ANATOMY AND SURGERY

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Waike 外科, literally 'the curriculum of external medicine', is a medical metonym established over a thousand years ago that mainly describes diseases of the material components of the body, most commonly the skin and flesh. Waike is also the modern Chinese term for 'surgery'. This dual meaning arises from the particular history of external diseases which was shaped by the interrelationship between fleshy, anatomical knowledge and surgical procedures. It therefore encompasses those Chinese perspectives on the medical body which are oriented towards its fleshy parts or, in other words, what one might call 'the muscular gaze' in Chinese medicine. The management and elimination of *nong* (膿; hereafter pus), that is, the suppurating pathological transformations of body fluids which cause flesh to fester, was the focus of recorded surgical practice in China. During the Song (960-1279) and Yuan (1271-1368) periods, anatomical knowledge became increasingly sophisticated and ultimately integrated with local cultures of self-cultivation, or yangsheng 養生, literally 'nourishing life' (Chapter 49 in this volume; Despeux 2018b). Yet, it was always difficult for external medicine to treat diseases which manifested pus. Operations on what we would now consider infected flesh persisted right into the twentieth century before there were either antibiotics or anaesthesia and were inevitably dangerous surgical procedures anywhere in the world before then. This chapter focuses on the changing boundaries of external medicine and neike (内科; hereafter internal medicine) as they have occurred since the Song period.

That which we call *chuang* 瘡 are illnesses of broken and bruised flesh.

Chen Shigong 陳實功

(1555-1636; Waike zhengzong: 14)

Contrary to popular academic belief, Chinese surgical procedures *did* involve an 'anatomical gaze' (Chapter 38 in this volume) on the muscular and fleshy body and this is finally being recognised in the English language historical literature on China (Despeux 2005, 2018a, 2018b; Wu Yi-Li 2011, 2015a, 2015b, 2017, forthcoming; Hu 2018).¹ The *Shiji* 史記 (Record of the Grand Historian, completed 91 BCE) records early Chinese surgical activities such as *gepi jieji* 割皮解肌 (cutting the *pi* 皮 'skin' and releasing the muscles) and *juemai jiejin* 訣脈 結筋 (severing the channels and knotting the tendons) (Li Jianmin 2007: 3). 'Pi' 皮 refers to the superficial layer of the human body, and the *jirou* 肌肉 (hereafter muscular flesh) with

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the *jinrou* 筋肉 (hereafter tendinous flesh) were the subsequent anatomical layers as one penetrated more deeply into the body. The *ji* 肌 (muscly) part of the flesh can be seen at the surface of the body, particularly where it rises up and gathers when it is called the *jiongrou* 膕肉 (bulky flesh).

Depictions of muscular flesh in the classical corpus of Chinese medicine, the *Huangdi neijing* 黄帝内經 (Yellow Emperor's Inner Canon, c. first century CE), hereafter *Inner Canon*, also employ the terms *fenrou* 分肉 (hereafter differentiated flesh), muscular flesh and other technical terms, all of which refer to corporeal forms (Zhao 2014: 255–6, 399; Chapter 7 in this volume). 'Differentiated flesh' refers to the different types of flesh and sinews that display a patterned structure and lie in proximity to the skeleton, such that it only becomes visible after dissection. One can map the tendinous flesh to the divisions of the twelve channels (Chapter 1 in this volume), and therefore an early Chinese anatomical system which embraces twelve tendons and related flesh. The tendinous flesh is the type of flesh that can exert physical force and is intimately associated with the physical structures and relationships that create movement (Li Ding 1998: 14).

The understanding of muscular flesh as it is explained in *the Inner Canon* is that it is responsible for bodily movement. The *Taiyin yangming lun pian* 太陰陽明論篇 (On the theory of Taiyin and Yangming) treatise of the *Suwen* 素問 describes the relationship between movement and human bodily fluids as follows:

All the four limbs are supplied with qi by the stomach, yet it doesn't [thereby] get to the channels; the necessary factor in the supply is the spleen. Now, if the spleen is sick and is unable to move the fluids for the stomach and the four limbs are not supplied with the qi of water and grain, the qi weakens by the day; the channel paths do not connect up; the sinews and the bones, the muscles and the flesh, none of them has qi to survive. So, from this they no longer function.²

The activity of the limbs is due to the function of moistening and nourishment produced by the qi of the *piwei* 脾胃 (stomach and spleen). Thus, if the *piwei* is unable to perform the function of transporting bodily fluid, then the muscular flesh and related tendons and skeletal structures of the limbs lose their normal physical structures and relationships which create movement.

Fluids and muscular flesh have interrelated effects. Should there be some external injury or other cause which gives rise to weeping wounds, there were prescriptions aimed at regenerating muscles and flesh (*Liu Juanzi guiyifan*: 14, 30, 40). The story of the famous circa third-century doctor, Hua Tuo 華佗, cutting out a festering spleen, also conceives pathology as being of the 'fleshy' body (Fan 2004; Shang 2005: 129). Huang Longxiang 黃龍祥 has styled the pre-modern Chinese study of anatomy as 'skin-deep' or 'superficial', and as characteristically prioritising various bodily structures such as 'the beginning and ends of the musculature' and understandings of how humans were 'endowed with muscular function' (Huang and Huang 2007: 34; Chapter 12 in this volume).

For example, through observations of the superficial parts of the muscular flesh, diagnoses could anticipate pathogenic transformations in the internal organs (Shang 2005: 323). This is Huang's insight into the Eastern Han dynasty *Huangdi mingtang jing* 黄帝明堂經 (Yellow Emperor's Classic of the Bright Hall). Anatomical research and knowledge gained in this way was usefully employed in pre-modern surgical techniques (Huang and Huang 2007: 323). A decision as to whether or not to proceed with surgery involved an assessment of the extent to which the body's superficial flesh was festering. *The Yellow Emperor's Inner Canon*

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states that 'when flesh decays it makes pus', and the festering of the muscular flesh was articulated within the terms of an 'aetiology concerned with cold and heat causes of disease', with cold dominating early causal explanations and heat predominant after the Song and Yuan (Wang 2014).

Chinese surgical practices were thus grounded in an anatomical gaze. The abovementioned theory that 'the spleen governs the flesh' was given its fullest expression in Li Gao's 李杲 (1180–1251) 'Discourse on the Spleen and Stomach'. Li's doctrine gradually became mainstream during the Yuan, Ming and Qing dynasties (1271–1911). He pointed out that fatigue and irregularity in eating and drinking led to wasting away of the flesh. In particular, his emphasis on internal injury (*neishang* 內傷) caused later doctors to pay attention to internally caused diseases of the seven emotions (*qiqing* 七情) in their relation to external medicine as well (Liu 1993: 27–84). Therefore, recuperation of the spleen lay at the heart of surgery and external medicine in China.

In cases where festering superficial flesh could not be healed, Li Chan 李梴 opined in his *Yixue rumen* 醫學入門 (Introduction to Medicine, 1575) that, 'when wounds do not close, this is because flesh does not grow' (*Yixue rumen*: 467), and went on to state that surgical procedures and herbal medicines could stimulate regrowth of the festering flesh. Pathological changes of the spleen and stomach were therefore considered the underlying cause of gradual decay of the flesh. As stated by Yu Chang 喻昌 (style name Jiayan 嘉言, 1585–1664), 'when nutrient *qi* (*rongqi* 榮氣) decays and becomes turbid, then the flesh slowly festers. The flesh is governed by the stomach' (*Yuyi cao*: 67).

When the barber surgeon Ambroise Paré (1510–90) was designing surgical instruments for the Kings of France, the Chinese surgeon, Chen Shigong 陳實功 (1555–1636), was articulating his perspective on the fleshy body. He went so far as to argue that, 'external medicine is especially relevant and of critical importance' to the spleen and stomach, which he deemed inseparably related to the flesh (*Waike zhengzong*: 13–14). Pus fluids (*nongye* 膿液) caused by suppurating flesh were always difficult to heal. Chen Shigong said:

And when at this time there is pus, yet it cannot be externally expressed, use a needle and hook to pull out the stiffened flesh to the surface of the body. Using a knife or scissors, cut about an inch or more at the main peak, enabling the pus to flow out. Try not to let the head of the wound become blocked up.

(Waike zhengzong: 11)

This is a crucial piece of historical information. Chinese doctors used various instruments, such as needles, hooks and knives and scissors, to get rid of extraneous material, that is, the accumulated pus which is trapped inside. Moreover, as the position of the suppurating swelling gets deeper, there develops a 'pus conduit' (*nong guan* 膿管), and the process of drawing it becomes more difficult, increasing the risk of infection.

Pus is a sticky type of pathological fluid, which tends to be classified in the category of 'fluids' (*jinye* 津液) in Chinese medical pathology (Yu 2012: 113, 250). It was expressed in the classics of early China as 'pus and blood' (*nongxue* 膿血) or 'swelling blood' (*zhongxue* 腫血). When flesh rots, it was said to generate matter, including corrupted fluids of the internal organs. Interconnected with the concept of *qi* in Chinese medicine, fluids are closely tied up with surgical procedures. The most important treatments in Chinese medicine, such as sweating, upward and downward purgation (*han* 汗, *tu* 吐, *xia* 下), all involved the regulation and purging of pathological fluids.

Emphasising the centrality of the body fluids to Chinese medical theory, Chen Xiuyuan 陳修園 (1753–1823) identified that the highest priority was their preservation in cases of Cold Damage or febrile diseases: 'conserving the fluids, this is the true exposition' (Fang 2007: 379; Sun 2011: 17–34; Chapters 8, 16 and 17 in this volume). When external injuries bleed, this also causes overall disequilibrium of the bodily fluids, and leads to pathological changes.

Diseases that required surgery were always different from internal medicine diseases. Initially, external medicine did not rely on pulse diagnosis. The condition and colour of the muscular flesh, such as changes in swelling and redness, were subject to visual examination. Hardness and softness of lesions and wounds could be palpated. Among the many forms of external diagnosis popular in early Chinese medicine, there was once a form of diagnosis that involved touching the skin all over the entire body.

In one overlooked essay on medical history, Liao Ping 廖平 (1852–1932) collected early methods for diagnosing the flesh (ji 肌) and skin (jifu 肌膚), and found that the technical terms for this kind of external diagnostics, such as 'slippery' (hua 滑), 'rough, choppy' (se 澀), 'tight' (jin 緊), 'hard' (jian 堅) and others, had later become adopted as vocabulary for pulse diagnosis. He pointed out that:

Since the *Canon of Difficulties (Nanjing* 難經; 1st or 2nd centuries CE) rather arbitrarily established a new technique that uniquely diagnosed through palpation of the 'two inches' (*liangcun* 兩寸), [that is, the radial pulse at the *cunkou* 寸口 position of the wrist], later writings on the pulse blatantly adopted vocabulary from skin diagnosis and applied it to the pulse.

(Liao 2010: 125)

Additionally, the second-century *Jin'gui yaolue* 金匱要略 (Essential Prescriptions from the Metal Coffer) retains a method for skin diagnosis which assesses whether or not the pus has developed (Gao 1964: 253). Whether or not there was pus located at the surface of the skin, or deeper below, was also an important factor in deciding whether or not to use surgical techniques. This move from external to internal diagnosis (by a focus on pulsing) occurred very late in the history of external medicine in China. For example, in his *Waike jingi* 外科 精義 (Essentials of external medicine), the fourteenth-century imperial physician of external medicine, Qi Dezhi 齊德之, questioned whether surgeons understood the pulse. Qi was of the opinion that:

all those who practise medicine, should first refine their understanding of complexion and pulse [diagnostics]. This is even more so for traumatology; one that is not expert in it, even if intelligent, wise and broadly learned, he will not be fit to be entrusted with a commission.

(Waike jingyi: 1)

In particular, he argued, it was necessary with illnesses such as 'internal sores' (*neichuang* 内瘡) and 'internal ulceration [possibly of a gangrenous type]' (*neiju* 內疽) where the internal organs could fester and rot. Types of swelling diseases which 'are not seen by the eye, the hand cannot come near, these are the most difficult, yet can be discerned by examining the pulse' (Ibid.: 8). Furthermore, in the Chinese surgical gaze, attention is also given to 'external ulcers' (*waiyang* 外瘍), which turn into 'internal ulcers' (*neiyang* 內瘍).

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In addition to incorporating pulse diagnostics, the treatment methods of Chinese external medicine, in the hands of the scholarly practitioners who left records and therefore evidence of their work, started to use pharmacological decoctions to substitute for surgical and other external treatments. Angela Leung made the useful observation:

when scholarly physicians consolidated traditional medicine, some ancient aspects were increasingly marginalised, particularly those that were considered technically more like 'handicraft' or were deemed superstitious; in particular those which were considered too technical and included acupuncture, eye surgery, and other external techniques that involved esoteric rituals.

(Leung 2011: 12)

From the Song and Yuan periods onwards, there was an increasing trend towards integrating the treatment of illnesses that had formerly been in the domain of external medicine with pulse diagnostics and treatment according to the principles of drug prescription.

A scholar working at the end of the Yuan period, Wu Hai 吳海 (dates unknown), wrote that an external medicine physician by the name of Guo 郭 (dates unknown) had pointed out in his preface that 'what the world of physicians specialising in ulcers called external medicine was different to what was known as internal medicine' and that the two defining features of the latter were 'taking the pulse' and 'drinking decoctions' (Wu Chaozong xiansheng wenguozhai ji: 8). He said, 'even though Mr Guo called ulcers external, in fact they broke out internally, and should be first pursued at their root, and only then treatment should be applied to the ulcer' (Ibid.). Even though some external medicine illnesses could be observed at the surface of the body, the original site where the pathogenic processes, including [excesses of] joy and anger, first broke out was in the internal organs and therefore could be included in internal medicine (Chapter 2 in this volume). In the relationship between external medicine and internal medicine, the scope for treating illness of the latter sort was comparatively large, whereas that of surgery was rather limited. Xu Dachun 徐大椿 (1693–1771) believed that, 'the methods for ulcer treatment are all external treatment, and these manual techniques had to be transmitted within a lineage tradition' (Yixue yuanliu lun: 63). Yet, one had to be on the alert to all the dangers of surgical methods that employed the knife. Xu also stated, 'if you cut flesh that has not yet completely decayed, when blood comes out copiously then there will be instant death' (Xuping waike zhengzong: 10). Since cases of death by surgery were obvious and easily seen and the rotting of muscular flesh was frequently impossible to control effectively, Xu suggested using drug therapy in external medicine. For the treatment of muscular flesh, he stated that 'external medicine involves no more [internal medicine treatments] than purging toxins, cooling fire, and the various methods for generating muscles and flesh, that's it' (Ibid.: 28). Toxins and fire here can be interpreted as the insurmountable problems related to the phenomenon of 'infection'. The most dangerous syndrome in Chinese external medicine was the 'toxic mire' (duxian 毒陷) where the 'mire' refers to a syndrome where the entire body is subject to corruption by the gradual, unceasing spread of various disease-causing entities (Jin 1958). Xu's choice of wording identified the limitations of what external medicine therapies could do in clinical practice (Ibid.). Chen Xiuyuan 陳修園 (1753–1823) criticised the various techniques of external medicine, saying:

Scholarly [doctors] are ill-informed and have little to say about it; and, so these techniques become less and less effective. In my youth when I encountered dangerous and contrary syndromes, external medicine practitioners' hands were tied, and they had no

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therapeutic strategies. They were forced to choose life-threatening approaches to correct them, and [only] seven or eight in ten might be cured. None had any other techniques; they probably deduced them from the *Shanghan lun* (Discourse on Cold Disorders).

(Huang 1995: 149)

This represents a great change in external medicine theory. Chen Xiuyuan hoped to go back to the classic ancient decoction recipes. In fact, the therapies in external medicine did begin to include decoctions, as shown by Qing dynasty documents. In drug therapy, texts such as the *Yizong jinjian* 醫宗金鑑 (Golden Mirror of Medical Learning; published 1742), which was the instructional texts of the Imperial Academy of Medicine, contained a great many powerful and toxic drugs, quite different from internal medicine decoctions (Xie 2004). A fellow countryman and friend of the famous Qing dynasty doctor Wang Shixiong 王士雄 (style name Mengying 王孟英; 1808–68) from Qiantang 錢塘 (now Hangzhou) in Zhejiang, Guan Rongtang 管榮棠, made a comparison of changes between ancient and contemporary external medicine methods. Guan pointed out that the use of decoctions was merely a delaying tactic, performed as a rote response. He said:

Examining the ancient therapies, they did not distinguish internal (*nei*) and external (*wai*); they used all the methods of knives, needles, *bian* $\overline{\mathcal{K}}$ stones, piercing, cautery, hot pressing, and washes, and did not specialize in one branch of decoctions. Now transmission of all these methods has been lost, and sole reliance is placed on decoctions.

(Wang Mengying yixue quanshu: 431–2)

Yet, the taking of decoctions in external medicine therapy usually could not control festering of the flesh, nor could it heal pus and bloody wounds, such that illness conditions successively worsened. Guan Rongtang questioned whether decoctions could be relied on:

Giving up knives and needles, and not using methods for removing pus and fester, engaging only in the domain of prescriptions and decoctions, waiting for abscesses (ju $\hat{\Xi}$) to resolve on its own – this is indolence and irresponsibility.

(Ibid.: 432)

In relation to surgical procedures, decoction therapy was a passive approach. Pan Mingde 潘明德 (1867–1928) of Menghe 孟河, Jiangsu, thus created the term 'Zhongjing-[style] external medicine', referring to this gradual transformation of external medicine towards internal medicine within a scholarly context (Pan 2014: 36). Moreover, as time went on, surgical procedures and activities involving cutting the flesh became ever more distanced from scholarly and elite medicine in China and more and more exclusive to the domain of those with less prestigious manual skills.

In roughly the eleventh century, Chinese doctors performed several large-scale dissections, from which remain records such as *Ou Xifan's Diagrams of the Five Organs (Ou Xifan wuzang tu* 歐希範五藏圖) based on sketches of the organs of the executed rebel fighter Ou Xifan 歐希範, who was executed in 1041 CE, and the *Diagrams for Preserving Perfection* (存真圖 *Cunzhen tu*) (Zhang 2014: 121–3). These books of anatomical diagrams showed that the left kidney was slightly lower than the right kidney or described arteries and the oesophagus penetrating the diaphragm (Despeux 2018a, 2018b). However, knowledge of the inner organs became linked with the imagination of Daoist *yangsheng* 養生 (nurturing life regimes). Cultivating the *zigong* 子宮 (translated from modern Chinese as 'uterus') described in the

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roughly sixteenth- or seventeenth-century *Xunjing kaoxue bian* 循經考穴編 (Investigations into the Points along the Channels) was the core and target of such self-cultivation (Yan 1961: 7): Similarly, the seventeenth-century *Zangfu zhizhang tu shu* 藏府指掌圖書 (*Illustrated Guide to the Zangfu Organs*) by Shi Pei 施沛 (1585–1661) collected multiple diagrams of the body which bore no relation to anatomical dissection, but were closely related to an expanding health regimen culture (Li Jianmin 2010). Soon thereafter, a number of Western anatomical works arrived in China, which Wang Xuequan 王學權 (1728–1810) of Hangzhou in Zhejiang received and to which he added his own critique, evincing a staunch faith in the knowledge of the formless physiology in Chinese medicine: 'Dead material that has form can be seen, but the functions of the formless are invisible' (*Chongqingtang suibi*: 116). Research in Western medical anatomy never came any closer to Chinese medical surgery.

Moreover, the most important puzzle for Chinese surgery remained the interpretation of the internal pathological changes indicated by decaying flesh at the surface of the body. As a result, the government commissioned Wu Qian 吳謙 and others to compile the 1742 *Yizong jinjian* 醫宗金鑒 (The Golden Mirror of Medical Learning), which maintained the view that no matter how serious external illnesses might be, as soon as the flesh decayed one must consider surgery, 'decaying flesh was bad flesh'. It also stated, 'if one encounters a person with full *qi*, use a knife to cut them to be effective' (*Yizong jinjian*: 62. 630). Between the eighteenth and the nineteenth centuries, the external medicine physician from Qingpu 青浦 Jiangsu, Zhu Feiyuan 朱費元, believed that the onset of pathological changes in the flesh was dependent on whether *yuan qi* 元氣 (primordial *qi*) was functioning normally or not:

When the circulation of blood and *qi* around an individual's entire body suffers dissipation day and night. The body, already depleted, suffers loss during circulation, and because of stagnation and hardening of damp-phlegm, stasis and build-up of blood accumulation, and festering corruption of the muscly flesh, pus and fatty-oil is produced. (*Zhu 2004: 133*)

With an increase in the flow of *nongzhi* (膿脂 pus and oil-fat) generated by the body, the festering of the muscular flesh would spread throughout the entire body. Even so, Zhu believed that surgery was not necessarily appropriate, and that it could result in too many complications, leaving:

a chance in ten thousand; a [surgical intervention] may not be careful, may destroy the inner membranes, may harm the tendino-muscular channels. If it is serious then it will bring fatal harm to the body, if minor it will harm the limbs.

(Ibid.: 135)

If surgical procedures directly harmed the inner organs and the tendinous flesh, then they would inflict permanent damage on the body.

Without exception, the 116 external medicine case histories that Zhu Feiyuan left for posterity all employed methods from internal medicine. He expressed the frank view that there were no benefits to surgical and other treatments (Ibid.: 80), 'do not be in the habit of using knife or needle so as not to fall short of the royal way' (Ibid.: 136). Crucial here is the phrase, 'the kingly way (*wangdao* 王道)'. The terminology comes from the discourse common among scholarly physicians about an idealised and gentle model of therapeutics and is opposite to the 'the way of the tyrant (*badao* 霸道)' (He 1998: 85–6). Surgery is violent, likened to punishment and the rule of terror.

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Historically, surgery in China was not 'superficial surgery'. Take, for example, sores on the occiput (*duikou* 對口), or the back (*fabei* 發背), two serious types of external medicine symptoms that develop pus, and which are frequently treated with surgery (Ling 1957; Zhang 1960).

Attached to the above-mentioned set of case histories, the *Linzheng yide fang* 臨証一得方 (*Comprehensive Recipes for Clinical Syndromes*) by Zhu Feiyuan, there is a commentary written by Zhu's sons and grandsons. It states 'in recent times crude handworkers treating the two syndromes, occipital and back sores, frequently use the knife to cut away *e'rou* 惡肉 (flesh that has gone bad), and they boast of their handicraft' (Zhu 2004: 138). The so-called *e'rou* refers to muscular flesh that has changed to become suppurating and rotten. As scholars have explained: 'at first, superficially there emerges a hot flushing erythema, raised swelling, burning heat, broiling pain, and gradually it begins to suppurate' and so on as the external lesions go deeper and enter the tendons and bone (Liao 1962: 6–8).

Right through to late Qing times, surgical treatment was used to treat a broad range of serious complaints. According to his personal observations of the harm caused by surgery, Wang Yanchang 王燕昌 (1831-1895), who came from a family lineage of physicians from Gushi 固始 in Henan, spoke of:

those suffering with their eyes, have to endure cutting by the knife. Those with pain in their arms and legs have to endure a hundred needles. Illnesses such as scrofula, pain in the throat, swelling of sores, choking on food, flatulence and abdominal distension, empty swellings, heart pain, infant wind-induced fright, jaundice and wasting away, they were [being treated with] chaotic needling and disorderly cutting, which resulted in death.

(Wangshi yicun jiaozhu: 145)

From this list, we know that surgery was employed for a rather broad ranging set of conditions.

Damage from surgical procedures, in Wang Yanchang's view, resulted in the long-term trauma of sick people. The wife of an epigrapher, Wang Yirong 王懿榮 (1845–1900), suffered from a breast tumour, an affliction that went on for seven years; when she died, she was only thirty-seven years old. When Wang's wife had the breast tumour surgery, they 'were misled by a quack, and blood oozed out from the wound' (Lu 1999: 93). Since blood from surgery is hard to stem, there was no way to close the wounds. external medicine illnesses could be treated with internal medicine in China, but such cases would likely fail.

Unsuccessful surgery, and therapies that used decoctions that were sold with exaggerated claims of efficacy, both harmed the reputation of the medical tradition within China and affected its popularity in late imperial China. At the end of the Qing, the scholar Fang Renyuan 方仁淵 (1844–1926) stated, 'those who wish to become famous specialists in treating ulcers must read large quantities of internal medicine prescriptions' (*Wangxugao yian*: 295). The gradually increasing tendency for China's field of external medicine to turn to internal medicine methods was set against background sociocultural causes. Ma Peizhi 馬培之 (1820–1905), the renowned physician of external medicine from Menghe in Jiangsu, observed:

Among the officially appointed [doctors] whom I have encountered, all give weight to internal medicine and slight external medicine, saying that specialists in treating sores do not take [account of] the pulse patterns. In cases of external sores they even extend to using the ingested drugs of 'prescription and pulse specialists'; this trend is most extreme in Jiang[su] and Zhe[jiang] provinces.

(Wu Zhongtai 2010: 151)

In external medicine, they took the pulse and [prescribed] ingested drugs. The 'prescription and pulse specialists' referred to here are doctors of internal medicine. This culture of opposition to surgery in Southern China was very common during the Ming and Qing periods. Even until now, this current in Chinese medicine of 'giving weight to internal medicine and slighting external medicine' is still prevalent. Is it possible that in the future history of Chinese medicine, research into China's medical traditions could take a long awaited and highly necessary external medicine turn?

Notes

- 1 Translator's note: Translating the anatomical terminology is complex and can only ever approximate to the range of meanings of the original text which, in itself, would have been interpreted differently in different periods. Our decisions, hereafter, are provisional.
- 2 Huangdi neijing Suwen jiaoshi (2009: 320). See also Unschuld et al. (2011: 483).

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