Spirit of stone: technical considerations in the treatment of the Jade Body

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The early Imperial period was a time of rapid change in medical ideas and practices in China. Manuscripts and artifacts excavated from tombs of the second century B.C. along the Yangtze river valley bring fresh insights into some of the processes involved in medical innovation in the early centuries of the empire. Through examining exorcistic practices and petty surgery to the refinement of a body sustained and nourished by physiological essences, this paper describes recurring patterns found in the changing medical techniques associated with stone, be that lancets, hot pressing stones or mineral prescription. After the transition to a culture of applying fine metal acupuncture needles, vestiges of these treatments found in early Chinese stone culture remain enshrined in both theory and practice of canonical medicine.

Maishu 脉書 (The Book of Channels) is a bamboo manuscript which was buried c. 186 B.C. and recovered in 1983–84 from the Zhangjiashan burial site in modern Hubei. Collectively its some six texts make up the earliest extant treatise to set out the principles and practice of acumoxa. Maishu (2) describes the passage of eleven mai 脈 ‘channels’ that traverse the body from the limbs to the torso and head—a concept fundamental to the development of the classical medical theory that was formulated in Han times. Maishu (4) then promotes exercise and diet as a way of cultivating the yuji 玉髓 ‘jade body’.

Now the reason that flowing water does not stagnate and a door that pivots does not get woodworm is because of movement. When there is movement then it fills the four limbs and empties the five viscera, when the five viscera are empty then the jade body will benefit. Now one who rides in a

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2 I follow Harper, who divides Maishu into six core texts which he describes as ‘ailment list’, ‘eleven vessels’, ‘five signs of death’, ‘care of the body’, ‘six constituents’ and ‘vessels and vapor’. His titles indicate well the content of each text. See Early Chinese medical literature: the Mawangdui medical manuscripts (London: Kegan Paul International) (The Sir Henry Wellcome Asian Series), 1998, 31. The word mai is difficult to translate; Harper translates it as ‘vessel’, which draws out the early association with the arteriovenous system. See Donald Harper, Early Chinese medical literature, 76–95. I prefer to follow the contemporary analogy with du 渠 ‘channel’ or ‘canal’ found in the Maishu 脈書 (channel, document). See Jiangling Zhang, Maishan Hanjia zhenli xiaozu, ‘Jiangling Zhangjiashan Hanjia (Maishu) shiwun, Wemu 1989, 7, 74. The translation ‘channel’ also serves to emphasize the relationship of the mai to the superficial anatomical channels as defined by muscle and bone, as they were understood before the more elaborate theories of the jinghuo and jingmai found in the Huangdi neijing 黄帝内經 (Yellow Emperor's inner canon; see notes 21 and 79 below). Jinghuo or jingmai have been variously translated as ‘conduit’, ‘meridian’, ‘circulation tract’, etc. See Nathan Sivin, Traditional medicine in contemporary China (Ann Arbor: Center for Chinese Studies, The University of Michigan, 1987), 34, 122 n.11; and Paul Ushchuld, Medicine in China: a history of ideas (Berkeley: University of California Press, 1985), 75, 81–3.

carriage and eats meat, must (fast and purify themselves?) in Spring and Autumn. If they do not (fast and purify themselves?) then the mai will rot and cause death.\textsuperscript{5}

In the few references to a ‘jade body’ in the received literature from Warring States and Han times we find a vision of perfection, or the body of a beautiful woman.\textsuperscript{6} But in the case of the Maishu acumoxa texts this perfect body is a physiological entity with a technical reality that borrows from ideas originating in self-cultivation culture.

In the Maishu (4) quotation above we find that movement ‘fills the four limbs and empties the five viscera’. Techniques of breath-cultivation and therapeutic gymnastics in late Warring States and early Imperial literature often echo and sometimes subvert these priorities: there is breathing and dispersing qi (the fundamental stuff of life) outwards into the limbs or, in contrast, filling the body and inner bowels through the orifices. The following quotation from Mawangdui Shiwen 十問 (Ten Questions) promotes both techniques:

The way to breathe qi: it must reach to the extremities .... Breathing must be deep and sustained. Fresh qi is easy to hold on to, qi that has been kept over night is ageing, fresh qi creates long life. The one who is good at putting the qi in order causes the qi that has been kept overnight to disperse during the night and fresh qi to collect in the morning by penetrating the nine orifices and filling the six cavities.\textsuperscript{7}

Many early breathing techniques also involve holding the breath and contracting the anus to move inner qi.\textsuperscript{8}

Western Han breath- and sexual-cultivation texts generally conceive of the body as a physiological entity made up of the triad qi, shen 神 (a manifestation of the 'spirits') and jing 精 'essences'.\textsuperscript{9} A technique found in both breath and sexual-cultivation, yubi 玉閉 ‘the jade closure’ refers to sealing these fluids and essences.\textsuperscript{10} Here the Mawangdui text, Shiwen, describes how to sustain vigour, and ensure longevity by absorbing a woman’s essences into the body.

In the cultivation of lengthening life secretly use the jade closure. At that moment when the jade closure opens, the illumination of the spirit arrives and accumulates. As it accumulates, it will be manifest. When the jade closure firms the essence, this will make the jade spring imperturbable. Then the hundred afflictions will not increase and thus you can live long.\textsuperscript{11}

\textsuperscript{4} is not attested in received literature, but from the context and the shape of the graph, which depicts water and a mouth-like opening, we may assume that it refers to some kind of technique to remedy a sedentary life and over-eating.

\textsuperscript{5} Maishu shiwen, 74.

\textsuperscript{6} Collected in Morohashi, vol. 7, 803.

\textsuperscript{7} Mawangdui Hanmu boshu, vol. 4, 147.

\textsuperscript{8} These are described in Donald Harper, 'The bellows technique in Laozi V and Warring States macrobiotic hygiene', Early China 21, 1995.

\textsuperscript{9} Jing may refer to the finest qi, to reproductive essences, often manifest as semen.

\textsuperscript{10} By 'closure' in later Daoist literature emphasizes the act of enclosing an inner space and containing and accumulating the body's essences within. See, for example, Mawangdui Hanmu boshu, vol. 4, 146.

\textsuperscript{11} Also translated in Harper, Early Chinese medical literature, 390–91 and n.2. The Mawangdui burial mound is located in the north-eastern section of Changsha 長沙, Hunan, formerly the Western Han Kingdom of Changsha, and was excavated in the early 1970s. It contains three tombs. Tombs no. 1 and no. 2 belonged to the Lord of Dai, Li Cang 利蒼, and his wife (who was buried in tomb no. 1). Tomb no. 3, from which the manuscripts were excavated, was occupied by one of their sons, who died in 168 n.c. at the age of about thirty. For the excavation report see Hunansheng bowuguan and Zhongguo kexueyuan kaogu yanjiusuo, Changsha Mawangdui er, sanhao Hanmu faqie jianbao 長沙馬王堆二·三號漢墓發掘簡報, Wenwu 1974, 7, 39–48. Details of the find are also given in the introduction to Mawangdui Hanmu boshu, vol. 1. See Harper, Early Chinese medical literature, 4 regarding the wooden tablet in Mawangdui tomb no. 3 that records the burial date. Mawangdui Hanmu boshu, vol. 4, 131–41.
We will see in the course of this paper that techniques to lead qi to the limbs as well as the intention of enhancing qi, shen and jing established in early self-cultivation remain enshrined in transmitted medical literature and surviving traditions of medical practice.

Despite the fact that Maishu (4) recommends movement and diet as ways of caring for the mai of the ‘jade body’, Maishu is not a treatise on self-cultivation. It simply uses self-cultivation priorities to model new medical techniques. After Maishu (4) there is a short text differentiating body constituents, followed by Maishu (6), which gives us the earliest extant reference to acupuncture (inasmuch as acupuncture can be defined as body piercing to normalize the flow of qi).

The channels are values by the sages. As for qi, it benefits the lower body and harms the upper; follows heat and distances coolness. So, the sages cool the head and warm the feet. Those who treat illness take the surplus and supplement the insufficiency. So if qi goes up, not down, then when you see the channel that has over-reached itself, apply one cauterisation where it meets the articulation. When the illness is intense then apply another cauterisation at a place two cun 寸 above the articulation. When the qi rises at one moment and falls in the next pierce it with a stone lancet at the back of the knee and the elbow.

Thus, the sage physician draws qi down and out through the limbs by applying cauterity and a stone lancet to open the channels at the joints. Here we have the technical elements of self-cultivation embraced within new medical ways to project qi away from the head and body towards the limbs. On the first impression there seems to be a contradiction between the crude nature of the intervention (surgery with stone) and the object of intervention (qi). But this would be to underestimate the potency of stone in early Chinese medical culture.

**Spirit of stone**

What, then, was stone in early Chinese culture? With the pervasive influence of wuxing 五行 ‘five agent’ (wood, fire, earth, metal and water) theories of generation and conquest in Han political, philosophical and scientific thought it is easy to overlook the importance of the agent shi ‘stone’ 石 in early Chinese attitudes to the mysteries of life and death.12 The 石神 ‘Stone Spirit’ itself was one of seven medical treatises given to the former Han physician Chunyu Yi 淳于意 (fl. 154 B.C.) by his teacher Yang Qing 陽慶 and recorded in Shiji 史記 ‘The Record of the Historian’, but it is no longer extant.13 Probably Chunyu Yi’s text was a treatise on yaoshi 藥石 ‘mineral drugs’, as distinct from either needling stones or plant products. Chunyu Yi criticizes his

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12 Stone as a generative force and, unusually, as aligned with the wuxing 五行 ‘five agents’ of water, wood, metal, earth and fire, is evident in the Tai chi shu 蓯玄書 (Book of the Generation of the Fetus), one of the silk manuscripts excavated from the Mawangdui burial site. Translated in Harper, *Early Chinese medical literature*, 371–384. Wuxing has been variously translated as ‘five agents’, ‘five phases’, ‘five processes’ or ‘five elements’. The five xing 皆 are not equivalent to the elements of early Western philosophic thought. The translation ‘elements’ suggests a material constituent and lacks the dynamic of quality and movement inherent in the early concept of xing. ‘Phases’ concentrates exclusively on the division of time and the passage of the seasons—and process’ seems to bring a mechanistic quality to what is fundamentally a natural metaphor.

colleague Sui 遂, physician to the King of Qi 齊, who takes the potent, heating prescription wushi 五石 ‘five stones’ when it is contra-indicated. Sui’s death from ingrowing abscesses is consistent with long-term arsenic poisoning, arsenic being one likely constituent of wushi.

The Han elite frequently took minerals such as lead, mercury, cinnabar and arsenic to preserve their bodies, if not also for pleasure. In death ritual, knowledge of the disinfecting and rot-preventing function of cinnabar is apparent in neolithic corpses found buried in thick layers of cinnabar. Some Han corpses have been found stuffed with cinnabar and with death shrouds soaked in it.14 Yet other stones, such as the five coloured stones buried with the King of Nanyue 南越, could confer the power of permanence and preservation from their very presence in the tomb.15 Interred stones and ores undoubtedly had a demon-quelling influence.16

Stone, and jade in its own distinctive way, determined a sacred space wherein the body would not decay. The corpses of Prince Liu Sheng 劉勝 (d. 113 B.C.) and his wife Dou Wan 窪嬃 were protected with several layers of jade; jade orifice plugs and jade bi (originally forming part of some kind of shroud) were followed by a complete jade armoury for the body. Their coffins were also lined with jade. Finally, placed between two of Liu Sheng’s coffins, there was a small, seated jade figure inscribed with the words gu yu ren 古玉人 ‘ancient jade person’, surely the most distinctive image of the potential for Liu Sheng’s immortality.17 Yuyi 玉衣 ‘jade funerary clothing’ was in use as early as the Eastern Zhou period and it seems likely that by Han times the image of the elite ‘body of jade’ was embedded in popular imagination.18

Thus jade, as the most refined form of stone, became a metaphor for physical immortality. Lesser stones could cut, cool and hot the body; some could also be a dwelling place for spirits, a protective and generative force as well as a stimulant in mineral form.19 By the second century B.C. all these qualities accumulated to the concept of medical stone and came to bear on the transformation of medical technology using bian 砭 and/or 銮石 zhenshi and chan 鐳, different kinds of lancing stones.20

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14 Traces of all these minerals were found in the corpse of the near perfectly preserved countess of Dai, buried in the Mawangdui burial mound in 168 B.C. See Li Jing 李靜, ‘Shili fang gu, yejing he liandan’ 尸體防腐·冶金和煉丹 in Wenyu tiandi 1992, 4, 17–18.
15 Scattered in an orderly fashion around the King of Nanyue’s Han tomb (c. B.C. 122) were all kinds of medicinal minerals. Most unusually, at the base of the southern wall on the western side of the coffin chamber, were five coloured stones. Xihan Nanyuewang mu, shang 西漢南越王墓上 (Beijing: Wenhuchubanshe, 1994), 141.
17 All mentions of yuren 玉人 in the received literature up until the end of the Western Han period refer to jade workers, rather than people of jade.
18 I am indebted to Donald Harper for pointing out the jade suit discovered in tomb D9M1 at a Wu 蜀 site in Suzhou at Zhen shan 臧山. See Zhenshan dong zhou mu di 聖山東周墓地, Suzhou bowuguan (Beijing: Wenwu, 1999). It had been thought that body suits were first used between the time of the Han emperors Jingdi 景帝 and Wudi 武帝 and there are none recovered from after the third year of the huangchu 黃初 reign of the Wei king Wendi 武帝. See Mancheng Hantu feiquan biaogao, (Beijing: Wenwu, 1980), 378, Lu Zheyin 盧澤胤, ‘Shi lun liang Han de yuyi’, Wenwu 89, 10, 51–8 and ‘zai liang Han de yuyi’ Kaogu, 81, 1, 60–7.
19 According to the Shiji and Hanshu 漢書 ‘Book of the Han’ biographies, Zhang Liang 張良 (d. 187 B.C.) natural patience and respect were severely tested by an old man who turned out to be the manifestation of a stone spirit, normally resident in a yellow stone beneath Jiebi Guncheng 青甌鼓城 mountain. Zhang Liang’s biography is Shiji 55, 2034–5 and 2046. See also Hanhu (Zhejiang hujuan shuju, 1962), 2024 and 2037.
20 ‘Zhen 銮 ‘needle’ is a common variant of zhen 針 ‘needle’. These graphs bear the bamboo (zhu 竹) and metal (jin 金) radicals respectively, but this does not necessarily indicate the type of material used to produce the instruments. If we understand zhenshi 銮石 as ‘needling
Medical tools and techniques found in late Warring States and Western Han textual and archaeological records fall naturally into four areas; firstly we will consider the atropica qualities of medical stones, secondly the evidence of tools used for surgery, then that for hot pressing, cautery and massage. Finally, in the transition to using fine metal needles, we will see vestiges of treatments found in early Chinese stone culture in the formation of classical Chinese acupuncture.

Atropica medical stones
Shang burial sites at Yinrou 殷墟 and Anyang 安陽 have yielded jade arrows which were probably useless for hunting and warfare but which more likely played a role in ritual. Scholars have speculated about their use in medicine generally, although it is difficult to determine a function except, perhaps, aiming at exercising illness entities in the body. A much-quoted account in Zuo zhuangzhu 元 地 譬 人 describes attacking an illness that has lodged in the body. The sixth-century B.C. physician Yihuan 聖 綏 states that an illness entity is situated:

above the region of the diaphragm and below the region of the heart, if you attack it will not work, if you try to penetrate you will not get through, medicine will not reach to it.

The patient had dreamed of two men, personifying the illness, hiding from the physician within his body. Lu and Needham used this quotation to suggest that acupuncture was practised in the sixth century B.C. But since the terminology of the effect ‘reaching’ its target is not exclusive to acupuncture, and is

stones’ then the metal radical in ‘needle’ is clearly irrelevant and may, in any case be a later variant. The most comprehensive discussions of biao 和 related subjects are in Ma Jixing and Zhou Shirong. Shang bronzes, Kaogu fajuzhong suojian bianshi de chubu tansuo 1978, 11, 80–82, and Yamada Keiji, The origins of acupuncture, moxibustion and decoction (Kyoto: International Research Centre for Japanese Studies, 1998). Hua dengfei 霍登非 is the work most famous for the exposition of classical acuomoxa theories. It is a corpus now extant in three recensions, the Tai su 太素 (Great Basis), the Shuwen 索問 (Plain Questions) and the Ling shu 盧 禮 (Divine Pivot). For the latter two texts I will refer to the Sibyu Biyao editions. Each of these is a compilation of small texts dealing with separate topics which may reflect the thinking in a distinct medical lineage. It is thought that the earliest texts were set down during the second or at the earliest the third century B.C. Collectively they represent the kind of debate through which classical medical concepts matured. For an extended discussion of the development of medical theories in China based on a clarification of the formation of the Hua dengfei see Yamada Keiji: ‘The formation of the Huang-ti nei-ching’, in Acta Asiatica 36, 2, 1979, 67–89.

Bronze and bone arrowheads and needles are commonly found in Shang burial sites. Needham’s note: Cf. NCNA Chinese Bulletin, 29 June 1961. For bone needles of the Shang period, considered to be hairpins, see Anon 195 pl. 35, figs 3–7, pl. 36 fig. 5. (Summarized in Gwé-Djen Lu and Joseph Needham, Celestial lancets (Cambridge: Cambridge University Press, 1980), 72–3). Shang arrowheads come in four basic types—the thin bi 髹 (spoon) shaped, the flat headed, the three-faceted blade and the conical. Ye Youxin 葉 又新 speculates that these arrowheads are similar to four of the nine needles described in Ling shu, ‘Jiucheng shier yu’ 十二辰 (‘Nine needles and twelve sources’)—a treatise that describes nine different kinds of needles and their uses—as well as to needles referred to as jiutou zhen 筋頭針, ‘arrowhead needles’ found in later medical literature. SBBY, vol. 205, fasc. 1, 1–4. Ye Youxin, ‘Shi shi Dong Han huo xiangshi shang kehui de yu zhen’ 石 喜 汉 九 處 事 火 炎 石 上的 筋 鈎 in Shangdang zongyi suiyuan xuexiao 1981, 3, 62 cites the Ming compilation by Yang Jizhou 楊 喜洲, Zheng jia dacheng 針灸大成 and Yizong jinjing 聖宗金經, a Qing work edited by Wu Qian 吳 融.

Zuo Zhuang, Chenggong 10. See Zuo shi chang shizhu 左 封 軍 筆 註 (Jilin: Jilin wenshi chubanshe, 1995), 426. Zuo Zhuang is a commentary on Chuci which records affairs of state between the eighth and fifth centuries B.C. This statement is recorded for the date of 580 B.C. Its authorship and authenticity are, however, uncertain. Opinions differ widely, placing some parts as early as the fifth century B.C. to the whole work being a first or second century B.C. forgery. See the discussion in Anne Cheng, ‘Ch’ un chi’u, Kung yang, Ku liang and Tso chu’ in Michael Loewe (ed.) Early Chinese texts—a bibliographical guide, (Berkeley, CA: Society for the Study of Early China, 1993), 67–77. See also the discussion in Yamada Keiji, The origins of acupuncture, 4–5.
certainly not corroborated in a similar context in other medical writings of the period, the claim cannot be substantiated.\textsuperscript{24}

More convincing evidence of atropica medical tools comes from a number of prescriptions from \textit{Wushier bingfang 五十二病方} \textsuperscript{52 Remedies}, the longest medical text excavated from the Mawangdui site. One remedy for inguinal swelling requires arrows to be shot from a peach wood bow.\textsuperscript{25} Another, for the ailment \textit{long}, involves incantation, the Pace of Yu, a ritual step, controlling the spirits with a stone and beating the patient over the head with an iron mallet:

On the sixteenth day of the month when the moon first begins to deteriorate, perform the Pace of Yu thrice. Say ‘Moon is matched against sun’ and ‘Sun is matched against moon’—three times each. ‘Father is perverse, Mother is strong. Like other people they bore Sons, and only bore inguinal swelling bulges. Perverseness desist. Grasp the hammering stone and strike your Mother’. Immediately, exorcistically beat and hammer the person twice seven times with an iron mallet. Do it at sunrise, and have the person with inguinal swelling face east.\textsuperscript{26}

With an increased vulnerability to spirits and demons beyond death, stones and pottery tiles interred along with other mortuary items may well have had an atropica medical function. One intricately engraved pottery tile, which Chinese historians often link to early hot pressing techniques, was excavated from a Warring States tomb in Hebei, Yi county (see figure 1). On the front at the top is a six-pointed star formation set into a circle, towards the handle end is the upper body of a man with two arms raised. His lower body on the handle end is damaged. Just above each of his hands and with one foot pointing towards the figure’s head are two leopard or dragon-like beasts in profile, upside-down with their tongues sticking out. On the back are the body and legs of another scaly dragon. Unfortunately its head is damaged. The dragon design has led scholars to associate the figure on the tile with the \textit{yushi 雨師} ‘Rain Master’, for dragons were thought to be rain-makers. Shi Shuqing quotes the \textit{Shanhai jing}: ‘the Rain Master ... in his two hands grasps a snake, at the left ear there is a black snake and at the right ear there is a red snake’, and a number of commentaries, to demonstrate that the Rain Master was an important figure in Warring States and Han ritual. Han Feizi states: ‘when the Yellow emperor was with the ghosts and spirits on Tai mountain, Wind Uncle went ahead and cleared the way and the Rain Master washed the road’.\textsuperscript{27}

Chinese medical historians have suggested that the tile, being flat and oval and fitting neatly into the palm of the hand, is a good size for massage or hot pressing.\textsuperscript{28} Its lavish decoration suggests that it also had a role in assisting ritual incantation, perhaps in aiding the patient of disease, as we have seen in the \textit{Wushier bingfang} remedy quoted above. We can assume that the tile carried the power of the ‘Rain Master’ and his techniques into the tomb and

\textsuperscript{24} See Lu and Needham, \textit{Celestial lancets}, 79. It is not clear in the text whether or not the physician intended to use an instrument to pierce the illness.


\textsuperscript{26} \textit{Long} 長 is a sub-category of inguinal swellings which refers to some kind of prostration. tr. Harper, \textit{Early Chinese medical literature}, 261.


\textsuperscript{28} This tile and two others from the same site were originally thought to be some kind of unfired cosmetic or cleansing utensil for scrubbing the skin, with related medical functions. See An Zhimin 安志敏, ‘Gudai de caojian taqiu’ 古代的潔面陶具, \textit{Kaoguxuebao} 1957, 4. Shi Shuqing reinterprets them as \textit{bianshi}. Shi Shuqing, ‘Gudai keji shiwu sikao’, 47.
could, just like the five coloured stones from the tomb of the King of Nanyue, serve to draw a boundary around the corpse and protect the body in death.

Stone surgical tools

Many discussions of the origins of acupuncture begin by isolating very early evidence for the activity of body piercing, perhaps the most striking image associated with the therapy. Archaeological remains of sharp pointed instruments may infer the practice of body piercing. In general, however, these

29 Many Shang sites have yielded stones that would be adequate for body piercing. Excavations from tomb 211 at Erligang Zhengzhou, for example, have uncovered many sharp stones and bone instruments such as ge blades, which could easily have had a medical purpose. Jade ge have also been excavated from the tomb of Fu Hao, consort of the Shang king Wu Ding (c. 1200 B.C.) at Anyang. See Yansu Fu Hao mu Dishang mu (Wenwu chubanshe, 1980 and 1984), pl. 107–114. See also Jiangsusheng wenwu gongzuodui, ‘Jiangsu wujiang meiyan xinshi qishidai yizhi’ Jiangsu wujiang meiyan xinshi qishidai yizhi, Kaogu 1963, 6, 390–12. For bone needles see Henansheng wenhuaju wenwu gongzuodui diyidui, ‘Zhengzhou Shangdai yizhi de fajue’ Zhengzhou Shangdai yizhi de fajue 1957, 1, 60.

30 See Ma Jixing and Zhou Shiron, ‘Kaogu fajuezhong suojian bianshi de chubu tansuo’, Ma Jixing, ‘Taiyixian Shangmuzhong’ chutu yijiao qijian bianlian tansuo, Wenwu, 1979, 6, 54–7 and the excavation report of Qiguangcheng bowuguan, Lanzhi shangwang jidi (Qilu: Qilu shushe, 1997), 175–82 and pl. IX and fig. 9. Lu and Needham, Celestial lancers, 69–71 summarize the archaeological evidence available up to 1980. They compare the archaeological finds to an interpretation of textual evidence that places the earliest references to acupuncture needles in the Shangqing and the earliest references to acupuncture therapy in Zuo Zhuan. The textual arguments are generally unconvincing. In three articles Ye Youxin speculates about the relationship between archaeological finds and later textual sources, in particular the nine types of needles described
Fig. 2. Sharpened bones and stones from Neolithic sites in Shayan district, Shaanxi. From *Kaogu, Xuebao* 1957, 17.

reports by Chinese medical archaeologists tend to lack caution in their attribution of medical use to sharpened stones. While I will survey the best evidence available, without the textual or pictographic corroboration that emerges during the Western Han period, arguments about the purpose of all these finds remain conjectural.

Many stones sharp enough for lancing and blood-letting, some even for amputation, have been excavated from four new-stone age sites (see figure 2); three thick, pencil-shaped stones, sharpened to a point at one end like javelin
heads, were also discovered at the Lujiao 麗角 site in Yiyang 益陽 Hunan. These appear to be sharp enough for draining abscesses or bleeding. Ma Jixing and Lu and Needham cite the Shanhaijing as early evidence of acupuncture. The account in question states: ‘underneath the Gao family and Wuli mountains, are many needling stones’, to which Guo pu 郭璞 (276–324) adds, ‘zhenshi “needling stones” are another term for bianzheng 碧針 “lancing needles” or bianshi 碧石 “lancing stones”’. This is certainly testimony to the selection and use of needling stones but it is difficult to be sure of much more. Opinions on the dating of the Shanhaijing vary widely, some placing it as early as the Shang dynasty and others as late as the late Han. Secondly, the needling stones at the foot of this mountain could have been put to any use, and therefore the quotation tells us most about medical needles in the time of Guo pu. Yet it stands to reason that lancing stones should have been used for petty surgery in very early times. There is simply little documentary evidence prior to the late Warring States to substantiate the claim.

In Huangdi nei jingsuwen (hereafter Suwen) 14, we find potent drugs directed towards illnesses of the centre, ‘the 鐢 chan, stone, needle and moxibustion to treat the exterior’. ‘treating the exterior’ may refer to illnesses with an external cause rather than ‘superficial’ illnesses. But Suwen 12 also distinguishes people from different regions by the ailments that they suffer and connects treatment with stone lancets to crude surgery: ‘in the eastern territories ... their illnesses are abscesses and swelling, for which treat them with bianshi’. Warring States, Qin and Han script graphic variants of bian include 碧 and thus also the terms bianshi 碧石 and bianshi 碧石. Bian 碧, glossed as ‘piercing illness with stone’, in Shuowen is also frequently used as a verb. Hanfeizi 34 also refers to the trauma involved in 𢃑刺 ‘piercing’ festering abscesses with yet another form of surgical instrument known as dishi 碓石. Chan 鐢 is an important medical tool that is often associated with early forms of acupuncture. In The origins of acupuncture, moxibustion and

31 Stones sharp enough for lancing and blood-letting, some even for amputation, have been excavated from four new stone age sites. Rough pyramid-shaped arrow heads excavated at Shayan 沙苑 district, Shanxi, could have been used for scraping, piercing, boring and amputation. An Zhiming 安志敏, ‘Shanxi chaoyi dali shayan di qu de shi qi shidai yuqu’, 陝西省調査隊 莊苑地區的石器時代遺存, Kaogu xuebao 1957, 3, 5 figs 2, 25. Similarly three finely rubbed adze-shaped stones, one rectangular and two roughly square with one side slanting, one edge very sharp, were excavated at the site of the Changgeng 蒲桑地區的石器時代遺存 temple in Huarong 華容, Hunan. Ma Jixing and Zhou Shirog, Kaogu fajuezhong suojian bianshi de chenbu tansuo’. Finally, Ma Jixing and Zhou Shirog consider a 6 × 2.3 cm. stone knife with a hole cut in one end discovered at the Jiejiaying 景家嶺 site in Changsha, Hunan, sharp enough for lancing, amputation and other surgical operations. ibid., 53 n.17. The authors saw this stone for themselves at the Hunan Provincial Museum, Zhou Shirog. ‘Hunan Yiyang Lujiaoshan fuxian xinxishi shidai yuqu’, Hunan Yiyang Lujiaoshan 發現新石器時代遺址, Kaogu 1965, 10, 536 figs 1 and 5.

33 The dating and authorship of Shanhaijing is uncertain. See Riccardo Fracasso, ‘Shanhaijing’ in Loewe, Early Chinese texts, 359–60. Suwen juan 4, pían 14, ‘tangye liao li lun’, 湯液醪醴論, SBBY, vol. 204, fasc. 1, 5b. The term 鐢 chan is also used in combination with both shi ‘stone’ and zhen ‘needle’.

34 Suwen juan 4, pían 12, ‘Yi fa fang yi lun’, 老子方宜論, SBBY, vol. 204, fasc. 1, 1. Few documents other than the Huangdi nei jing mention the compound term bianshi but, as we shall see in the course of this paper, there are many ways in which early medical works refer to lancing stones.

35 Mawangdui Hunmu boshu, vol 4, 17 uses the graph 碓 and Zhangjiashan Maifa, uses the term. The date is uncertain but Zhangjiashan Hanjian zhenghao xiaozu, ‘Jiangling Zhangjiashan Hanjian (Majistu) shiwen’, 江陵張家山漢簡脈診脈文, Wenwu 1989, 7, 12–42. Huangdi nei jing taisu lunar calendar volume 19 ‘zheng zhi shen’ 知針石 references to bianshi 碓. Huangdi nei jing taisu reference to Dongyang yuxue shanben congshu ed.

36 Shuowen 99. See Shuowen jiezi zhu, 453.

37 Hanfeizi 13 champions the ‘no pain, no gain’ theory when it uses painful piercing of the bone with a knife to benefit the patient as an analogy to encourage people to criticize their king and the king to listen to criticism. Hanfeizi juan 13, pían 34. SBBY, vol. 173, fasc. 3, 12.
decocion, Yamada Keiji sets out a detailed etymological argument to suggest that bian 砭, di 砭 and chan 砭 all refer to surgical instruments of the same basic shape, likened to the bud on the tip of a stem, or to a spoon.  

Ma Jixing, on another track, believes that the bianlian 砭镰 ‘stone lancing sickle’ is a key to the early development of medical tools that evolved into the stone and metal needles eventually deployed in acupuncture. He traces the shape of the lian 銚 ‘sickle’ and its practice (also referred to as lian in a verbal sense) from the Shang period through to modern times. In later medical literature there is evidence that lian, ‘the sickle’ and ‘the art of the sickle’, both artifact and practice, are a recurring theme in medical treatises. Common terms include the daolian 刀镰 ‘knife sickle’, pilian 鋨镰 ‘bursting sickle’, fenglian 風镰 ‘sharp-pointed sickle’, liange 劈割 ‘sickle cutting’ and lianxi 剁洗 ‘sickle purifying?’. The shape of the lian is continuously refined (although its handle size is always limited by its being hand-held) and eventually emerges in premodern medical literature as a metal needle with a sickle-shaped bend and an internal edge sharp enough for ‘scraping away rotten flesh in hidden places’. Techniques associated with lian are often treatments for eye ailments, lancing boils or petty surgery on facial growths as well as a condition known as infant erysipelas.

The earliest record detailing surgical procedure is in Wushier bingfang for treating inguinal swellings and involves cutting the navel with a bianshi ‘lancing stone’ and then cauterizing:

First raise the testicles and pull down the skin. Pierce the side of the duo (navel) with a lancing-stone. ... liquid and lard ... stir with pure [liquor]. In addition, cauterise the wound. Do not allow the wind to reach it. For an easy cure, cauterise the Great Yin and Great Yang.

In an eclectic medical approach, Wushier bingfang recommends cauterizing the Great Yin and Great Yang, rare evidence of the influence of newer physiological theories in the recipe literature.

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38 The argument, put briefly, suggests that fa 砋, the right-hand element of the graph bian was originally expressed as jie 砍, hence the graphic variant bian 戮. jie was a graphic variant of han 篾, glossed in Shuowen tongxun dingcheng as ‘the shape of a bud at the tip of a stem’. Chan 铢, the right-hand element of chan 铢, apparently had a similar meaning to jie. And shi, the top right-hand element of di 銚 was a variant of bi 砭 ‘spoon’. He concludes, in short, the original character “bian” and the character “di” signified the same shape. Yamada Keiji, The origins of acupuncture, 13–5.

39 Ma Jixing’s arguments are set out in two papers. See Ma Jixing, ‘Gaosheng Taiji shishai mubianlian kuo’ in Hebei sheng Wenwu yanjiusuo, Gaosheng Taiji Shangdai yizhi, (Beijing: Wenwu, 1985), 199–203 and Ma Jixing, ‘Taixicun Shangmuzhouchu de yiliao qiju bianliang’, Wenwu 1979, 6, 54–7. The earliest stone identified as a bianliang was excavated from a Shang site in Gaosheng taixi 嘉城台西 in 1973. In shape it is not much different from the many ordinary shilian ‘stone sickles’ used in agriculture and construction. What distinguishes this particular stone are the circumstances of the tomb. On a raised level to the left side of the main coffin, archaeologists found the skeleton of a girl with her hands bound, most probably a slave sacrifice. Lavish burial goods and the probability of slave sacrifice suggest that the main occupant of the tomb was of high social status. On the opposite side to the slave girl, to the right of the main coffin, was a black and red lacquered box containing the stone sickle. The stone was clearly an object of great value, perhaps in ritual life. It may have had a medical function.

40 Ma Jixing, ‘Taixicun Shangmuzhouchu de yiliao qiju bianliang’, 6, 55.

41 The Northern Song work Taiping shenghui fang 太平聖惠方 records the use of a pidao to lian ‘sickle’ bad blood in cases of infant erysipelas.


43 But this statement is ambiguous and could refer either to cauterization on specific channels or specific points. Li Jianmin 李建民 suggests that these divisions of the body reflect an essentialization of the cycles of the macrocosm. He offers this as evidence against the prevailing theory that the systematization of the channels preceded the acupoints. Li Jianmin, Mingtong yuyang: ‘yi Wushierbingfang ’jiu qi tai Yin, tai Yang’ wei li’ (Taipei: Institute of History and Philology, Academica Sinica, 1997). See also Donald Harper, ‘The Wu Shi Erh Ping Fang: translation and prolegomena’, Ph.D. Thesis (Berkeley: University of California, 1982), 392–4. The idea that some acupoints developed through an awareness and experience of the body in
We have already seen a reference to moving qi with a stone embedded in a text excavated from a tomb at the Zhangjiashan site (earliest date 186 B.C., latest date 156 B.C.). Strangely, after documenting treatment to re-establish the correct movement of qi Maishu (6) goes on to give fine detail on how to prepare stones for lancing abscesses:

When using the stone lancet to open the channel it is necessary to follow these principles: where the abscess swelling has pus then measure its size and make a lancet for it. There are four harmful things:
One states: if the pus goes deep and the stone lances to a shallow depth it is called not reaching it.
Two states: where the pus is shallow and the stone lances deeply call it overreaching ... 44

We might read the references to ‘opening’ mai with a stone in Maishu as evidence of early blood-letting. And this is a well-attested medical technique in the Huangdi nei Jing corpus, where Suwen 46, for example, states, ‘now as for qi and blood amassing, it is fitting to drain with a stone’. 45 But there is no other evidence of blood-letting in Maishu.

The text then specifies how to tailor a stone lancet to the quantity of pus. Instead of finding information about what kinds of stones were used to move qi or to influence the mai we are given explicit instructions for crafting the correct size of a stone lancet according to the condition of an abscess. We are also left with the impression that medical technology had not quite caught up with theoretical developments about the nature and treatment of the body. The same passage is re-worked in Huangdi nei Jing Lingshu (hereafter Lingshu) 7 where, in a description of the nine needles, the word ‘pus’ has been changed to ‘illness’, and the word ‘stone lancet’ to metal ‘needle’.

Chunyu Yi, perhaps because he was a native of the eastern territories, was rather partial to using bianshi, chan as well as zhenshi 針石 ‘needling stones’ to ci 剝 ‘pierce’ and qu 取 ‘select and stimulate’ various strategic places. 46 He does not use surgical techniques and states clearly that bianjiu zhi qizhu 灸灸至氣逐 ‘stone and cauterisation lead the qi’. And so when the nurse of the King of Northern Qi has ‘heat jue’ and her feet are hot and oppressive three needles are used to pierce the sole of the foot. 47 We can image on the basis of Maishu (6), quoted above, that the needles were thought to

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44 A recension of this text is reproduced in a number of later works including Lingshu juan 2, pian 7, ‘guanzhen’. SBBY, vol. 205, fasc. 1, 5th and Zhenjiu jiaoyiing 5.
45 Suwen juan 13, pian 46, ‘bingsengiun’ 併能論. SBBY, vol. 204, fasc. 3, 2. The author(s) is making a distinction between the use of needle and stone. Needles are appropriate for stopping the production of qi associated with the growth of abscesses. Epler makes a convincing argument for the formative influence of the practice of blood-letting in the development of accupoxa therapy, a tendency that is particularly evident in Suwen. There is no substantial corroborations for this view in the Mawangdui or Zhangjiashan texts. Dean Epler Jr., ‘Blood-letting in early Chinese medicine and its relation to the origin of acupuncture’, Bulletin of the History of Medicine 54, 1980, 337–67.
46 Just like the wandering government advisers we meet in the Warring States philosophic literature Chunyu Yi roamed from one court to another seeking patronage. His travels took him through the commanderies of Qi 齊, Jibei 濟北 and Zichuan 齊川, an area that is roughly equivalent to modern Shandong. I am grateful to Elisabeth Hsu for her unpublished map of the travels of Chunyu Yi.
move qi downwards through the feet to cool the condition. And in case 16, when the King of Zichuan has a headache, body heat and feels in distress, Chunyu Yi slaps his forehead with cold water and pierces the Foot Yang Illumination channel in three places, probably also on the extremities, thereby resolving agitation in the upper body.\footnote{Siji 105, 2815, 2807 and 2805}

By the second century B.C. we can detect a changing perception of the potential of medical intervention with stones. Sima Qian’s account of the life and work of Bian Que differentiates medical techniques according to how deeply illness has penetrated the body:

when the affliction stays in the couli 腕理 taking soups and yun 煮 ‘hot-pressing’ it will reach there;\footnote{The couli is a commonly identified structure on the surface of the skin, which forms part of the permeable barrier between inner and outer bodily space. I have discussed different interpretations of couli in detail in ‘The influence of Yangsheng culture on early Chinese medical theory’, 226–30. Despeux also discusses the couli as the space of interchange between internal and external; see ‘Le corps, champ spatio-temporel, souche d’identité’, L’Homme, 137, janv.-mars 1996, 92–3. Working with the Neijing corpus, Sivin translates couli 腕理 ‘interstices of the flesh’ and understands the term to refer to the ‘spaces in the boundaries within the flesh, between flesh and skin, and sometimes between flesh and internal organs’. (Sivin, Traditional medicine in contemporary China, 103, n.14.)} in the blood and channels zhenshi 銓石 ‘needling stones,’ will reach there; when it is in the bowels and stomach, applying wines and tinctures to it will reach there; when it is in the bone and marrow even if one could control fate there’d be nothing one could do.\footnote{Siji 105, 2793. The statement is a modified version of one in Hanfei zi juan 7, pian 21. SBBY, vol. 173, fasc. 2, 2b–3.}

Stone lancets, in this account, treat the blood and channels at a deeper level than the skin. Sima Qian, however, probably composed the account of Bian Que in the image of medicine of his time. Earlier accounts of Bian Que’s work and of surgery in Hanfeizi suggest that it was his skilful surgery with zhenshi, dishi 砥石 and knives at the superficial level of the flesh and skin, not more sophisticated acupuncture techniques, that made him famous.\footnote{Hanfeizi juan 8, pian 25, SBBY, vol. 173, fasc. 2, 8.} We can be forgiven for our confusion over treatments with stone. For even in the sixteenth century the techniques had been forgotten. The Ming scholar physician, Xie Zhaozhe, laments:

Physicians of old gave first place to the needle, the stone and to moxa. Drugs were secondary ... moxa only applied in ‘wind blockage’ or in urgent cases. Acupuncture was less than one in a hundred ... as for the stone, the tradition is quite lost.\footnote{Xie Zhaozhe, fl. Wanli period (1573–1619). Wu zazu ‘Five miscellanies’, Reprinted in Guoxue zhenben wenku series, 1935, 220.}

It is certainly not possible to identify a monolominal development from petty surgery with stones to the modern acupuncture needle, and this is a point stressed by both Yamada Keiji and Paul Unschuld.\footnote{Paul Unschuld, Medicine in China, 95; Yamada, The origins of acupuncture.} Modern scholarship tends to date the compilation of the Huangdi neijing corpus to the first or second century B.C., and this and the preceding period was a time of great technical innovation. In this context it is worth noting that the Zhoulì’s 周禮 list of professionals (which while being an idealized account of life in Zhou times, may reflect something of its own time) mentions physicians who lance abscesses but has no record of acupuncture or moxibustion personnel.\footnote{Opinions about the date and authorship of Zhoulì have varied widely from the Duke of Zhou to Liu Xin 劉歆 (–46–+23). See William G. Boltz, ‘Chou li’, in Loewe, Early Chinese texts, 25–9.} Yet, on the
basis of the many references given in this paper, it is reasonable to imagine that medical stones were used for different purposes in different social, professional and cultural contexts—and even that, in the course of experimentation with petty surgery, physicians made observations and hypotheses concerning the potential of stone to treat the body at a deeper level. In the next section we will consider other medical interventions with stone and cautery which had an equal, if not a greater, impact on the principles and practice of acupuncture.

*Hot pressing, cautery and massage*

Yamada presents strong evidence that the development of moxibustion with mugwort was related to an earlier use of mugwort to ward off auspicious elements and drive away demons. The people of Chu in particular wore mugwort dolls at their waist. He also describes the use of a related plant, *xiaoxiao* 薤, as a form of incense to attract the gods, concluding that ‘mugwort must originally have been more than just a medicinal herb. *Ai* and *xiaoxiao* belong to the same mugwort genus, but one was used as incense to beckon the gods, whereas the other was used to drive away demons that caused illness’. These represent two contrasting approaches to ensuring that the body only played host to benign entities. Yamada raises the possibility that the channel system was discovered by those using moxibustion for ‘magical therapies’ because ‘the routes or areas of illness caused by gods of illness invading the body is highly compatible theoretically with the concept of the vessels (channels)’.  

Yamada’s theory about moxibustion parallels the different uses of stone to define and determine an unassailable physical space.

The use of cautery is attested in literary analogies of the Warring States period. *Zhuangzi* puts the idea of ‘cauterising where there is no sickness’ into Confucius’s mouth as an analogy for useless effort; *Mengzi* likens inadequate preparation in government to the futility of using insufficiently mature *ai* 艾 ‘moxa punk’ or ‘mugwort’ to treat chronic illness. However, it is not possible to ascertain how widespread the use of moxibustion with mugwort was in Han times. In the *Wushier bingfang* we can identify many different types of cautery: mugwort burned on the top of the head or the shin treats inguinal swelling, cat-tail mats cauterize warts:

Take a worn-out cat-tail mat or the soft leaves of a cat-tail bedmat and make them into a cord. Then light the tip and cauterize the tip of the wart with it. When it becomes hot, pluck off the wart and discard it.  

Despite their earlier origins cautery techniques had taken a supplementary role to acupuncture by the time of the *Huangdi* corpus. Yamada points out that of the compound term used in the *Huangdi* corpus a distinction is made

55 Harper, *Early Chinese medical literature*, 244; Yamada Keiji (ed.) Shin hakken Chūgoku kagakushi shiryō no kenkyū (Kyoto: Kyoto daigaku jinbun kagaku kenkyū, 1985) vol. 2, 58–63. See also Yamada, *The origins of acupuncture*, 66–78. Yamada compares the stages in one *Wushier bingfang* prescription for hernia which involves minor surgery, the applications of paste and alcohol, and fumigation, to the stages in a ritual ceremony described in *Li Ji*. The fumigation, he believes, was intended to drive away the god of sickness and prevent it from entering the wound. Here we have a repetition of that theme where openings in the body, here a wound but elsewhere the orifices, are both vulnerable to malevolent activity as well as pivotal in methods to support and protect the body.


58 Moxibustion is generally used for replenishing techniques associated with conditions that have 堆下 xian xia ‘dropped down’, which I interpret to be empty, deficient conditions. See the conditions associated with the lung channel in *Lingshu juan* 3, plan 10, ‘Jingmai’. SBBY, vol. 205, fasc. 1, 1b.
between the bianshi 'needling stones' (or zhenshi, chanshi and shi) and ci jiu 刺灸 'piercing and cauterizing' (or jiuj ci and zhen ai 针艾 'needle and moxibustion') and they are even contrasted. His point is that where the combinations 'moxibustion and acupuncture' are contrasted to bianjia, acupuncture is classified as more akin to moxibustion than to surgical techniques—a feature well-illustrated in the excavated channel texts from Mawangdui and Zhangjiashan which use mainly 久 (灸) jiu 'cauterization' to treat the channels and not stone.

So if qi goes up, not down, then discern which channel is in excess and jiu 久 cauterise where it meets the articulation ...

Since most of the symptoms associated with the channels of the excavated texts are different kinds of pain manifesting themselves on the channel itself, we can imagine that exercise, massage, hot and cold-pressing and cauterity with the type of pottery and stone utensils discussed below, would be appropriate therapy.

Yamada describes a distinction highlighted by Yang Shangshan (Sui period) in his annotation of Suwen: Yang Shangshan believed the single graph shi ‘stone’, as distinct from bian ‘lancing stones’, referred to cold stones in poultices. There is also textual evidence to corroborate the judgement that some excavated stones had a hot-pressing, or cauterizing function. One stone excavated from a Warring States tomb at Jiangxi, Shanggao 高 is of special interest. It is an oval, convex, pendulum, rubbed to a shine, with a hole at one end for suspension and was found inside a three-legged ding鼎 'cauldron'. The hole indicates that the stone was usually suspended and the cauldron that it was suspended in or over hot fluid. With its oval, convex shape it would have been suitable for holding in the hand during hot pressing and massage treatment. An egg-shaped stone engraved with chan 建 cicadashaped patterns and with a hole at one end excavated from the Spring and Autumn period Hujiawan tomb in Xialiu-city, Hunan may well have been used for the same purpose (see figure 3).

Heating stones in different kinds of fluid or in fire is attested in the Mawangdui Wushier bingfang prescriptions. For example, here is a suggested remedy for itchy anus:

Take stones the size of a fist, twice seven in number. Thoroughly burn them. Have two thirds sheng of well beaten rice and eight times that amount of water, and put the stones into it. ... cooked, then drink it, and it desists.

Wushier bingfang gives us twelve different yun ‘hot-pressing’ techniques, of
which the Shanggao and Hujiaowan stones would be appropriate tools for the following treatment:

Recipe for male haemorrhoids: the size of a zao (jujube) pit lodged on the edge of the anus which at times itch and at times are painful. First cut it off. If it cannot be cut off, [take] turtle brain and didan chong (oil beetles), half and half. Blend and spread on (the haemorrhage). Burn small oblong stones. Quench them in gruel vinegar and use them to hot press. If it does not desist, repeat it again following this procedure. Excellent.67

Other liquids and substances used in hot-pressing techniques recorded in Wushier bingfang include the steam from rat boiled in urine, roasted salt wrapped and dipped in liquor, anthill loam,68 wuhui (monkshood) and litu (black veratrum).69

The following recipe for haemorrhoids that protrude through the anus suggests cauterization with a hot stone:

Male haemorrhoid ... There is snail-like flesh protruding, sometimes like the shape of a rat teat. The tip is large and the base small, and there is a

67 ibid., 272.
68 See the translations in ibid., 229, 231–2 and 235–6.
69 There are many more methods recorded in later medical literature such as Qianjin Baoyao, which records hot-pressing with ash, animal and metal, many more herbs and substances including rape, black bean, silkworm excrement, willow root, peach juice, etc. See the descriptions in Qigucheng bowuguan, Linzi Shangwang multi (Qifu: Qifu shushe, 1997), 180.
Fig. 4. A stone, covered in rub marks and heat fissures, recovered from a Warring States tomb in Xamia. From Wenwu, 1978, 11.

hole in it. ... it, heat it quickly using cauterization, grasp the small base, and twist until it breaks off. Take the millet food sacrifice from the offering niche by the entrance to the inner (chamber) and incinerate the head of a dead person. Smith both, moisten with rancid lard, and put it into the hole. 70

One flat, oval, stone 6 cm. long, excavated from a Warring States tomb at Xia 燕 麻 seems to be a good example of the kind of tool used in this type of operation. The stone was covered with rub marks and heat fissures. One side was rubbed to a shine (see figure 4). The two stones from Xialiu, Hujiaxian and Shanggao, described above, could also be heated in fluid and used for this purpose.

Different types of massage would naturally require stones of different shapes and sizes. A round, concave stone 3.2 cm. in diameter was excavated from a site at Taobo 桃博, Yiyang 益陽. 71 Traces of massage pressure are evident on its inner side. With such a small stone it would be possible to concentrate pressure on small areas or along the fine lines of the channels. A 9.5 cm., aubergine-shaped river pebble excavated from the Han period Yanzi zui 燕子嘴 tomb at Changsha 長沙, Hunan, is even more useful in this respect (see figure 5). 72 With a small teat stone at one end the pressure applied could be even greater and the site of the lesion more carefully targeted. Both these stones might be considered ancestors of needles described in Lingshu 1, the ‘nine needles’ treatise of the Huangdi nei jing: the chizhen 銷針 ‘spoon needle’ was designed to massage the channels and the yuanzhen 資針, ‘round

70 tr. Harper, Early Chinese medical literature, 270. Many excavated stones are appropriate for this kind of cautery of boils and wounds. The shape, apart from rendering the stone easy to hold and being appropriate to the size and place of the lesion, would be immaterial. Ma Jixing and Zhou Shirong suggest that a 13 cm. long oval stone, rubbed to a shine, excavated from a site at Hunan, Shimenzao 石門量 city might be an early example from the Shang period. Ma Jixing and Zhou Shirong, ‘Kaogu fajuezhong suojian bianshi de chubu tansuo’, 82. See Zhou Shirong, ‘Hunan Shimen xian Zaoshi faxian Shangyin yizhi’ 湖南石門縣岳市發現商殷遺址, Kaogu, 1962.3, 145.

71 Ma Jixing and Zhou Shirong, ‘Kaogu fajuezhong suojian bianshi de chubu tansuo’, 53 n. 17. The authors saw this stone personally at the Hunan Provincial Museum.

72 Zhou Shirong, ‘Changsha dongjiao lianghanmu jianjie’ 長沙東郊漢墓簡介 Kaogu 1963.12, 684, fig. 3.2.
needle', massaged all the divisions between the muscles. Both were thought to influence the qi of the inner body.

Pottery utensils were also suitable for use in massage and hot-pressing procedures. Pottery hot-pressing has obvious advantages over stone. Firstly, it is possible to mould the utensil to the required shape. Secondly, it can withstand high heat and cooling without cracking and, thirdly, it distributes heat evenly around the face of the tool.

Four late Warring States pottery pantiles recently excavated from tomb M1 at the Shangwang site at Linzi in Shandong are convincing examples of the kind of tool that would have been suitable for cautery and hot-pressing (see figure 6). All four have rough patterns trowelled in longitudinal lines onto one of the faces. The edges of all the pantiles are finely rubbed down to make round edges, smooth enough to avoid damaging the skin of the patient during massage. Scorch marks and liquid stains cover the tiles. Neither the shape, nor the extent of the scorch marks on the pantiles, are consistent

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73 Lingshu juan 1, pian 1. SBY, vol. 205, fasc. 1, 2.
74 This is a tradition that has been traced to the Banpo 半坡, Jiangsu Huai 淮安 and Qingliangang 青蓮庵 sites where Ma Jixing and Zhou Shirong speculate that some flat and cylindrical pottery utensils were used in hot-pressing and massage.
75 See the excavation report in Linzi Shangwang muji, 175–82 and plate IX and fig. 9. The tiles are apparently not 'tao pai' 蟄拍 spinning wheel tiles of the sort used to indicate the female gender and/or suggest that a girl would become good at spinning and weaving. The girl in the tomb was of fairly high status and therefore unlikely to be taking up spinning professionally. The tiles were placed at the north end of the tomb between the coffins. Two of these pantiles are oval, one 13.4 cm. long and 9.1 cm. wide and the other 17 cm. long and 11 cm. wide. The other two are rectangular, and 23.7 × 9 cm.
with culinary use. There is a strong argument that these items are *yunju* 熨具 ‘hot-pressing tools’.

All of the cauterization treatments related thus far seem to treat concrete symptoms or pain, and appear to have little to do with the physiological body that is the central concern of this paper. But *jiu* was also a technique to stimulate *qi* in self-cultivation. *Tianxia zhidao tan* describes how the gentleman who has over-indulged in sexual activity tended to ‘cauterise his body to bring forth his *qi*’ in a programme which included taking special medicines and diet. (The point of the passage is that his efforts are in vain if he fails to regulate his sexual activity.)

Where *Maishu* (6) uses both cautery and stone *bian* to normalize the movement of *qi* and writes of opening the channel at the joints with a stone lancet, does this necessarily mean breaking the flesh? Since in Han culture stone had a way of defining and containing the most precious and vitalizing essences of the body, could a specially chosen stone not open the channel and influence the movement of *qi* itself, with the power of its very presence? When Bian Que states that needle and stone act at the level of the blood and channels, and we envisage piercing through the skin, should we not also entertain the idea that specially selected or crafted stones were used to heat, press and massage the channel?

At this point we have exhausted the evidence available from excavated medical stones and must await further excavation of the many thousands of burial sites that have already been identified. Even from the evidence of these

*76 Mawangdui Hanmu boshu*, Vol. 4, 164.
few examples we have begun to chart a change in the nature of medical intervention. Stone tools for petty surgery and pain relief were a pervasive necessity, but physicians and self-cultivators in the late Warring States and early Imperial period began to apply all manner of treatments to the channels in order to tonify their qi and restore their jing. In the next section we will see that they also reinvented ancient medical cultures related to stone, such as commanding the spirits, bleeding, hot-pressing, lancing, cauterization and massage, according to the principles of new physiological theories that were circulating at that time. Here we will set out some of the technical considerations involved in this transition.

Acupuncture alchemy

By the early Western Han period changing medical perceptions of the living inner body, under the influence of ideas fundamental to early self-cultivation culture, were already prompting a change in the nature of medical interventions at the surface of the body.\textsuperscript{77} In less than a century and by the time of the \textit{Huangdi neiijing} compilation (the canon of Chinese acupuncture) these changes resulted in the concept of a formal system of channels, known as jingluo 經絡 through which different types of qi moved rhytmically around the inner body.\textsuperscript{78} There was also a corresponding change in medical technology. From occasional references to stones and bian to treat the channels, fine metal filament needles were suddenly the favoured method for moving qi by insertion at strategic points on the surface of the skin. In the words given to the Yellow Emperor written in \textit{Lingshu}, we see that the new theories and technology matched:

I wish not to employ poisonous herbs; to be without applying bianshi 'stone lancet'. I wish to use small needles to connect the jingmai and adjust blood and qi, to lay out the hui 'meeting places' where it comes in and out and flows smoothly or inversely. So that it may be transmitted to posterity, that they will use this method in an enlightened way, ... I will for the first time establish the \textit{Zhenjing} 鍼經 (Needle Canon).\textsuperscript{79}

Here we have small needles applied to a body imagined in physiological terms, where qi and jing flow smoothly through the jingluo and where the qi comes and goes at hui 'meeting places'.\textsuperscript{80} A distinction is made between this mode of treatment and the cruder application of bianshi lancing stone which, throughout the compilation, is most frequently used to refer to surgical tools.

The \textit{Yantielun 鐵論} ('Discourse of salt and iron') of 81 B.C. reveals that Bian Que's legendary use of pulse diagnostics and the zhenshi 針石 'needling stone' to redistribute the influences of Yin, Yang and qi is the medical expression of a pervasive political concern. The text matches the maxim to 'take the

\textsuperscript{77} I have argued this at length in my doctoral thesis. See Vivienne Lo, 'The influence of yangsheng culture on early Chinese medical theory'.

\textsuperscript{78} Some interpretations will leap over the \textit{Neijing} corpus to place the concept of circulation and its corollaries as late as the \textit{Neijing}. Unschuld differentiates between the evidence for a discovery of circulation in the \textit{Neijing} and a more mature theory as set out in the first twenty-two chapters of the \textit{Neijing}: Unschuld, \textit{Medicine in China}, 85–6.

\textsuperscript{79} \textit{Lingshu juan} 1, \textit{pian} 1 'Juzhen shier juan', SBBY, vol. 205, fasc. 1, 1–4. The \textit{Zhenjing} is one of the medical canons listed in the \textit{Yivenshi}, the bibliographical treatise of the \textit{Hanshu}, and was a nine \textit{juan} text used by Huangfu Mi (215–282) and associated with a nine \textit{juan} Siwen (Basic Questions). Historians have identified these two texts as the earliest known elements of the \textit{Huangdi neiijing}. However, it is impossible to know whether there was ever a Han text known as \textit{Huangdi neiijing} or what collection of texts it might have been.

\textsuperscript{80} I will discuss the significance of hui below.
surplus and supplement the insufficiency’, which we met a century or more earlier in the writings of Maishu (6), to the redistribution of wealth in the state:

Now the crude physician does not know the patterns on the skin formed by the arrangement of the mai, the division of blood and qi; he blindly stabs yet does not benefit the illness, only damaging the skin and flesh. Now you wish to cut down on the surplus to replenish the insufficiency, but the rich grow increasingly rich and the poor grow increasingly poor. By deploying the punishments of severe laws you wish to stop villainy with prohibition and violence, yet villainous plots do not stop. Your intention is not that of Bian Que’s use of the needling stone, so the multitude have not yet received direction.81

The inferior physician/government knows nothing of the subtler workings of the body/state and simply does superficial damage. We should note that it is not so much that the locus of therapeutic intervention changes; the account of Bian Que’s needling stone still has him working through the medium of skin and flesh. But, in contrast to the accounts of his surgery in Hanfeizi, he is able to distinguish the exact locations of the mai and, more importantly, his intention and mode of attention are significantly different. Suwen 46, discussing abscesses of the neck, distinguishes between treatment with stone and needle, ‘if the qi of an abscess is increasing, then it is fitting to use a needle to open and drain it. Now if the qi is flourishing and the blood amasses it is fitting to disperse it with stone. The illness is the same, but the methods are different’.82

Despite the Yellow Emperor’s dissatisfaction with the crude methods associated with stone quoted above in jiuzhen 九針 ‘nine needles’, much of the therapy detailed in the Huangdi neiijing compilation, and even in the passages where jiuzhen itself differentiates needles and techniques, amounts to little more than petty surgery, blood-letting and massage. Lingshu 7 ‘guanzhen’ 官針 and Taisu 21 ‘jiuzhen suoxiang’ 九鍼相象 give us the number of needles specified for surgical use. Figure 7 is a Ming reconstruction of the nine needles.83 The pizhen 銮針, ‘bursting needle’ had a tip as sharp as a sword for bursting abscesses. Yamada quotes Duan Yucai’s notes to the Shuowen gloss of pi to suggest that this was a double-edged sheathed knife.84 The dazhen 大針 ‘big needle’ was for draining oedematous swelling of the joints. The changzhen 長針 ‘long needle’ has a three-faceted blade and was applied, alarmingly, to illnesses residing in the centre, while fengzhen 鋤針, the ‘sharp-pointed needles’, were applied to the channels and the qi. The reference here is probably not to a surgical operation, but the various accounts are inconsistent; Taisu 21 suggests that fengzhen was a triple-edged needle ‘to remove fever and draw blood’.85

82 Suwen juan 13, pian 46. SSBY, vol. 204, fasc. 3, 2.
84 Yamada, The origins of acupuncture, 16.
85 Lingshu does not explicitly associate the fengzhen with moving qi, but it brings in other important elements related to the new models of acumoxa theory. Treatment must be at the jing ‘well’, ying and shu locations and selected according to the four seasons. It is not clear whether, by the time of the Lingshu compilation, the well, ying and shu locations are part of a system with the matching acupoints as we know them today or whether they serve as body-piercing locations in their own right. See also Huangdi neiijing taisu, vol. 2, 414–5. Ma Jixing and Zhou Shirong Yiyang Lujiao site lancets to be early models for the fengzhen. Ma Jixing and Zhou Shirong consider ‘Kao gu fajuezhong suojian bianshi de chubu tansuo’. 
Suwen 60, for example, recommends applying heat or a needle to the joints, mainly in order to ease pain. The location of acupoints is also given with specific reference to the cavities between bones.⁸⁶ Here we can imagine a range of different interventions. Yet, despite the crude nature of many techniques, Huangdi neijing frequently insists on the priority of a medicine involving qi.

A number of treatises in the Huangdi neijing corpus represent the earliest extant example of a concerted attempt to raise the level of discourse about body piercing and to promote theories about moving qi with needles. In Lingshu 4 Huangdi asks Qi Bo about rules in using the needle. Qi Bo answers:

... one must target the qi xue 氣穴 ‘qi cavities’, and not target the seams in the flesh .⁸⁷

and Lingshu 3 states that:

the crude keeps to the guan 開 ‘passes’, he keeps to the four limbs and does not know the comings and goings of blood and qi, of upright and perverse.⁸⁸

I have discussed the nature of guan elsewhere.⁸⁹ For the purposes of this paper,

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⁸⁶ Suwen juan 16, pían 60 ‘Gukong lun’, SBBY, vol. 204, fasc. 4, 1a–6a.
⁸⁷ Lingshu juan 1, pían 4 ‘Xieqi zangfu bingxing’ 邪氣藏府病症, SBBY, vol. 205, fasc. 1, 14b.
⁸⁸ Lingshu juan 1, pían 3 ‘Xiaozhen’ 小針, SBBY, vol. 205, fasc. 1, 8a.
it suffices to say that, at a superficial level of the body, these passages represent narrow passages or constrictions in the body, best represented as the channels formed between bones, muscle and particularly at the joints, i.e. guanjié 關節.

In the selection of guan as the site of intervention we are reminded of the passage in Maishu (6) which specifies treatment at the huan ‘articulations’, the elbows and the popliteal crease.

Another passage from Lingshu 1 provides us with acupuncture techniques to establish a flow of qi similar to that which we have seen was deemed essential in the care of the ‘jade body’ of Maishu (4) and the ‘jade closure’ techniques of breath and sex cultivation. In a passage which again recalls the stone bian in Maishu, which brought qi to the limbs by needling the elbow and knees and the huan ‘articulations’, Qi Bo describes the 365 places where the jie 節 (like guan another term that refers the joints)90 cross, ‘where the qi of the shen 神 ‘spirit’ (or alternatively ‘qi and shen’）travels in and out, not the skin, flesh, tendons and bone’.91 When, in another treatise, Shuwen 14 describes medicine for moving the shen as ‘the way of the needling stone’, we are also reminded of the pervasive power of stone to protect and control spirits, of the Rain Master stone, the five coloured stones and the layers of jade used to protect the Han lords in death.92 It may be that the notion of shen ‘spirit’ in these medical treatises is one stage further in a long process of abstraction. Nevertheless, we can see that many of the qualities that had accrued to the culture and spirit of stone in earlier times still shape the new acupuncture treatments of the Han period.

Qi Bo also distinguishes superior forms of treatment by the kind of attention that is paid to the guan. He explains:

The crude guard the xing ‘form’ and the superior guard the shen ‘spirit’. As for the shen, the shen lodges in the gates; if you do not observe the affliction, how can you know its cause? The subtleties of piercing lie in the speed; the crude guard the guan ‘passes’, the superior guard the jí 极; the movement at the jí is not separate from the cavities, the jí are in the cavities; clear, quiet yet subtle, the coming cannot be met with and the goings cannot be followed.93

Rather than needle into the jie ‘joints’ or guan ‘passes’, which is apparently painful, it is important to pay attention to jí. In astronomy the jí are the points on which spherical/celestial bodies pivot—the crucial points that do not move themselves, but control the movement of the whole body. In divination jí represents the point of control in both a spatial and a temporal sense. In contrast to the large areas of ‘joints’ and ‘passes’, which refer to a generalized area, the jí must be very fine and well-defined points crucial to the passage of qi, jíng and shen. Their exact position is so subtly perceived that only the superior physician can find them. Huainanzi 20 describes how ‘one who attains the dao 道 Way’ uses the jí. When calm and contained, with shen ‘spirits’ lodging in their heart and no perverse qi, *on the four limbs, at the joints and intersections, the pores of the hair and skin steam and sweat, so the jíshu 极枢

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90 The two terms guan and jie are eventually elided into the single term guanjié ‘the joints’.
92 Shuwen juan 4, pían 14. SBBY, vol. 204, fasc. 1, 5b.
93 Lingshu juan 1, pían 1. SBBY, vol. 205, fasc. 1, 1. Lingshu juan 1, pían 3. SBBY, vol. 205, fasc. 1, 8 also notes the difference between guan and jí in crude and sophisticated attention to the joints. It adds a distinction between zhèngqi 正氣 ‘proper qi’, and zìqi 害氣 ‘perverse qi’, the former associated with guarding the shen 神 ‘spirit’ and the latter with ke 客 (unwelcome) ‘guests’. This concept of a conflict between proper and perverse or evil qi is an abstraction of ideas associated with demonological possession.
‘ pivots’ are adjusted beneficially, then of the one hundred mai and nine orifices, not one is not smooth’. 94

I interpret ji as the deepest part of the fleshly cavities that nestle between joints, the natural pits where one’s finger stops when one presses into the cavities of the body. 95 These cavities are concentrated around the vertebrae, shoulders, hips, knees, elbows, fingers—all the articulations of the body—and are the sites of the vast majority of acupuncture points. The ji, we are told, are within the cavities. Thus the distinction between the practice of crude and superior physicians is not just that the treatment must be applied at an elusive and tiny location, but also how the physician perceives the nature of his intervention. He must focus on the patient’s spirit, not physical form, a fundamental principle of practice which begs the question of how the physician’s intention is involved in the outcome of treatment.

Much is made of how to influence qi without leaving blood clots and bruising or harming the body by needling to inappropriate depths. Perhaps in the anxiety and care taken to avoid damaging the arteriovenous system with crude stone implements we can see evidence of blood-letting. The Huangdi nei jing corpus does indeed document many instances of blood-letting. 96 Certainly blood-letting would be most easily accomplished at the joints and in particular at the elbows. But we can also see a distinction between crude forms of body piercing and a concern to pitch the treatment towards leading and facilitating the movement of qi: just like the passage in Maishu where we have seen that opening the channel at the huanc ‘articulations’ was matched to treating at the elbows and knees in order to regularize pathological qi, so needling at the joints leads the flow of qi to the limbs where it naturally enters and leaves the body. We can see a distinction (rather than a progression, since many crude surgical and pain relief treatments remained in the domain of the acupuncturist) between blood-letting, pain relief and treating shen and qi at the gates or between focal points at the joints.

Given the Huangdi nei jing preoccupation with moving qi it is surprising that only three of the ‘nine needles’, the haozheng 毫針, the chanzhen 鐳針 and the yuanli zhen 員利針 ‘round sharp needle’ were used to pierce the body to influence conditions of qi pathology. The yuanli zhen were used to treat acute illnesses associated with baoqi 暴氣, ‘violent qi’, and there is little by way of further information. 97 The chanzhen had ‘a big head and sharp point’, like the spoon-shape of the bian, chan and di stones suggested by Yamada. It was used to drain Yang qi by inserting it into the outer, dorsal parts of the body to cure subcutaneous illnesses. This kind of treatment aimed to draw illnesses out of the body through the surface of the skin. The haozheng was used with a gentle and slow technique to needle bi 痹 conditions associated with pain. 98

Neither of these treatments seem to relate specifically to points along the channels or to acupuncture points.

94 Huainanzi jiao shi 淮南子校釋, 2044.
95 Zhongji 中極 ‘Middle extremity’ (Harper translates poetically ‘Middle bourn’) was an early identification of the uterus, the organ situated at the extremity of one of the deepest, accessible cavities in the body. Later this becomes the name of an acupuncture ren 任 ‘vessel’.
96 Epler makes a convincing argument for the formative influence of the practice of blood-letting in the development of acunoxa therapy, a tendency that is particularly evident in Suwen. There is no substantial corroboration for this view in the Mawangdui or Zhangjiashan texts. Dean Epler Jr., ’Blood-letting in early Chinese medicine’.
97 Lingshu juan 1, pian 1, SBBY, vol. 205, fasc. 1, 2a.
98 As well as the haozheng, the yuanli zhen 員利針 ‘round, sharp needle’ and the fengzhen 鋲針, ‘fine pointed needle’ are used to resolve different illness associated with bi 痹. Shuowen 7b, glosses bi as ‘damp illness’. See Shuowen jie zhu, 350. Suwen juan 13, pian 43 is devoted to a description of the syndrome in all its various manifestations.
Where *Lingshu* I suggests manipulating *qi* by piercing the body with fine needles a distinction is made between the crude quality of stone lancets and small, metal needles. Modern acupuncture needles are made from finely tempered steel of a quality that was not available to the authors of *Lingshu*. Most tools and weapons in the late Warring States and Han period were made of cast iron which, due to foundry production, allowed for cheap mass production. But cast iron, with its high carbon content, would have been brittle and dangerous when fashioned as finely as a ‘mosquito proboscis’, a description of the *haozhen*. Iron with a low carbon content was difficult to cast and had to be wrought by smithy methods. Technically it would have been possible to smith a fine iron or steel needle from before the third century B.C., but excavations have not unearthed any examples from this period. Many swords made from wrought iron and mild steel survive from Qin and Han times. A number of sewing cases containing fine iron and steel sewing needles have also been recovered from Han tombs. Another *gang zhen* was excavated from a Chu tomb in Baoshan, Hubei, but there is no evidence that the archaeologists have determined decisively whether it is iron or steel. Copper, bronze, gold or silver could also be beaten quite thin, but these would still make clumsy, fragile instruments. Besides, gold and silver were expensive and tools of this quality would not have been widespread.

The *haozhen* would have to have been more sophisticated than, for example, the nine silver and gold needles excavated at the Mancheng burial site. These needles are all much finer and sharper than those recovered from the Zhou period, but they are still far removed from steel needles and especially from those described as *haozhen*. The holes in the handle shaft also suggest that the needles might have been hung, or more likely that they had a threading function—especially in this particular tomb which contained the two suits made of jade pieces sewn together with gold wire. It seems certain that these are sewing needles (despite the suggestion of medical use made by a nearby bowl in the grave site inscribed with the words *yigongyuan* ‘bowl for medical use’).

The failure of archaeologists to discover steel medical needles in Han tombs should not overly distress us. Changes in burial culture after the first century B.C. meant that the wealthy were no longer buried along with their medical treatises and the content of their medical cabinets. Excavations are also, in a sense, random, and we cannot draw definite conclusions from what they do not contain. But the burden of proof falls to those who would state that acupuncture to move *qi* with fine metal needles pre-dates the second century B.C.

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100 Donald Wagner discusses the development of wrought iron and steel working in Han times in *Iron and steel in ancient China* (Leiden, Boston and Cologne: E. J. Brill, 1993), 267–88. See also Donald Wagner, *The state and the iron industry in Han China* (Copenhagen: Nordic Institute for Asian Studies, 2001).
103 Of those needles, five were intact with long, thin squared handles pierced with one or two holes, two are 6.6cm. long, gold needles with a very sharp 7 degree angle on the conical tip; one is a 6.5cm. gold needle with a three-faceted 50 degree angle on the tip and two are 6.9 cm. round and sharp tipped needles—one of gold, the other of silver. See *Mancheng Hanmu fazue baogao* (Beijing: Wenwu, 1980), 116.
What we do know is that there are increasing references to acupuncture with needles from the first century. Medical texts excavated from a tomb at Wuwei 武威 provide us with the earliest datable detail about the site of needle insertion and manipulation technique.\textsuperscript{104}

When there is cold qi in the stomach, where in the abdominal duct, the intestines are swollen ... the patient who is being needled breathes out forty or fifty times before taking out the needle. Next, pierce in the space between five cun below the knee to the depth of three fen into the flesh; leave the needle for as long as it takes to steam a sheng of rice; take the needle out; this is called three li 里 ‘miles’. Next pierce the nape of the neck, from upper to lower, on either side of the eleventh vertebrae, to the depth of four fen into the flesh; leave the needle for 120 breaths; take out the needle; this is the lung shu 脾 ‘transporter’.

Here the prescription for cold in the stomach is to needle two places sanli (three li ‘miles’) 三 里, and feishu ‘lung transporter’ 肺俞, (now names of acupoints that are familiar to modern acupuncturists), at given depths for a given period of time. Even though the exact location does not entirely accord with later theory they are in the same general vicinity and the language and process is classical.\textsuperscript{105} The Wuwei site (c. first century A.D.) is contemporary with or just subsequent to latest theories about the date of the Huangdi neijing compilation. We can therefore be reasonably certain that significant and rapid changes had taken place in both theory and technology around the time of, or shortly after, the closure of the Mawangdui (168 B.C.) and Zhangjiashan (c. 186–154 B.C.) tombs and before the time of the closure of the Wuwei tomb.

We have come a long way in identifying early medical techniques and tools associated with stone and needles, but we have not yet come across the application of stone or needle to strategic locations on the channels known as zhenxue ‘acupoints’ before either the Wuwei account or the less clearly dated Huangdi neiijing compilation. It is interesting that Lingshu 1 and 9 do not refer to acupoints by name. Their names are to be found scattered in a rather disorganized fashion through other treatises of the Lingshu and Suwen. Maishu or parallel texts at Mawangdui make no mention of specific acupoints. Neither are there any acupoints definitively revealed in Chunyu Yi or Bian Que’s treatments. The Mianyang figureine, a Western Han lacquered wood carving of the human body covered with lines that bear some similarity to the channels described in Zhangjiashan and Mawangdui channel texts, does not reveal the kind of holes, all systematically engraved with individual names, with which we are familiar from, for example, the cast bronze acupuncture models of the Northern Song period.\textsuperscript{106} Thus we can only conclude that there is no evidence to show that stimulating the channel network via a mature acupoint system

\textsuperscript{104} Zhang Yanchang and Zhu Jianping (ed.) Wuwei Handai yijian yanjiu. 武威漢代醫籍研究 (Beijing: Yunnan chubanshe, 1996); 21–23.  
\textsuperscript{105} See the discussion in Zhang Yanchang and Zhu Jianping (ed.), Wuwei Handai yijian yanjiu, 86–90.  
\textsuperscript{106} See He Zhiguo 何志國, ‘Woguo zuizao de renjing jingmai qidiao’ 我國最早的 人類經脈循環, Zhongguo Weruwuhao 中國文物報 1994, 15 (April 17), 4 for the first description of the discovery of the figureine. A detailed discussion of the figureine can be found in He Zhiguo, ‘Xian Han renjing jingmai qidiao kao’ 西漢人體經脈循環考, Daizhan tiansuo 大自然探索 1995, 3, 116–20. The bronze statues were first cast by Wang Weiyi 王維一, the Director of the Imperial Medical Service, in 1027 A.D., with an explanatory text entitled Tongren shuxue shenjutu shijing 通人論穴針灸圖經 (Illustrated canon of acuoxia for the bronze man transporting points). See Lu and Needham, Celestial lances, 131. The model kept in Japan’s Tokyo National Museum is most likely to be one of the originals.
with metal needles was a feature of therapy before the first century B.C. at the earliest.107

Evidence for acupuncture needling at acupoints has often relied on Shi ji juan 105 when Bian Que, treating the Crown Prince of Guo, sent his disciple Ziyang 子陽, to 'sharpen needles and needlestone to qu 取 (select and stimulate) the waisanyang wuhui 外三陽五會 'outer three yang and five meetings'.108 If we understand this term to be the alternative to baihui 百會 'hundred meetings', an acupoint on the top of the head, as it is listed in Huangfu Mi's 皇甫谧 third century A.D. Zhenjiu jiaiyi jing 針灸甲乙經, we could then say that Bian Que's treatment is the earliest explicit reference to acupuncture at an acupoint.109 But Huangfu Mi may well have based his opinion on Sima Qian's account. And we cannot know for sure to what Sima Qian was referring.110

The Mianyang figure offers us a new and, I believe, a most satisfactory explanation for the term, since it does not refer to either one acupoint or one anatomical location. If we compare the figure and the descriptions of the channels in the excavated texts we can see that the three Yang are a combination of the three bilateral Yang channels of the leg and the single line which travels along the spine and over the head (arguably the most Yang given its position). Two of the leg lines converge before they pass over the top of head, which leaves only four (remembering their bilateral nature) extensions of the leg lines on the crown. Adding the line that follows the spine makes a total of five lines traversing the crown. These five lines are intersected by one of the extensions of the arm lines which splits the crown horizontally. Here there are then the three Yang and five meetings, with the 'outer sanyang wuhui' being the intersections furthest away from the centre of the head (see figure 8).

In summary, evidence from the figure helps to identify the location of sanyang wuhui as five different places on the top of the head where the lines meet. I doubt, therefore, that the Shi ji reference is to a single acupoint. The stone reliefs which depict a half-bird/half-man physician (probably Bian Que) brandishing a stone lance at Lianglecheng shan 兩城山, Weishan 微山 county may support the notion that early acupuncture involved multiple needling, perhaps along the channels. Of a collection of eight reliefs, two show two women and a child. The women, according to Ye Youxin's interpretation have short, fine (and therefore probably metal) needles placed in a line between the hair line and the skin of the face as well as all along the woman's arm (see figure 6).

107 The acupoints which seem to exist in the excavated texts that describe sexual-cultivation are in fact simply anatomical locations. Quepen 缺盆 'Broken Bowl' is a term used in pre-coital massage to refer to the area of the clavicle, and zhongji 中極 Middle Extremity is a significant anatomical location where qi transforms, without yet being the name and location for the acupuncture point Ren 3 that it eventually becomes.
108 Shi ji, 105, 2792.
109 Zhenjiu jiaiyi jing 針灸甲乙經 3 (Beijing: Renmin weisheng, 1979), 331. See also Zhenjiu dacheng 7 (Tianjin: Tianjin kexue jishu, 1992), 367.
110 Yamada Keiji examines a number of different theories on the matter. His problem centres around whether sanyang wuhui is one or two terms (the wuhui of the sanyang or the sanyang and wuhui), and how the term relates to the sanyang wushu 三陽五輸 found in a similar account in the earlier Hanshi waizhuan (c. second century B.C.). In summary, sanyang might refer to one of two locations—either the three Yang channels we meet in the excavated texts, Yang ming, shaoyang or taiyang or it might refer to the third Yang, just one of these channels. But are they the three Yang of the arm or the leg? Yamada believes that the term wushu and wuhui are identical and refer to the jing 井, rong 筋, jing 脈 and he 胡 locations that we know from later ancmous theory. He rejects the idea that they are the wushu in the Tai Yang channel that connect to the inner Yin organs. If they were to form a part of or belonged to the san Yang, he argues, then it is unlikely that they would refer, as do the wushu, to the阴 organs. Yamada Keiji, 'Hen Shaku densetsu' 玉藻伝説, Toho gakushi 東方學報 60, 1988, 130–2. See also Lu and Needham, Celestial Lancets, 80–81.
figure 9). The spirit physician appears to be raising a long needle in his left hand. But since these are very worn carvings Ye Youxin's judgement cannot be considered solid evidence. However, Chunyu Yi, treating a case of hot sore feet, does pierce the channels at three different places on the sole of the foot and on the yangming channel. He uses the term ci 割 when referring to

111 I have discussed the figurine in Zhiguo and Lo, 'The channels'. It should be noted that other reproductions of the stone relief do not show the number of needles so clearly.

112 Shi ji, 105, 2804.
piercing the body, although it is not clear whether the instrument he is using is zhen, bian, or chanshi 錫石. All of these tools are mentioned in the text.

We have three cases where multiple stimulation of the channels seems a likely interpretation of medical records. The intersections of the body, at the naturally formed cavities between joints, were the places where shen and qi should pass in and out of the body. Because these locations were constrained guan ‘joints’ or ‘passes’, where movement could become hindered, and they were therefore sites of frequent swelling and discomfort, and naturally primary locations for treatment. Cauterization and body piercing could assist the movement of qi, initially at the joints, and then along the channels where two or more channels crossed. Ultimately the concept of critical locations where qi moved in and out of the body developed into a mature system of acupoints all along the channels.

Zhenjiu jiayijing gives us the earliest acupoints explicitly associated with stone and jade. On the abdomen above the navel and at the eighteenth point along the kidney channel is a location known as the shiguan 石闌 ‘stone pass’. On the belly we have the shimen 石門 ‘stone door’; on the chest there is the yutang 玉堂 ‘jade hall’ and at either side of the base of the skull we rest on the yuzhen 玉枕 ‘jade pillow’. Under the tongue on the lateral sublingual vessels, and directly linked to the ‘jade spring’, the pool of saliva that is a source of nourishment and transformation in breath meditation, are two acupoints known as yuye 玉液 ‘jade fluid’ and jinjin 金津 ‘golden saliva’.

With the advent of steel needles technical developments caught up with theoretical changes in the construction of the body. The object of acumoxa treatment, like daoyn, could finally be trained on smelting a physiologically perfect body, perhaps even the ‘jade body’ as it was imagined by the author of Maishu (4) who brought together self-cultivation and acumoxa theory. Through locations on the body, some likened to jade itself, it was possible to control the physiological essences and spirits of the body qi, jing and shen. This is a trend that we have seen beginning in the self-cultivation of excavated manuscripts dating to late third/early second centuries B.C. that is elaborated and partially systematized in the medical physiology of the Huangdi neiijing corpus.

Conclusion

We saw in the discussion of the ‘jade closure’ techniques that self-cultivation cultures were often intent on achieving a state of shenming ‘illumination of the spirits’. Shenming is consistent with an acuity of the senses and a visible brightness which corresponds with having successfully cultivated or jie 接 ‘received’ Yin. The code for successful cultivation in the Mawangdui texts

113 Zhenjiu jiayijing 3, 407, 404, 390 and 336.
114 Both shen and shenming are used to refer to divine beings such as gods and spirits. Most of the evidence from the Warring States period comes from the Guanzi, Zhuangzi and the Zuo zhuan. See for example ‘Xianggong 14’ which states that, ‘the people receive their lord and love him like their father and mother, they look up to him as if they clearly respect him as if he were a shenming’. ‘Xianggong 25’ refers to the descendants of shenming as if the shenming are the ancestors, while Zhuangzi refers to ‘dwelling in the company of the shenming’. Zuoshi jiumu yizhu (Jilin wenshi chubanshe) 533 and 592. Elsewhere shenming comes to mean characteristics of divine beings that allow them a spirit-like wisdom, a sharpness and clarity of perception rather than a mechanical or analytical intelligence. A discussion of the terms can be found in John Knoblock, Xian zi: a translation and study of the complete works Vol 1: 1–6 (Stanford: Stanford University Press, 1988), 252–4. The concept of shen in the Guanzi and the Huainanzi is the subject of a paper by Harold D. Roth, ‘The early Chinese concept of shen: a ghost in the machine?’ in Sagehood and systematizing thought in Warring States and Han China. (Asian Studies Program, Bowden College).
reads, ‘the qi arrives, blood and qi flow freely, the ears and eyes are keen and bright, the skin gleams, the voice is clear, the back, thighs and buttocks are sturdy and you get through to an illumination of the spirit’. In *Lingshu* 9 we find similar outcomes for acupuncture needling:

In all cases the way of needling entails stopping when the qi is adjusted, tonify the Yin and sedate the Yang, the voice and qi become increasingly clear, the ear and the eye become keen and bright, if one goes against this the blood, the qi, will not flow freely.\(^{115}\)

The physician should also pay attention to the quality of his spirit. *Suwen* 54 is explicit about the level of concentration required to be sure about the depth and location of an illness. The practitioner is instructed to wait:

as if pouring over a deep abyss and not daring to sink down; the hand, as if holding a tiger, desires its sturdiness; the spirit, without arranging for a crowd of other things, quietly and with intent observes the patient without looking to left or right; as for righteous, without being deflected downwards, he must have principle through being upright; as for having to make the spirit upright, he must regard the patient’s eye to govern their spirit, in order that the qi moves easily.\(^{116}\)

To avoid damaging the patient he must cultivate his attention:

As for the way to grasp the needle, firmness is the treasured thing. Hold (it) upright and needle straight. Do not needle to left and right. The spirit is on an autumn hair. Fix the intention on the patient.\(^{117}\)

The conditions required to nurture such attention are set out in *Lingshu* 9:

He (the practitioner) stays in an isolated and quiet place, forcibly holding the coming and going of the spirit; he closes the doors and shuts the lattices and the hun and the po do not scatter; he concentrates the intention and unifies the spirit and refines the division of qi; he does not hear human voices in order to gather their (the patient’s) essence and unify their spirit; he commands the intent into the needle.\(^{118}\)

In the last section we drifted away from an archaeological and textual account of medical techniques associated with the application of stone and stones. Yet by following the transition from stone to metal tools we can still detect the inheritance of a treatment that has developed within a medical culture of atropiac stone. Just like the self-cultivator practising the ‘jade closure’ on his own body, or the funeral director sealing the orifices of the corpse, the practitioner prepares the room, closing down all the exits to control the movement of the spirits. All three define a protected space by circumscribing a perfected body within which it is possible to transform the physiological essences of qi, jing and shen. The physician, settling his own souls, the hun and po, and looking into the patient’s eyes, uses himself as a tool to govern the patient’s spirit. The spirit no longer dwells within stone itself, nor does the practitioner use stone to treat his patient, but all the qualities of stone are brought to the place of healing.

Chunyu Yi’s case histories do not record techniques to exorcise demons associated with illness, nor is there any suggestion that he wanted to promote

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\(^{117}\) *Lingshu juan* 1, *pián* 1, SSBY, vol. 205, fasc. 1, 1b–2.

medicine of this kind. Thus the book that Yang Qing gave to Chunyu Yi was probably not a treatise on exorcism. It may have contained information on prescribing minerals, petty surgery or heat treatments. It may have been an early treatise describing the use of stone needles on the channels, we cannot know. Nevertheless, with an interdisciplinary approach to early Chinese stone culture we have gone some way to unravelling the story of the Stone Spirit. For medical stone, from sharpened flint to the quintessential jade, most Yin of Yin\textsuperscript{119}, conferred a technical reality upon the body which we have seen recurring through burial culture, pharmacotherapy, self-cultivation and finally in the construction and treatment of the physiological being at the foundation of acupuncture practice. By sealing, storing and transforming the body’s finest essences, medical techniques associated with stone played a central role in the early formalization and control of the movement of qi and the spirits. The principles of those practices are eventually systematized in the canons of acupuncture towards the end of the first and in the second half of the Han period.

\textsuperscript{119} Guanzi (Taipei: Shangwu), vol. 2, 92.