大棗 (Ziziphus jujubae Mill., Fructus)

These [diaphoretic medicinals are] sweet and warm.
Gegen 葛根 (Peurariae Radix)
Glehning 赤茯苓 (Poria cocos (Schw.) Wolf, Sclerotium Rubrae)
These [diaphoretic medicinals are] sweet and balanced.

Sangbapi 桑白皮 (Morus alba L., Cortex Radicis)
This [diaphoretic medicinal is] sweet and cold.

Fangfeng 防風 (Ledebouriellae Radix)
Danggui 当歸 (Angelica sinensis (Oliv.) Diels, Radix)
These [diaphoretic medicinals are] sweet, acrid, and warm.

Fuzi 附子 (Aconitum carmichaeli Debx., Radix Lateralis)
This [diaphoretic medicinal is] sweet, acrid, and hot.

Guangui 官桂 (Cinnamomum cassia Blume, Cortex)
Guizhi 桂枝 (Cinnamomum cassia Blume, Ramulus)
These [diaphoretic medicinals are] sweet, acrid, and very hot.

Houpo 厚朴 (Magnolia officinalis Rehd. Et Wils, Cortex)
This [diaphoretic medicinal is] bitter and warm.

Jiegeng 桔梗 (Platycodon grandiflorum (Jacq.) A. DC., Radix)
This [diaphoretic medicinal is] bitter and slightly warm.

Huangqin 黄芩 (Scutellaria baicalensis Georgi., Radix)
Zhimu 知母 (Anemarrhena asphodeloides Bge., Rhizoma)
Zhishi 枳實 (Citrus aurantium L., Fructus)
Digui 地骨皮 (Lycii Cortex Radicis)
These [diaphoretic medicinals are] bitter and cold.

Qianhu 前胡 (Peucedani Radix)
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
These [diaphoretic medicinals are] bitter and slightly cold.

Qianghuo 羌活 (Notopterygii Radix et Rhizoma)
This [diaphoretic medicinal is] bitter, acrid, and slightly warm.

Shengma 升麻 (Cimicifugae Rhizoma)
This [diaphoretic medicinal is] bitter, sweet, and even balanced.

Shaoyao 芍藥 (Paeonia Radix)
This [diaphoretic medicinal is] sour and slightly cold.

Fuping 浮萍 (Lemnae seu Spirodelae Herba)
This [diaphoretic medicinal is] acrid, sour, and cold.
凡此四十味 皆發散之屬也
As for these 40 flavors, they each are categorized as releasing and dispersing.

3. *Xia* 下 (downward drainers): ³

以本草考之下藥之
Use the materia medica to check the action of these downward draining medicinals:

**Cold [downward drainers] include:**
- *Rongyan* 戎鹽 (Halitum); salty
- *Xijiao* 犀角 (Rhinoceri Cornu); sour & salty
- *Cangyan* 苍鹽 (blue-green salt); sweet & salty
- *Zexie* 澱瀉 (*Alisma plantago-aquatica* L., Rhizoma); sweet & salty
- *Zhishi* 栀實 (*Citrus aurantium* L., Fructus); bitter & sour
- *Ni Féi* 膿粉 (course powder); acrid
- *Zeqi* 澱漆 (*Euphorbiae Herba*); bitter & acrid
- *Xingren* 杏仁 (*Prunus armeniaca*, L., Semen); bitter & sweet

**Slightly cold downward drainers include:**
- *Zhudan* 豬膽 (pig bile); bitter

**Very cold downward drainers include:**
- *Yaxiao* 牙硝 (Salt peter, niter); sweet
- *Dahuang* 大黃 (*Rhei Radix et Rhizoma*); bitter
- *Guadi* 瓜蒂 (*Cucumis melo*, L., Pedicellus); bitter
- *Qianniu* 牽牛 (*Pharbitidis Semen*); bitter
- *Kuhuzi* 苦瓠子 (bitter gourd seeds); bitter
- *Yanzhi* 鹽汁 (salt extract); bitter
- *Niudan* 牛膽 (cattle bile); bitter
- *Yangti* 芫花 (*Daphne genkwa* Seib. Et Zucc., Flos); bitter & acrid
- *Poxiao* 朴硝 (Slaked Lime or Mirabilite); bitter & acrid
- *Mangxiao* 芒硝 (Mirabilite); bitter & acrid

**Warm downward drainers include:**
- *Binglang* 槟榔 (*Areca catechu* L., Semen); acrid
- *Yuanhua* 芫花 (*Daphne genkwa* Seib. Et Zucc., Flos); bitter & acrid
- *Shimi* 石蜜 (Mel, honey); sweet
- *Zaojiao* 醫角 (*Gleditsia sinensis* Lam., Fructus); acrid & salty

**Hot downward drainers include:**
- *Badou* 巴豆 (*Croton tiglium* L., Semen); acrid
Acrid and cooling downward drainers include:
*Zhuyangxue* 豬羊血 (pig & sheep blood); salty

Balanced downward drainers include:
*Yuliren* 鬱李仁 (Pruni Semen); sour
*Taohua’è* 桃花萼 (*Prunus persica* (L.) Batsch., Calyx); bitter

As for the above 30 flavors only *qianniu, daji, yuanhua, zaojiao, yangti, kuhuzi,* and *guadi* have slight toxicity, while *badou, nifen,* and *xingren* have great toxicity. The rest are all without toxicity.
Appendix 7

Selected tonic formulas with ingredients from the *Yixue Faming* (Medical Innovations) by Li Dongyuan (1180-1251):

**Huangqi Buzhong Tang** (Astragalus Tonify the Center Decoction): ¹

- *Huangqi* 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix); 1 qian
- *Renshen* 人參 (Panax ginseng C.A. Mey, Radix); 8 fen
- *Zhigancao* 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata); ½ liang
- *Baizhu* 白术 (Atractylodes macrocephala Koidz., Rhizoma); ½ liang
- *Cangzhu* 苍术 (Atractylodis Rhizoma); ½ liang
- *Jupi* 橘皮 (Citrus reticulate Blanco, Pericarpium); ½ liang
- *Zexie* 澤瀉 (Alisma palntago-aquatica L. var. orientale Samuels, Rhizoma); 3 fen
- *Zhuling* 豬苓 (Polyporus umbellatus (Pers.) Fr., Sclerotium); 3 fen
- *Fuling* 茯苓 (Poria cocos (Schw.) Wolf, Sclerotium); 3 fen

**Shuanghe San** (Double Harmony Powder): ²

- *Huangqi* 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix); 1 liang
- *Renshen* 人參 (Panax ginseng C.A. Mey, Radix); 3 qian
- *Gancao* 甘草 (Glycyrrhiza uralensis Fischer, Radix); 3 fen
- *Shudihuang* 熟地黃 (Rehmannia glutinosa (Gaertn.) Libosch., Radix Preperata); 1 liang
- *Dangguishen* 當歸身 (Angelica sinensis (Oliv.) Diels, Radix); 1 liang
- *Chuanxiong* 川芎 (Ligusticum wallichii Hort., Radix); 1 liang
- *Baishaoyao* 白芍藥 (Paeonia lactiflora Pall., Radix); 3½ liang
- *Guangui* 官桂 (Cinnamomum cassia Blume, Cortex); 3 fen

Selected tonic formulas with ingredients from the *Lanshi Micang* (Secret Book Kept in Chamber) by Li Dongyuan (1180-1251):

**Buqi Tang** (Tonify Qi Decoction): ¹

- *Huangqi* 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
- *Zhigancao* 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)
- *Chaihu* 柴胡 (Bupleurum chinense D.C., Radix)
- *Shengma* 升麻 (Cimicifugae Rhizoma)
- *Dangguishen* 當歸身 (Angelica sinensis (Oliv.) Diels, Radix)
- *Honghua* 紅花 (Carthamus tinctorius L., Flos)

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**Yiwei Shengyang Tang 益胃升陽湯 (Benefit Stomach & Raise the Yang Decoction):**

Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
Renshen 人參 (Panax ginseng C.A. Mey, Radix)
Baizhu 白朮 (Atractylodes macrocephala Koidz., Rhizoma)
Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
Shengma 升麻 (Cimicifugae Rhizoma)
Chenpi 陳皮 (Citrus reticulate Blanco, Pericarpium)
Dangguishen 當歸身 (Angelica sinensis (Oliv.) Diels, Radix)
Chaoshenqu 炒神曲 (Massa Fermentata Preperata)
Zhenghuangqin 生黃芩 (Scutellaria baicalensis Georgi., Radix recens)

**Huangqi Buwei Tang 黃芪補胃湯 (Astragalus Tonify the Stomach Decoction):**

Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
Shengma 升麻 (Cimicifugae Rhizoma)
Jupi 橘皮 (Citrus reticulate Blanco, Pericarpium)
Dangguishen 當歸身 (Angelica sinensis (Oliv.) Diels, Radix)
Yizhi 益智 (Alpinia oxyphylla Miq., Fructus)
Honghua 紅花 (Carthamus tinctorius L., Flos)

**Danggui Buxue Tang 當歸補血湯 (Angelica Tonify Blood Decoction):**

Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
Dangguishen 當歸身 (Angelica sinensis (Oliv.) Diels, Radix)

**Huangqi Tang 黃芪湯 (Astragalus Decoction), version 1:**

Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix)
Gancao 甘草 (Glycyrrhiza uralensis Fischer, Radix)
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)
Shengma 升麻 (Cimicifugae Rhizoma)
Jupi 橘皮 (Citrus reticulate Blanco, Pericarpium)
Dangguishen 當歸身 (Angelica sinensis (Oliv.) Diels, Radix)
Xiangbaizhi 香白芷 (Angelicae Dahuricae Radix)
Gaoben 龜版 (Ligusticum sinense Oliv., Radix et Rhizoma)
Caodoukou 草豆蔻 (Alpinia katsumadai Hayata, Semen)
Mahuang 麻黃 (Ephedra sinica Stapf., Herba)
Lianhua 蓮花 (Nelumbo nucifera Gaertn., Flos)
Huangbai 黃柏 (Phellodendri Cortex)
**Renshen Yiqi Tang** 人参益气汤 (Ginseng Benefit the Qi Decoction):

Huangqi 黄芪 (Astragalus membranaceus (Fisch.) Bge., Radix)  
Renshen 人参 (Panax ginseng C.A. Mey, Radix)  
Shenggancao 生甘草 (Glycyrrhiza uralensis Fischer, Radix recens)  
Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)  
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)  
Shengma 升麻 (Cimicifugae Rhizoma)  
Baishaoyao 白芍藥 (Paeonia lactiflora Pall., Radix)  
Wuweizi 五味子 (Schisandra chinensis (Turcz.) Baill., Fructus)

**Buzhong Tang** 補中湯 (Tonify the Center Decoction):

Huangqi 黄芪 (Astragalus membranaceus (Fisch.) Bge., Radix)  
Cangzhu 苍术 (Atractylodis Rhizoma)  
Zhigancao 炙甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)  
Shengma 升麻 (Cimicifugae Rhizoma)  
Chaihu 柴胡 (Bupleurum chinense D.C., Radix)  
Danggui 當歸 (Angelica sinensis (Oliv.) Diels, Radix)  
Shenqu 神曲 (Massa Fermentata)  
Zexie 澤瀉 (Alisma palntago-aquatica L. var. orientale Samuels, Rhizoma)  
Damai niemian 大麥糵面 (barley sprouts)  
Honghua 紅花 (Carthamus tinctorius L., Flos)  
Wuweizi 五味子 (Schisandra chinensis (Turcz.) Baill., Fructus)

**Huangqi Tang** 黄芪湯 (Astragalus Decoction), version 2:

Huangqi 黄芪 (Astragalus membranaceus (Fisch.) Bge., Radix)  
Renshen 人参 (Panax ginseng C.A. Mey, Radix)  
Shenggancao 生甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)  
Yihuang San 益黃散 (Benefit the Yellow Powder):

Huangqi 黄芪 (Astragalus membranaceus (Fisch.) Bge., Radix)  
Renshen 人参 (Panax ginseng C.A. Mey, Radix)  
Shenggancao 生甘草 (Glycyrrhiza uralensis Fischer, Radix recens)  
Shugancao 熟甘草 (Glycyrrhiza uralensis Fischer, Radix Preperata)  
Chenpi 陳皮 (Citrus reticulate Blanco, Pericarpium)  
Shaoyao 芍藥 (Paeonia lactiflora Pall., Radix)  
Huanglian 黃連 (Coptis chinensis Franch., Rhizoma)
Selected tonic formulas with ingredients from the *Piwei Lun* 脾胃論 (Treatise on the Spleen & Stomach) by Li Dongyuan 李東垣 (1180-1251):

**Bupiwei Xieyinhuo Shengyang Tang** 補脾胃瀉陰火升陽湯 (Tonify the Spleen & Stomach, Drain Yin Fire, & Raise the Yang Decoction): 12

- **Huangqi** 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix) 1 liang
- **Renshen** 人參 (*Panax ginseng* C.A. Mey, Radix) 7 qian
- **Cangzhu** 苍术 (*Atractylodis Rhizoma*) 1 liang
- **Zhigancao** 炙甘草 (*Glycyrrhiza uralensis* Fischer, Radix Preperata) 1 liang
- **Chaihu** 柴胡 (*Bupleurum chinense* D.C., Radix) 1 liang, 5 qian
- **Shengma** 升麻 (*Cimicifugae Rhizoma*) 8 qian
- **Qianghuo** 羌活 (*Notopterygii Radix et Rhizoma*) 1 liang
- **Huangqin** 黃芩 (*Scutellaria baicalensis* Georgi., Radix) 7 qian
- **Huanglian** 黃連 (*Coptis chinensis* Franch., Rhizoma) 5 qian
- **Shigao** 石膏 (Calcium Sulfate, Gypsum) only use in the summer

**Qingshu Yiqi Tang** 清暑益氣湯 (Clear Heat & Benefit the Qi Decoction): 13

- **Huangqi** 黃芪 (*Astragalus membranaceus* (Fisch.) Bge., Radix)
- **Renshen** 人參 (*Panax ginseng* C.A. Mey, Radix)
- **Baizhu** 白术 (*Atractylodes macrocephala* Koidz., Rhizoma)
- **Cangzhu** 苍术 (*Atractylodis Rhizoma*)
- **Zhigancao** 炙甘草 (*Glycyrrhiza uralensis* Fischer, Radix Preperata)
- **Shengma** 升麻 (*Cimicifugae Rhizoma*)
- **Jupi** 橘皮 (*Citrus reticulate* Blanco, Pericarpium)
- **Danggui** 當歸 (*Angelica sinensis* (Oliv.) Diels, Radix)
- **Qingpi** 青皮 (*Citrus reticulata* Blanco, Pericarpium Viride)
- **Zexie** 澤瀉 (*Alisma palntago-aquatica* L. var. orientale Samuels, Rhizoma)
- **Shenqu** 神曲 (Massa Fermentata)
- **Gegen** 葛根 (*Peurariae Radix*)
- **Maimendong** 麥門冬 (*Ophiopogonis Tuber*)
- **Huangbai** 黃柏 (*Phellodendri Cortex*)
- **Wuweizi** 五味子 (*Schisandra chinensis* (Turcz.) Baill., Fructus)
Appendix 8

Five selected entries from the *Tangye Bencao* 湯液本草 (Materia Medica of Decoction) by Wang Haogu 王好古 (c.1210-1310):

**Fangfeng** 防風 (Ledebouriellae Radix):

純陽 性溫 味甘辛 無毒 足陽明胃經 足太陰脾經 乃二經之行經藥

It is pure yang, its nature is warm, its flavor is sweet and acrid, and it is without toxicity. It is a medicinal for invigorating both the foot yangming stomach channel and the foot taiyin spleen channel, and it is a taiyang channel root channel medicine.

象云 治風通用 瀉肺實 散頭目中滿氣 除上焦風邪之仙藥也

誤服瀉人上焦元氣 去蘆併釵股用

Xiang [or the *yaolei faxiang* 藥類法象 (categorization of medicinals by function & form)] by Li Dongyuan 李東垣 (1189-1251) says: *fangfeng* is used for the treatment of penetrating wind, it drains lung excess, it disperses head and eyes afflicted by a fullness of qi, and it is a xianyao (immortal medicinal) for eliminating upper jiao (burner, region) wind evils. It is a mistake [to suggest that] taking this medicine drains yuanqi (source energy) from a person’s upper jiao.

珍云 身去身半已上風邪 梢去身半已下風邪

Zhen [or the *Zhenzhu Nang* 珍珠囊 (Bag of Pearls) by Zhang Yuansu 張元素 (c.1140-1220)] says: the body [of this root] dispels upper wind evils that have already [caused paralysis] on half of the body; the tips [of this root] dispels lower wind evils that have already [caused paralysis] on half of the body.

心云 又去濕之仙藥也 風能勝濕爾

Xin [or the *yongyao xinfa* 用藥心法 (core methods of medicinal use)] by Li Dongyuan says: *fangfeng* is also a xianyao (immortal medicinal) for dispelling dampness, for wind is thus able to conquer dampness (e.g., wood conquers earth).

本草云 主大風 頭眩痛 惡風 風邪 目盲無所見 風行周身

骨節疼痛 煩滿脅痛腎風 頭面去來 四肢攣急 字乳 金瘡內痙

*Bencao* [or the *Daguan Bencao* 大觀本草 (Materia Medica of the Daguan Reign Period, 1108)] says: *fangfeng* governs great wind, dizziness and pain in the head, aversion to wind, wind evils, eyes which go blind and are without the capacity for sight, wind that traverses the whole body, bone and joint aches and painful obstructions, vexation, fullness, flank pain, umbilical wind, facial twitching, spasms and contracture of the four limbs, for the breasts, gold-headed ulcerations and internal spasms.
Dongyuan says: *fangfeng* is able to regulate [the actions of] *huangqi* (*Astragalus membranaceus* (Fisch.) Bge., Radix), *huangqi* gains the merits of *fangfeng*, and [when used together] the healing is great. [Dongyuan] also says: *fangfeng* is like a squad of scrappy soldiers who will follow where they are led and achieve results. Thus a wind medicinal is a remedy to moisten the center.

Bencao also says: *fangfeng* cures wind with *zexie* (*Alisma plantago-aquatica* L. var. *orientale* Samuels, Rhizoma) and *gaoben* (*Ligusticum sinense* Oliv., Radix et Rhizoma), it raises the yang with *danggui* (*Angelica sinensis* (Oliv.) Diels, Radix) and *shaoyao* (*Paeonia Radix*). It was inscribed that [sage king] Yu used surplus grain to cure the women and children whose organs had wind. It counteracts the toxicity of *fuzi* (*Aconitum carmichaeli* Debx., Radix Lateralis). It antagonizes *ganjiang* (*Zingiber officinallis* Rosc., Rhizoma), *lilu* (*Veratri Radix et Rhizoma*), *bailian* (*Vitis pentaphylla*, Thunb., Radix), and *yuanhua* (*Daphne genkwa* Seib. Et Zucc., Flos).

**Heifuzi** 黑附子 (*Aconitum carmichaeli* Debx., Radix Lateralis):  
Its temperature is hot, its flavor is very acrid, it is pure yang, or it is acrid, sweet, and warms with great heat, and has a great toxicity. It is used as a guiding medicinal to unblock and invigorate all of the channels. It enters the hand shaoyang channel of the sanjiao (three burners, regions), and is a remedy for the mingmen (life gate).

Xiang says: the nature [of *fuzi*] is to take action and not to be idle; it also is able to eliminate extreme cold afflicting the kidneys. When assisted by *baizhu* (*Atractylodes macrocephala* Koidz., Rhizoma) it is called zhufu tang (*atractylodes & aconite decoction*), and is a shengyao (sagacious medicinal) for eliminating cold and damp. As a damp medicinal one should only add a small [dose in the formula]. It is used a guiding medicinal to unblock and invigorate all of the channels, and treats channel obstruction. Prepare slowly over a fire [to detoxify].

Zhen says: *fuzi* treats spleen damp and kidney cold.

Bencao says: *fuzi* governs wind cold cough and rebellious evil qi, [treats] warmth afflictions [like] gold-headed ulcerations, and breaks up hard bowel blockages and accumulations and blood masses in the bowels, cold and damp sprains and limb injuries.
with muscular contracture, knee pain and foot aching, cold feebleness with an inability to
walk, wind and cold in the waist and back, central abdominal cold pain, huoluan (sudden
turmoil) cramping of the sinews [accompanied by] diarrhea with red and white (blood
and pus), stiff muscles and bones, powerful yin (cold) able to induce an abortion. It is
considered the chief among the hundred medicines.

液云 入手少陽三焦命門之劑 浮中沉無所不至 附子味辛大熱 為陽中之陽 故行
而不止 非若乾薑止而不行也 非身表涼而四肢厥者 不可僭用 如用之者 以其治四逆也
Ye [or the Tangye Bencao 湯液本草 (Materia Medica of Decoction) by Wang Haogu]
says: [fuzi] enters the hand shaoyang sanjiao channel and is a remedy for the mingmen
(life gate). Floating, centered, or sinking, there is nowhere it doesn’t reach. The flavor of
fuzi is acrid and very hot, it is considered yang within yang. Therefore it moves and
doesn’t stop. In no way is it like ganjiang (dried ginger) which stops and doesn’t move. In
no way [is it appropriate to use this root] when the body’s exterior is cool and the four
limbs are the opposite (warm). One cannot usurp this usage, for one uses it for treating
sini (four rebellions, or frigid extremities).

本草又云 地膽為之使 惡蜈蚣 畏方風黑豆甘草黃耆人參
冬月采為附子 春月采為烏頭
Bencao also says [of fuzi]: didan 地膽 (Elephantopus scaber L., Herba) is considered its
envoy, it antagonizes wugong 蜈蚣 (Scolopendra subspinipes mutilans L. Koch.), and
has an aversion to fangfeng, heidou (black beans), gancao (Glycyrrhiza uralensis Fischer,
Radix), huangqi, and renshen 人參 (Panax ginseng C.A. Mey, Radix). When harvested in
the winter it is fuzi, when harvested in the spring it is wutou.

Huangqi 黃芪 (Astragalus membranaceus (Fisch.) Bge., Radix): ’
氣溫 味甘 純陽 甘微溫 性平 無毒
入手少陽經 足太陰經 足少陰命門之劑
Its temperature is warm, its flavor is sweet, it is pure yin, or it is sweet and slightly
warm, its nature is balanced, and it is without toxicity. It enters the hand shaoyang (SJ)
channel, the foot taiyin (SP) channel, and is a remedy for the foot shaoyin (KD) and
mingmen (life gate).

象云 治虛勞自汗 補肺氣 入皮毛 瀉肺中火
如脈弦自汗 脾胃虛弱 瘡瘍血脈不行 內托陰證瘡瘍必用之 去蘆用
Xiang says: [huangqi] treats deficiency and toil with spontaneous sweating, tonifies lung
qi, enters the skin and hair, and drains fire afflicting the lung. If it seems the pulse is wiry
and there is spontaneous sweating, then the spleen and stomach are deficient and feeble.
If there are ulcerations and itching then the blood vessels are not flowing, the interior
provides the yin diagnosis, and for ulcerative lesions one must use it. Remove reeds to
use.

珍云 益胃氣 去肌熱 諸痛必用之
Zhen says: [huangqi] benefits stomach qi, dispels muscle heat, and for various pains one
must use it.
心云 補五臟諸虛不足而瀉陰火 去虛熱 無汗則發之 有汗則止之
Xin says: [huangqi] tonifies the five zang (solid organs) from various deficiencies and insufficiencies and drains yin fire, dispels deficient heat, if there is no sweating it will induce it, if there is sweating then it will stop it.

本草云 主痈疽久敗瘡 排膿止痛 大風癩疾 五痔鼠腫 補虛 小兒百病
Bencao says: [huangqi] governs carbuncles and gangrenous festering lesions, draining pus, stopping pain, dafenglai (leprosy) disease, the five hemorrhoids and shulou (swollen ulcerated fistulas, cancerous lesions), tonifying deficiencies, the hundred diseases of children, mothers and infants whose organs have evil qi, driving out bad blood between the five zang (solid organs), tonifying men’s deficiencies and depletions, the five labors resulting in emaciation, abdominal pain and draining dysentery.

又云 破癥癖 腸風血崩 帶下 赤白痢及產前後一切病 月候不調
又治頭風熱毒 目赤骨蒸 生蜀郡山谷 白水漢中
今可東陝西郡多有之
[Bencao] also says: [Huangqi] breaks apart bowel obstructions and masses, [it is used for] intestinal wind, blood collapse (excessive menstrual bleeding), vaginal discharge, red and white (blood & pus) dysentery, all kinds of obstetric diseases, irregular menstrual cycles, xiaoke (wasting & thirsting), and phlegmatic coughs. It also treats wind heat toxins in the head, with red eyes and bone steaming. It grows in the mountains and valleys of Sichuan, the baishui [variety grows in] Hanzhong (Shanxi province), and today one can acquire large quantities from eastern Shaanxi province.

芪與桂同功 特味稍異比桂 只甘平不辛熱耳
世人以苜蓿根代之 呼為土黃耆 但味苦能令人瘦 特味甘能令人肥也
頗能亂真 用者藥可知
Astragalus and cinnamon work well together, its unique flavor is slightly different compared to cinnamon because it is sweet and balanced, not acrid and hot. Commoners use muxugen (alfalfa roots) as a substitute, and call it tuhuangqi (earth astragalus), but its flavor is bitter and it can make a person emaciated. The unique flavor of sweet [is why true huangqi] can make a person fat. The surest way to identify this adulterant is to use it, because [if you taste] the medicine you will know.
Huangqi also treats coughing up blood, softens the spleen and stomach, and it is considered a central region medicinal. It also treats shanghan (cold damage) with a chi pulse position that cannot be perceived, and also tonifies the kidney organ’s yuanqi (source energy). It is considered a spleen medicinal, and is a medicinal of the upper, middle, lower, inner, outer, and sanjiao (three burners, regions).

今本草圖經 只言河東者 沁州綿上是也 故謂之綿耆 味其如蜜 兼體骨柔軟如綿

Now the Bencao Tujing (Illustrated Classic of the Materia Medica, 1063) only says [the variety from] Hedong (Shandong province) is the region where the continuous [skin] superior [variety grows]. Therefore it is called mianqi (continuous astragalus), its flavor is like honey, it grows twice the size but the structure is soft and flexible like continuous strands. The commoners think this is mian, but it is not.

別說云 黃耆本出綿上為良 故圖經所繪者 憲水者也 與綿上相鄰 盡以地產為綿 若以柔韌為綿 則偽者亦柔 但以乾脆 甘苦為別耳

Bieshuo (Distinguishing Discussions) says: if the huangqi root produces continuous strands it is considered great. Therefore the illustration in the Tujing depicted the shui ([white & red] water varieties, and next to these was depicted the mianshang (continuous superior [variety]). The utmost is when the earth gives birth to the mian. If it seems soft but strong it is considered mian, but then the fake is also soft, but when dried it is brittle, and sweet or bitter is another difference.

東垣云 黃芪 人參 甘草 三味 退熱之聖藥也

Dongyuan says: Huangqi, renshen, gancao, these three flavors are shengyao (sagacious medicinals) for diminishing heat.

靈樞曰 衛氣者所以溫分肉而充皮膚 肥腠理而司開闔

Lingshu (Divine Pivot) [chapter 47] says: the weiqi (protective energies) it what warms and spreads the muscles and fills up the skin, it fattens the couli (interstices) and is in charge of opening the doors.

黃芪既補三焦 實衛氣與桂同 特益氣異耳 亦在佐使桂 則通血也 能破血而實衛氣 通內而實外者 此 桂以血言一作色 求則耆為實氣也

Since huangqi tonifies the sanjiao (three burners, regions), and makes replete the weiqi (protective energies) when combined with cinnamon. It has a unique benefit to different qi. It also is the left assistant and envoy to cinnamon, and then unblocks the blood. Amazingly, it is able to break blood and make replete the weiqi, penetrate interiorly and make replete the exterior. Cinnamon is used to speak to the blood and become the same color, seeking [the blood], and then astragalus become the shiqi (genuine energy). It antagonizes biejia (Amyda sinensis (Weigmann), Carapax).
Dahuang 大黃 (Rhei Radix et Rhizoma):

Its temperature is cold, its flavor is bitter and very cold, it flavor is extremely thick, it is $\text{yin}$, and it is without toxicity. In enters the hand and foot yangming (LI, ST) channels. Soaked in wine it enters the taiyang (SI, UB) channels. Washed in wine it enters the yangming channels. For all the other channels don’t use wine.

Xiang says: the nature of [dahuang] is to move and not to be idle, it drains various excesses and heat that are obstructed, it promotes bowel movements, it washes and cleans out heat from within the intestines and stomach, and is used specifically for constipation.

Xin says: [dahuang] washes and cleans out excess heat.

Zhen says: for wanton heat on the interior use bitter to drain it. Soaked in wine [dahuang] enters the taiyang channels, washed in wine it enters the yangming channels, and for all other channels don’t use wine.

Bencao says: [dahuang] governs draining stagnant blood, blood obstruction from cold or heat, it breaks up bowel obstructions, masses, accumulations, fluid retention, and food stagnation, it washes and cleans out the intestines and stomach, sends out the old and brings in the new, promotes and benefits the water and grains, harmonizes the center and transforms food, calms and harmonizes the five $\text{zang}$ (solid organs), balances the stomach and descends $\text{qi}$, eliminates excess phlegm and knotted heat within the intestines for central abdominal swelling and fullness, for swollen cold blood obstructions in girls, lower abdominal pain, and all old blood which is retained and clotted.

Ye says: the flavor [of dahuang] is bitter and cold, it is a $\text{yin}$ within $\text{yin}$ medicinal. It drains fullness, it sends out the old and brings in the new, it dispels old taints and calms the five $\text{zang}$. It said to destroy and settle calamity and chaos in order to cause nothing more than a $\text{taiping}$ (great peace), such that it is given the name $\text{jiangjun}$ (general of the army). To enter the hand and foot yangming use wine to guide it, this is the foremost. It is used as are the oars of a boat, and can float within the mind, using the draining nature of bitter it brings things down from up high. Use wine to command it to take action and reach the division of up high, as if reaching the summit where the traces of man have not yet reached; one must strive in order to achieve it.
Therefore for *taiyang* and *yangming*, and *zhengyang* (correct *yang*) and *yangming* [channels], when using *Chengqi Tang* (Order the Qi Decoctions) they all use wine soaked [dahuang], and only the *shaoyang* and *yangming* are considered descending channels. Therefore *Xiao Chengqi Tang* (Minor Order the Qi Decoction) doesn’t use wine soaked [dahuang]. Miscellaneous formulas have created its usefulness; steamed with noodles its regulatory ability is unequaled.

衍義云 損益前書已具 仲景治心氣不足 吐血衄血 潟心湯用大黃黃連
*Yanyi* [or the *Bencao Yanyi* (Dilatations on the Materia Medica) by Kou Zongshi 寇宗奭 (c.1120)] says: the *Sunyi Qianshu* (Former Book on Profit & Loss) [said dahuang] was a tool, [Zhang] Zhongjing treated insufficient heart qi, vomiting blood, and nose bleeds [with dahuang]. *Xiexin Tang* (Drain the Heart Decoction) uses dahuang and huanglian (*Coptis chinensis* Franch., Rhizoma).

或曰 心氣既不足矣 而不用補心湯 更用瀉心湯何也 對曰 若心氣獨不足 則須當不吐衄也 此乃邪熱因心氣不足而客之 故令吐衄
Why did someone say: when the heart qi is already insufficient, don’t use *Buxin Tang* (Tonify the Heart Decoction), switch over to using *Xiexin Tang* (Drain the Heart Decoction)? I replied: If it seems the heart qi alone is insufficient then it follows that there wouldn’t be vomiting or nosebleeds, so this then is evil heat causing the heart qi to be insufficient and making themselves a guest. Therefore it causes vomiting and nosebleeds. Using bitter to drain the heat is just like using bitter to tonify the heart; it is all one action but two purposes. If you have this diagnosis then use it, if not then it will not be effective. One only needs to consider the relative deficiencies and excesses, and that is all.

本草又云 惡干漆
*Bencao* also says: [dahuang] antagonizes *ganqi* (*Rhus verniciflua* Stokes, Lacca Exsiccatae).
**Fuling** 

*Poria cocos* (Schw.) Wolf, *Sclerotium*:  

Its temperature is balanced, its flavor is bland or its flavor is sweet and bland, it is *yang*, and is without toxicity. The white variety enters the hand *taiyin* (LU) channel, the foot *taiyang* (UB) channel, and the *shaoyang* (GB, SJ) channels. The red variety enters the foot *taiyin* (SP) channel, the hand *taiyang* (SI) channel, and the *shaoyin* (HT, KD) channels.

**Xiang** says: *fuling* stops thirst, benefits urination, eliminates dampness and benefits dryness, harmonizes the center and benefits *qi*, benefits the lower back and waist, governs the blood circulation. It treats obstructed urination, or copious yellow or red urine which is unfavorable. If the urination is benefited, maybe with frequent doses, it then causes a great depletion of the eyes, or if the sweating is profuse and a person takes it then they deplete their *zhengqi* (genuine energy) causing the loss of a person’s longevity.

**Xin** says: bland is able to benefit the orifices, sweet is used to assist the *yang*, and *fuling* is a *shengyao* (sagacious medicinal) for eliminating dampness. Its flavor is sweet and balanced, it tonifies *yang*, benefits the spleen and purges water, it can conquer wanton dampness, for inhibited urination, the bland flavor drains and discharges, and it is *yang*. It treats water hindering the spleen, generates body fluids, and guides the *qi*.

**Zhen** says: *fuling* is sweet, pure *yang*, it drains, discharges, and stops thirst.

**Bencao** says: *fuling* governs rebellious *qi* in the chest and flanks, worry, rage, fright, evil, fear, and palpitations, knotted pain below the heart, chills and fever, vexation and fullness, rebellious coughing, and a burnt mouth with a dry tongue. It benefits urination, stops *xiaoke* (wasting & thirsting), benefits salivation, [treats] a large abdomen with a trickling urinary disorder, a wasted diaphragm and [the chest] full of phlegm and water, water swellings, knotted urinary disorders. It opens the chest and *fu* (hollow organs), harmonizes the *zang* (solid organ) *qi*, destroys kidney evils of enduring *yin*, benefits the *qi* and strength, and protects the spirit and guards the center.
液云 入足少陰 手足太陽 色白者入辛壬癸 赤者入丙丁
伐腎邪 小便多能止之 小便澀能利之 與車前子相似 雖利小便而不走氣
酒浸 與光明朱砂同用能秘真 味甘平 如何是利小便
Ye says: [fuling] enters the foot shaoyin (KD), and the hand and foot taiyang (SI, UB). The white colored variety enters xin ren gui (the 8th, 9th, & 10th Heavenly stems, corresponding to the LU, UB, KD), the red variety enters bing ding (the 3rd & 4th Heavenly stems, corresponding to the SI & HT). It destroys kidney evils. If the urination is too much it is able to stop it, and if the urination is constrained it is able to benefit it. Combined with cheqianzi (Plantaginis, Semen) it has the same effect. Although it benefits urination it doesn’t move qi. Soaked in wine and combined with the radiance of zhusha (cinnabar) it has the same use of being able to hide the truth. Its flavor is sweet and balanced. What else can benefit urination like this?
INTRODUCTION:

1. Shiji, sec.8《書》, sub.28《封禪書》, psg.19.
2. Lushi Chunqiu, sec.13《有始覽》, sub.63《應同》, psg.1.
3. Ibid., sec.17《審分覽》, sub.96《勿躬》, psg.2.
4. Shiji, sec.8《書》, sub.28《封禪書》, psg.23.
5. Liji, sec.2《禮運》, psg.20.
6. Ibid., sub.41《鄉飲酒義》, psg.15.
7. Taigong Liutao, sec.3《龍韜》, sub.11《五音》, psg.1.
8. Wenzi, sec.6《自然》, psg.1.
9. Ibid., psg.3.
10. Yue Jueshu, sec.5《計倪內經》, psg.5.
11. Huainanzi, sec.20《秦族訓》, psg.8.
12. SW, sec.4《金匱真言論》, psg.3; SKQS, j.1, di.4, p.25a-28a.
14. Ibid.
15. Nanjing, sec.13《用鍼補瀉》, psg.7; Nanjing Benyi, SKQS, j.2, di.75, p.56a-56b.
17. Ibid.
18. SW, sec.8《靈蘭秘典論》, psg.1; SKQS, j.3, di.8, p.1a-2a.
19. Baihu Tongde Lun, sec.3《卷三》, sub.3《五行》, psg.1.
20. Ibid.
21. Ibid.
22. Ibid., psg.21.
23. Ibid.
24. Ibid., psg.22.
25. Ibid.
26. *Han Shu*, sec.1《紀》, sub.1《高帝紀》, sub.2《高帝紀下》, psg.61.
27. Ibid., sec.5《志》, sub.1《律厯志》, sub.2《律厯志下》, psg.213.
28. *Dongguan Han Ji*, sec.1《紀一》, sub.1《世祖光武皇帝》, psg.2.
29. Ibid.
30. *Huainanzi*, sec.4《養形訓》, psg.16.
31. *Dongguan Han Ji*, sec.1《紀一》, sub.1《世祖光武皇帝》, psg.2
32. Ibid.
33. *Lunheng*, sec.15《奇怪》, psg.3.
34. *Han Shu*, sec.6《傳》, sub.69《王莽傳》, sub.2《王莽傳中》, psg.19.
35. Ibid.
36. Ibid., psg.93.
37. *Jin Louzi*, sec.1《興王》, psg.15.
38. Ibid.
39. *Hou Han Shu*, sec.2《列傳》, sub.7《馮岑賈列傳》, psg.10.
40. *Tongdian*, sec.56《禮十五》, sub.2《歷代所尚》, psg.19.
42. Ibid.
43. *Taiping Yulan*, sec.272《婦人三》, sub.5《薛靈芸》, psg.1.
44. *Tongdian*, sec.62《禮二十一》, sub.1《君臣服章制度》, psg.22.
45. Ibid., sec.56《禮十五》, sub.2《歷代所尚》, psg.23.
47. Ibid., j.87, p.2239.
48. Ibid.
50. Ibid.
53. Ibid.
54. Ibid.
56. Ibid.
58. Ibid.
59. *Hu Hong Ji*, 2009 reprint, di.1, p.44.
60. Ibid., p.47.

CHAPTER 1:

4. *Su Shen Liangfang, SKQS*, j.1, p.1a-3b; j.4, p.11a.
5. *Mingyi Bielu*, in *BC*, j.1, p.11b. The instructions on drying ginseng root, *wuling jianfeng* 無令見風, may also have meant to slow dry it in the shade.
9. Ibid.
15. Ibid.
22. Ibid., *j*.6, p.158; *SKQS*, *j*.6, p.3b.
23. Ibid., *j*.159; *SKQS*, *j*.6, p.4b.
25. Ibid.
26. Ibid.
27. Ibid., sec. 618《學部十二》, sub.1《敘圖書》, psg.11. The text *Guicang* (Return to Storage) might also be translated as *Guizang* (Return to the Organs).
28. Ibid., sec.722《方術部三》, sub.1《醫二》, psg.6. The phrase *xing yu shi* (transmitted through the ages) could also be translated as “transmitted around the world.” Given that the passage is talking about ancient texts preserved for posterity, the former is used, even though it is known Chinese medical texts did spread to Japan, Korea, and elsewhere. This translation is also used in subsequent passages for consistency.
29. Ibid., psg.7.
30. Ibid., sec.724《方術部五》, sub.1《醫四》, psg.13.
31. Ibid., sec.12《天部十二》, sub.3《醫》, psg.12.
32. *Baopuzi*, sec.1《內篇》, sub.19《遐覽》, psg.3.
34. *Tongdian*, sec.25《職官七》, sub.2《太常卿》, psg.12.
35. *Han Shu*, sec.3《志》, sub.10《藝文志》, psg.637.
38. *SW*, wuyun 五運: sec.9《六節藏象論》, psg.4 & 5; *SKQS*, *j*.3, *di*.9, pp.7b & 8a; sec.66《天元紀大論》, psg.1(2x) & 2(2x); *SKQS*, *j*.19, *di*.66, pp.1b(2x), 3b, & 4a; sec.67《五運行大論》, psg.title & 1; *SKQS*, *j*.19, *di*.67, pp.10a & 10b; sec.69《氣交變大論》, psg.1, 2, & 4; *SKQS*, *j*.20, *di*.69, pp.1a, 2b, & 13b; sec.70《五常政大論》, psg.1; *SKQS*, *j*.20, *di*.70, p.19a; sec.71《六元正紀大論》, psg.1(2x), 76(2x), 78, 140, & 144; *SKQS*, *j*.21, *di*.71, pp.1b(2x), 23a(2x), 24b, 36b, & 42b; sec.72*《刺法論》, psg.3; sec.73*《本病論》, psg.3. *SW, *di*.72 & 73 lost in *SKQS.*

49. Taiping Yulan, sec.397《人事部三十八》， sub.1《敘夢》， pgs.23.

50. LS, sec.43《淫邪發病》， pgs.1; SKQS, j.7, di.43, p.4b.

51. Taiping Yulan, sec.724《方術部五》， sub.1《醫四》， pgs.1. The Taiping Yulan has other short quotes attributed to the SW which are found in chapters 2, 5, 8, 17, 23, 29, 44, 75, & 78 of the received text, as well as several unidentified passages apparently from alternative editions that are no longer extant.

52. SW, rong 榮: sec.2《四氣調神大論》， pgs.1 & 2; SKQS, j.1, di.2, pp.8b & 12b; sec.10《五藏生成》， pgs.1(5x) & 2; SKQS, j.3, di.10, pp.14a, 14b(4x), & 16a; sec.14《湯液醪醴體》， pgs.2; SKQS, j.4, di.14, p.8b; sec.26《八正神明論》， pgs.4; SKQS, j.8, di.26, p.11b; sec.27《離合真邪》， pgs.1; SKQS, j.8, di.27, p.13a; sec.32《刺熱》， pgs.2(4x) & 3; SKQS, j.9, di.32, pp.11b(2x) & 12b(3x); sec.34《逆調論》， pgs.5(2x); SKQS, j.9, di.34, p.18a(2x); sec.35《痺論》， pgs.1; SKQS, j.10, di.35, p.2a; sec.42《風論》， pgs.1; SKQS, j.12, di.42, p.2a; sec.43《癥論》， pgs.5; SKQS, j.12, di.43, p.10b; sec.49《脈解》， pgs.6; SKQS, j.13, di.49, p.17b; sec.58《氣穴論》， pgs.2; SKQS, j.15, di.58, p.14b; sec.61《水熱穴論》， pgs.4(3x); SKQS, j.16, di.61, pp.14a(3x); sec.62《調經論》， pgs.8; SKQS, j.17, di.62, p.7b; sec.67《五運行大論》， pgs.6; SKQS, j.19, di.67, p.17a; sec.69《氣交變大論》， pgs.3(5x) & 5; SKQS, j.20, di.69, pp.7a, 8a, 9a(2x), 9b, 14a; sec.70《五常政大論》， pgs.1, 2(3x), & 3(3x); SKQS, j.20, di.70, pp.20a, 24a, 26b, 28b, 30a, 31b, 34a; sec.71《六元正紀大論》， pgs.13, 25(2x), 37, 49, 61(2x), 145, 146, & 148; SKQS, j.21, di.71, pp.5a, 9a, 9b, 12a, 15a, 18b, 19a, 43a, 43b; sec.73*《本病論》， pgs.16(2x) & 17; sec.74《至真要大論》， pgs.4, 5, & 8; SKQS, j.22, di.74, pp.7a, 11b, 18b; sec.77《疏五過論》， pgs.2; SKQS, j.23, di.77, p.9a; sec.81《解精微論》， pgs.2; SKQS, j.24, di.81, p.11a. *SW, di.73 lost in SKQS.

53. SHL, rong 榮: sec.1《辨脈法》， pgs.5, 7, & 29; Zhujie Shanghan Lun, 2004 reprint, j.1, di.1, p.34(2x), 37; SKQS, j.1, di.1, p.2b, 3a, 7a; sec.2《平脈法》， pgs.23(3x), 29(2x), 33(2x), 35(3x), 36, & 37; Zhujie Shanghan Lun, 2004 reprint, j.1, di.2, p.46(2x), 47(3x), 48(6x), 49; SKQS, j.1, di.2, p.23b(2x), 24a(2x), 25b, 26a, 26b(4x), 27a; sec.3《傷寒例》， pgs.25; Zhujie Shanghan Lun, 2004 reprint, j.2, di.3, p.58; SKQS, j.2, di.3, p.12a; sec.6《辨太陽病脈證并治》， pgs.26, 29(4x), & 85; Zhujie Shanghan Lun, 2004 reprint, j.3, di.6, p.74(4x), 80; SKQS, j.3, di.6, p.9a(4x), 21b; sec.20《辨不可下病脈證并治》， pgs.12(2x) & 13; Zhujie Shanghan Lun, 2004 reprint, j.9, di.20, p.142(2x), 143; SKQS, j.9, di.20, p.3b(2x), 4b.

54. Nanjing, rong 榮: sec.1*《經脈診候》， pgs.14, 23, & 24(4x); Nanjing Benyi, SKQS, j.1, di.14, p.24a; j.1, di.23, p.45b; j.1, di.24, p.48a(2x); sec.4*《榮衛三焦》， pgs.1(5x); Nanjing Benyi, SKQS, j.1, di.30, p.58a(4x); sec.5《藏府配像》， pgs.1 & 4; Nanjing Benyi, SKQS, j.2, di.32, p.3a; j.2, di.35, p.8a; sec.13《用鍼補瀉》， pgs.3(5x) & 8; Nanjing Benyi, SKQS, j.2, di.71, p.53a(5x); j.2, di.76, p.59b. *Nanjing Benyi, SKQS, uses ying 榮: j.1, di.24, pp.48b & 49a; j.1, di.30, p.58a.
55. LS, rong 榮: sec.1*《九鍼十二原》, psg.1; sec.10《經脈》, psg.28, 30(2x), & 32; SKQS, j3, di.10, pp.10a(3x) & 10b; sec.17《脈度》, psg.2(3x), 3(2x), & 4(3x); SKQS, j.4, di.17, pp.11a(3x), 11b(5x); sec.28《問問》, psg.7; SKQS, j.5, di.28, p.17a; sec.57《水脈》, psg.4; SKQS, j.9, di.57, p.1b; sec.65《五音五味》, psg.4, 5*, & 6; SKQS, j.10, di.65, pp.2b, 3a; sec.71《邪客》, psg.1; SKQS, j.10, di.71, p.10b; sec.72《通天》, psg.3; SKQS, j.10, di.72, p.15b; sec.75《刺節真邪》, psg.4*; sec.81《鬱疽》, psg.2; SKQS, j.12, di.81, p.13a.* LS, SKQS, uses ying 营: j.1, di.1, p.1a; j.10, di.65, p.3a; j.11, di.75, p.7b.

56. SW, ying 营: sec.3《生氣通天論》, psg.4; SKQS, j.1, di.3, p.18a; sec.9《六節藏象論》, psg.7; SKQS, j.3, di.9, p.12a; sec.19《玉機真藏論》, psg.4(3x); SKQS, j.6, di.19, pp.3a(2x), 3b; sec.25《寶命全形論》, psg.4; SKQS, j.8, di.25, p.7a; sec.43《熱論》, psg.5; SKQS, j.12, di.43, p.11b; sec.45《厥論》, psg.1(2x); SKQS, j.12, di.45, p.17a(2x); sec.54《鍼解》, psg.2; SKQS, j.14, di.54, p.11a; sec.60《骨空論》, psg.3(2x); SKQS, j.16, di.60, pp.2b, 5a; sec.62《調經論》, psg.10; SKQS, j.17, di.62, p.9a; sec.77《疏五過論》, psg.2; SKQS, j.23, di.77, p.8b.

57. Nanjing, ying 营: sec.5《藏府配像》, psg.1, 6(6x); Nanjing Benyi, SKQS, j.2, di.32, p.3a; j.2, di.37, pp.11b(3x) & 12a(3x).

58. LS, ying 营: SKQS, j.1, di.1, p.1a; sec.5《根結》, psg.5(3x); SKQS, j.2, di.5, p.3a(3x); sec.6《壽夭剛柔》, psg.10, 11, & 12; SKQS, j.2, di.6, p.7a(3x); sec.8《本神》, psg.1 & 13(2x); SKQS, j.2, di.8, pp.11b & 13a(2x); sec.10《經脈》, psg.1, 2, & 34; SKQS, j.3, di.10, pp.1a(2x), 11a; sec.12《經水》, psg.1; SKQS, j.3, di.12, p.16b; sec.15《五十營》, psg.title, 1, 2, & 3; SKQS, j.4, di.15, pp.8b(2x), 9a(2x); sec.16《營氣》, psg.title, 1(3x); SKQS, j.4, di.16, pp.9a(3x), 10a; sec.18《藏衛生會》, psg.1(5x), 2, 3(2x), & 5; SKQS, j.4, di.18, pp.12a(2x), 12b(3x), 13a, 13b, 14a; sec.30《決氣》, psg.1; SKQS, j.6, di.30, p.4a; sec.34《五亂》, psg.3; SKQS, j.6, di.34, p.8a; sec.35《脈論》, psg.3; SKQS, j.6, di.35, p.9b; sec.47《本藏》, psg.1(2x); SKQS, j.7, di.47, pp.11b(2x); sec.48《禁服》, psg.2 & 7; SKQS, j.8, di.48, pp.2a & 3b; sec.52《衛氣》, psg.1; SKQS, j.8, di.52, p.10a; sec.59《衛氣失常》, psg.3; SKQS, j.9, di.59, p.3b; sec.60《玉版》, psg.2; SKQS, j.9, di.60, p.5b; sec.63《五味論》, psg.3; SKQS, j.9, di.63, pp.11b; SKQS, j.10, di.65, p.3a; sec.68《上膈》, psg.1; SKQS, j.10, di.68, p.8b; sec.71《邪客》, psg.1; SKQS, j.10, di.71, p.10b; SKQS, j.11, di.75, p.7b; sec.80《大憝論》, psg.1; SKQS, j.12, di.80, p.10b.

61. Xinkan Tuji Suwen Yaozhi Lun, 2006 reprint, j.6, p.253.
62. Shiji, sec.1《本紀》, sub.6《秦始皇本紀》, psg.38.
63. Taiping Yulan, sec.830《資產部十》, sub.8《醫針》, psg.6.
64. Bronze Figure Classic, SKQS, j.1-7.
65. Ibid., j.1, pp.1a-8a.
66. Ibid., p.1b-2a.
67. Nanjing, sec.1《經脈診候》, psg.23; Nanjing Benyi, SKQS, j.2, di.63, p.44b.
68. Ibid., sec.12《藏府井論》, psg.4; Nanjing Benyi, SKQS, j.2, di.65, p.46b.
69. Ibid., psg.1; Nanjing Benyi, SKQS, j.2, di.62, p.44a.
70. Ibid., psg.3; Nanjing Benyi, SKQS, j.2, di.64, p.45a-45b.
71. Bronze Figure Classic, SKQS, j.1, p.5a.
72. Ibid., p.2a.
73. LS, sec. 1《九鍼十二原》, psg.14; SKQS, j.1, di.1, p.5a; sec.2《本輸》, psg.3; SKQS, j.1, di.2, p.6b; Bronze Figure Classic, SKQS, j.1, p.2a.
74. Nanjing, sec.12《藏府井俞》, psg.5; Nanjing Benyi, SKQS, j.2, di.66, p.46b-47a.
75. Bronze Figure Classic, SKQS, j.2, p.1a-6b; j.4, p.1a-4a.
76. Nanjing, sec.1《經脈診候》, psg.23; Nanjing Benyi, SKQS, j.1, di.23, p.45b; sec.2《經絡大數》, psg.2; Nanjing Benyi, SKQS, j.1, di.26, p.52b-53a.
77. Nanjing, sec.3《奇經八脈》, psg.1, 2, & 3; Nanjing Benyi, SKQS, j.1, di.27, p.53b-54a; j.1, di.28, p.54b-55b; j.1, di.29, p.57a-57b.
79. Ibid., j.2, di.6, p.73-79; SKQS, j.2, di.6, p.29b-35b.
80. Ibid., j.1, di.2, p.6; SKQS, j.1, di.2, p.6a.
81. LS, sec.44《順氣一日分為四時》, psg.6; SKQS, j.7, di.44, p.7a.
82. Bronze Figure Classic, SKQS, j.1, p.7b; SW, sec.25《寶命全形論》, psg.3; SKQS, j.8, di.25, pp.4a-5b.

CHAPTER 2:

1. JS, j.4, p.73.
2. JS, j.23, p.535-536.
3. JS, j.23, p.536.
4. JS, j.4, p.70-76.
5. JS, j.23, p.536.
6. JS, j.23, p.536.
7. JS, j.23, p.536.
8. JS, j.23, p.536.
11. JS, j.51, p.252.
12. JS, j.51, p.252-253.
15. JS, j.5, p.97.
16. JS, j.131, p.2813.
17. JS, j.5, p.100.
18. JS, j.5, p.100.
19. JS, j.23, p.536.
20. JS, j.23, p.536.
22. JS, j.23, p.536.
23. JS, j.131, p.2813.
24. JS, j.131, p.2813.
25. JS, j.131, p.2813.
26. JS, j.131, p.2813.
27. *JS, j.6, p.121.*
28. *JS, j.6, p.121.*
29. *JS, j.6, p.121-122.*
30. *JS, j.6, p.122.*
31. *JS, j.6, p.122.*
33. Ibid., p.153; *SKQS,* preface 1, p.1a.
35. Ibid., *j.*3-6, pp.17-42.
36. Ibid., *j.*7-8, pp.43-55.
37. Ibid., *j.*9, pp.56-60.
38. Ibid., *j.*9, pp.60-63.
39. Ibid., *j.*10-11, pp.64-72.
40. Ibid., *j.*12-50, pp.73-281.
41. SW, 2010 reprint, ch.31, p.159-162; *SKQS,* *j.*9, *di.*31, p..
43. Ibid.p.675.
44. Ibid.
47. Ibid., e.g., *j.*2, pp.17-18; *SKQS,* *j.*2, pp.1a-7b.
51. *Waitai Miyao Fang,* 2011 reprint, *j.*2, p.17; *SKQS,* *j.*2, pp.2b. The order of *shengjiang* and *gancaozhi* were switched for ease of comparison with the above version of the same formula.
56. Ibid., *j.*1, p.151; *SKQS,* *j.*1, p.2a-2b.
60. *Shanghan Weizhi Lun,* *SKQS,* *j.*1, *di.*3, p.4b.
61. Ibid., pp.4b-7b.
64. Ibid., p.176; *SKQS,* *j.*3, *di.*39, p.3b-4a.
65. *Shiji,* sec.5《列傳》, sub.105《扁鵲倉公列傳》, psg.4-5.
67. *Qian Han Ji,* sec.6《高后紀》, psg.9.
69. *Hou Hanshu,* sec.2《列傳》, sub.77《文苑列傳下》, psg.5.
72. Ibid., p.45; *SKQS,* *j.*1, *di.*2, p.21b.

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The 18th Difficulty mentions the cun, guan, and chi positions, together with superficial, middle, and deep positions, corresponding to the three jiaos (burners, body regions). While it does not directly correspond the zangfu to these positions, it does reference the location of the zangfu in the three body regions by correlating the channels with the wuxing, noting that fire ascends, water descends, and earth is in the center. This is consistent with other passages that suggest the cun corresponds to yang and the chi to yin. Other than mentioning that the lung pulse might be felt on the right side in the 18th Difficulty, this passage does not mention any other organs being located on the left or right, in any specific pulse position (cun, guan, chi), or at any depth (e.g., superficial, deep). The remainder of the text dedicated to pulse diagnosis can be understood according to the five depths model detailed in the 5th Difficulty.

81. Nanjing, sec.1《經脈診候》, psg.5; Nanjing Benyi, SKQS, j.1, di.5, p.12a.
82. (舌心) SW, sec.5《陰陽應象大論》, psg.7; SKQS, j.2, di.5, p.7a; sec.17《脈要精微論》, psg.5; SKQS, j.5, di.17, p.6b; sec.41《刺腰痛》, psg.1; SKQS, j.11, di.41, p.15b; sec.48《大奇論》, psg.5; SKQS, j.13, di.48, p.11a; sec.63《繆刺論》, psg.3; SKQS, j.18, di.63, p.2b; sec.70《五常政大論》, psg.1; SKQS, j.20, di.70, p.21a; sec.74《至真要大論》, psg.11; SKQS, j.22, di.74, p.25a; LS, sec.17《脈度》, psg.2; SKQS, j.4, di.17, p.11a; sec.21《寒熱病》, psg.5; SKQS, j.5, di.21, p.2b; sec.23《熱病》, psg.25; SKQS, j.5, di.23, p.9b; sec.37《五腸五使》, psg.3 & 4; SKQS, j.6, di.37, p.13a(2x); sec.69《憂恚無言》, psg.1; SKQS, j.10, di.69, p.9a; Nanjing, sec.5《藏府配像》, psg.6; Nanjing Benyi, SKQS, j.2, di.37, p.10b.
83. (舌食) SW, sec.4《金匱真言論》, psg.3; SKQS, j.1, di.4, p.26b; sec.31《熱論》, psg.2(2x) & 3; SKQS, j.9, di.31, pp.2b(2x) & 3a; sec.33《評熱病論》, psg.4; SKQS, j.9, di.33, p.16a; sec.72《刺法論》, psg.7; sec.74《至真要大論》, psg.5; SKQS, j.22, di.74, p.9b; LS, sec.4《邪氣藏府病形》, psg.9; SKQS, j.1, di.4, p.16b; sec.9《終始》, psg.14(2x); SKQS, j.2, di.9, p.16b(2x); sec.10《經脈》, psg.11 & 19; SKQS, j.3, di.10, pp.4a(2x), 10a; sec.17《脈度》, psg.2; SKQS, j.4, di.17, p.11a; sec.18《營衛生會》, psg.3; SKQS, j.4, di.18, p.13b; sec.21《寒熱病》, psg.8; SKQS, j.5, di.21, p.3b; sec.29《師傳》, psg.11; SKQS, j.6, di.29, p.3a; sec.63《五味論》, psg.2; SKQS, j.9, di.63, p.11b; sec.75《刺節真邪》, psg.5; SKQS, j.11, di.75, p.8a; Nanjing, sec.5《藏府配像》, psg.6; Nanjing Benyi, SKQS, j.2, di.37, p.10b; sec.10《泄傷寒》, psg.2; Nanjing Benyi, SKQS, j.2, di.58, p.38b; *SW, di.72 lost in SKQS.
84. (舌經) SW, sec.47《奇病論》, psg.1; SKQS, j.13, di.47, p.4b; sec.59《氣府論》, psg.10; SKQS, j.15, di.59, p.29b; LS, sec.10《經脈》, psg.10, 18, 30, & 38; SKQS, j.3, di.10, pp.4a, 6b, 10a, 12a; sec.11《經別》, psg.2 & 4; SKQS, j.3, di.11, pp.15a & 15b; sec.13《經筋》, psg.1 & 8; SKQS, j.4, di.13, pp.1a & 5a; sec.22《癩狂
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85. (舌厥) SW, sec.16 《診要經終論》, psg.5; SKQS, j.4, di.16, p.18a; LS, sec.9 《終始》, psg.35; SKQS, j.2, di.9, p.19a; sec.10 《經脈》, psg.32; SKQS, j.3, di.10, p.10b; Nanjing, sec.1 《經脈診候》, psg.2; SKQS, j.1, di.10, p.10b; Nanjing, sec.6 《藏府度數》, psg.5; Nanjing Benyi, SKQS, j.4, di.24, p.48b.
86. SW, sec.22 《藏氣法時論》, psg.9; SKQS, j.7, di.22, p.9a.
87. SW, sec.36 《刺瘧》, psg.5; SKQS, j.10, di.36, p.13a.
88. SW, sec.52 《刺禁論》, psg.3; SKQS, j.14, di.52, p.5a.
89. LS, sec.31 《腸胃》, psg.1; SKQS, j.6, di.31, p.4b; Nanjing, sec.6 《藏府度數》, psg.5; Nanjing Benyi, SKQS, j.2, di.22, p.16b.
90. SW, sec.32 《刺熱》, psg.1; SKQS, j.9, di.32, p.6a.
91. LS, sec.23 《熱病》, psg.21; SKQS, j.5, di.23, p.9a.
92. Zhubing Yuanhou Lun, 2011 reprint, j.1 di.4, p.1. Note: missing from SKQS.
93. Ibid., j.4, di.41, p.24; SKQS, j.4, di.41, p.2b.
94. Ibid., j.27, di.5, p.149; SKQS, j.27, di.5, p.3a.
95. Ibid., j.30, di.1, p.164; SKQS, j.30, di.1, p.1a-1b.
96. Ibid., j.30, di.8-12, p.165; SKQS, j.30, di.8-12 p.3b-5b.
97. Ibid., j.39, di.70, p.220; SKQS, j.39, di.70, p.6a.
98. Ibid., j.50, di.144 & 145, p.280; SKQS, j.50, di.144 & 145, p.11a-11b.
100. Ibid., j.2, di.3, p.55; SKQS, j.2, di.3, p.7a.
101. Ibid., j.2, di.4, p.61; SKQS, j.2, di.4, p.16b-17a.
102. Ibid., j.4, di.7, p.90; SKQS, j.4, di.7, p.1b.
103. Ibid., j.4, di.7, p.92; SKQS, j.4, di.7, p.4b.
104. Ibid., j.4, di.7, p.99; SKQS, j.4, di.7, p.18b-19a.
105. Ibid., j.5, di.8, p.109; SKQS, j.5, di.8, p.12a.
106. Ibid., j.5, di.8, p.110; SKQS, j.5, di.8, p.14a.
107. Ibid., j.7, di.15, p.137; SKQS, j.7, di.15, p.9b.
108. Ibid., j.9, di.20, p.142; SKQS, j.9, di.20, p.2b-3a.
109. Ibid., j.9, di.20, p.144; SKQS, j.9, di.20, p.6b-7a.
111. Ibid., j.2, di.22, p.167; SKQS, j.2, di.22, p.6b-7a.
113. SW, sec.28 《通評虛實論》, psg.3; SKQS, j.8, di.28, p.22a.
114. SW, sec.69 《氣交變大論》, psg.3; SKQS, j.20, di.69, p.10a.
115. SW, sec.71 《六元正紀大論》, psg.141, 151, & 154; SKQS, j.21, di.71, pp.38a, 46a, & 48b.
117. LS, sec.34 《五亂》, psg.7b; SKQS, j.6, di.34, p.8a.
118. LS, sec.34 《五亂》, psg.3; SKQS, j.6, di.34, p.8a.
121. Ibid., j.22, di.1, p.127; SKQS, j.22, di.1, p.1a-2a.
122. Ibid., j.22, di.1, p.127; SKQS, j.22, di.1, p.1b.
123. Ibid., j.22, di.6-16, pp.128-129; SKQS, j.22, di.6-16, p.3a-7b.
124. Ibid., j.22, di.10, p.128; SKQS, j.22, di.10, p.4b-5a.
125. Ibid., j.22, di.12, p.128; SKQS, j.22, di.12, p.5b-6a.
126. Ibid., j.22, di.17, p.129; SKQS, j.22, di.17, p.7b.
127. Ibid., j.40, di.92, p.223; j.47, di.69, p.260; SKQS, j.40, di.92, p.1a-1b; SKQS, j.47, di.69, p.2b-3a.
129. Ibid., j.18, di.1, pp.782-783.
130. Ibid., j.10, di.6, p.700.
131. Ibid., j.18, di.1, p.782.
132. Waitai Miyao Fang, 2011 reprint, j.6, p.81; SKQS, j.6, p.3a.
137. JS, j.131, p.2811.
138. Ibid.
139. Ibid.
140. Ibid.
141. Ibid.
144. Ibid., j.1, pp.175-176.
145. Ibid., p.176. Floating pulses usually indicate an exterior syndrome, so Liu must be suggesting that these diseases become contagious only after moving interiorly.
146. Waitai Miyao Fang, 2011 reprint, j.1, di.9, p.12; SKQS, j.1, p.41a.
147. Ibid.; SKQS, j.1, p.41a.
149. Ibid.
150. Ibid., p.184.
151. Ibid., p.189.
152. JS, j.131, p.2811.
153. Ibid.
154. SW; SKQS, j.21, di.71, pp.23a, 42b.
156. Ibid.
158. Liji, sec.45《鄉飲酒義》, psg.15; Xunzi, sec.20《樂論》, psg.10; Kongzi Jiayu, sec.28《觀鄉射》, psg.2.
160. Ibid.; SKQS, preface, p.3a.
161. Ibid, p.82; SKQS, preface, p.3a-4a.
162. Ibid., j.1, di.1, p.89; SKQS, j.1, di.1, p.1a-3b.
163. Ibid., j.1, di.2, pp.89-108; SKQS, j.1, di.2, feng 風: pp.3b-4a; re 熱: pp.4a-31b; shi 湿: pp.31b-32b; huo 火: pp.33a-57b; zao 燥: pp.57b-60a; han 寒: pp.60a-69a.
164. SW, sec.35《瘧論》, psg.5; SKQS, j.10, di.35, p.6a.
165. SW, sec.66《天元紀大論》, psg.2; SKQS, j.19, di.66, p.6b.
167. Ibid., j.1, di.2, p.91; SKQS, j.1, di.2, p.9a.
169. Ibid.
171. Ibid., p.92; SKQS, SKQS, j.1, di.2, p.12a-13a.
173. Ibid., pp.95-96; SKQS, j.1, di.2, p.24a-28b.
174. SW, zhanli 戰慄: sec.71《六元正紀大論》, psg.151; SKQS, j.21, di.71, p.45b; Shanghan Lun, sec.21《辨不可下病脈證并治》, psg.22; Zhujie Shanghan Lun, 2004 reprint, j.9, di.21, p.144; SKQS, j.9, di.21, p.6b.
175. E.g., zhanzhuan lili 戰戰慄慄: Shuoyuan, sec.16《談叢》, psg.22; Qianfu Lun, sec.13《慎微》, psg.3; Wenzi, sec.5《微明》, psg.13; Shiji, sec.3《書》, sub.3《律書》, psg.9; Hou Han Shu, sec.1《紀》, sub.1《光武帝紀上》, psg.47.
177. Ibid.; SKQS, j.1, di.2, p.27a.
178. Ibid., pp.96-7; SKQS, SKQS, j.1, di.2, p.29a.
179. Liji, sec.9《禮運》, psg.18.
180. Suwen Xuanji Yuanbing Shi, 2006 reprint, j.1, di.2, p.97; SKQS, SKQS, j.1, di.2, p.29b. The SKQS uses gan 肝 (liver) instead of qing 情 (emotions) as in the 2006 reprint for this passage, which might have intended to use the homophone gan 感 (emotions) instead.
183. Ibid., p.100; SKQS, SKQS, j.1, di.2, p.40a. Portions of this passage are missing from the SKQS.

CHAPTER 3:

1. JS, j.6, pp.122-123.
2. JS, j.6, pp.123-135.
3. JS, j.6, p.136.
4. JS, j.7, p.156.
5. JS, j.23, p.537.
6. JS, j.23, p.537.
7. Shennong Bencao, c.1800 reprint, j.1, p.22b-23b; DGBK, j.6, p.212-213. ; SKQS, j.6, p.133b-135a.
8. DGBK, j.6, p.213. ; SKQS, j.6, p.134b. The first passage cited is in the Lunheng, sec.59《驗符》, psg.6. A variation on the second passage (two characters reversed order) is in the Yiwen Leiju, sec.98《卷九十八》, sub.1《祥瑞部上》, sub.5《木芝》, psg.18. This second passage is repeated in the Taiping Yulan, sec.986《藥部三》, sub.1《芝下》, psg.19.
18. Nanjing Benyi, 2006 reprint, preface 7, p.121; j.1, p.123; *SKQS*, preface 6, p.1a-8a; 2006 reprint, j.4., pp.156-159; *SKQS*, j.2, di.51, p.27a-27b; j.2, di.53, p.28a; j.2, di.58, p.35a-36b.
19. Ibid., j.4., p.157; *SKQS*, j.2, di.53, p.28a.
22. *JS*, j.9, p.207.
34. *JS*, j.11, p.252.
35. *JS*, j.11, p.252.
38. *JS*, j.11, p.259.
41. *JS*, j.12, p.284.
42. *JS*, j.12, p.284.
43. *JS*, j.12, p.284.
44. *JS*, j.23, p.540.
47. Ibid.
48. Ibid.
51. Shiji, sec.5《列傳》, sub.84《屈原賈生列傳》, psg.29; Hanshu, sec.4《傳》, sub.18《賈誼傳》, psg.10.
52. Lunheng, sec.14《物勢》, psg.3; sec.54《自然》, psg.8.
53. Zhuangzi, sec.1《內篇》, sub.6《大宗師》, psg.5; 1999 reprint, j.1, di.6, p.100; Liezi, sec.3《周穆王》, psg.2; Huainanzi, sec.9《主術訓》, psg.26; Wenzi, sec.1《道原》, psg.7; Guiguzi, sec.17《實意法螣蛇》, psg.2.


57. Ibid., j.1, di.1, p.114; SKQS, j.1, di.1, p.1b.

58. Ibid., j.1, di.6, pp.118-119; SKQS, j.1, di.6, pp.14b-18a.

59. Ibid., j.1, di.7, pp.119-124; SKQS, j.1, di.7, pp.18a-31b.

60. Suwen Bingji, 2006 reprint, j.1, di.7, p.119; SKQS, j.1, di.7, pp.18a-18b; SW, sec.74《至真要大論》, psg.16; SKQS, j.22, di.74, p.37b.

61. Suwen Bingji, 2006 reprint, j.1, di.7, p.120; SKQS, j.1, di.7, p.19b.


63. Ibid.; SKQS, j.12, p.1b.


65. Ibid., p.122; SKQS, j.1, di.7, pp.26a-26b.


67. SW, sec.71《六元正紀大論》, psg.154; SKQS, j.21, di.71, p.49b.

68. Suwen Bingji, 2006 reprint, j.1, di.8, p.124; SKQS, j.1, di.8, p.32a.

69. Ibid., j.1, di.2, pp.115-117; SKQS, j.1, di.2, pp.3b-10a.

70. Suwen Yaozhi, 2006 reprint, j.5, p.244.

71. Ibid., j.6, p.256.


73. Ibid., j.1, di.5, p.4; SKQS, j.1, di.5, p.6a.


75. Ibid., j.1, di.4, pp.117-118; SKQS, j.1, di.4, pp.12a-13b.

76. Ibid., j.1, di.5, p.118; SKQS, j.1, di.5, pp.13b-14b.

77. Ibid., j.1, di.7, p.123; SKQS, j.1, di.7, p.29b-30a.

78. Ibid.

79. Ibid., j.2, di.18, pp.144-145; SKQS, j.2, di.18, pp.52b-54b.

80. Ibid., p.144; SKQS, j.2, di.18, p.52b.

81. Ibid.

82. Ibid., p.145; SKQS, j.2, di.18, p.53b-54a.


85. Ibid., j.2, di.10-12, pp.130-137; SKQS, j.2, di.10-12, pp.1a-25b.

86. DGB, fangfeng 防風: j.7, p.231; SKQS, j.7, p.36a.


88. Jufang, 2007 reprint, j.1, p.18; SKQS, j.1, p.29a-29b.


91. Suwen Bingji, 2006 reprint, j.2, di.14, p.139; SKQS, j.2, di.14, p.34b; xionghuang jiedu wan: Jufang, 2007 reprint, j.8, p.200; SKQS, j.8, p.6a; miaoxiang wan:
Jufang, 2007 reprint, j.6, p.160; SKQS, j.6, p.5b. The 2007 reprint uses the character yuan 圓 instead of wan 丸 for both formulas.

92. DGBC, j.14, pp.499-500; SKQS, j.14, p.4a-7a.
93. DGBC, j.13, pp.472-473; SKQS, j.13, p.35a-37a.
94. DGBC, j.4, pp.103-106; SKQS, j.4, p.6a-11b.
95. DGBC, j.16, pp.547-549; SKQS, j.16, p.8a-11a.
96. DGBC, j.7, pp.223-226; SKQS, j.7, p.16a-20a.
97. DGBC, j.8, pp.277-278; SKQS, j.8, p.72a-73a.
98. DGBC, j.13, p.470-471; SKQS, j.13, p.29b-31b.
100. Ibid., j.3-15, pp.24-78.
101. Ibid., j.1, p.13; SKQS, j.1, pp.9a-9b.
102. Chunqiu Zuozhuan, sec.10《昭公》, sub.1《昭公元年》, psg.2.
104. Lunheng, sec.49《商蟲》, psg.6.
105. Shouwen Jiezi, sec.14《卷十四》, sub.7《蟲部》, psg.8929.
106. Fengsu Tongyi, sec.8《祀典》, sub.10《雄雞》, psg.4.
107. Suwen Xuanming, 2006 reprint, j.1, p.13; SKQS, j.1, pp.9a-9b; SW, sec.19《玉機真藏論》, psg.8; SKQS, j.6, di.19, p.7b.
111. Ibid., j.2, di.14, p.140; SKQS, j.2, di.14, p.36b. In the 2006 reprint this formula is called Jin hua wan 金花丸.
112. Ibid., j.2, di.15, p.141; SKQS, j.2, di.15, p.41b.
116. Suwen Xuanming, 2006 reprint, j.6, p.39; SKQS, j.6, p.9b.
117. Ibid., j.4, p.31; SKQS, j.4, p.8b-9b. There are some missing characters in the SKQS.
118. Ibid., j.11, p.61; SKQS, j.11, p.8a.
119. Ibid., j.12, p.64; SKQS, j.12, p.6a-7b.
120. Jufang, 2007 reprint, j.5, p.154; SKQS, j.5, p.61a-61b.
122. Ibid., j.3, di.24, p.157; SKQS, j.3, di.24, p.18a-19b.
124. Ibid., j.2-3, pp.204-230.
125. Ibid., j.6, pp.248-256.
126. Yishui 易水: Yixue Qiyuan, 2006 reprint, preface, p.12; Yizhou 易州:

127. JS, j.24, p.575.
130. JS, j.131, p.2812.
131. Ibid.
133. Ibid.
134. Ibid.
135. JS, j.131, p.2812.
138. Ibid.
143. Ibid., j.1, p.78.
144. Ibid.
145. Ibid., p.79.
146. Ibid., p.84.
147. Ibid., p.82. Qiang 强 could also be translated as strength, power, obstinace, or stubbornness, but to capture the meaning of evil actions that Zhang implies, the word violence is used.
148., pp.77-88.
150. Ibid., p.33.
151. Ibid., pp.36-47.
152. Ibid., p.44.
155. Ibid.
157. Ibid., j.1, p.22.
158. Ibid., pp.15, 17, 18, 19, 20, 22.
159. Xiyou Ji, sec.68《朱紫國唐僧論前世 孫行者施為三折肱》, psg.27.
160. Jin Pingmei, sec.61《西門慶乘醉燒陰戶 李瓶兒帶病宴重陽》, psg.27.
163. DGBC, j.12, huoxiang 藿香: pp.452-453; SKQS, j.12, p.95b-96a; tanxiang 檀香: j.12, p.453; SKQS, j.12, p.96b.
165. Ibid., pp.51-61.
167. Ibid., j.1, [di], pp.71-72.
175. DGBC, heifu 黑附子: j.10, p.335-336; SKQS, j.10, p.4a-6b.
187. Ibid., p.57.

CHAPTER 4:

2. Ibid.
5. Ibid.
10. Ibid.
11. Ibid.
16. Ibid.
18. Ibid.
22. Ibid.
25. Ibid.
26. Ibid.
29. Ibid.
30. Ibid.
31. Ibid.
77. SW, sec.66《天元紀大論》, psg.3; SKQS, j.19, di.66, p.8a; sec.68《六微旨大論》, psg.4; SKQS, j.19, di.68, p.28a; sec.72《刺法論》, psg.1; sec.73*《本病論》, psg.5, 11, & 16. *SW, di. 73 lost in SKQS.
79. Ibid., j.2, di.13, p.64; SKQS, j.2, di.13, pp.9b-2a.
80. Ibid., p.65; SKQS, j.2, di.13, p.10a.
82. Ibid., pp.65-66; SKQS, j.2, di.13, p.11a.
83. Ibid., j.12, di.3, p.379; SKQS, j.12, di.3, p.1a.
84. yu露出气, 元氣: Chunqiu Fanlu, sec.6《王道》, psg.1; sec.7《無形》, psg.1; sec.8《四諱》, psg.11 & 16; Qiantu Lun, sec.32《本訓》, psg.1; Hanshu, sec.3《志》, sub.1《律曆志》, psg.5, 9, 20, 25, & 26; sec.4《傳》, psg.1; sub.58《揚雄傳》, psg.2; sec.4《傳》, sub.69《王莽傳》, psg.48; Hou Hanshu, sec.1《紀》, sub.1《顯宗孝明帝紀》, psg.14; sec.2《列傳》, sub.22《郎顗襄楷列傳下》, psg.28; sec.2《列傳》, sub.31《劉趙淳于江劉周趙列傳》, psg.46; sec.2《列傳》, sub.33《班彪列傳下》, psg.2; sec.2《列傳》, sub.35《王充王符仲長統列傳》, psg.30; sec.2《列傳》, sub.57《李杜列傳》, psg.8; sec.2《列傳》, sub.79《方術列傳上》, psg.1 & 23.
85. SW, 原: Chunqiu Fanlu, sec.6《王道》, psg.1; sec.7《無形》, psg.1; sec.8《四諱》, psg.11 & 16; Qiantu Lun, sec.32《本訓》, psg.1; Hanshu, sec.3《志》, sub.1《律曆志》, psg.5, 9, 20, 25, & 26; sec.4《傳》, psg.1; sub.58《揚雄傳》, psg.2; sec.4《傳》, sub.69《王莽傳》, psg.48; Hou Hanshu, sec.1《紀》, sub.3《顯宗孝明帝紀》, psg.14; sec.2《列傳》, sub.22《郎顗襄楷列傳下》, psg.28; sec.2《列傳》, sub.31《劉趙淳于江劉周趙列傳》, psg.46; sec.2《列傳》, sub.33《班彪列傳下》, psg.2; sec.2《列傳》, sub.35《王充王符仲長統列傳》, psg.30; sec.2《列傳》, sub.57《李杜列傳》, psg.8; sec.2《列傳》, sub.79《方術列傳上》, psg.1 & 23.
86. SW, 关元: sec.8《靈蘭秘典論》, psg.3; SKQS, j.3, di.8, p.2b; sec.26《八正神明論》, psg.5; SKQS, j.8, di.26, p.12b; sec.35《癥論》, psg.2; SKQS, j.10, di.35, p.3b; sec.39《舉痛論》, psg.4; SKQS, j.11, di.39, p.3a; sec.40《腹中論》, psg.3; SKQS, j.11, di.40, p.8b; sec.47《奇病論》, psg.3; SKQS, j.13, di.47, p.5b; sec.71《六元正紀大論》, psg.49; SKQS, j.21, di.71, p.14b; LS, sec.1《九鍼十二原》, psg.1; & 14(15x); SKQS, j.1, di.1, pp.1a, 1b, 4b(4x), 5a(11x); sec.2《本輸》, psg.7-12(6x); SKQS, j.1, di.2, p.8a(2x), 8b, 9a, 9b, 10a; sec.3《小鍼解》, psg.1; SKQS, j.1, di.3, p12a; sec.19《四時氣》, psg.5(2x); SKQS, j.4, di.19, p.15b(2x); sec.44《順氣一日分為四時》, psg.7(2x); SKQS, j.7, di.44, p.7a(2x); sec.66《百病始生》, psg.3(2x) & 4; SKQS, j.10, di.66, pp.5a(2x) & 5b; sec.79《歲露論》, psg.1; SKQS, j.12, di.79, p.6b.
87. SW, sec.66《天元紀大論》, psg.3; SKQS, j.19, di.66, p.8a; sec.68《六微旨大論》, psg.4; SKQS, j.19, di.68, p.31b; sec.72《刺法論》, psg.1(天元) & 16(本元); sec.73*《本病論》, psg.1 (天元). *SW, di.72 & 73 lost in SKQS.
88. Nanjing, sec.1《經脈診候》, psg.3; Nanjing Benyi, SKQS, j.1, di.14, p.27a.
90. Ibid.
93. Ibid., j.3, di.29, p.153; SKQS, j.3, di.29, pp.41b-42a.
94. Ibid., j.2, di.13, p.67; SKQS, j.2, di.13, p.12b.
95. Ibid., j.1, di.3, p.21; SKQS, j.1, di.3, p.12b.
97. Ibid., j.4, di.7, p.163; SKQS, j.4, di.7, p.6a.
98. Ibid., j.2, tu 吐: di.14, pp.71-72; han 汗: di.15, p.75; xia 下: di.16, pp.85-86;
   SKQS, j.2, tu 吐: di.14, pp.16b-17a; han 汗: di.15, pp.19b-20a; xia 下: di.16, pp.29b-30a.
100. Ibid., p.378; SKQS, j.12, p.5a.
102. Ibid., p.408; SKQS, j.12, p.33b.
103. Ibid., p.406; SKQS, j.12, p.32a.
104. Ibid., p.399; SKQS, j.12, p.25b.
106. Ibid., j.2, di.11, p.55; SKQS, j.2, di.11, p.1a-1b.
107. Ibid., p.59; SKQS, j.2, di.11, pp.4b-5a.
108. Ibid., j.5, di.97, p.203; SKQS, j.5, di.97, p.20a-20b.
110. SW, kai 欽: sec.3《生氣通天論》, psg.8; SKQS, j.1, di.3, p.21a; sec.5《陰陽應象大論》, psg.6 & 7; SKQS, j.2, di.5, pp.5b & 9a; sec.7《陰陽別論》, psg.2; SKQS, j.2, di.7, p.21b; sec.10《五藏生成》, psg.4; SKQS, j.3, di.10, p.18a; sec.16《診要經終論》, psg.3; SKQS, j.4, di.16, p.14a; sec.18《平人氣象論》, psg.7; SKQS, j.5, di.18, p.16a; sec.19《玉機真藏論》, psg.2, 3, & 8; SKQS, j.6, di.19, pp.2b, 3a, & 7a; sec.22《藏氣法時論》, psg.11 & 12; SKQS, j.7, di.22, pp.9b & 10a; sec.23《宣明五氣》, psg.2; SKQS, j.7, di.23, p.12b; sec.32《刺熱》, psg.1; SKQS, j.9, di.32, p.6b; sec.33《評熱病論》, psg.3 & 4(4x); SKQS, j.9, di.33, pp.15a, 15b, 16a(3x); sec.38《欬論》, psg.title,1(4x), 2(12x), & 3(21x); SKQS, j.10, di.38, pp.16a(2x), 16b(3x), 17a(7x), 17b(11x), 18a(15x); sec.41《刺腰痛》, psg.1(2x); SKQS, j.11, di.41, p.16b(2x); sec.42《風論》, psg.3; SKQS, j.12, di.42, p.3b; sec.43《痹論》, psg.2; SKQS, j.12, di.43, p.7b; sec.45《厥論》, psg.2(2x); SKQS, j.12, di.45, p.20a(2x); sec.49《脈解》, psg.5(4x); SKQS, j.13, di.49, pp.16b(2x) & 17a(2x); sec.52《刺禁論》, psg.2 & 3(2x); SKQS, j.14, di.52, pp.4b, 6b, & 7a; sec.62《調經論》, psg.3; SKQS, j.17, di.62, p.3b; sec.63《�忘了論》, psg.11(2x); SKQS, j.18, di.63, pp.6a & 6b; sec.64《四時刺逆從論》, psg.4; SKQS, j.18, di.64, p.13b; sec.65《標本病傳論》, psg.3(2x); SKQS, j.18, di.65, pp.15b & 16a; sec.69《氣交變大論》, psg.2(5x) & 3; SKQS, j.20, di.69, pp.3a, 4a, 5b(2x), 6a, & 8b; sec.70《五常政大論》, psg.1, 2(2x), 3, & 6; SKQS, j.20, di.70, pp.22b, 27b, 28a, 34a, & 38b; sec.71《六元正紀大論》, psg.25, 37(4x), 61(3x), 141; SKQS, j.21, di.71, pp.8b, 12a(2x), 12b(2x), 18a, 18b, 19a, & 38b; sec.74《至真要大論》, psg.5(5x), 7, 8(6x), 11(6x); SKQS, j.22, di.74, pp.10a, 10b, 11a, 11b(2x), 17a, 18b, 19a, 19b, 20a(2x), 20b, 25a(2x), 25b(4x); sec.76《示從容論》, psg.2(3x); SKQS, j.23, di.76, pp.6a(2x), 7a.
111. SW, kaisou 嗽嗽: sec.5《陰陽應象大論》, psg.6; SKQS, j.2, di.5, p.5b; sec.10《五藏生成》, psg.4; SKQS, j.3, di.10, p.18a; sec.16《診要經絡論》, psg.3; SKQS, j.4, di.16, p.14a; sec.76《示說容論》, psg.2; SKQS, j.23, di.76, p.6a; chuansou 嗽嗽: sec.73*《本病論》, psg.8 & 16. *SW, di.73 lost in SKQS.

112. LS, ke 咳: sec.4《邪氣藏府病形》, psg.21 & 22; sec.10《經脈》, psg.5(2x) & 19; sec.22《癲狂病》, psg.21; sec.35《脈論》, psg.4; sec.47《本藏》, psg.4(2x); sec.57《水腫》, psg.1; sec.60《玉版》, psg.6(2x) & 7(2x); SKQS, j.3, di.10, pp.7a(#1); sec.74《論疾診尺》, psg.2 & 16; SKQS, j.11, di.74, p.6a; sec.75《刺節真邪》, psg.2; sec.78《九鍼論》, psg.15.

113. LS, kai 欽: SKQS, j.1, di.4, pp.18a & 18b; SKQS, j.3, di.10, pp.1b(2x) & 6b; sec.20《五邪》, psg.1; SKQS, j.5, di.20, p.1a; SKQS, j.5, di.22, p.6a; SKQS, j.5, di.23, p.9a; SKQS, j.6, di.35, p.10a; sec.36《五藏津液別》， psg.5; SKQS, j.6, di.36, p.12a; SKQS, j.7, di.47, pp.12b & 13a; SKQS, j.9, di.57, p.1a; SKQS, j.9, di.60, pp.7a(#2, 3 & 4); SKQS, j.11, di.74, p.4b; SKQS, j.11, di.75, p.7a; SKQS, j.12, di.78, p.4b.

114. LS, kesou 咳嗽: sec.74《論疾診尺》, psg.16; SKQS, j.11, di.74, p.6a.

115. Nanjing, kai 欽: sec.1《經脈診候》, psg.16; Nanjing Benyi, SKQS, j.2, di.56, p.32a. Note: although kai 欽 appears once in both, it does so in different chapters in the electronic version versus the SKQS.

116. Nanjing, ke 咳: Nanjing Benyi, SKQS, j.1, di.16, p.35a; sec.7《虛實邪正》, psg.2; Nanjing Benyi, SKQS, j.2, di.49, p.25a; sec.9《藏府積聚》, psg.2(2x); sec.12《藏府井俞》, psg.8; Nanjing Benyi, SKQS, j.2, di.68, p.50a.

117. SHL, kai 欽: sec.1《辨脈法》, psg.43; Zhujie Shanghan Lun, SKQS, j.1, di.1, p.15a; sec.2《平脈法》, psg.22 & 35; Zhujie Shanghan Lun, SKQS, j.1, di.2, pp.23a & 26b; sec.6《辨太陽病脈證並治》, psg.15, 17, 62(2x), 86, & 87; Zhujie Shanghan Lun, SKQS, j.3, di.6, pp.5b, 6b, 17a(2x), 22a, & 23b; sec.8《辨陽明脈證並治》, psg.19 & 20; Zhujie Shanghan Lun, SKQS, j.5, di.8, p.5a(2x); sec.10《辨少陰脈證並治》, psg.4, 50, 51, 54, 55, & 56; Zhujie Shanghan Lun, SKQS, j.6, di.11, pp.3a, 11b, 12a, 13a, 14a, & 14b; sec.15《辨不可發汗脈證並治》, psg.10, 13, & 14; Zhujie Shanghan Lun, SKQS, j.7, di.15, pp.9b & 10a (also 10a, 咳); sec.20《辨不可下脈證並治》, psg.10; Zhujie Shanghan Lun, SKQS, j.9, di.20, p.2b(3x).

118. SHL, kesou 咳嗽: sec.3《傷寒例》, psg.9; Zhujie Shanghan Lun, 2004 reprint, j.2, di.3, p.54; SKQS, j.2, di.3, p.4b. Preference for 欽 also found in the Jinkui Yaolue. 喘 appears twice, 叩嗽 appears once.

119. Lunyu, sec.13《子路》, psg.3; 1998 reprint, di.13, p.161; Rumen Shiqin, 2008 reprint, j.3, di.25, p.16b. Preference for 欽 also found in the Jinkui Yaolue. 喘 appears twice, 叩嗽 appears once.


121. Ibid., j.12, p.400; SKQS, j.12, p.26a.

122. Ibid., j.1, di.7, p.38; SKQS, j.1, di.7, p.37a.

123. Ibid., p.39; SKQS, j.1, di.7, p.38b.

124. SW, he 喘: sec.36《刺瘧》, psg.1; SKQS, j.10, di.36, p.8b.


127. Ibid., pp.40-41; SKQS, j.1, di.7, p.40a.
128. Ibid., p. 41; SKQS, j.1, di.7, p.40b.
131. Liji, sec.9《禮運》, psg.18; Kongzi Jiayu, sec.32《禮運》, psg.1.
133. SW, sec.39《舉痛論》, psg.6; SKQS, j.11, di.39, p.5a.
137. Ibid., p.137; SKQS, j.3, di.26, p.26b. Zhang uses his style name: Liu Hejian
139. Ibid., j.6, di.30, pp.225-226; SKQS, j.6, di.30, pp.18b-19a.
140. Ibid., j.12, p.402; SKQS, j.12, p.28a.
141. Ibid., j.2, di.20, p.107; SKQS, j.2, di.20, p.51b.
142. Ibid., p.106; SKQS, j.2, di.20, p.50a.
143. Ibid.
144. Ibid., j.1, di.2, p.15; SKQS, j.1, di.2, p.15a.
145 Ibid., pp.16-17; SKQS, j.1, di.2, pp.16a-16b.
146. Ibid., p.17; SKQS, j.1, di.2, p.16b.
147. Ibid.; SKQS, j.1, di.2, p.17a.
149. JS, j.16, pp.358-359.
150. JS, j.16, pp. 359-364.

CHAPTER 5:

1. JS, j.17, p.374.
2. Ibid.
3. JS, j.23, p.543.
4. Ibid.
5. JS, j.131, p.2814.
6. Ibid.
7. Ibid.
8. JS, j.17, p.374.
10. JS, j.17, pp.374-375.
11. JS, j.17, p.375.
12. Ibid.
15. JS, j.17, p.376.
16. Ibid.
17. JS, j.17, p.377.
18. JS, j.17, p.378.
20. JS, j.17, p.379; j.23, p.544.
22. JS, j.17, pp.380-381.
23. JS, j.17, p.382.
26. JS, j.23, p.545.
27. JS, j.17, p.386.
28. JS, j.23, p.545.
29. JS, j.17, pp.386-400.
30. JS, j.23, p.545.
31. JS, j.17, p.400.
32. Ibid.
33. JS, j.17, pp.402-403.
34. JS, j.17, p.403.
35. Piwei Lun, 2005 reprint, preface, p.13; SKQS, preface 2, pp.1a-1b.
36. Ibid.
38. Ibid.
39. SW, sec.5《陰陽應象大論》, psg.4; SKQS, j.2, di.5, p.2b.
40. Nanjing, sec.1《經脈診候》, psg.18; Nanjing Benyi, SKQS, j.1, di.18, p.37b.
41. SW, sec.71《六元正紀大論》, psg.80, 86, 92, 98, 104, 110, 116, 122, 128, & 134; SKQS, j.21, di.71, pp.25a-35b.
43. Piwei Lun, 2005 reprint, j.2, di.2, pp.32-33; SKQS, j.2, di.2, pp.3a-4b.
44. Neiwei Shang Bianhuo Lun, SKQS, j.2, pp.1b-2b.
47. Ibid., p.16.
48. Ibid.
53. Dengxizi, sec.2《轉辞》, psg.9.
55. Ibid., p.72; SKQS, j.3, di.10, pp.16b-17a.
57. Liji, sec.2《曲禮下》, psg.121.
58. Shuoyuan, sec.18《辨物》, psg.5.
59. SW, beng《崩》sec.7《陰陽別論》, psg.3; SKQS, j.2, di.7, p.24a; sec.44《痿論》, psg.2; SKQS, j.14, di.44, p.13a; sec.69《氣交變大論》, psg.2; SKQS, j.20, di.69, p.5a; sec.70《五常政大論》, psg.3; SKQS, j.20, di.70, p.33a.
60. SW, sec.69《氣交變大論》, psg.2; SKQS, j.20, di.69, p.5a.
65. Ibid., pp.70-71; *SKQS*, j.3, di.10, p.15a.
67. Ibid., j.1, p.100; *SKQS*, j.1, p.15a.
68. Ibid.; *SKQS*, j.1, p.15b.
69. *Huainanzi*, sec.20《泰族訓》, psg.11; *Chunqiu Zuozhuan*, sec.6《文公》, sub.7《文公七年》, psg.2.
70. *Shangshu*, sec.1《虞書》, sub.3《大禹謨》, psg.6.
71. Ibid., j.1, p.100; *SKQS*, j.1, p.15a.
72. Ibid.
75. *Zhanguo Cè*, sec.9《燕策》, sub. 1《燕一》, sub. 9《燕王喚既立》, psg.7; *Shiji*, sec.4《世家》, sub.34《燕召公世家》, psg.23.
77. Ibid., p.3.
79. Ibid., p.11; *SKQS*, j.1, di.3, p.11b.
80. Ibid., p.14; *SKQS*, j.1, di.3, pp.16a-16b.
81. Ibid., pp.15-16; *SKQS*, j.1, di.3, p.18b-19a. The formula’s ingredients are included in Appendix 7.
82. *Yixue Faming*, 2008 reprint, j.1, p.16.
83. *Piwei Lun*, siwei 四維: 2005 reprint, j.1, di.8, pp.25-26(2x); *SKQS*, j.1, di.8, p.32b(2x).
84. SW, siwei 四維: sec.3《生氣通天論》, psg.2; *SKQS*, j.1, di.3, p.16b; sec.69《氣交變大論》, psg.4(5x); *SKQS*, j.20, di.69, p.13a(3x); sec.70《五常政大論》, psg.2; *SKQS*, j.20, di.70, p.27b; sec.74《至真要大論》, psg.15(2x); *SKQS*, j.22, di.74, p.34b & 35a.
85. *Piwei Lun*, sizhi 四肢: 2005 reprint, j.1, di.8, pp.25-26(8x); *SKQS*, j.1, di.8, p.31a(3x), 32a(3x), 32b(2x).
86. SW, sizhi 四肢: sec.73*《本病論》, psg.4, 12, 15, 16(2x), & 17. In contrast, the term sizhi 四支, is by far the most frequently used term in the Suwen, estimated at 32 occurrences. *SW, di.73 lost in *SKQS*.
87. LS, sizhi 四肢: sec.3《小鍼解》, psg.2; *SKQS*, j.1, di.3, p.12a; sec.4《邪氣藏府病形》, psg.23; *SKQS*, j.1, di.4, p.19a; sec.8《本神》, psg.6 & 13; *SKQS*, j.2, di.8, p.12a; sec.21《寒熱病》, psg.3; sec.22《癥瘕病》, psg.7 & 11; *SKQS*, j.5, di.22, pp.5a & 6a; sec.23《癥瘕病》, psg.2; *SKQS*, j.5, di.23, p.6b; sec.35《脈論》, psg.4; *SKQS*, j.6, di.35, p.10a; sec.60《玉版》, psg.6; *SKQS*, j.9, di.60, p.7a; sec.66《百病始生》, psg.3; *SKQS*, j.10, di.66, p.4b; sec.71《邪客》, psg.3; *SKQS*, j.10, di.71, p.11b. Note: sizhi 四支: LS, *SKQS*, j.2, di.8, p.13a; j.5, di.21, p.2a.
88. *Nanjing*, sizhi 四肢: sec.1《經脈診候》, psg.16(2x); *Nanjing Benyi*, *SKQS*, j.1, di.16, pp.34a & 35a(四支); sec.7《虛實邪正》, psg.2; *Nanjing Benyi*, *SKQS*, j.2, di.49, p.24b; sec.9《藏府積聚》, psg.2; *Nanjing Benyi*, *SKQS*, j.2, di.56, p.31b.

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89. SHL, sizhi 四肢: sec.1《辨脈法》, psg.32; Zhujie Shanghan Lun, 2004 reprint, j.1, di.1, p.38; SKQS, j.1, di.1, p.9b-10a; sec.6《辨太陽病脈證并治》, psg.24; Zhujie Shanghan Lun, 2004 reprint, j.3, di.6, p.73; SKQS, j.3, di.6, p.8a; sec.10《辨太陰脈證並治》, psg.2; Zhujie Shanghan Lun, 2004 reprint, j.6, di.10, p.118; SKQS, j.6, di.10, p.11b; sec.11《辨少陰病脈證并治》, psg.50; Zhujie Shanghan Lun, 2004 reprint, j.6, di.11, p.123; SKQS, j.6, di.11, p.11b; sec.12《辨厥陰病脈證并治》, psg.30; Zhujie Shanghan Lun, 2004 reprint, j.6, di.12, p.129; SKQS, j.6, di.12, p.21b; sec.13《辨霍亂病脈證并治》, psg.8 & 10; Zhujie Shanghan Lun, 2004 reprint, j.7, di.13, p.134(2x); SKQS, j.7, di.13, pp. 3a & 4b; sec.15《辨不可發汗病脈證并治》, psg.13; Zhujie Shanghan Lun, 2004 reprint, j.7, di.15, p.10a.
90. Guanzi, sec.1《牧民》, psg.2.
91. Ibid.
92. Guanzi, sec.1《牧民》, psg.1; Shiji, sec.5《列傳》, sub.62《管晏列傳》, psg.4.
93. Yixue Faming, 2008 reprint, j.1, di.1, p.2
95. LS, man 性: sec.8《本神》, psg.6; SKQS, j.2, di.8, p.12a; sec.19《四時氣》， psg.3; SKQS, j.4, di.19, p.15a; sec.21《寒熱病》, psg.8(2x); SKQS, j.5, di.21, pp.3b(2x); sec.22《癥瘕病》, psg.5; SKQS, j.5, di.22, p.5a; sec.24《厥病》, psg.14; SKQS, j.5, di.24, p.11b; sec.26《難病》, psg.28; SKQS, j.5, di.26, p.14a; sec.28《口問》, psg.14 & 15; SKQS, j.5, di.28, pp.18b & 19a; sec.33《海論》， psg.5; SKQS, j.6, di.33, p.7a; sec.34《五亂》， psg.3; SKQS, j.6, di.34, p.8a; sec.39《血絡論》, psg.2 & 8(2x); SKQS, j.6, di.39, pp.16b & 17a; sec.47《本藏》， psg.3; SKQS, j.7, di.47, p.12b; sec.63《五味論》, psg.5(2x); SKQS, j.9, di.63, p.12a(2x); sec.66《百病始生》, psg.5(2x); SKQS, j.10, di.66, pp.6a(2x).
96. Piwei Lun, 2005 reprint, j.1, di.2, pp.6-7; SKQS, j.1, di.2, p.5b-6b.
100. Yinzheng Lueli, 2011 reprint, postscript, p.73.
101. Ibid.
103. Yiwei Luoli, 2011 reprint, postscript, p.73.
105. Yinzheng Lueli, 2011 reprint, postscript, p.73.
106. Yilei Yuanrong, SKQS, preface, p.1b.
108. Tangye Bencao, 2008 reprint, preface 1, p.1; preface 2, p.1; SKQS, preface, p.1a-2b. Only the second preface from the reprint is in SKQS.
111. Ibid., di.3, pp.6-8; SKQS, j.1, di.3, pp.6b-9a.
112. Ibid., di.4, pp.22-35; SKQS, j.1, di.4, pp.28b-39a.
113. Ibid., j.2, di.1, pp.36-95; j.3, di.2-9, pp.96-153; SKQS, j.2, di.1, pp.1a-83a; SKQS, j.3, di.2-9, pp.1a-78b.
114. Ibid., j.2, di.1, p.54; SKQS, j.2, di.1, p.27a.
115. Ibid., pp.36-37; SKQS, j.2, di.1, pp.1a-2a.
116. Ibid., j.3, di.1, pp.113-114; SKQS, j.3, di.1, pp.25a-26a.
117. Ibid., j.2, di.1, pp.36-37; SKQS, j.2, di.1, pp.1a-2a.
118. Ibid., pp.54-55; SKQS, j.2, di.1, pp.26a-28a.
119. Ibid., pp.49-50; SKQS, j.2, di.1, pp.18b-19b.
121. Ibid., j.1, p.16, 18-21, 29-31.
122. Ibid., p.68.
123. Ibid.
124. Ibid., p.45.
125. Ibid., p.9.
126. Ibid.
127. Ibid., p.15.
129. Ibid., pp.1a-1b.
130. Ibid., j.1, pp.1a-18b.
131. Ibid., p.16a.
132. Ibid., p.17b-18a.
133. Ibid., j.1-9.
134. Ibid., j.2, pp.18a-19a.
135. Ibid., j.4, p.2b.
136. Ibid., j.7, pp.1a-8b.
137. Ibid., p.1a.
138. Ibid., p.1b.
139. Ibid., p.15a.
140. Ibid.
141. Ibid., p.15b.
142. Ibid., j.11, p.6a.
144. Ibid., preface 2, no page number. Not included in the SKQS.
145. Ibid.
146. Ibid., j.1, pp.1-2; SKQS, j.1, pp.1b-2a.
147. pp.2-4; SKQS, j.1, pp.2b-5b.
148. Ibid., p.5; SKQS, j.1, pp.6a-6b.
149. SW, sec.18《平人氣象論》, psg.2; SKQS, j.5, di.18, p.14a.
150. SW, sec.63《繆刺論》, psg.1; SKQS, j.18, di.63, p.1b.
151. Nanjing, sec.2《經絡大數》, psg.2; Nanjing Benyi, SKQS, j.1, di.26, p.52b.
152. LS, daluo 大絡: sec.4《邪氣藏府病形》, psg.35(2x); SKQS, j.1, di.4, pp.21a(2x); sec.10《經脈》, psg.34 & 51(2x); SKQS, j.3, di.10, pp.11a, 14a(2x); sec.19《四時氣》, psg.7; SKQS, j.4, di.19, p.16a; sec.27《周脈》, psg.4; SKQS, j.5, di.27, p.15b; sec.38《逆順肥瘦》, psg.10; SKQS, j.6, di.38, p.15b; sec.60《玉版》, psg.9; SKQS, j.9, di.60, p.8a; sec.62《動輸》, psg.5; SKQS, j.9, di.62, p.10a; sec.75《刺節真邪》, psg.18; SKQS, j.11, di.75, p.11a.
153. Cishi Nanzhi, 2011 reprint, j.1, p.5; SKQS, j.1, p.6a-6b.
154. Ibid.; SKQS, j.1, p.6b.
156. Cishi Nanzhi, 2011 reprint, J.1, pp.6-9; SKQS, J.1, pp.7a-12b; SW, sec.3《生気通天論》, psg.8; SKQS, J.1, di.3, p.21b; sec.5《陰陽應象大論》, psg.6; SKQS, J.2, di.5, p.5a; LS, sec.74《論疾診尺》, psg.16; SKQS, J.11, di.74, p.6a.
157. SW, sec.5《陰陽應象大論》, psg.6; SKQS, J.2, di.5, p.5a.
158. Cishi Nanzhi, 2011 reprint, J.1, pp.6-9; SKQS, J.1, p.8a.
159. Ibid., p.8; SKQS, J.1, p.11a-11b.
160. Ibid., pp.16-39; SKQS, J.1, pp.21a-57a.
161. Ibid., pp.17-18; SKQS, J.1, p.24a-25b.
162. Weisheng Baojian, 2011 reprint, preface 1, no page number.
163. Ibid., preface 2, no page number.
164. Ibid., preface 3, no page number.
165. Ibid., prefaces 4-7, no page numbers.
166. Ibid., preface 8, no page number.
167. Ibid., preface 3, no page number.
168. Ibid., J.1, di.1-10, pp.1-10.
172. Ibid., J.6, di.6, p.51; J.25, p.287.
173. Ibid., J.5, di.3, p.45.
174. Ibid., J.18, di.1, p.204.
175. Ibid., J.6, di.1, p.48.
177. Ibid., J.25, p.305.
178. Ibid., J.5, di.3, p.43.
179. Ibid., p.44.
180. Ibid., J.17, di.2, p.196.
181. Ibid., J.6, di.4, p.50.
182. Ibid., J.18, di.2-7, pp.228-231.
183. Ibid., J.25, pp.292-305.
185. Ibid., J.13, di.13, p.149.
186. Ibid., J.16, di.1, p.178.
187. Ibid., di.10-12, pp.186-189.
188. Ibid., di.10, pp.186-187.
189. Ibid., di.11, p.187.
190. Su Shen Liangfang, SKQS, J.5, p.4b.
191. Weisheng Baojian, 2011 reprint, J.16, di.12, p.188.
192. Ibid.
193. Ibid., p.189.
194. Ibid., J.8, di.5, p.77; J.18, di.6, p.214.
196. Ibid., J.10, di.3, p.103.
CONCLUSION:

1. *Gezhi Yulun*, 2006 reprint, preface, p.3. A different preface is included in the *SKQS* that identifies three masters of the Jin; Liu Shouzhen, Zhang Zihe, and Li Dongyuan; preface, p.1a-2b.


4. Ibid., pp.28-29; *SKQS*, *j*1, *di*43, pp.67a-69a.

5. Ibid., p.29; *SKQS*, *j*1, *di*43, p.69b.


8. *Nanjing Benyi*, 2011 reprint, preface 7, p.121; Not included in *SKQS*.


12. Ibid., *buzhong yiqi tang* 補中益氣湯: *j*1, *di*8, p.8; *j*1, *di*20, p.14; *j*1, *di*21, p.15; *j*1, *di*23, p.16; *j*1, *di*25, p.19; *j*2, *di*42, p.34.


15. Ibid., *di*9, pp.98-99; *SKQS*, *j*2, *di*9, pp.32a-35b.


17. *Binhu Maixue*, 2011 reprint, preface, p.1647; *j*1, pp.1661-1662; *SKQS*, *j*1, pp.1a-1b; *j*1, *di*3, p.32a-33b.

18. Ibid., preface, p.1647; *SKQS*, preface, p.1a.


22. Ibid., p.90; *SKQS*, *j*2, *di*14, p.26b.

23. Ibid., *di*91; *SKQS*, *j*2, *di*14, p.27b.


25. Ibid., pp.2-3.


27. Ibid., *j*3, *di*1, p.60.

28. Ibid.

29. Ibid., *j*6, *di*1, pp.135-144.


33. Ibid., preface 1, no page number.

34. *Yixue Yuanlei Lun*, *SKQS*, *j*2, pp.51b-52a.

35. Ibid., *j*1, p.52b.


39. Ibid.

40. Ibid., preface 1, no page number.
APPENDIX 1


APPENDIX 2


APPENDIX 3

2. Ibid.
3. Ibid., p.39.
4. Ibid.
5. Ibid., p.37.
7. Ibid., p.38.
8. Ibid., p.37.
9. Ibid.

APPENDIX 4


APPENDIX 5

3. This medicinal did not have its own entry in the *Zhenzhu Nang*.

APPENDIX 6


APPENDIX 7

2. Ibid., p.44.
4. Ibid., pp.162-163; SKQS, j.2, pp.44b-45a.
5. Ibid., j.3, p.187; SKQS, j.3, pp.25b-26a.
6. Ibid., p.198; SKQS, j.3, pp.44a-44b.
7. Ibid., p.200; SKQS, j.3, p.48a.
8. Ibid., p.204; SKQS, j.3, p.54b.
11. Ibid., p.211; SKQS, j.3, p.64b.
13. Ibid., j.2 p.44; SKQS, j.2, p.21a-21b.

APPENDIX 8

2. Ibid., pp.49-50; SKQS, j.2, di.1, pp.18b-19b.
3. Ibid., pp.54-55; SKQS, j.2, di.1, pp.26a-28a.
4. Ibid., pp.70-71; SKQS, j.2, di.1, pp.48a-49b.
5. Ibid., j.3, di.1, pp.113-114; SKQS, j.3, di.1, pp.25a-26a.
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