

AN INTRODUCTION

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It is a delight and a cause for celebration for us to finally introduce this edition of the Routledge Handbook of Chinese Medicine. It represents a mammoth effort on which both of us have laboured in equal measure, spanning almost a decade and multiple life and professional changes. It has also drawn together a community of, mostly young, researchers who are actively shaping the history and anthropology of the field – and it is a huge field with both diachronic and synchronic depth and breadth, with rich and ever-growing quantities of ancient medical manuscripts on subjects that still have contemporary academic and practical relevance. There are chapters on the origins of the basic principles of *yin* and *yang* and the Five Agents, on early Chinese anatomy and physiology, on herbs, food, sex and self-cultivation and the ways in which ancient ideas and practices have been enhanced, reinvented and negotiated over two millennia.

The range of the project has grown as we embraced all the topics which increasingly became essential to do justice to the rubric ‘Chinese Medicine’. At the outset, we had to debate the concept of a Handbook. This is not an instructional manual. Far from it. Albeit that both editors have been practitioners of Chinese medicine at some point in their careers and are concerned with the *know-how* of how we know the body, there is little here that will have direct relevance in the clinic. Our authors are concerned with the nature of medicine and healing in the Chinese cultural region, its plural epistemologies and the way it has been portrayed from the beginning of the empire in the third century BCE to the globalisation of Chinese products and practices in the present day. In what way, then, is this collection a Handbook?

Contributors to the Routledge Handbook Series aim to provide cutting-edge overviews of current scholarship in the Humanities and Social Sciences with an authoritative guide to theory and method, the key sub-disciplines and current major debates. We have therefore selected topics and designed the style and arrangement of the chapters so that they can be a primary port of call for all those readers seeking an introduction to the broad range of ideas and techniques that have made up pre-modern and traditional medicine in China, and the historiographical and ethnographic approaches that have illuminated them. The book is intended for entry-level researchers, interested and engaged general readers, practitioners and patients, but also specialists in Chinese medicine who feel the need to refresh their knowledge and understanding with the latest developments in the field.

We should first attempt to define the limits of Chinese medicine. This is a famously slippery subject. What do the geopolitical ‘Chinese’, and eclectic notion of ‘medicine’ mean as separate terms and then in combination? There was no term in Chinese for ‘Chinese medicine’ (*zhongyi* 中醫) in China before the arrival of an identifiable and different style of medicine originating elsewhere, i.e. the European medicine that appeared with the Jesuits and surgeons of the seventeenth and eighteenth centuries, forcing a recognition of difference and a local crisis of identity. Until the arrival of this powerful and foreign medicine in China, there were only the terms for ‘medicine’ of one kind or another, without any imperial or national designation. As China had been the self-styled centre of the world since 221 BCE and had produced copious writings on the body, often collected in the imperial library and/or state-sponsored, there was no need to designate where the medical orthodoxy came from!

Long before the Jesuits’ arrival in China, a medicine from the Chinese cultural region had, in fact, been identified by other and distant language communities. At the turn of the fourteenth century, at the end of one of the so-called Silk Routes, far from Chinese borderlands, physicians, translators and scholars gathered at the court of Rashid al-Din, the Judeo-Muslim scholar and Vizier. They had travelled to Mongolian Ilkhanid Persia from the Hindu Kush and the slopes of the Himalayas, from China, Arabia and Europe. Rashid al-Din sponsored translations of medical works from around the world, producing a monumental collectanea of medical knowledge, including Chinese works. Compiled in Persian, and finalised in 1313, the *Tansuqnama-i ilkhan dar funun-i Pulum-i khatayi* (The Treasure Book of the Ilkhan on Chinese Science and Techniques) contains some of the earliest extant evidence of the classical treatises of Chinese medicine. As a distant and exotic unknown, Chinese science and medicine could be named and explored. In this great intellectual melting pot, Chinese medical practitioners were thought very skilled in pulse diagnosis and there were earnest attempts to characterise the distinctive aspects of this foreign medicine from far away.

***Longue Durée* and formation of institutions and traditions**

Historians have come a long way from representing the classics of Chinese medicine as a revealed truth of pre-history, delivered by the Yellow Emperor in conversation with his ministers and advisers. Much of the classical literature was indeed framed in debates with his ministers and advisers which acted as a rhetorical device for authors who aimed not so much at introducing contesting viewpoints, but at standardising information. They promoted a view of the body as a microcosm of the state and the state as a microcosm of the cosmos, where imperial power was naturalised as a mandate from Heaven offered to the incumbent ruler and extended to the very depths of every human being. Joseph Needham described this view as ‘organismic’: it aligned the physiology and functions of the body with state priorities of political unity and unification and aimed to remove blockages to the flow of imperial power and to place at the centre of that authority a divine ruler, or the heart, interpolating the wise ministers and their executive functions into the organs and bowels and their activities.

There is little doubt that what we now regard as Chinese medicine crystallised in the centuries around the turn of the first millennium of our common era in a period that spanned the late Warring States, and the Qin and Han empires. The early impulse to collate and standardise the disparate writings and beliefs of ritualists, doctors and diviners of the late Zhou period within a coherent whole was certainly a feature of the larger imperial drive for standardisation (of the calendar, writing, weights and measures, roads, etc.). Writers on medicine attributed the traditional sources of medical knowledge to icons of a legendary past – sages, cultural heroes and mythical rulers. To the Red Emperor or Divine Husbandman, Shennong 神農 was

attributed the tradition of trying and testing drugs and food. He was the legendary patron of the earliest *materia medica* (Chapter 8) and the pharmacological traditions that were more thoroughly systematised after the Song, but still invoked his name (Chapter 9). The most celebrated legendary patron of scholarly medicine, however, was the Yellow Emperor (Huangdi 黄帝; also translated as ‘Yellow Thearch’). A founding culture hero, he is said to have developed many of the inventions that bring together universalising, cosmological concepts with ideas of law, punishment, calendrics, divination practices and medicine (Chapter 7).

New archaeological sources have completely transformed our understanding of the socio-cultural contexts within which this new formalised imperial medicine came into being. The last half-century of research has seen the excavation of manuscripts from the late Warring States and Han tombs (ca. third to first centuries BCE), which continue to be unearthed as China digs up ancient cemeteries in a sustained fever of urban construction (Chapter 3). The texts, mostly inscribed on silk and bamboo in numerous editions, testify to a wide range of bodily treatments and remedy and recipe traditions that co-existed in everyday practice at least for the nobility of ancient China. They provide the earliest evidence of many longstanding medical traditions and body cultivation practices: remedy collections, of acupuncture, sexual cultivation, breathing meditations and therapeutic exercise. Some of the practices did not survive as orthodox medicine but many, such as therapeutic exercise, massage and acupuncture, were adopted as fields of study in later imperial medical institutions (Chapter 6).

The excavated texts also reveal myriad and anonymous scholarly voices whose work is compiled in brief excerpts in the classical Yellow Emperor corpus. They also testify to many aspects of everyday life that led to the innovations of the medicine of *yin*, *yang*, the Five Agents and *qi* – observing and recording the seasons and the animal world, circadian rhythms, the rituals that governed everyday life and the pervasive importance of the cultures of numerology (Chapters 4 and 5).

Why does a medicine that is so culturally situated in the homologies of Chinese empire remain relevant today? The terms *yin*, *yang*, the Five Agents and *qi* (Chapters 1 and 2) form the linguistic glue that sustains our imagination of China’s long, coherent tradition of medicine. But to what degree does the Chinese medicine provided on the streets of Beijing, Taipei, Tokyo, London and San Francisco reflect the medicine of the imperial courts of the ancient world or medieval Daoist or Buddhist healing practices? There is much yet to be gained by applying analytic frameworks already well developed in the domains of social and cultural critiques to these open questions. While within the constraints of a single volume we have not been able to pay as much attention as we would have liked to environmental, climatic or economic changes, to the histories that focus on the deep structuring effect of external patterns and events, much is said by the contributors about internal structures of medicine and healing, the enduring Chinese mentalities, social norms and taboos. While there is a rough chronological ordering of the chapters throughout this Handbook and a pinpointing of sudden change and the causes of those change, we pay as much attention to recurring patterns in conceptions of health and illness, to the plural epistemologies of practice and their incremental transformation over roughly the two millennia since the unification of China in 221 BCE, and thus to the *longue durée* of medical practice in China.

Sickness and healing

Certain types of medical knowledge were derived, from the Han period onwards, by observing the tissues, bones and viscera of the physical body (Chapter 13). As in ancient Greece and other cultures with longstanding written medical traditions, it is abundantly clear to us that

deep surgery could not be therapeutically effective – except under the extreme conditions of, for example, war and childbirth. In the treatment of living bodies, it was more practical and effective to imagine physiology and anatomy as homologous with the order of the external worlds. This was demonstrated, for instance, in the *yin* and *yang* channels portrayed on models and diagrams illustrating acupuncture practices (Chapter 12).

The salience of medical discourse in imperial China is clear: it portrayed a cosmos wherein the healthy body was confluent with natural laws, observed as cycles and phases of Heaven and Earth, dissonance with which produced illness (Chapter 14). Physicians who could perceive and identify these dissonances could diagnose and predict disorders at a more fundamental level using pulse, palpation and facial diagnosis, and thereby treat their patients, including for emotional disorders and their behavioural manifestations (Chapters 10 and 15).

In addition to these cosmological patterns of disease, symptoms of epidemic disease were, from the Han period onwards, classified as ‘cold damage’. This syndrome framed feverish diseases and other infectious conditions in the language of cycles of *yin* and *yang* mapped on to body physiology. Similarly, we can see the roots of a genre of medical case histories that captured changing and plural approaches to diagnosis and treatment (Chapter 11). The plural natures of the Chinese medical traditions are most vividly illustrated in surviving manuscript collections which have not been shaped by subsequent editors, and perhaps reflect more faithfully the heterogeneity of medicine from below, of local healers, of women and of itinerate doctors (Chapter 18). Case histories were a genre that grew exponentially in late imperial times (late fourteenth to twentieth centuries), a period which also saw increasing numbers of epidemics, the history of which is a controversial subject that has inspired subtle historiographical reflections in this Handbook (Chapters 16 and 17).

Food and sex

Historiographical reflections are also very much a feature of the section on food and sex (Chapters 25 and 26) which traces the emergence of a gendered body, in both medical and sexual scenarios (Chapters 23 and 24). Writing the sexual body was surely the earliest context within which the sensory aspects of *yin* and *yang* and *qi* first developed (Chapter 22). The anatomy and function of the sexual organs were the subject of intense scrutiny, but more significantly *yin* and *yang* and *qi* formed a terminological code applied to the sensory realms of the inner body before these concepts became the building blocks of a medical orthodoxy. Heat, passion, pain and the total physical dimensions of emotion and well- or ill-being all came to be described in these terms.

Pleasure in China, be it of sexual, culinary or spiritual design, was also the source of many prohibitions concerned with restraint and particular practices (Chapters 19–21). Daoist sexual teachings on health and immortality were a significant legacy of these traditions and trained and disciplined women’s desires (Chapter 30).

Practices of the spirits and religious orthodoxies

Much of this book is concerned with what we might now consider religious healing and the innovations in treatments inspired by the religious institutions that formed estates within the state. Their healing practices were not professionally or imperially endorsed as medicine, despite continuities of physiology and cosmology that carried over into native religious traditions: Buddhists and Daoists were prohibited from competing with physicians from the Tang period onwards. Communications with deities and divine entities, enlisting their support to

empower treatments and to intervene in the aetiology of a sickness, have been commonplace in medicine in China (Chapter 31). Divination and the cultures of calculation that evoke the authority of the spirits were at the heart of the construction of early Chinese medicine and structured the time-honoured practice of selecting auspicious days for undertaking medical treatment. Manipulation of time was also a key technique in the practice of Chinese alchemy affecting both the compounding of material substances in pursuit of the elixir of life and the inner cultivation that refined the essences of the body (Chapter 29).

Divination features strongly in Daoism where healing regularly involved ritual practices to rid the body of demonic infestation, but is this Daoist medicine as it is currently purveyed on the internet? While a broad variety of therapeutic and cultivation repertoires were assimilated into and developed within Daoist traditions, the moniker of 'Daoist medicine' itself is modern. Abroad, Daoist medicine was a creation of the European and American countercultures during the latter half of the last century. The term came to be used widely to refer to the whole of classical Chinese medicine and self-cultivation cultures as they became meaningful to communities interested in mind-body-spirit healing. Daoism has, therefore, been conflated with Chinese medicine by those interested in locating holism and spirituality in Asia. At home in China, Daoist medicine served as a politically sanctioned label to dissociate from the more volatile *qigong*, sheltering a broad array of regional and orally transmitted practices under the epistemic umbrella of scripturally authorised practice (Chapter 27).

Disentangling the history of religions and healing in China forces us to embrace the diversity of the interlinked traditions. Given the enormous impact of Indian medicine on the Chinese medical landscape and on local religious forms, that came through the introduction of Buddhism (Chapter 28) – monastic provision for the sick, the (quasi-illicit) compounding of drugs by monks and nuns and power of the charismatic healers and deities such as the Medicine Buddha – one has to interrogate the assumption of a monolithic and discrete culturally specific imperial, Daoist or national 'Chinese medicine'.

The worlds of Sinographic medicine: a diversity of interlinked traditions

If you look at the plethora of cultural influences and healing modalities covered in this *Handbook*, you will get some sense of how diverse and interconnected healing in China has been despite, and also paradoxically because of, its grand and eclectic scholarly literature which embraces and monopolises diversity (Chapter 37). The history of medicine and healing in the region must be contextualised within a broader frame that is not limited to the political or linguistic boundaries considered today to be 'Chinese'. Rather, it extends with migrations, adaptations and transformations into nearby regions. Some of these continuities have been mediated by geographic proximity, by political history or by trade, while other regions shared common forms of written language, while using linguistically distinct vernaculars.

The commonalities of writing in Korea, Japan, pre-colonial Vietnam and, more recently, Singapore have allowed for more direct sharing, negotiation and localisation of medical theory (Chapter 33–36). The overland exchange of material culture with Mongolia, Tibet, India and all the regions and cultures along the routes to Persia and beyond (Chen Ming Chapter 32) illustrates the tensions between the historical imaginations of Asia writ large, and a narrower cultural ecumene of 'East Asia'.

These commonalities invite consideration of how the exchange of knowledge of medical materials, bodily and universal cosmography, as well as forms of textuality are reconciled within a common Sinographic sphere, or 'Graphbund', a notion which adapts the

Euro-origin term of Sprachbund. Freeing the history of medicine from its Chinese borders, and considering the forms of its regional porosity, allows for much more nuanced narratives and comparison. Looking westwards to the medieval records of multi-graph and multi-lingual exchange recovered from the library cave at the Buddhist shrines in Dunhuang (modern Gansu, northwest China), we find a rich vein of materials, which enable us to study the notions of periphery and centre. Recent studies of these sources, which lie mainly in the British Library and the Bibliothèque nationale de France, show the extensive circulation of official medical texts produced in the successive Chinese capitals, while also attesting to dynamic local medical cultures and materials, as well as inter-regional exchange, that are all but omitted in official canons and transmitted works.

Wider diasporas

Chinese medicine has been shaped most radically by its multi-faceted encounters in the processes of globalisation from the first major diaspora during the Mongolian Empire to the transmissions and translations of early modern Europe and then the multi-faceted encounters with biomedicine in the twentieth century and beyond. We find it intersecting with new debates about sphygmology in eighteenth-century France, in divisions between Northern and Southern elites in Vietnam, shoring up ethnic communities, with knowledge and the ability to organise in first colonial and then technocratic Singapore, as a vehicle for Chinese soft diplomacy and development in communist African states or as a cultural and economic riposte to the inequities of profit-driven biomedicine in post-Spanish colonies across the world (Chapter 38–42 and 46).

In China itself, the arrival of a new medical knowledge and methods from overseas took place during the time when the empire was weak and being attacked by imperial powers from America, Europe and Japan. While the Qing dynasty lost its increasingly frail grip on central power, new medical techniques were brought in, primarily by Christian missionaries. The first Treaty of Tianjin (1858) granted foreigners immunity from Chinese law as well as unrestricted movement, affecting the relationship between religion and medicine in China in new ways, which nevertheless echoed earlier eras when priests and monks exercised medical authority. Rights under the treaty allowed foreigners to acquire property as well as the power to reside beyond the confines of treaty ports for the first time. Ecclesiastical institutions saw their opportunity, and in the 1890s set up missionary clinics in larger towns and urban areas across the country. It became widely known that converts could be won over by free medical care where preaching had failed. The earliest wave of European-style hospitals and medical schools was due to the efforts of religious institutions, a fact which echoes the medieval introduction of Indian medicine via Buddhist hospitals and rural care in the community. As in the Tang dynasty, this kind of missionary medicine appealed particularly to the rural and urban poor with no social resources. By contrast, however, the secondary political and religious agendas of these institutions led the wealthy, who could afford to pay for expert medical care, to be suspicious of foreign missionary medicine and to defer to traditional medicine.

European anatomical texts were available in China from the early eighteenth century via Jesuit translation but, without verifiable treatment methods to complement them, were considered little more than curious intellectual exotica. The middle of the nineteenth century saw a dramatic change, with the introduction of spectacular new foreign techniques, mainly in anaesthesia and surgery. Nevertheless, despite their dramatic appeal (including the removal of cataracts, tumours, stones and cysts), the nature of these treatments aligned

European surgeons with humbler practitioners of artisanal medicine, rather than with literate scholars. Even before the time of medical records, many forms of minor and superficial surgery had been performed routinely in China, such as lancing abscesses, bloodletting, removing projectiles, suturing wounds, hernia repair, haemorrhoid surgery and castration, as well as acupuncture. By the nineteenth century, a few foreign miracle drugs, in particular quinine and chloroform, were regularly included within Chinese *materia medica* repertoires. The prevention of smallpox also formed an arena wherein foreign and indigenous technologies were negotiated.

Negotiating modernity

Later in the Qing (Manchu) administration, the cause of technological ‘Westernisation’ was conflated with ‘modernisation’ and championed by Chinese officials who advocated the use of foreign military methods and tools. Conservative in outlook, they formed a hard core of the Self Strengthening reform movement (1861–95), their slogan for which was *Zhongti xiyong* 中體西用 ‘Chinese Learning for our foundation, Western learning for practical application’. A minor modernisation programme ensued during which the Tianjin Medical School was established in 1881 as the first national institute where physicians could train in ‘Western medicine’.

The vital need for reform was underscored by the debacle of the country’s defeat in the Sino-Japanese War (1894–95) and the subsequent fiasco of the Boxer Uprising, which intensified the grip by imperialist powers on the failing Qing state. Chinese sentiment was divided: conservative court officials thoroughly rejected institutional modernisation, while the reformers lobbied for thoroughgoing Westernisation as the sole solution. Numerous intellectuals went overseas to study natural science or medicine, most commonly in Japan, which had instigated a thorough reform programme in the wake of the Meiji Restoration (1868). Overseas medical training continued to be a dominant motif through the early twentieth century in the biographies of major revolutionary writers and reformist politicians, including Dr Sun Yat-sen (1866–1925).

The early twentieth century saw increased foreign activity in China. After the fall of the last imperial house in 1911, the Republican government (1911–49) was more open to trade and diplomacy, but invested little in health. *Health* diplomacy provided one way through which the colonial powers could establish a foothold in China. A century of warfare, rebellion and plague had taken its toll and the second Sino-Japanese War (1937–45) and Chinese Civil War (1945–49) were looming. Foreign public health initiatives such as the League of Nations-Health Organization (LON-HO) and the Rockefeller Foundation’s International Health Division sponsored programmes aiming to improve the health of the population through modern scientific nutrition and hygiene in line with the teachings of the Johns Hopkins University School of Public Health (Chapter 47). Modernisers issued a legal challenge to medical practitioners still working in traditional ways, but this had the opposite of the intended effect by galvanising opposition to a new level of professionalisation aligned with the state, and thus a new ‘Chinese’ medicine was born.

Following the Communist takeover of China, there was a concerted official effort to validate Chinese medicine as compatible with medical modernity. The profession of medical history gained a new salience as it offered a form of legitimacy to Chinese medicine. A precedent for this can be found in histories of Chinese medicine and physicians throughout the imperial period, particularly hagiographies of eminent medical figures. What was significant in the post-1949 accounts was how the past was explicitly used (and in some ways re-created

and re-configured) to serve the present in this new post-‘liberation’ discipline. Where many other instances of ‘modernisation’ saw the discarding of the ‘pre-scientific’ past in efforts to construct ‘modern’ scientific medical systems, China’s revolutionary government sought to incorporate and scientise its medical past. This led to political tension, particularly during the Cultural Revolution (1966–76), and confrontations with traditional knowledge, typified by a ruthless re-inscription of tradition and a push to purge Chinese society of superstition and religion.

The years 1953 and 1954 saw the first institutions to teach a newly modern Chinese medicine in Shanghai, Chengdu, Guangzhou, Beijing and Nanjing. The very future of traditional medicine was, however, threatened by the strident ideological debates that foreshadowed the radical social and economic campaigns of the Great Leap Forward (1958–61). During this time, great efforts were devoted to modernisation, standardisation and institution-building for traditional medicine, in order to serve the people. It was at this time that the new term Traditional Chinese Medicine or TCM came into being, coined by Ma Kanwen 馬堪濶 (1927–2016), marking its regional and temporal genesis as it began to migrate abroad.

During the Cultural Revolution (1966–76), there was an extraordinary experiment that embodied Mao Zedong’s (1893–1976) spirit of continuing revolution and deploying the masses for the health of the nation, the Barefoot Doctors Campaign, named for the farming people who went barefoot in the paddy fields. Over a million people, mainly farmers, village healers and young graduates, were given a short training in anatomy, bacteriology, maternal and infant care, together with the basics of public health as well as the Chinese *materia medica* and acupuncture, after which they were sent out into the countryside. The effect is very difficult to assess, but many believe that this was one of the few positive elements of the period, and in general a success. As a propaganda campaign, it certainly had a powerful legacy in global health when the 1978 Alma Ata Declaration embraced its principles of popular participation in low-tech health for the masses and the model remains an inspiration for development work (Chapters 44 and 45).

Traditional medicine was, in Mao Zedong’s famous adage, ‘a national treasure’ to be exploited for its benefits to the masses. Inventing a tradition for our times, twentieth-century Chinese leaders were never totally modern, as they retained the vision of a glorious tradition with holistic aspirations – now a post-modern imagination of bodily resonance, a holistic medicine no longer struck through with imperial homologues, but still with a commitment to following the harmony of Heaven and Earth by embodying the rhythm of the seasons *for the universal good of the people*.

But their brave new socialist vision of medicine was also one of material substance and could simultaneously embrace modern reductionist approaches to phytochemistry (Chapter 48). It was fit enough to survive the encounter with early twentieth-century pharmacology and the marriage of old and new would lead ultimately to extracting a substance’s bioactive metabolites to make a modern medicine which carried with it the power of tradition (Ibid.).

Despite the new material modernity, the cultivation of *qi* and the spiritual dimensions of ancient China survive vividly in the global cultures of the martial arts and therapeutic movement, and also in meditation regimes. They survive in the work of contemporary Chinese sexologists looking for holistic concepts of sexual well-being (Chapter 26). They have in addition been instrumental in carving out communities for practitioners within which individuals can find common interests in the care of the body, whether for the cultivation of socialist bodies, or in the more individualistic and family oriented domains of the age of reform (Chapter 49).

It is useful to study the translation and analysis of remedies and recipe books in order to learn more about the transmission of knowledge. The process of translating tangible details and material practices brings the modern translator up against similar problems of identification and interpretation of substances and methods that have bedevilled merchants, scholars, pundits and simple end-users of old (Chapter 43).

Ironically, it is this very propensity for change, and an inherent ability to adapt to contemporary situations as well as absorb influences from abroad, that has ensured the durability of this quasi-imperial medicine. To some degree, it has been the polysemic nature of the terminology of Chinese medicine that has ensured a continuity of practice as terms like *qi* segue seamlessly into the imagination of an ‘energy’ coursing through our bodies as if we can plug ourselves into the national grid. Similarly, we celebrate the ‘treasure house’ of Chinese medicine and its empirical use of thousands of plants as medicine for providing us with the latest wonder drug to treat malaria, artemisinin – even though that substance, disease concepts, explanations for efficacy and manner of delivery are all changed beyond recognition.

The imagination of a coherent and pervasive Chinese tradition, easily identified, is therefore illusory, ephemeral. Those who have tried to capture it, as a counterpoint to a Western tradition, inevitably run the risk of addressing the subject in crude and unsustainable ways. Given the number of peoples who have lived in, and moved through, China, the origins of Chinese medicine are certainly not entirely Chinese, and historians therefore must embrace an equivalent diversity of healers and healing practices.

The end of Chinese medicine?

Returning to the question posed at the beginning of this introduction and, indeed, implicit in this entire Handbook: what are the limits of Chinese medicine or TCM? At what stage is Chinese medicine no longer Chinese medicine? This is not just a semantic riddle, but an important academic question that rests on contextualised definitions where one necessarily has to state the realms of the discourse in order to make sense of it (Chapter 51). To turn this question on its head, while there have not been many new ‘natural’ materials added to the Chinese *materia medica* after the Qing dynasty (since 1911), we must wonder whether we can discover new Chinese medicines and therefore develop the tradition. Undoubtedly over the millennia, many substances, such as frankincense, cloves and American ginseng, have been introduced into the Chinese tradition and attributed new properties. Recently, for example, Chinese medical practitioners have begun to employ maca, which originated from South America, for new medicinal purposes. It does not yet have an official monograph in Chinese pharmacopoeia, but the community of Chinese practitioners commonly recognise it as strengthening the yang of kidney based on TCM theory. Working outside of China, Chinese settlers also borrow from the indigenous healing traditions they encounter and draw them into the Chinese recipes and traditions. For example, Peranakan Chinese settlers in the Malay Peninsula use local plants, yet describe them in Hokkien and other southern Chinese dialects.

Many Chinese people and the Beijing government itself are, rightfully, very proud and excited about the discovery of artemisinin and its origin in Chinese medicine; in this historically and politically charged process, this innovation has been construed as a great national achievement for Chinese science and TCM. The product was developed according to a historical book description and it is therefore representative of an ethnopharmacologically driven drug development. Although it was originally extracted with ether, which has never been used in Chinese medicine, it was found that the ancient technique of wringing the juice extracts was actually more effective. Also, in this process, other compounds, which

have anti-malaria properties, are extracted. However, artemisinin can simply be regarded as a medicine with an interesting chemistry and the pharmacological properties used in treating the modern disease, malaria, have been proved via modern scientific strategies. How we got to test it in the first place may be no more relevant than the use of aspirin being grounded in centuries of pre-modern European and Islamic healers employing the willow tree for fever and other illnesses.

Modern science has very few strategies for testing multi-ingredient remedies and traditional herbal remedies, such as goji, ginseng and ginkgo, as well as those like Padma, are marketed because of their profile as TCM preparations. They are all, however, used outside of their original contexts so have but a tenuous connection with pre-modern medicine. Thus, when single herbs or substances that originate in the Chinese *materia medica* are not used within either TCM or pre-modern Chinese conceptual and practical frameworks, they are evidently not Chinese medicine in any traditional way. One must also distinguish between new diagnostic practices where there is some integration of Chinese medical theory such as the use of electronic devices to stimulate acupuncture ‘channels’ and the use of techniques such as ether to extract bioactive metabolites. The latter was not invented in a Chinese medical context nor is it a practice common to medical practitioners working with TCM. Fruits and herbs that were in the ancient *materia medica* become phytomedicines with usages supported by modern scientific evidence and little or no reference to traditional theory except perhaps as a marketing exercise to evoke the romance of ancient authorities. The modern uses of *cordyceps* or goji in healthcare in what has been called ‘the global North’ (Chapter 51) have transformed these substances into some sort of a power food or food supplement which are, therefore, no longer traditional medicines. Moreover, once the active ingredient has been derived, or the essence extracted, and a substance is packaged and mass delivered as an injection, as an extract or as a pill, with indications not listed in the pre-modern texts, or in modern TCM practice, can it still be thought of as Chinese or traditional, despite its name and history?

Finally, are there ways to bridge the epistemological gaps between the modern and traditional (Chapter 50) or does Chinese medicine have its own kind of modernity that defies these tidy binaries? This Handbook could never give an exhaustive account of Chinese medicine. The more we cover the more we realise has been omitted. In the end, the answers to these and many questions we have not yet considered are for future researchers, who we hope will benefit in framing their work from the studies in this Handbook.