Medical Missionaries and the Invention of the “Serai Hospital” in North-western British India

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Abstract

This article sets out to challenge the assumption that the pavilion plan hospital became an international standard by the late nineteenth century. This assumption is based on evidence of just a few, mainly British, state and military hospitals. Hospitals constructed by non-British European empires and those by North Americans in the colonised world have been excluded. Moreover, indigenous people in many parts of colonial territories encountered so-called Western biomedical services for the first time in Protestant mission hospitals rather than in state or military hospitals. The article examines several case hospitals built by the Church Missionary Society (CMS) in north-western British India and offers a framework for analysing the architecture of Protestant mission hospitals that goes “beyond” a postcolonial approach. Drawing on conceptual tools offered by the field of the history of emotions, the article argues that the missionaries remade the pavilion plan and invented a new form, namely the Serai hospital, to gain local people’s “trust” and “affection”. This strategy was less about “pacifying” the patients and more about increasing their numbers. Indeed, medical missions were “emotional set-ups” that served to change the sensory relationship between missionaries and local people.

Keywords

Missionaries – hospital architecture – pavilion plan – Church Missionary Society – history of emotions – serai system
1 Introduction

The historiography of hospital architecture in Europe and North America in the late nineteenth and early twentieth centuries is predominantly about the pavilion plan. The advocates of pavilion design aimed to limit the spread of hospital infection by allowing air – and natural light – to permeate every part of the hospital. Pavilion plan hospitals often consisted of long rectangular wards that were housed in a separate pavilion. Each ward had windows facing each other along each length to ensure cross-ventilation; each also had its own sanitary facilities – baths, sinks and water closets – that were placed usually at the end of the ward. According to Cor Wagennar, the pavilion plan was the “the first revolution” in the history of hospital architecture: “a victory of science, philosophy and technology”.

Scholars such as Jeremy Taylor and Jeanne Kisacky further argue that this type of hospital planning became an international standard by the late nineteenth century. This understanding is perhaps to be expected: after all, the pavilion plan was partly popularised through Florence Nightingale’s Notes on Hospitals (1863), which has a chapter on how to construct a pavilion plan hospital in India. According to Kisacky, “it became the international bible of late nineteenth-century hospital design.” Moreover, Franz Oppert’s Hospitals, Infirmaries, and Dispensaries (1867), Frederic J. Mouat and H. Saxon Snell’s Hospital Construction and Management (1883), and Henry C. Burdett’s four-volume Hospitals and Asylums of the World (1891) showcase examples of pavilion plan hospitals built in Australia, British India, and Persia. These texts provided models to be copied and recommendations to be followed. They have constituted some of the main sources in Taylor, Kisacky, and other scholarship concerning the history of hospital architecture worldwide.

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4 Kisacky, Rise of the Modern Hospital, 23.
However, there are some stark omissions in these texts. By an overreliance on these sources, scholars have provided only a partial picture of hospital architecture in a global context in the late nineteenth and early twentieth centuries. These books exclude hospitals built in China, along with hospitals built in Africa and South America, those constructed by non-British empires, and those by North Americans in the colonised world. Moreover, they were published when missionary medicine was still in its infancy. Therefore, the examples they provide mainly concerned state or military hospitals. By the turn of the century, however, it was Protestant medical missions that had emerged as one of the main providers of so-called Western biomedical services in colonial territories, if not the only one in some regions.7 An examination of all these hospitals is required for addressing the extent to which the pavilion plan became an international standard.8 Protestant mission hospitals, in particular, are an important lens through which a more complete history of hospital architecture in the global context can be written. Although the secular and mission medicine in colonies shared characteristics in terms of the ways in which diseases and healing were perceived, it was the missionaries that engaged in major spending on medical facilities at the local level.9

This article takes a step towards writing Protestant mission hospitals into the historiography of hospital architecture in a global context through a specific focus on mission hospitals of the largest and most influential missionary


8 Simon De Nys-Ketels has most recently examined the Clinique Reine Elisabeth of Coquilhatville in the Belgian Congo, which was a state hospital. Hospitals built by Belgian missionaries in the Belgian Congo need to be considered if we want to acquire a better picture; see Simon De Nys-Ketels, “A hospital typology translated: Transnational flows of architectural expertise in the Clinique Reine Elisabeth of Conquilhatville, in the Belgian Congo,” ABE Journal, 19 (2021), <http://journals.openedition.org/abe/12715>, accessed 4 January 2022.

society in north-western British India: the British Church Missionary Society (CMS). By shifting the focus onto these hospitals, we can challenge the assumption that the pavilion plan became an international standard. My analysis draws on conceptual tools offered by the field of the history of emotions. It contends that the missionaries remade the pavilion plan and invented a new form to gain local people’s “trust” and “affection”, a strategy that was less about “pacifying” the patients and more about increasing their numbers. Indeed, medical missions were what Monique Scheer has termed “emotional set-ups” that served to change the sensory relationship between missionaries and local people. Scheer defines an emotional set-up as a practice that serves to mobilise emotions. She describes how we can bring about an emotional state in ourselves by seeking certain spaces, sounds, companions, and so on, or we can simply be confronted with an emotional set-up, involving the self, others, objects, sounds, smells, the environment. According to this concept, people do not passively feel certain emotions but rather there are material arrangements that facilitate certain habits and routines and thus “doing emotions”. I show that the missionaries disregarded scientific and sanitary approaches embodied in the pavilion plan in favour of providing a space that could feel and smell familiar.

The article also highlights some of the benefits of engaging with the the field of the history of emotions for the writing of the history of colonial architecture. From a post-colonial/imperial perspective, colonial buildings are thought to have been modified in response to colonial actors’ anxieties around the tropical climate that were “entangled with medical and racial discourses, biopolitics and the political economy of colonialism.” This perspective offers useful tools for analysing the basic organising principles in the spatial configuration of many colonial buildings and cities, but if it fails to account for issues such as the lack of professional architectural expertise, and the involvement of local builder, labourers, and craftsmen, it can homogenises colonial subjectivity and agency. Ideas, moreover, sometimes emerged “at the edges” of political and economic systems rather than moving from the

10 Jeffrey Cox, Imperial Fault Lines: Christianity and Colonial Power in India, 1818–1940 (Stanford, CA, 2002), 1.
11 Monique Scheer, “Are Emotions a Kind of Practice (and is that what makes them have a history)? A Bourdieuian Approach to Understanding Emotion,” History and Theory, 51 (2012), 209.
13 For example, see Chopra, A Joint Enterprise, 129–133.
“core” to the “periphery”. British India, in particular, played a sub-imperial role in the administration and acquisition of British-controlled territories stretching from Africa to eastern Asia. Research has also illuminated the role of Australia in the development of tropical architecture. While in recent years scholars have increasingly dwelled on these points in a desperate attempt to absorb wider historiographical and methodological developments and thus go “beyond” a postcolonial frame of analysis or to discuss “what more there is to architecture,” they have disregarded a growing body of literature on the history of emotions, senses, and space. As a result, they have remained extremely centred on visual perception and spatial experience. Indeed, little attempt has been made to consider how local people’s senses and feelings could have been engaged by conditions other than visual conditions. Scheer’s concept of the emotional set-up helps to address this shortcoming. It demands an examination not only of the making and remaking of metropolitan forms, but also of the modes of occupation. As Kathleen James-Chakraborty has stated, moreover, one of the new directions for studying colonial architecture engages with the issue of memory to understand “what buildings mean [and meant] to those who


live[d] amidst them."\textsuperscript{18} Yet, scholars of colonial and imperial architecture have rarely gone beyond examining design intentions to understand the cultural histories and memories of objects (and spaces) and to uncover their emotional significance or to address, in James-Chakraborty words, "the public for architecture". As Margrit Pernau has observed, the potential of a space to evoke emotions depends largely on the "specific cultural sensitivity and attentiveness" of the users. Affects occur only when the users can practically appropriate the space.\textsuperscript{19} It is important, therefore, to examine how patients encountered and evaluated spaces.\textsuperscript{20}

In the next section, I discuss the gaining of trust and affection in the medical missions, and I offer a framework for analysing mission hospital buildings. I then turn to examining the CMS hospitals in north-western British India, before introducing – and analysing the development of – the serai hospital, which was a novel hospital design.

2 From Anglican Church Expansion to Practical Christianity

Until the 1870s, Protestant missionary societies seldom sought the talents of medical doctors and whenever they did, their initiatives were short-lived.\textsuperscript{21} They had doubts about the efficacy of medical mission work, and therefore showed a lack of commitment to invest in them. Mission historians have identified two main reasons for this reluctance to invest: one was the "primitive", "unregulated", and "community-based" state of medicine in Europe and North America in the late eighteenth and early nineteenth century, and thus its inefficiency in the colonies. As David Hardiman puts it, "the treatment resorted to by [physicians, surgeons, and apothecaries] was frequently more iatrogenic than curative."\textsuperscript{22} Late eighteenth and early nineteenth century evangelical

\textsuperscript{19} Margrit Pernau, "Space and Emotions: Building to Feel," \textit{History Compass}, 12 (2014), 541–549.
\textsuperscript{21} For example, Abdul Masih (Abdool Messeh), a catechist of the CMS, oversaw medical provision in Agra mission station in 1816–1817; see "Church Missionary Society," \textit{The Missionary Register} 4 (1816), 375; "Reports of Societies," \textit{The Missionary Register} 5 (1817), 425. In 1834 the American Board of Commission for Foreign Mission (ABCFM) sent Dr Peter Parker to China to establish a hospital as the only feasible avenue of access to the Chinese. This initiative eventually led to the establishment of the Medical Missionary Society; see, Michael C. Lazich, "Seeking Souls through the Eyes of the Blind: The Birth of the Medical Missionary Society in Nineteenth-Century China," in Hardiman, \textit{Healing Bodies, Saving Souls}, 59–86.
\textsuperscript{22} Hardiman, "Introduction," 11.
conceptualisations of illness, moreover, depicted “paganism” as a sickness of both mind and body, and therefore had little room for medical doctors. In Britain, even after the Medical Act of 1858 had regulated the qualifications of practitioners in Medicine and Surgery, actions to establish medical missions were slow to emerge. For example, between 1851 and 1870, the CMS recruited seven doctors out of a total of 107 new missionaries and founded only two medical missions.

The 1870s brought new promises, however. The justification, raised by some missionaries, that medical work could purchase friendship or trust from people who would otherwise be “hostile”, and the heightening of philanthropic concerns in the late nineteenth century meant that medical work increasingly came to be viewed as a “benevolent” and “sentimental” practice with a persuasive power. North American missionaries of various denominations were particularly driven by these concerns, as were Scottish doctors, and these two groups took a lead in adopting medical work. Although some Anglican missionaries, such as the Universities’ Mission to Central Africa, remained suspicious of medical work, the CMS had become enthusiastic in their advocacy of such work by the 1890s. In 1858, there were only seven medical missionaries in India and China. This figure rose to twenty-eight in 1882, 140 in 1895, and 280 in 1905. The CMS sent out ten medical missionaries in the 1870s, and twenty-two in the 1880s. By 1904, the Society had seventy-five medical missionaries.

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24 Although the Medical Act formally unified the medical profession in Britain, there were few immediate signs of uniformity up until 1886; see Michael Worboys, Spreading Germs: Disease Theories and Medical Practice in Britain, 1865–1900 (Cambridge, 2000), 20–28.
26 For example, the Members of the Lahore Missionary Conference of 1862 discussed the fact that medical missionaries would prove very valuable “auxiliaries to the direct work of propagating the Gospel, more especially in large cities, among the hill tribes, and in all places, as Cashmere, where medical aid is not available, and where deep prejudice may be removed by their means”; see Report of the Punjab Missionary Conference held at Lahore in December and January, 1862–63 (Lodiana: The American Presbyterian Mission Press, 1863), 109.
29 Ibid., 16.
30 “Our Medical Missions,” The Church Missionary Gleaner 18, no. 213 (1891), 131. The key change occurred in 1891 when the Church Missionary formed the Medical Missionary Auxiliary
working in forty-nine medical missions. Of these forty-nine, nine had been established in north-western British India: in Kashmir (1865), Dera Ghazi Khan (1879), Amritsar (1882), Quetta (1885), Bannu (1894), Peshawar (1898), Dera Ismail Khan (1889), Multan (1899), and Islamabad (1901), each with several branch dispensaries.

Studies of missionaries and their medicine have highlighted medical missionaries’ inability to secure people’s friendship or trust solely through administrating medicine. In certain regions, such as the Belgian Congo, the medical missionaries used coercive techniques. In many other places, however, obtaining trust gained an importance of its own beyond mission medicine’s sensibility— it came to be seen as the fundamental act of missionary business, and even as an essential first step for any given mission. As emerging studies in the history of emotions have emphasised, emotions are not universal, but rather are intertwined in the dynamics of the cultural presence. Thus, it is important not to draw a false equivalence between present configurations of emotion words, including trust and affection, and the stated feelings of missionaries, situated in different places. One should avoid too readily interpreting these terms to imply “pacifying” and “solidifying”, and to assume that the

Committee ( MMA ) with the object of bearing all of the costs of the Society’s medical missions, without any grant money from the General Fund. The Medical Committee undertook the responsibility for providing all new buildings required by the medical missions in 1900; see “The cms Medical Mission Auxiliary – What is it?” Mercy and Truth 1, no. 2 (1897), 28; “Things to be Noted,” Mercy and Truth 4, no. 41 (1900), 98.

“Things to be Noted,” Mercy and Truth 11, no. 131 (1907), 354.


missionaries understood them in a way similar to other colonial actors across time and space. As Rob Boddice states, there is nothing “intrinsic, objective or timeless” about emotion words. To understand the meaning and emotional significance of building trust and affection in the context of medical mission work, it is useful to consider what changed with the introduction of medical work. While missionaries were not allowed to proselytise directly and failed to reach diverse people through Bible sales and distributions and opening schools, they could spend a good deal of time in proximity to indigenous people and visit them at their homes through medical work. Therefore, building trust and affection implies a change in the sensory relationship between missionaries and local people, emerging out of a century of mission work marked by the frustrations and failure to reach a large audience. There were differences in how building trust was understood and practised, depending on the national affiliation of individual missionary organisations, and where they worked. For example, building trust did not carry the same colonial connotations for North American missionaries as it did for British medical missionaries, in particular for the CMS medical missionaries in north-western British India. Moreover, building trust was seen as particularly relevant in the Muslim World, with medical work being considered as the most powerful instrument for attracting people in “Mohammedan cities”. Nevertheless, coming into close contact with indigenous people was imbedded in the medical work of many Protestant missionary organisations.

The motto “healing bodies, saving souls” might be rendered “affecting bodies, saving souls”. This change is interpretive and captures my argument: that is, medical missions should be viewed as emotional set-ups that served to change the sensory relationship between missionaries and local people. Missionaries spent a great deal of time contemplating their own emotions as well as those

36 Boddice emphasised this important point with reference to the terms “happy”, “compassionate” and “pain”; see Boddice, History of Feelings, 19.
37 The missionaries were even met with the throwing of stones according to some mission accounts; see, for example, D. W. Carr, “Progress in Persia,” Mercy and Truth 11, no. 128 (1907), 238.
of their prospective converts. The practical measures that medical missionaries deployed to obtain people’s trust are an important part of this larger history which has recently gained a new impetus due to the growing attention to the role of emotions in the making of history. Studies have gone beyond seeing emotions as limited to the private sphere of missionary family interactions and intimacy, and have shown that we need to investigate emotions if we are to more fully understand colonial missions and colonialism. As I will show in the next two sections of this article, the examination of medical missions as emotional set-ups offers further answers to questions of why certain architectural forms were privileged over others. It also offers some insights into how it actually felt to stay in a mission hospital.

3 The Punjab Model

In 1865 the first medical mission of the CMS was established in Kashmir in a rented house. The missionaries constructed a purpose-built hospital in 1875, which was pulled down and replaced by a new hospital built between 1886 and 1895 “on the pavilion plan system” (Fig. 1) to the design of brothers Arthur and Ernest Neve.

The design of mission hospitals was often left to the care of the medical missionaries themselves. They sometimes consulted other missionaries, sought help from military engineers, or brought their ideas back to Britain for professional help. But, on the whole, the archival materials offer relatively little help


42 “Medical Mission Auxiliary Annual Meeting, May 5, 1898,” Mercy and Truth 2, no. 10 (1898), 134.
in understanding how they designed the hospitals. They could have drawn upon new and approved design criteria that were disseminated through journals and books, if it was possible for them to consult copies of the relevant publications.43 Many of these missionaries had studied and practised medicine in pavilion plan hospitals before joining the mission field and could have also modelled their designs after these hospitals.44 Arthur Never, for example, had worked as a house physician in the Royal Infirmary, Edinburgh, which was considered one of the best pavilion plan hospitals. As stated by Bremner and Nelson, the transfer of European architectural forms overseas in the nineteenth and twentieth centuries, among other things, had as much to do with memory and architectural literature as any formal architectural expertise.45

43 Some mission stations were isolated and hence missionaries had little contact with the outside world. For example, Rev. C. H. Stileman wrote in 1904 that “it is impossible to send from Kerman such plans and estimates for hospital buildings as it is customary to receive in India”; see C. H. Stileman, 7 June 1904, CMS/M/C 2/1 4, no. 54, Cadbury Research Library, Special Collections, University of Birmingham (CRL thereafter); Emily Turner has highlighted this point in her article on the CMS Church Building Abroad; see Emily Turner, “The Church Missionary Society and Architecture in the Mission Field: Evangelical Anglican Perspectives on Church Building Abroad, c. 1850–1900,” Architectural History, 58 (2015), 202; For a discussion concerning connection and isolation in global history, see Ronald Wenzlhuemer, Doing Global History: An Introduction in 6 Concepts (London–New York, 2020), 54–64.

44 For example, Dr W. B. Heywood and P. S. Sturrock finished their medical education at the London hospital; see “Medical Reinforcements, 1897,” Mercy and Truth 1, no. 10 (1897), 228–230.

There were also missionary examples and publications: almost seven years after the construction of the Kashmir hospital was started, the London Society for Promoting Christianity amongst the Jews proposed a scheme for a hospital in Jerusalem, drawn by Arthur Beresford Pite, an English architect. It consisted of four pavilions radiating outwards from a central administrative building.\textsuperscript{46} As this and the Kashmir medical mission were among the first in the Middle East and British India, they could have served as models for other medical missions that were built in subsequent years, especially as their design was disseminated in missionary journals and meetings. The design of the “hospital for Jews” was published in \textit{the Builder} in 1896. The plan of a proposed pavilion plan mission hospital for West Africa, moreover, was published in \textit{Mercy and Truth} in 1899.\textsuperscript{47} However, many CMS mission hospitals in British India, Persia, Palestine, and Egypt did not live up to the principles of the pavilion plan. The “hospital for Jews” acted as a model insofar as it was one of the first buildings in the “Orientalist” style, but not for being one of the first pavilion plan mission hospitals.\textsuperscript{48} Samuel D. Albert compares the layout of the hospital to other national hospitals in Jerusalem, for example, the French Hospital and the German Hospital, stating that it contrasted markedly with all of them and arguing that the hospital for Jews was “representative of the (medical) modernity Britain was attempting to bring to the Holy Land.”\textsuperscript{49} But the hospital contrasted too with many mission hospitals that were constructed afterwards, including the CMS hospital in Nablus.\textsuperscript{50}

The CMS often opposed episcopal oversight and hence was less disciplined and establishmentarian, allowing individual missionaries to follow their own stance on architecture.\textsuperscript{51} Nevertheless, the Society for the Propagation of the

\begin{thebibliography}{99}
\bibitem{Hill1899} “A Memorial to the Late Joseph Hill, Bishop in West Africa,” \textit{Mercy and Truth} 3, no. 27 (1899), 61.
\bibitem{Albert2022} The Orientalist style “is neither a direct copy nor complete invention, but rather a use of forms that were sensitive to and derivative of traditional architectural styles and decorative elements”; see Albert, “Egypt and Mandatory Palestine and Iraq,” 431 and 433.
\end{thebibliography}
Gospel in Foreign Parts (SPG), which was of a decidedly corporate nature and highly regulatory in the recruitment of its applicants, also constructed hospitals with various layouts. To explain the missionaries' approach to hospital design, we need to see beyond the organisational structure of individual missionary societies and consider how they were united for the common purpose of gaining trust and affection. A picture of the diversity of medical missions of various Protestant missionary societies can be gained from the second of a three-volume study Christian Missions and Social Progress: A Sociological Study of Foreign Missions (1899) by James S. Dennis, a member of American Presbyterian Mission in Beirut, and from A. R. Cavalier’s In Northern India (1899). As these volumes show, a more common design was the single (sometimes U-shaped) pavilion. The missionaries also developed hospitals with irregular designs and one-block, two-storey structures.

In north-western British India, the CMS missionaries designed hospitals with diverse layouts. In 1903, Arthur Neve toured the medical missions in north-western British India as the secretary of the Punjab Medical Sub-Conference. Although Neve had designed a pavilion plan hospital in Kashmir, he appraised the design of two hospitals, neither of which was modelled on the pavilion plan. The first was the largest and newest ward at the Dera Ismail Khan hospital, which measured 61 feet in length, 20 feet in width, and 18 feet in height and was “lighted by fourteen windows [some at the ceiling level],

52 As an “official” Church of England Association, the SPG had a great deal of influence on Anglican ecclesiastical architecture in Britain’s empire during the mid-nineteenth century, in such a way that “can be seen to amount for a form of corporatisation”; see G. A. Bremner, “The Corporatisation of Global Anglicanism,” ABE Journal [Online], 2 (2012), https://doi.org/10.4000/abe.357.

53 For an account of SPG medical work, see C. F. Pascoe, Two Hundred Years of the SPG: An Historical Account of the Society for the Propagation of the Gospel in Foreign Parts, 1701–1900 (London, 1931), 816a–818. St. Catherine Hospital, St. Stephen Hospital, and St. Elizabeth Hospital were the three main hospitals of SPG in India. They were designed differently; see, Here and There with the SPG in India (Westminster, 1905), 51 and 55.


55 A sub-conference could only be formed when three of medical missionaries of a Society’s mission (such as the Punjab mission) had passed their second language examination. The responsibility of the sub-conference was to review the progress and financial efficiency of medical missions; see Rules for Medical Sub-Conferences, 4 April 1899, CMS/M/AP 2/1, CRL.

56 Arthur Neve, “Memorandum on the CMS Medical Missions of the Punjab & N.W. Frontier,” CMS/M/C 2/1/4, no. 64, CRL.
and [had] six large doors, two on each side and one at each end” (Fig. 2).\textsuperscript{57} The second ward was the new “eye block” at the Bannu hospital. Neve regarded this ward as “more suitable to adopt as the standard pattern” and called it the “Punjab model”.\textsuperscript{58} It had two wards that were smaller than the ward at the Dera Ismail Khan hospital, measuring 30 feet by 16 feet, lit by windows at the top of the walls on opposite sides, with four opposing doors – two on each side (Fig. 3), while a covered veranda ran along three sides of both blocks.

The fact that Neve opted for the eye block indicates that he might have been familiar with the debates on the health benefits of the so-called block plan; that is, with smaller rooms, as opposed to older pavilion plan wards. The rationale was that smaller rooms were less crowded and noisy, and thus more comfortable and easier to manage.\textsuperscript{59} But neither the new ward at Dera

\textsuperscript{57} Dr Haywood, “The New Hospital at Dera Ismail Khan,” \textit{Mercy and Truth} 7, no. 75 (1923), 81.

\textsuperscript{58} Neve, “Memorandum on the CMS Medical Missions”. Medical missionaries concentrated on the treatment of eye diseases, both because of their high prevalence and because it was a medical skill that they thought local physicians lacked. However, the “eye-block” was not reserved merely for patients with eye diseases. On eye diseases, see David Hardiman, “Christian Therapy: Medical Missionaries and the Adivasis of Western India, 1880–1930,” in Hardiman, \textit{Healing Bodies, Saving Souls}, 143.

\textsuperscript{59} Annemarie Adams, \textit{Medicine by Design: The Architect and the Modern Hospital} (Minneapolis, MN, 2008), 113.
Ismail Khan nor the eye block at Bannu were cross-ventilated. If the hot climatic conditions of the region were the deciding factor, the missionaries could have drawn upon Nightingale’s advice in *Notes on Hospitals*. In Burdett’s book, there were also models of pavilion plan hospitals built in hot and dry regions. Nightingale recommended adding verandas, but advised against minimising the size or number of windows. Her advice that “[e]ach ward should [be] so arranged as to prevent the patient going out or holding communication with persons outside,” was not realised either; both blocks had several points of entry and exit.

The missionaries drew upon “standard plans” that were developed by the Public Work Department of the Government of India (PWD). The initial “frame” of these standard plans was that of a pucca bungalow, transformed in a hospital to admit air and light to the upper volume. The missionaries might have opted for these plans due to the lack of professional architectural

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expertise. As Bremner has observed with regard to churches built in South Asia, they were mostly “rather generic and ‘incorrect’ in character, owing to the input of military engineers.” 64 Examining how the missionaries went about designing these two hospitals, and with whom they consulted regarding their designs, is important and could reveal new information about the PWD planning conventions, previously unknown “experts”, missionaries’ view of and contributions toward tropical architecture and medicine, and their relationship with military engineers. 65 But if we turn our attention to the missionaries’ aim of building trust and affection, other considerations begin to come to the surface. We start to see that the PWD planning conventions could have conformed to the expectations of, for example, a small group of wealthy Indian elites, who themselves happened to live in houses designed after these conventions. The hospitals would make a different impression on these Indian elites than on the Indian servants who worked in these houses. 66 As Gammerl, Nielsen and Pernau state, people bring “culturally and historically specific preconceptions” to an encounter, which “premediate” their behaviour and their “interpretation of the encounter.” 67 Indeed, while there are some merits in examining these buildings as “symbol[s] of Britain’s commercial and military might,” 68 there are also limitations. A focus on building trust and affection, and emotions more broadly, demands turning our attention to the patients and avoiding generalisations about their feelings and attitudes towards these buildings. The new ward at the Dera Ismail Khan hospital and the eye-ward at Bannu could not affect patients in any simple and unequivocal way. They could blend in with their surroundings without the overtones of a public building, or they could have been perceived by some observers as familiar, a fact that might have even influenced missionaries’ decision to opt for the PWD conventions.

Cathy Keys has examined the Australian Inland Mission’s cottage hospital and has shown that “the intended design use of verandas for cool, night time sleeping for both patients and resident nursing sisters” contrasted significantly with the “veranda movement” in Europe, which provided tuberculosis patients

68 Desai and Desai, “Origin and indigenisation of the Imperial bungalow in India.”
access to sunlight and fresh air. As she shows, the hospital was designed with ward doors and verandas wide enough to allow beds to be easily taken out whenever desired to deal with “periods of oppressive heat”. In fact, according to Jiat-Hwee Chang and Anthony D. King, veranda is a term and structure that is “symbolic of the colonial tropical lifestyle.” The CMS archival sources show patients sitting and sleeping on verandas too. But they also illustrate that patients are surrounded by their family and friends, and this communal aspect is another important factor. The rationale behind the provision of wards with more than one route of entry and exit also owed to the fact that patients’ families and friends were permitted to come and go freely within the walls of the hospitals, and multiple doors facilitated direct interactions between patients and their family members. Indeed, before appraising the design of wards at Dera Ismail Khan and Bannu, Neve stated that “[i]t is difficult to standardize wards,” not merely due to the climatic conditions or building materials locally available, but also because of certain “special needs”. Although he did not further expand on what these special needs could have been, there is no doubt that making provisions for patients’ families and friends was one of them. The missionaries even developed a rather novel approach to the design of wards for the specific purpose of housing patients along with their close associates. This design gained currency with the construction of the Peshawar hospital. It is to this type that we now turn.

4 The Serai System

Prior to the construction of the purpose-built hospital at Peshawar, three caravanserais (traditionally designed to house caravans, built along caravan routes in the Middle East and Central Asia) were used by missionaries to serve as the hospital (Fig. 4). One of these caravanserais was used for traveller patients who came to the hospital from beyond the frontier with their families and friends. Instead of admitting the patient alone, the missionaries placed

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70 Chang and King, “Towards a Genealogy of Tropical Architecture,” 286.
71 Neve, “Memorandum on the CMS Medical Missions.”
72 The missionaries also developed another novel design known as “purdah hospital”. I examine this layout in my forthcoming monograph, Emotion, Mission, Architecture: Building Hospitals in Persia and British India, 1865–1914 (Edinburgh, 2022).
one room of the serai at the disposal of the entire family. Graham Mooney and Jonathan Reinarz have shed light on how “any discussion about using the restriction of visiting to non-infectious disease hospitals [in England] as a tool of infection control by the medical staff is thrown into dispute – if not revealed as grossly hypocritical – when class distinctions are considered.” At Peshawar, by contrast, letters and missionaries’ reports reveal that family, which was understood to extend beyond relatives of varying closeness and friends to include

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neighbours and servants, were permitted inside the walls of a mission hospital regardless of a patient’s class status. Their admittance meant bringing together different age groups and different socio-economic classes into the hospital. Such was the practical appeal of this arrangement that it was replicated within the new hospital.

The construction of the new Peshawar hospital began in 1904. It was planned by Dr Arthur Lankester and a local builder by the name of Miran Baksh. After preparing the sketch plans, Lankester and Miran Baksh drew up the plans to scale under the “close supervision and help of experienced engineer officers” of the “Military Works Department.” Lankester and Miran Baksh also superintended the construction of the buildings. The hospital was opened in February 1906, although some buildings were added in subsequent years.

The hospital was constructed on terraced land, which was surmounted by a mausoleum of considerable size known as the “Said Khan’s Tower”. The missionaries made the decision to build the hospital “in stages” in order to take “the fullest advantage” of the “natural features of the site”. The out-patient department was built on the lower slope, and on the upper slope were two in-patient blocks: one was a two-storey U-shaped structure consisting of an operating theatre, some offices, and two large wards for sixteen beds. The second in-patient building was called the “James Serai”, where patients could stay with their families and friends. It consisted of a set of thirty identical rooms designed around three sides of a courtyard, each having only one door (Fig. 5).

While the Peshawar hospital is a notable exemplar, it is not easy to identify precisely when and where the idea of the serai system was developed, and whether it was an invention of the CMS’s missionaries. It appears that initially it was developed to address the needs of women who were not willing to remain in the hospitals without their relatives. Four such family rooms were built at Kashmir, each incorporating a little yard. Maxwell reported in 1876 that “[i]t is found to be best to give the women separate huts, as they

77 In a letter dated 17 August 1904, Lankester stated that he had spent “a great deal of careful thought on the plans ...” Miran Baksh, furthermore, was not just a passive local associate implementing architectural input because it is clear that he designed and added ornamentations; see Arthur Lankester, 17 August 1904. CMS/M/C 2/1/4, no. 133, C.R.L.
78 See Lankester’s memoir, which is published by his grandson; see Arthur Lankester, Stepping Stones: A Doctor’s Memories (London? 2013), 73, 92.
79 Ibid., 73.
81 Arthur Lankester, 24 August 1904. CMS/M/C 2/1/4, no. 135, C.R.L.
often bring their families with them.”83 The hospitals of the Church of England Zenana Missionary Society (CEZMS) at Quetta and Peshawar also had family wards “enabling many women who would not leave their husbands to go into an ordinary ward to be treated.”84 Moreover, Dr Theodore Pennell sent plans in 1904 to add “four houses” to the Bannu hospital to accommodate patients who came from some distant place, usually across the frontier with their family members.85 It appears that after the construction of the Peshawar hospital, the “serai system” or the system of “family wards” came to be viewed as an architectural solution to the practical problem of accommodating patients’ family members who had nowhere else to stay.

Lankester described the James Serai in 1906 as “a feature borrowed from the old hospital in the city.”86 This statement is significant: the serai hospital was characterised not with reference to hospital planning in Britain that was incorporated into the traditional building practices of the region. Far from being a

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84 “What Others are Doing and Saying,” *Mercy and Truth* 58, no. 5 (1901), 223.
85 Copy of letter from Dr T. L. Pennell dated 10 May 1904, group 2, no. 257, CMS/M/FL 1/I 2/4, CRL.
result of an interface between indigenous and imported ways of building, it arose rather from an indigenous type of architecture that had been associated with the region for centuries. One might assume that the missionaries' decision to draw on the caravanserai architecture conformed to the vision of Henry Venn, the secretary of the CMS. Venn put in place a mission strategy in the middle decades of the nineteenth century that advocated for the integration of local cultural traditions as the best method of missionary work. His aim was to make Christianity responsive to converts' needs and thus accessible and relevant. Venn's ideas, no matter how difficult they proved to be in practice, influenced the CMS's stance on architecture for some time after his retirement and death. But they were eventually jettisoned in 1901, after which the CMS envisaged a "territorial" approach with reduced local independence. Thus, the Peshawar hospital was designed without Venn's vision in mind. The serai hospital was not a product of an "experiment" either; that is, a desire to test new ideas impossible to implement in Britain. Rather than being in favour of the presence of close associates in the hospitals, the missionaries tolerated them to increase the number of attendees. In other words, permitting family members inside the walls of a mission hospital was a strategy for bringing in larger numbers of people, and its effectiveness in doing so was remarked by missionaries of various denominations in almost every mission field. In

87 For a study of the interface between indigenous and imported ways of building, see Crinson, Empire Building.
89 Williams, Ideals of the Self-Governing Church, 75–80.
91 This Memorandum resulted from the 1899 centenary systematic review of all the CMS policy; see Kenneth John Trace Farrimond, "The Policy of the Church Missionary Society Concerning the Development of Self-Governing Indigenous Churches, 1900–1942" (PhD diss., University of Leeds, 2003), 51–90; see also Williams, Ideals of the Self-Governing Church, 263; Kevin Ward, "The Legacy of Eugene Stock," International Bulletin of Missionary Research, 23 (1999), 76.
92 This line of inquiry discusses how new ideas were often adopted more quickly beyond Europe due to the lack of monitoring. For one of the earliest studies in this regard, see Gwendolyn Wright, The Politics of Design in French Colonial Urbanism (Chicago, IL, 1991).
north-western British India, missionaries recorded that the numbers of family members sometimes equalled that of the patients, and most importantly, they developed an architectural solution to accommodating family members.\textsuperscript{94} In designing the seria hospital, the missionaries suspended their own medical ideas about the curbing of infectious diseases in order to cultivate trust or friendship. The seria system complicates the dynamic regarding how far missionaries (consciously or otherwise) imposed dominant forms of Western culture on indigenous people.

Indeed, visits from family and friends were increasingly restricted in Britain from the 1880s onwards, due to deep concerns about the state of hospital hygiene. There were fears that guests might introduce dirt, and hence infection. Guests were either not allowed to visit at all or they could visit only during specific hours.\textsuperscript{95} Missionaries also observed that the presence of close associates could be irksome; but that this arrangement could “disarm [patients’] suspicions, whilst at the same time bring[ing] very many more individuals under the influence of our teaching,” as was asserted in a pamphlet about the hospital.\textsuperscript{96} This quote shows that the prime concern of missionaries was the number of patients from beyond the frontier, and the opportunity to engage with as many people and their family members as possible, even if that meant they had to direct their attention away from some of the medical concerns of the time. As a 1908 report on the hospital reveals, missionaries concerned themselves about how the hospital architecture would be perceived by the patients: “How would the people regard the new hospital?” wrote Lankester. “[T]he new hospital is popular,” he contended, while reminding his readers that “they [missionaries] were careful to not carry their foreign ideas too far.” By way of an example, he referred to the James Serai: “in the Serai portion of our hospital especially, our rough trans-frontier patients, with their families, can come and live under conditions not remotely different from those at their homes.”\textsuperscript{97} This report illustrates that the design of the James Serai involved thinking about the requirements of certain patients and how they could preserve, to some degree, their own way of living while in the hospital, because there were fears that

\textsuperscript{94} For example, according to a letter written by Lankester’s wife, there were thirty-eight traveller patients in the Peshawar hospital accompanied by thirty-two relations on 15 March 1907; see “Punjab and Sindh Mission,” \textit{Mercy and Truth} 11, no. 130 (1907), 328.


\textsuperscript{96} \textit{Peshawar Medical Missions}, 1904, CMS/M/FL 1/L 7, CRL.

\textsuperscript{97} A Frontier Hospital: Peshawar Medical Mission of the Church Missionary Society, CMS/ACC 7/O10, CRL.
they would otherwise avoid coming to, and staying in, the hospital. With family members present, patients did not need to abandon their family surroundings. Even if they had to interact with missionaries, who expressed and practised their emotions in unfamiliar ways, they could seek comfort in the presence of familiar voices, smells, and touch.

A photograph of the James Serai (Fig. 6) is worthy of consideration, especially if compared with a painting of a caravanserai in Peshawar (Fig. 7). As much as this painting might have been refined to illustrate the supposedly crowded and “unsanitary” status of a caravanserai, it points to the ways in which the James Serai echoed a caravanserai not only in planning, but also in the ways it was inhabited by people. The James Serai also mimicked the adapted caravanserais in terms of their construction methods and materiality (as far as photographs reveal), yet understanding how patients perceived the Serai building requires an examination of various factors, including their past experiences, occupation, gender, age, and so on. The emotional significance of a caravanserai could lapse because of a change to the building’s function. Meanwhile, patients who had been to the three adapted caravansaries were already aware of the changed circumstances and might have been able to retain and attach certain meanings to the new serai hospital. Certainly though, the serai hospital disrupted the discursive split between “civilised” and “uncivilised”, or “ideal” and “decadent” family, in missionary writing.98 Although the

98 Several historians, such as Patricia Grimshaw and Esme Cleall, have examined the importance of “family,” broadly defined, for missionaries; see Patricia Grimshaw, “Faith,
CMS missionaries exhibited a lack of respect for the indigenous families, they hoped to bring family members under the locus of their project of “intervention” in this way.

In his speech at the annual meeting of the Medical Mission Auxiliary in 1912, Lankester pointed to the serai hospital as one of the “needs of the N. W. Frontier,” indicating that by this time the design of hospitals according to the caravanserai model had become a system of hospital architecture in north-western British India. Besides highlighting the regional importance

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The hospitals at Quetta, Bannu, and Multan all had a serai building or family wards; see “Items: Home and Foreign,” Mercy and Truth 13, no. 146 (1909), 38; R. J. H. Cox, 2 June 1912, CMS/M/C2 1/10 1912-1914, no. 110, CRL.
of the serai hospital, Lankester’s speech brought this type of hospital planning to the further attention of other missionaries, having already talked about this system in his 1905 speech at the annual meeting of the MMA.101 Moreover, the Peshawar medical mission was sometimes visited by other missionaries while touring mission stations; these tours may also have contributed to the popularity of the serai type.102 Lankester claimed in his 1905 speech that the serai system had become known “all over the country [Britain].”103 Whether true or not, the “Indian block” that was added to the Mengo hospital in Uganda in 1915, testifies that the serai hospital had at least become known in other mission fields. This block, which was built for the Sikhs who remained behind having been recruited for the development of the Ugandan Railway project in the later years of the nineteenth century,104 consisted of several small rooms but did not have a courtyard.

The Indian block can serve as an important case study for understanding missionaries’ stance on “Indian colonisation” of East Africa. An examination of the events that led to the construction of this block might also reveal important new links between British India and East Africa.105 These considerations, however, do not explain why the missionaries adopted this model instead of other types. The model of the serai hospital was also copied in West Africa, where three separate buildings were set aside in the Gierku medical mission in Hausaland to accommodate a patient’s “whole family and belongings.”106 According to the descriptions of these buildings, it was not only a patient’s family and friends that were taken in but also their “fowls and goats”107 and “cooking pots and primus stove.”108 Ms. Lyons of the Mengo medical mission complained in 1928 that “there is scarcely room for the doctor when he comes to make an examination.”109 Her complaint shows once again that the invention of the serai hospital was not an experiment. The missionaries suspended their own judgements, for example, about measures to limit the spread of infections, in favour of facilitating certain practices to meet patients’ needs,

102 See, for example, Cavalier, In Northern India.
105 Metcalf, Imperial Connections, 165–203.
107 Ibid.
109 Ibid.
and hence to attract more patients. Patients’ arrival with their family members and belongings was not a form of transgression on their part but was rather in complete conformity with the expectations inherent in a serai building. The serai hospital can reveal further information – beyond questions about sanitary concerns, climatic conditions, and buildings’ appearance – as to why the pavilion plan was not always privileged. The serai hospital was a strategy for gaining patients’ trust or affection – a way to draw people in for missionaries as well as medical interventions.

5 Conclusions

Hospital architecture in Britain and other parts of Europe, as well as in North America, underwent a radical transformation in the second half of the nineteenth century, when most of the new and rebuilt hospitals conformed to one basic plan known as the pavilion plan. Examples of pavilion plan hospitals could also be found in some parts of colonial territories. Nevertheless, the long-standing assumption that the pavilion plan became an international standard is somewhat misleading. This assumption has been based on the analysis of a few state and military hospitals, whereas indigenous people in many parts of colonial territories encountered Western biomedical services for the first time in mission hospitals. By focusing on mission hospitals, we can better appreciate the variety and complexity of hospital architecture in the late nineteenth and early twentieth centuries. Indeed, mission hospitals are an important lens through which a fuller global history of hospital architecture could be written.

The article examined several case hospitals built by the Church Missionary Society in north-western British India. While some mission hospitals adhered to pavilion plan models, others followed distinct plans known as the Punjab model and the serai hospital or the serai system. Having gained currency with the construction of the Peshawar hospital, the serai system, in time, became a model of hospital architecture in north-western British India. The serai hospital was neither an experiment nor was it a result of an interface between indigenous and imported ways of building. It was a strategy for gaining people’s trust and friendship, that was reproduced and implemented outside north-western British India as well.

Overall, this article suggested a framework for the analysis of the architecture of medical missions which goes beyond the postcolonial/imperial perspective. An examination of the role of local actors, the lack of professional architectural expertise, and the need for community segregation have already
challenged the postcolonial perspective. But this article considered the importance of emotions and feelings. This approach has shown that the medical missions were established to gain local people’s trust and affection, a strategy that was less about pacifying the patients and more about coming into close contact with them; they ought to be analysed as emotional set-ups.

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