

Exploring 19th-century medical mission in China: Forging modern roots of Chinese medicine


Author:

Youheng Zhang¹ 

Affiliation:

¹Department of Philosophy,
School of Marx, Wuhan
University of Technology,
Wuhan, China

Corresponding author:

Youheng Zhang,
zhangyouheng@whut.edu.cn

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During the 19th century, missionaries profoundly impacted China's social and scientific advancement. Their efforts faced challenges because of deeply ingrained superstitions and polytheistic traditions. Missionaries adopted diverse approaches such as spreading scientific knowledge, establishing educational institutions and conducting medical missions to further their mission. Notably, medical missions played a vital role in alleviating suffering, eradicating prejudice and fostering opportunities for the spread of Christianity in China. Through providing medical services, missionaries gained trust and goodwill within local communities, showcasing Christian compassion and benevolence. Additionally, they founded medical schools, translated foreign medical works and established medical journals, contributing to the development of modern Chinese medicine to some extent.

Contribution: This article delves into the medical practices of 19th-century medical missionaries. It asserts that these medical missionaries played a pivotal role in establishing the groundwork for the advancement of modern medicine in China. Furthermore, the article suggests that contemporary missionary activities in China can draw inspiration from the model set by these historical medical missionaries, emphasising the enduring relevance of their approach in conducting effective missionary work today.

Keywords: medicine; medical mission; Chinese Christianity; missionary society; Christian hospital.

Introduction

According to the New Testament, Jesus initiated his public ministry and embarked on healing activities in Galilee in 28 AD. He preached and performed miraculous healings, earning widespread recognition throughout Syria. Medical schools affiliated with church universities in mediaeval Europe housed the most advanced medical knowledge of that era. Christian graduates often merged their medical practices with evangelism, enabling the population to encounter the divine radiance of Christ through their healing endeavours. Nonetheless, when examining the history of Christianity, few medical mission undertakings can rival the magnitude of the impact of mission work in 19th-century China. Grundmann (1990) lauded medical missionaries in China as 'exemplary representatives' of the missionary movement, showcasing their extraordinary dedication and contributions.

Therefore, in this article, the author commences by conducting a historical examination of the endeavours undertaken by these medical missionaries. These significant initiatives encompassed the establishment of clinics and hospitals, the establishment of medical schools, the translation of Western medical literature and the establishment of medical journals and newspapers. It is noteworthy to mention that due to the substantial number of missionaries involved, it is impractical to cover the work of all individuals in this article. Hence, priority is accorded to work that has profoundly influenced Chinese medicine up to the present day. Ultimately, it is anticipated that this article will present a relatively impartial evaluation of this history, thereby underscoring the crucial role played by medical missionary work in the advancement of Chinese medicine.

Christian hospitals throughout China

Clinics and hospitals in 19th-century China served as both accommodations for missionaries and channels for building close connections with the local population. Before 1840, Christian hospitals and clinics were solely established in Macau and Canton by missionaries. In 1820, Robert

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Morrison¹ and John Livingstone² established clinics in Macau (Sun n.d.). Following suit, Dr. Colledge³ founded a clinic in Macau in 1827, which later expanded into a hospital specialising in ophthalmology. This hospital, being the first Christian hospital established by a foreigner in China, operated for 5 years, providing medical aid to around 6000 individuals and curing approximately 4000 people of various ailments (Liao, Fu & Zheng 1998:476).

Up until 1935, the hospitals and clinics run by missionaries were sporadic endeavours lacking a clear missionary objective. It was only after Rev. Parker's⁴ groundbreaking success in China that medical missions evolved into an 'international movement' (Jackson 1889:107). During Parker's senior year in 1831, a religious revival at Yale University sparked his interest in overseas missions (Anderson 2006:207). Despatched by the American Congregational Church to Canton, China, in 1834, Parker established the country's first true Christian hospital with a dedicated medical mission. While Parker was not the first Western doctor or Protestant medical missionary in China, it was not until 1835 that these two roles were integrated (Young 1973:250).

Between 1840 and 1842 AD, the signing of the Treaty of Nanjing, a consequence of China's defeat in the First Opium War,⁵ marked a humbling moment. This treaty granted permission for missionaries to establish churches and hospitals in five key commercial ports: Guangzhou, Xiamen, Fuzhou, Ningbo and Shanghai (Wang 2012). In the period between 1842 and 1848, church clinics and hospitals were swiftly established at each of these five ports, as indicated in Table 1 (Zhen Zhiya 1984:114). While their primary purpose was to support missionary efforts, these institutions played a vital role in assisting foreign traders, missionaries, military personnel and expatriates residing in the ports. Their services extended beyond the religious sphere, catering to the needs of various individuals within the international community.

After the conclusion of the Second Opium War, the Qing government, through the signing of the Treaties of Tianjin and Beijing with Britain and France in 1858 and 1860

1. Robert Morrison was born on 05 January 1782 in Buller's Green, Northumberland, England, and died on 01 August 1834 in Canton, China. He was a Presbyterian minister and translator who was the London Missionary Society's first missionary to China. He has considered the father of Protestant mission work there (see 'Robert Morrison | British Missionary | Britannica' n.d.).

2. Dr John Livingstone was a surgeon for the East India Company who opened a dispensary for the poor in Macao in 1820 with Reverend Dr Robert Morrison of the London Missionary Society (see Fu 2013).

3. Thomas Colledge (1797–1879) was an English surgeon who worked for the East India Company in Canton and assisted Rev. Peter Parker in establishing the Canton Hospital (see 'Thomas Richardson Colledge' 2022).

4. Peter Parker (1804–1888) was a Framingham, Massachusetts-born medical missionary. He is a Yale Divinity School and Yale Medical School graduate who is credited with 'opened the gates of China with a lancet when Western cannon could not heave a single bar,' see Blake (1931:396). He was the founder of medical missionaries in China, and he was more advanced than the former doctor in China. He demonstrated exceptional competence and energy in his work at the Canton Hospital (see Fu 2016).

5. The First Opium War (第一次鸦片战争), also known as the First Sino-British War or the 'War of Commerce,' began China's modern history of humiliation and was an unjust war of aggression fought by Britain against Qing dynasty from 1840 to 1842.

TABLE 1: Hospitals established in open port cities.

Date	Location	Founder	Name	Note
1842	Canton	Peter Parker	Canton Hospital	Reopen
1843	Xiamen	Dr Cumming and Hepburn ⁶	Clinic (Anonymous)	American Presbyterian Mission (Support)
1844	Shanghai	William Lockhart	Renji Hospital	London Missionary Society (Despatch)
1845	Ningbo	Daniel Macgowan	Jinli Hospital	American Baptist Churches (Assignment)
1848	Canton	Benjamin Hobson	Jinlibu Hospital	London Missionary Society (Support)
1848	Fuzhou	Moses White	Clinic (Anonymous)	American Methodist Missionary (Support)

respectively, not only ratified but also expanded the invaders' rights to operate hospitals and similar institutions in China (cf. Gu Changsheng 2004:257–258; MacGillivray 1907:9–36). Subsequently, an array of Christian hospitals were constructed by missionary societies in various provinces and cities across the interior of China. Table 2 provides a comprehensive overview of these well-known Christian hospitals during this period.

These statistics demonstrate the gradual expansion of missionaries from various nations beyond China's coastal regions and into the country's interior, encompassing major cities, rural areas and even towns, following the Second Opium War. Wherever the missionaries ventured, Christian hospitals were established as a symbol of their presence. By around 1900, European and American missionaries had established hospitals in numerous locations, including Hong Kong, Canton, Hankow, Wuchang, Yichang, Shanghai, Tianjin, Beihai, Qingdao, Hangzhou, Foochow, Xiamen, Chengdu, Chongqing, Baoding, Soochow, Tongzhou, Zhangjiakou, Taiyuan, Wefang, Nanjing, Wuxi, Wuhu, Kaifeng, Jilin, Shenyang, Jiujiang, Nanchang, Changde, Shijiazhuang, Wuzhou, Lanzhou, Kunming, Guiyang and many more (Deng & Cheng 2000:318–322).

In conclusion, although these hospitals may have been relatively modest in size, their dispersion throughout the nation has positioned them as pivotal platforms for the Church's dissemination of the gospel to the Chinese population. It is noteworthy that many of the leading hospitals in China today have origins as Christian hospitals (Y. Yang n.d.; T. Young n.d.), and these Christian hospitals laid the groundwork for the development of modern hospitals in China (Chen & Chen 2022).

Christian hospital-based medical school

The missionaries recognised the significance of education in China from the early stages of their presence. They firmly believed that imparting modern scientific knowledge would not contradict Christian values. On the contrary, they saw education as a means to propagate Christianity by dispelling long-standing superstitions through scientific understanding (K.-C. Liu 1960).

6. There are very few records about Dr Cummings, but an account of him and Dr Hepburn can be found on a local information network in Xiamen (see Brown n.d.).

TABLE 2: †The Christian hospitals opened after the Second Opium War.

Date	Location	Name	Founder	Affiliation
1864	Beijing	Shuang Qi Gan Hospital	John Dudgeon	London Missionary Society
1864	Wuhan	Puai Hospital	(Anonymous)	Methodist Church of Great Britain
1866	Wuhan	Wuhan Union Hospital	Griffith John	London Missionary Society
1866	Shanghai	Tongren Hospital	Elliot Thomson	Episcopal Church (US) Mission
1867	Shantou	Gospel Hospital	William Gauld	English Presbyterian Mission
1871	Hangzhou	Hospital of Universal Benevolence	James Galt	Church Missionary Society
1877	Foochow	Magaw Memorial Hospital	Sigourney Trask	Methodist Episcopal Church Woman's Foreign Missionary Society
1878	Foochow	Foochow Medical Missionary Hospital	Dauphin Osgood	American Board medical missionary
1879	Yichang	Puji Hospital	Mary Moore	Scottish Presbyterian Mission
1880	Tianjin	London Missionary Society Hospital	John Mackenzie	London Missionary Society
1883	Soochow	Soochow Hospital	William Park	Methodist Episcopal South Mission
1883	Wuhan	Wuchang Renji Hospital	Griffith John	London Missionary Society
1883	Shanghai	Red House Hospital	Elizabeth Reifsnyder	Woman's Union Missionary Society
1886	Beihai	C.M.S. Pakhoi General Hospital	Edward Horder	Church Missionary Society
1886	Wuhu	Wuhu General Hospital	(Anonymous)	Methodist Episcopal Church
1887	Huaian	Love and Mercy Hospital	Absalom Sydenstricker	American Southern Presbyterian Mission
1891	Leshan	Kiating General Hospital	Omar Kilborn	United Church of Canada
1892	Chongqing	Chungking General Hospital	James McCartney	Methodist Episcopal Church
1895	Jinan	Annie M. Hunter Memorial Hospital for Women	(Anonymous)	American Northern Presbyterian Mission
1897	Nanchang	Ida Kahn Hospital	Ida Kahn	Methodist Episcopal Church Woman's Union Missionary Society
1898	Wenzhou	Blyth Hospital	(Anonymous)	Methodist Missionary Society
1899	Cangzhou	Roberts Memorial Hospital	Arthur Peill & Sidney Peill	London Missionary Society
1901	Jiujiang	Elizabeth Skelton Danforth Memorial Hospital	Mary Stone	Methodist Episcopal Church Woman's Union Missionary Society
1907	Shanghai	Ruijin Hospital	Próspero París	Roman Catholic Church
1908	Changsha	Hsiang-Ya Hospital	Edward Hume	Yale-in-China Association
1909	Jinan	Cheloo University of Medicine	(Co-founded)	English Baptist Mission American Presbyterian Mission
1910	Chengdu	West China Union University Hospital	(Co-founded)	British, American and Canadian Missions

†, This table does not list all the hospitals established by missionaries during this period but rather selects the better-known ones. For those interested in more hospital archives and history, more details can be found in *The History of Western Medicine in China* (<https://ulib.iupui.edu/wmicproject/>).

In the initial missionary-run hospitals in China, young Chinese individuals were hired and trained in basic nursing and therapeutic skills to support the doctors' work. This marked the beginning of Western medical education in China (Gu Changsheng 2004:260). During his tenure at the Canton Hospital, Parker enlisted three assistants, among whom Guan Tao, the first Western doctor in China, became particularly renowned (Z. Liu 2000). This strategy of involving local individuals in missionary work was commonly employed by medical missionaries to facilitate communication with the local community.

Similarly, in Christian hospitals, medical missionaries conducted medical classes to educate medical students. However, because of their limited size and inadequate resources, these institutions were ill-equipped to conduct sophisticated modern medical trials and demonstrations (Zhang Yabin & Shi Rusong 2011).

According to a survey conducted by Neal Boyd (1897), out of the 60 Christian hospitals at that time, 39 were accepting apprentices. Only 5 hospitals had more than 10 students, while the remaining hospitals had 2 to 6 students each. The total number of graduated students was approximately 300, with an additional 250 to 300 undergraduates. Boyd highlighted the inadequacy of this situation and advocated

for the introduction of systematic medical teaching by missionaries (Boyd 1897:90). Consequently, in the early 1900s, a significant number of formal medical schools began to emerge in China, as indicated in Table 3.

The Boxer Rebellion,⁷ which took place from 1899 to 1901, had a profound impact on the influence of the Christian Church, including its sponsored medical education initiatives (Preston 2000). During this tumultuous period, medical education faced numerous challenges, and tragically, many medical missionaries lost their lives. One of the primary difficulties faced by Christian medical schools in the aftermath of the war was a severe shortage of teachers. It was not uncommon for a medical school to have only one or two medical missionaries available to teach (Graves 1905). These medical missionaries were responsible for their medical practices and spreading the gospel, which made them exhausted. Balancing these demanding responsibilities proved to be a significant challenge.

Given this circumstance, Gillison (1905) proposed a collaborative approach among various missionary societies in significant Chinese cities to address the challenges in medical education. The suggestion was for missionary doctors from each mission to regularly provide instruction to students at medical colleges,

⁷Boxer Rebellion, also known as The Taiping Movement, was an extreme populist movement of the Chinese people against the invasion of China by foreigners.

TABLE 3: The famous Christian medical schools of this period.

Date	Location	Name	Affiliation
1866	Canton	Pok Tsai Medical School	American Presbyterian Mission
1877	Beijing	Tongwen Guan, The College of Medicine	Chinese Government employed
1880	Shanghai	St. John's University, The College of Medicine	Protestant Episcopal Church (US)
1881	Tianjin	Tientsin Medical School	Viceroy (Li Hongzhang)'s patronage
1884	Hangzhou	Hospital of Universal Benevolence, Medical college	Church Missionary Society
1891	Soochow	Women's Medical College of Soochow	American Southern Methodist Mission
1892	Shenyang	Moukden Medical College	United Free Church of Scotland
1899	Canton	Hackett Medical College	American Southern Methodist Mission
1899	Canton	Hackett Medical College for Women	American Southern Methodist Mission
1902	Wuhan	Union Medical College	London Missionary Society Methodist Missionary Society (UK)
1906	Beijing	Lockhart Union Medical College for Men	American Southern Methodist Mission
1906	Beijing	Peking Union Medical College	American Board of Commissioners for Foreign Missions London Missionary Society American Southern Methodist Mission American Methodist Episcopal London Medical Missionary Association Society for the Propagation of the Gospel China Medical Board (1916)
1908	Beijing	North China Union Woman's Medical College	American Board of Commissioners for Foreign Missions Methodist Episcopal Church American Southern Methodist Mission
1910	Jinan	Cheeloo College of Medicine	American Presbyterian Mission English Baptist Mission Church of England Missions Methodist Episcopal Church
1912	Canton	Lingnan University Medical School	Canton Medical Missionary Union Church of the United Brethren Foreign Mission Society
1914	Changsha	Hsiang-Ya Medical College	Yale-in-China Association Hunan Provincial Government
1914	Chengdu	West China Union University, College of Medicine	American Baptist Foreign Mission Society Methodist Episcopal Church Friends' Foreign Mission Association Canadian Methodist Mission

Source: Deng, T. & Checng, Z., 2000, *A general history of Chinese medicine (Modern Volume)*. General History of Chinese Medicine, People's Medical Publishing House, Beijing, viewed from <https://book.douban.com/subject/1537752/>; Liao, Y., Fu, F. & Zheng, J., 1998, *History of science and technology in China: Medical volume*, China Science Publishing, Beijing; Resources Portal | Western Medicine in China, 1800–1950, n.d., viewed 18 March 2023, from <https://ulib.iupui.edu/wmcp/>; Zhen, Z., 1984, *Teaching materials of Chinese Medical History in Medical Colleges and Universities (for Chinese Medicine, Traditional Chinese Medicine and Acupuncture)*, Shanghai Scientific and Technical Publishers, Shanghai

with the missionary societies sharing the costs of the student's education. The Medical Missionary Association of China has been actively supporting this endeavour (Lincoln 1905). This collaborative model, known as '协和(Union)', aimed to consolidate the educational resources of multiple missionary societies (cf. Chan & Chu 2013). By pooling their financial and teaching resources, they could establish a smaller number of hospitals and medical schools under the Union framework, thereby strengthening the quality of education provided. Consequently, we witnessed the collaborative efforts of various missionary societies in establishing medical colleges after 1901 (see Zhang Yabin & Shi Rusong 2011), resulting in the emergence of several hospitals and medical colleges in China that remain highly regarded nationwide to this day (e.g. Reeves 1970; Veith 1973; Zhao et al. 2021).

The medical translation works by missionaries

In addition to establishing medical colleges, medical missionaries undertook a crucial and highly significant effort: the translation of Western medical texts into Chinese. Just as the Bible needed to be translated into Chinese for a wider audience to comprehend its teachings, the translation of

Western medical texts into Chinese played a vital role in enabling more effective medical missionary work. However, the translation of scientific and medical terms from Western languages into Chinese posed challenges due to differences in terminology and the potential absence of equivalent terms in Chinese (Bowers 1975). This complexity added to the difficulty of the translation process. Consequently, large-scale translation efforts were primarily undertaken by the Chinese government, specifically by the Tongwen Guan in Beijing, starting in the 1990s (Wright 1998). However, before this period, much of the early translation work was carried out by missionaries, as highlighted in Table 4, which showcases some notable contributions made by these early medical missionaries.

Devan (1847) stands among the pioneers in addressing the issue of terminology disparities between China and Western disciplines. His vocabulary book laid the foundation for subsequent work on medical translation. Hobson, along with his collaborator Mao-Cai Guan, made noteworthy contributions to early medical translation efforts by selecting Chinese terms familiar to the local population instead of inventing new vocabulary (Bosmia et al. 2014). Kerr's translation work was more extensive, encompassing a

TABLE 4: Some important medical translation works.

Author or Translator	Book Title	Date	Note
Thomas Devan	<i>The Beginner's First Book in the Chinese Language</i>	1847	Vocabulary Toolbook
Benjamin Hobson	《全体新论》(Quan-Ti-Xin-Lun) ⁸	1851	
	《博物新编》(Bo-Wu-Xin-Bian) ⁹	1855	These five books, collectively known as 'The Five Types of Western Medicine', are the beginning of the introduction of Western medicine into China (P. Zhao 1991)
	《西医略论》(Xi-Yi-Lue-Lun) ¹⁰	1857	
	《妇婴新说》(Fu-Ying-Xin-Shuo) ¹¹	1858	
	《内科新诚》(Nei-Ke-Xin-Jie) ¹²	1858	
John Kerr	《西药略释》(Xi-Yao-Lue-Shi) ¹³	1871	
	《裹扎新法》(Guo-Zha-Xin-Fa) ¹⁴	1872	These books were translated from different English books, and his Chinese assistant assisted him with proofreading (Li n.d.)
	《内科阐微全书》(Nei-Ke-Chan-Wei-Quan-Shu) ¹⁵	1874	
	《花柳指迷》(Hua-Liu-Zhi-Mi) ¹⁶	1875	
	《眼科撮要》(Yan-Ke-Cuo-Yao) ¹⁷	1880	
	《炎症论略》(Yan-Zhen-Lun-Lue) ¹⁸	1881	
	《割症全书》(Ge-Zhen-Quan-Shu) ¹⁹	1881	
	《西医内科全书》(Xi-Yi-Nei-Ke-Quan-Shu) ²⁰	1883	
	《卫生要旨》(Wei-Sheng-Yao-Zhi) ²¹	1883	
John Dudgeon ²²	《西医举隅》[Miscellaneous Essays on Western Medicine]	1875	
	《续西医举隅》[Continuation of the corner of Western Medicine]	1881–1882	He worked as a medical teacher at Tongwen Guan, The College of Medicine
	《解剖图谱》[Anatomical Atlas]	1875	
	《全体通考》[Human Anatomy]	1886	

Source: Deng, T. & Checng, Z., 2000, *A general history of Chinese medicine (Modern Volume)*. General History of Chinese Medicine, People's Medical Publishing House, Beijing, viewed from <https://book.douban.com/subject/1537752/>; Liao, Y., Fu, F. & Zheng, J., 1998, *History of science and technology in China: Medical volume*, China Science Publishing, Beijing

broader range of academic fields compared to Hobson's. One of Kerr's notable accomplishments was the compilation of *Xi-Yi-Nei-Ke-Quan-Shu* [Kerr's Practice of Medicine], a significant work on early Chinese internal medicine that sheds light on the limitations of Chinese medicine in treating certain internal disorders. This work was translated by his assistant, Ching-Gao Kong (cf. Hong & Wang 2014). Dudgeon, during his time in China, also played a crucial role in translating and introducing numerous Western medical works. However, because of fragmented information, it is challenging to provide an accurate account of all his translations, as many of his books were compiled at a later stage. Nonetheless, it is widely acknowledged that Dr Dudgeon's writing in China surpassed that of most missionaries of his time (cf. Gao 1995).

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8. Also translated as A Treatise on Physiology (Hobson & Chen 1851).
9. Also translated as Treatise on Natural Philosophy and Natural History ('《博物新编》 Treatise on Natural Philosophy 2020).
10. Also translated as the First Lines of the Practice of Surgery, see M. sing Chan (2013).
11. Also translated as Treatise on Midwifery and Diseases of Children (Hobson and Guan 1986).
12. Hobson, B. & Maocai, G., 1858, 'Nei ke xin shuo. Ren ji yi guan', Shanghai, viewed 21 March 2023, from <https://collections.nlm.nih.gov/catalog/nlm:nlmuid-8108337-bk>.
13. This book also translated as Manual of Materia Medica.
14. This book described how to bandage an injured person or a person in surgery.
15. This book provided an initial introduction to some of the key aspects of internal medicine.
16. This book introduced some of how western medicine treats STDs.
17. This book introduced the structure of the eye, and how to treat eye diseases.
18. This book explains what inflammation is, where it might arise in the body, and how Western medicine tackles it.
19. This book introduced the basics of surgery and how to perform it.
20. This book is an updated and more comprehensive version of Nei-Ke-Chan-Wei-Quan-Shu, also known as Kerr's Practice of Medicine.

21. The book presented fundamental concepts in everyday health and emphasises the role that government and society play in general health issues (Yu & ISHINO 2005).
22. More details about John Dudgeon's work can be found in (Zheng and Liu 2016).

In addition to the efforts of medical missionaries, many Chinese individuals actively participated in early translation endeavours (e.g. Shu & Zhao 1875). Foundations sponsored by mission societies also facilitated the involvement of local scholars in translation work (e.g. Fryer 1880). The foundational work undertaken by these translators provided medical students with essential teaching materials and contributed to the establishment of Western medicine's knowledge base during the early period in China.

The medical journals and newspapers founded by missionaries

Medical journals and newspapers played a crucial role in facilitating the spread of medical knowledge by missionaries.²³ Compared to the translations of Western medical texts, these publications had shorter production times and cycles, enabling faster dissemination of information to a wider audience. As missionaries moved inland from China's coastal areas after the Opium War, the vast territory posed challenges for communication among them. In this context, newspapers and journals emerged as effective means of communication and publication of their research (Dai & Wu 2020). These publications facilitated both the exchange of ideas among missionaries and the dissemination of medical knowledge.

One notable publication was the *Medical Reports* [海关医报], a biannual journal initially edited by Alexander Jamieson (1871), a customs medical officer in Shanghai. It contained disease investigations and medical papers by customs medical officers and other medical missionaries in China. Although the journal was discontinued in 1904 and later

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23. In the 19th and 20th centuries, the Missionary Society published a large number of newspapers and journals, but most of the fundamental work was done in the 19th century. So, the focus of this article is on the Missionary Society's 19th-century publication of medical journals and newspapers; readers interested in other publications can find additional information in 'Primary Sources: Missionary Perspectives on China' (2020).

changed to a pamphlet format in 1911, with only one issue published, it remains a valuable source for studying the development of medicine and epidemiology in modern China (Z. Zhang 2022).

The *Western Healing Gazette* or *Western Healing News* [西医新报], founded in 1880 and edited by John Kerr, holds the distinction of being the first modern Western medical journal edited and published by a medical institution in China (cf. Pan & Yang 2011). It was published by the Canton Hospital and lasted for 2 years, with only eight issues published before its discontinuation. In 1886, the China Medical Missionary Society published the *China Medical Missionary Journal* in Shanghai (cf. Liu 2011). Initially a quarterly publication in English, it transitioned to a bimonthly in 1905 and then to a monthly in 1923. In May 1907, it was renamed the *China Medical Journal* and later merged with the English section of the *National Medical Journal of China* [中华医学杂志] in January 1923 (Yuan & Xu 1996). The journal was published separately in Chinese and English, eventually taking on the title *Chinese Medical Journal*. After the departure of missionaries, the Chinese Medical Association continued to publish the journal for almost a century. It remains China's oldest medical journal and serves as a primary source for studying the development of Chinese medicine (cf. Gao 2018).

Additionally, publications such as *The Chinese Repository* (1832–1851), *China's Millions* (1875–1964) and *West China Missionary News* (1908–1940) also provide comprehensive records of the medical experiences of many missionaries alongside other content.

The effects of medical mission

Medical missionary work held a significant position in the propagation of Christianity in China, akin to direct preaching, written sermons and educational missionary endeavours. By contrasting the merits and demerits of medical missionary work with alternative approaches, it becomes apparent that it wielded a discernible and efficacious influence on the expansion of Christianity. Nevertheless, it also faced formidable obstacles that proved challenging to overcome.

Firstly, medical missions played an indispensable role in the expansion of the missionary field, surpassing other approaches in their effectiveness. In the early days of Christian missionary work in China, various strategies such as direct preaching, Bible translation, educational missions and humanitarian efforts were employed to spread Christianity. However, it was medical missions that proved exceptionally successful in opening doors for mission work. The restrictive policy of the Qing government, which prohibited religion, posed significant challenges to direct preaching, making the propagation of Christianity an arduous task. Additionally, the moral and ethical aspects associated with educational missions often deterred Chinese parents from enrolling their children in Christian schools, exemplified by Liang Fa's Christian school and its limited

impact (cf. McNeur & Seitz 2013). Consequently, until the year 1860, no other form of missionary work, except for medical missions, could generate fresh opportunities for preaching. Medical missions, on the other hand, garnered the trust of individuals across all social classes, breaking down prejudice and creating avenues for the dissemination of Christianity.

Furthermore, medical missions made an irreplaceable contribution to the growth of missionary work. While education, altruism and cultural publication were also instrumental in missionary activity, each had its limitations. Church education, though it could foster prominent believers and increase the church's influence, faced resistance from the Chinese populace and had limited impact compared to secondary schools, elementary schools and hospitals (Gu, Wei & Zonghua 1994:263). The scope of charitable endeavours was similarly constrained, with infant care initiatives often being associated with kidnappings and higher mortality rates, leading to resentment among the Chinese population. Cultural publishing, although effective among intellectuals, reached only a small audience. Moreover, as Chinese society progressed and underwent transformations, the significance and efficacy of these methods were diminished or restricted. In contrast, the medical mission was not bound by temporal or geographical constraints, allowing them to reach diverse social classes. Additionally, the longstanding shortcomings of China's medical and healthcare systems provided medical missions with an enduring and sustainable means of advancing missionary work. In the early Republican era, Christians in Shanxi even claimed that the church bore complete responsibility for illness prevention and health in the province, presenting a unique opportunity to preach Christianity through medicine (The China Mission Year Book 1917: *Eight Annual Issue* 1917:214–215). By directly aiding the sick, missionaries fostered trust and meaningful relationships with the Chinese people, facilitating the expansion of their work.

Secondly, the medical mission has demonstrated its effectiveness as a means of evangelisation, playing a significant role in the widespread dissemination of Christianity, both directly and indirectly. Church-operated medical institutions served as powerful magnets, attracting large gatherings of people and providing a fertile ground for missionary endeavours. Although medical missionaries faced the challenge of striking a balance between medical practice and preaching, many successfully managed the delicate interplay between the two. Collaborating with skilled preachers, medical missions achieved remarkable triumphs. In the northeastern region of China, for instance, Dugald Christie baptised 14 individuals within the first 2 years of his medical mission, highlighting the impact of medical mission (The Chinese Recorder and Missionary Journal 1885-12: *Vol 16 Iss 11* 1885:485). John Dudgeon noted in 1884 that the number of converts among hospital patients far exceeded those resulting from direct preaching (The Chinese Recorder and Missionary Journal, January–February 1884: *Vol 15 Iss 1* 1884:9). Additionally, Maxwell (1924) asserted

that over half of the believers in China first encountered the Bible within the context of a church hospital. Remarkably, some patients even transformed into zealous preachers following their conversion to Christianity, achieving notable success (Yang S. 1968:304–305). As a result, Maxwell boldly proclaimed that the medical mission had proven to be the most potent instrument at the Church's disposal for missionary work.

The effectiveness of medical missions could also be seen in the attitudes of non-medical missionaries. Many full-time missionaries advocated for the simple practice of medicine as an aid to missionary work, believing it to be 'of great value' (The Chinese Recorder and Missionary Journal 1889-08: Vol 20 Iss 8 1889:380–381). However, like other forms of mission work, medical missions had challenges that are difficult to overcome. One significant challenge was that church-run medical missions were costly endeavours that often fail to achieve the expected results. Despite many people seeking treatment at church hospitals, the percentage of converts to Christianity remains relatively low. Even with unprecedented investment in evangelism in China, the number of converts had never exceeded 1% of the population (Young 1973:252). Moreover, because of the prevailing influence of Chinese polytheism, religion is not typically perceived by the Chinese as a comprehensive way of life or spiritual pursuit (Bell 1989). Icons such as Lao Tzu in Taoism and Buddha in Buddhism often hold more cultural significance, symbolising a sense of belonging or serving as intermediaries for making promises to the heavens. As a result, Christianity, like other indigenous Chinese religions, encounters challenges in attracting a significant number of followers that span the entire population. The multifaceted nature of Chinese religious practices, marked by syncretism and the blending of beliefs, further complicates the task of establishing Christianity as a dominant spiritual force in China. While Christianity has experienced growth in specific regions and demographic groups, its broader adoption faces the hurdle of capturing the attention and commitment of the entire populace.

But this is not the only measure of success for medical missions. In present-day China, full-time missionaries are no longer directly engaged in medical work. However, churches in every province remain active in charitable activities, extending aid to those in need (McCarthy 2013). Independent believers or preachers often join these initiatives, collectively demonstrating the Christian commitment to serving others (Cao 2021). Notably, Christians can be found offering assistance in response to natural disasters across the nation, leveraging their professional skills as doctors or nurses to support government-led relief efforts. Furthermore, nursing has emerged as a significant avenue through which Christian churches in China demonstrate their concern for others. Each year, these churches provide training to their members, enabling them to obtain nursing certifications and contribute to the medical field (L.T. Yang n.d.).

While government restrictions have diminished the prominence of the medical mission approach in Chinese medicine compared to the 19th century, Christian churches in China continue to pursue this cause. They establish small hospitals and clinics led by the church, strategically located in densely populated residential communities (W. Zhang n.d.). Through these endeavours, they aim to reach out to the local population and provide medical care. Consequently, medical missions and their related modalities remain effective and enduring missionary tools in China.

Conclusion

Even today, many Chinese hospitals and medical colleges proudly trace their origins back to the 19th-century medical missionaries, highlighting their rich history and significant contributions to medical practice. This enduring legacy serves as a testament to the lasting impact of medical missionaries on Chinese healthcare institutions, medical education and the field of medicine itself.

The history of medical missionaries in 19th-century China provides valuable insights into the role of modern science in advancing Chinese society and promoting human health. During the transitional period between the 19th and 20th centuries, there were evident opportunities for collaboration between China and the West. The progress of modern science, technology and rational thinking had a profound influence on both Chinese and Western traditions, creating a solid foundation for fruitful exchanges between the two civilisations.

It is important to acknowledge that while the motivations of medical missionaries to improve modern Chinese society may have been influenced by a sense of superiority and commercial interests, their efforts also reflected a genuine humanistic concern and support for China's development. Therefore, the missionary work carried out in China should continue to uphold this spirit, recognising the importance of compassion, respect and the shared goal of advancing healthcare and well-being.

By appreciating the historical significance of medical missionaries in China, we gain a deeper understanding of the transformative power of cross-cultural exchange and collaboration in the field of medicine and religion. Their contributions have shaped the landscape of Chinese healthcare, and their legacy serves as a reminder of the ongoing importance of fostering mutual understanding and cooperation in advancing global healthcare endeavours.

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Author's contributions

Y.Z. is the sole author of this research article.

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