

Building the First Christian Church for the Shanghai Expatriate Community: Trinity Church, 1847–62

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ABSTRACT

Trinity Church, built in the British concession at Shanghai in 1847–48, was the first Christian church erected for the foreign community there. Although it was an important centre of worship for that community, within twenty years it had collapsed and been demolished; it was replaced by the current church, erected to designs by George Gilbert Scott between 1866 and 1869, since when the original church has been largely forgotten. However, the failures in construction that led to its demolition are instructive. Drawing on the transnational knowledge network of the British empire, especially the experience of the existing British settlements at Hong Kong and Canton (Guangzhou) a thousand miles to the south, the projectors of the building attempted to combine western and Chinese constructional traditions and practices. The colonists believed they were educating the workforce in the (purportedly superior) methods of the west, but they succeeded only in producing a constructional hybrid, with disastrous consequences. As a work of construction, the first Trinity Church reveals the problematic nature of building production in early treaty-port era Shanghai, while as a cultural construct it stands as a failed example of the so-called pedagogy of imperialism.

Despite its importance in the history of colonial Shanghai, the first Trinity Church, dating from the 1840s and 1850s, has hitherto remained largely unexamined. Its successor, the current Trinity Church (built 1866–69), has been mentioned repeatedly in works relating to George Gilbert Scott, but little has been written about the building that it replaced.¹ Indeed, the first Trinity Church is mentioned only in passing, if at all, in works relating to modern architectural history in Shanghai and China, and this article is thus the first attempt to provide a proper account.² The story of the church's construction is worth telling for what it reveals, not least about the attitudes of the time, notions of hybridity and the patronising ideals of what has been described as the 'pedagogy of imperialism'.³

The original documents relating to the project, including drawings, letters and building committee minutes, do not survive, but all the meetings relating to the church were well documented and recorded in the minutes of the meetings and these were published at the time, in full, in local newspapers, chiefly the *North-China Herald*.⁴ These, together with other surviving sources, allow us to reconstruct in considerable detail the

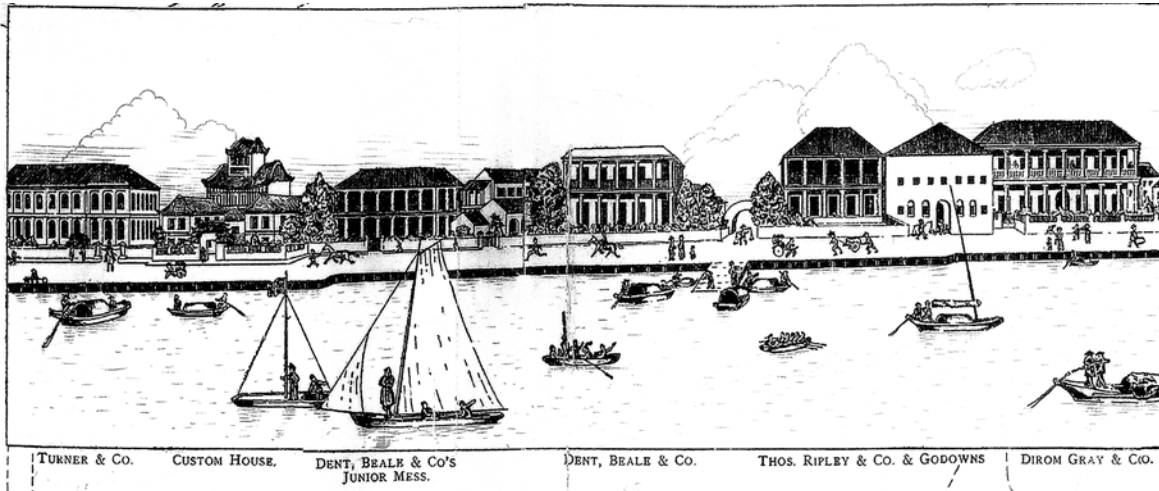
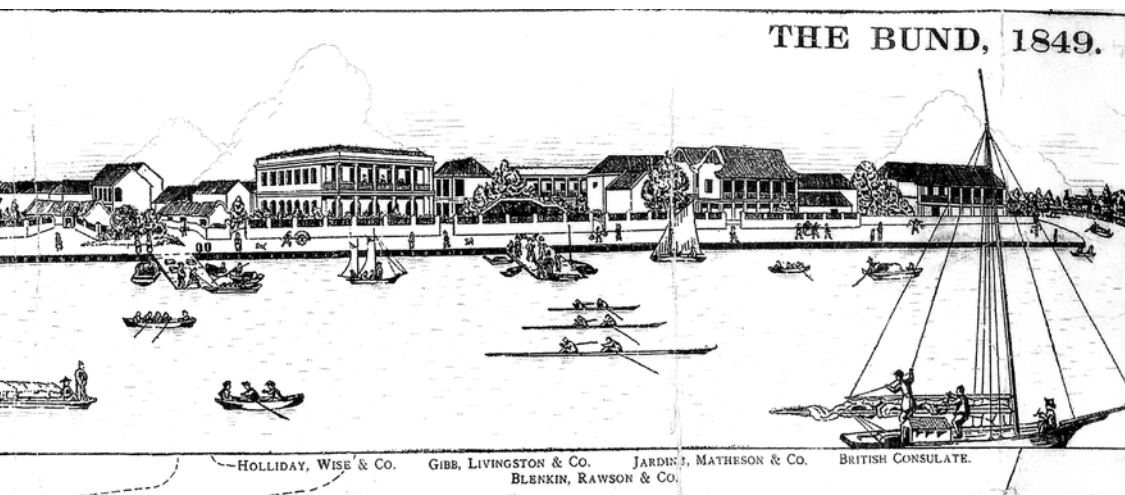


Fig. 1. Major buildings on the Shanghai Bund in 1849, drawing after a painting engraved as part of Ground Plan of the Foreign Settlement in Shanghai, 1855

building of the first Trinity Church in 1847 and the subsequent repairs, as well as the problems that led to its demolition in 1862.

THE ARRIVAL OF THE ENGLISH-SPEAKING COMMUNITY, 1843–47

The background to the foundation of Shanghai as a 'treaty port' in 1843 following the first opium war (Anglo-Chinese war), in which northern China was opened up for Anglo-French colonialism, has been told many times.⁵ Following the signing of the treaty of Nanking in 1842, Shanghai quickly became 'one of the principal places of intercourse between the people of China and Christendom'.⁶ The Shanghai outpost of the London Missionary Society was opened on 5 November 1843 and the Rev. W. H. Medhurst arrived in Shanghai shortly afterwards, on 24 December.⁷ Initially, the English-speaking community relied on Medhurst to provide all religious support until representatives from other denominations, both English and American, began to arrive in Shanghai. The Rev. Thomas McClatchie from the Church of England Society arrived on 11 April 1845, with William Jones Boone, an American missionary from the Protestant Episcopal Church Mission, arriving a couple of months later in June.⁸ At first, services took place in the British consulate, which leased a group of traditional houses in a 'very well situated' part of the Chinese city, on Se Yaou Kea Street, described as 'with a northern and southern aspect consisting of four buildings that contain 52 upper and lower rooms'.⁹ The local papers described how 'these services were maintained by the Missionaries alternately and gratuitously; and the devotional exercises were conducted chiefly according to the ritual of the Church of England'.¹⁰ Services for foreigners were sometimes also conducted by American and English clergy in the traditional house that Boone rented at Hongkew, a suburb of Shanghai's Chinese city.¹¹



According to Elijah Coleman Bridgman, the first American Protestant Christian missionary appointed to China, there were already three foreign missions in Shanghai by 1847, and nearly all the mission families lived in traditional houses within the Chinese city or in the suburbs in their early days. No doubt some of these buildings were badly constructed, but there was a clear wish to erect structures that were comparable to those the expatriates had back home. In line with colonialist views on non-European culture and society, local buildings were generally seen as inferior.¹² Bridgman wrote:

Until August 1846, the mission families occupied native houses in the eastern and southern suburbs of the city. In some very essential particulars, all native houses in China are so badly constructed and so unfavorably situated, that few of them can be occupied as residences by Europeans without more or less damage to health. Personal observation and experience enable me to speak most confidently in this matter. Acting on this view of the case, the missionaries sought for sites whereon to erect houses for themselves.¹³

The opportunity to build came in November 1845, when land regulations were signed to secure a site for the foreigners to rent plots and erect their own houses. Once the delimitation of the consular boundary of the British settlement had been established, an informal colony with British extraterritorial jurisdiction was created.¹⁴ Whether expatriates were constructing houses inside or outside the boundary, the style of the buildings was a major issue. In 1846, the mission families of the London Missionary Society built some characteristically European-style houses with front verandahs in a lot situated within the bounds of the consular limits, but the brick chapel they built for the Chinese within the walls of the old city near the principal temple, was built in a local vernacular style.¹⁵ For the hospital they built for the Chinese in 1846, the lease issued by the Shanghai taotai (local official) explicitly stated that, because the site was

far away from the foreign concession, it must be in the local style to avoid drawing undue attention.¹⁶ This was unusual. Thomas Kingsmill, a British civil engineer who had arrived in Shanghai in 1862, observed:

The new-comers soon set themselves to run up houses on the site, but their ideas were borrowed from the South. There the old factories at Canton and the houses about Macao, were the best specimens of architectural talent available; native workmen were imported and a few houses, all of which have seemingly disappeared, were run up rather than built. The main requirement of a house in China was then supposed to be a wide verandah with round brick pillars running round, or at least on three sides, and this was the type generally adopted. In some cases, architectural aid was procured from the Southern colony, but the greater number of the houses were of the type referred to.¹⁷

The clear implication was that new buildings for the use of expatriates should demonstrate their difference from local, indigenous architecture. The answer was the importation of colonial building practices used elsewhere. As shown in a view of the Shanghai Bund from 1849, buildings with verandahs typical in other parts of Britain's empire, especially India, were widely used in Shanghai (Fig. 1).¹⁸ Moreover, the construction system used for the so-called Thirteen Factories in pre-treaty Canton (1757–1842) was carried over into early treaty-port Shanghai.¹⁹ Three of Shanghai's first mercantile buildings — for Jardine, Matheson & Co., Dent, Beale & Co. and Russell & Co. — were built by Chop Dollar, a Cantonese builder who had moved from the south and quickly became the leading contractor in Shanghai.²⁰ This is indicative of the architectural networks that operated across the broader British imperial system, with construction knowledge and practice disseminated regionally across colonies and settlements.

The British consulate was built in 1846 on rented land on the Bund at Li's Ground (Lijiachang), under the first British consul, George Balfour, to a design by John Hetherington (1801–48). Later described as 'the first British Architect in Shanghai', Hetherington had no formal background in architecture.²¹ He had arrived in Shanghai in 1844 and by 1846 had become a partner in Wolcott, Bates & Co., a tea and silk trading company, but two years later he died there of fever.²² The consulate was first occupied by the second British consul, Rutherford Alcock, who took up residence on 21 July 1849.²³ Records show there was a little chapel in this consulate and a Christmas service was held there in 1847.²⁴ Hetherington and the consulate were the exception. When faced with new or important building types, British settlers in Shanghai generally sought professional support from outside, with Hong Kong, as the only British crown colony in China (established in 1843), acting as the transit point for architectural expertise between the broader British empire and the new treaty port cities. The first Trinity Church provides a useful example of how this expertise was drawn on. As the first church for Shanghai's English-speaking community, its form was considered particularly important.²⁵

By 1847, the number of residents from the United Kingdom and United States had greatly increased, with 107 English-speaking foreigners listed as living in Shanghai.²⁶ On 6 April 1847, a public meeting was held at the British consulate to discuss the urgent need to erect a church and to appoint and pay for a chaplain, so that public worship could be conducted 'solely by ministers episcopally ordained'.²⁷ A journal at the time described

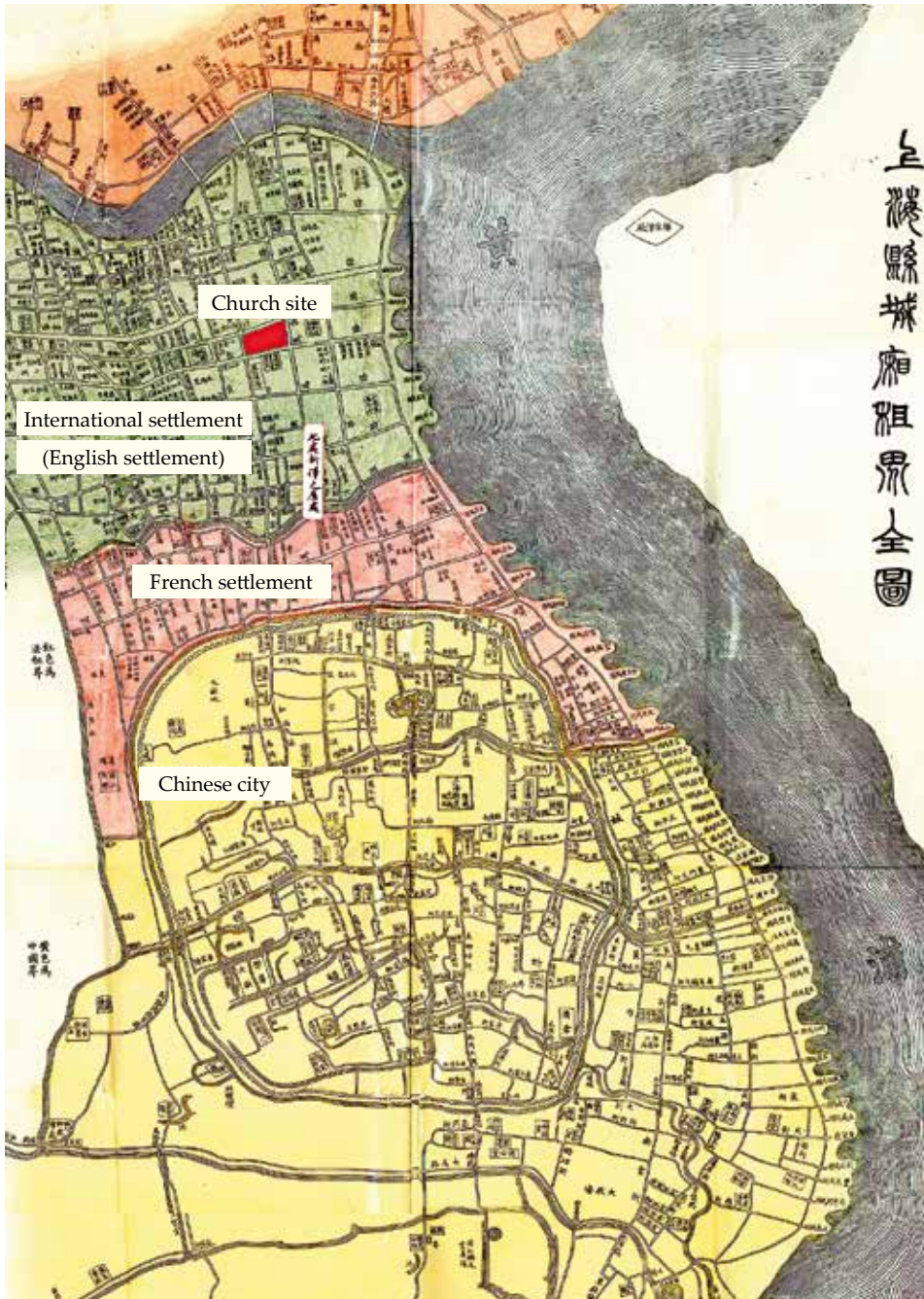


Fig. 2. Map of Shanghai in 1884 (Shanghai Xian Chengxiang Zujie Quantu — a revision by Dianshizhai of a map originally drawn by Yucang Xu in 1875) with annotations by the authors showing the concession areas and site of Trinity Church (Shanghai Library)

how this was so that the British and American missionaries could give their attention 'as undividedly as possible to the poor heathen (Chinese), for whose evangelization they had been set apart'.²⁸ Rutherford Alcock chaired the meeting, which nineteen others attended. The meeting adopted William Jones Boone's suggestion of building a church by loans to be repaid with the proceeds of the sale of pews, and agreed that the minister should also be supported from annual assessments on the same.²⁹ Thomas Chay Beale, a leading Scottish merchant and partner in the powerful China trading firm Dent, Beale & Co., offered a plot of land at a nominal price for the establishment of the church. This site was in the heart of the English settlement and occupied an entire city block between Hankow Road and Hangchow Road running east–west and Honan Road and Kiangsi Road running north–south (Fig. 2).

The financing of public building construction at this time in Shanghai came entirely from the local community, without any assistance from the British government. This contrasts with what happened in Hong Kong, where as early as 1844 the British government provided assistance in the construction of St John's Cathedral.³⁰ In the case of Trinity Church, this financial stricture changed only after ownership of both the building and the land on which it sat came fully under the control of the British community in Shanghai in August 1848. The need to finance the church initially from local resources proved problematic, affecting everything that followed. This first meeting decided that the new church should contain sixty or more pews capable of accommodating at least 300 people, and that it should cost no more than \$6000 (Shanghai dollars, approximately £2000), and that the parsonage should cost no more than \$4000.³¹ The costs were supposed to be covered by selling fifty pews (250 seats) at \$200 each (\$40 per seat), with the remaining ten pews set apart as free seating. To secure a fund for the maintenance of a minister, each pew sold would be liable for an annual fee of \$5 to cover the salary of the minister.

BUILDING THE FIRST CHURCH, 1847–48

Two committees were formed to take the project forward. The first was the building committee, consisting of William P. Pierce, Thomas C. Beale, Charles Shaw and William Jones Boone, which was charged with procuring the building lot, building the church and parsonage, and selecting six vestrymen from among the pew-holders to manage the church. The second was the corresponding committee, consisting of Boone, Thomas McClatchie, C. Empson and Rutherford Alcock, whose responsibilities included writing to the secretary of the Church Missionary Society to procure a Church of England clergyman. Boone (1811–64) was the only person who was on both committees, showing the importance of his role. The pew-holders (later called subscribers) were kept informed of the progress at meetings held for the purpose, which also allowed them to have a say in the proceedings. It was the minutes of these and all subsequent meetings that were published in full in the local press.

The importance of the church as a symbol of expatriate colonial identity is evident in the rhetoric of these meetings. The church was to be built to a high standard, in a European style, to distinguish it from both the existing vernacular chapel and the hospital built for the Chinese. While Trinity Church was expected to cost \$6000 for 300



Fig. 3. View showing the Anglican church in Canton (Guangzhou), built in 1847, Chinese gouache on paper, c. 1848–56 (Peabody Essex Museum)

seats, the existing local vernacular brick chapel built by London Missionary Society at a cost of \$2000 was able to accommodate 400–500 Chinese.³² This highlights that Christian congregations in Shanghai were segregated along racial lines, with the new church clearly seen to be better than the one already constructed for locals.³³

To achieve this required a skilled architect. The committee did not give the job to Hetherington, but instead approached George Strachan (1821–93), a young man then working in the surveyor general's department in Hong Kong as an acting clerk of works and architect.³⁴ Strachan had emigrated from Edinburgh to Macao in about 1841, and in 1844 he was already working as draughtsman for the design and construction of Government House under Alexander Thomas Gordon, the Hong Kong surveyor general. He was involved in revising Philip Hardwick's design for St John's Cathedral, Hong Kong, in 1844.³⁵ In 1845, he appeared in a government record as 'architect of Victoria, Hong Kong'.³⁶ He set up his own architectural practice in Hong Kong in 1846.³⁷

There are two possible reasons for the choice of Strachan. One is that the British consul in Shanghai asked the British colonial government in Hong Kong to suggest a suitable architect for the project. Strachan's work on St John's would have made him an obvious candidate. Alternatively, Boone may have known Strachan, as both men were in Macao in 1841 and in Hong Kong in 1844. At the time of his commission, Strachan had never been to Shanghai and was working remotely. It was only in 1849, following the completion of the first Trinity Church, that he moved from Hong Kong to

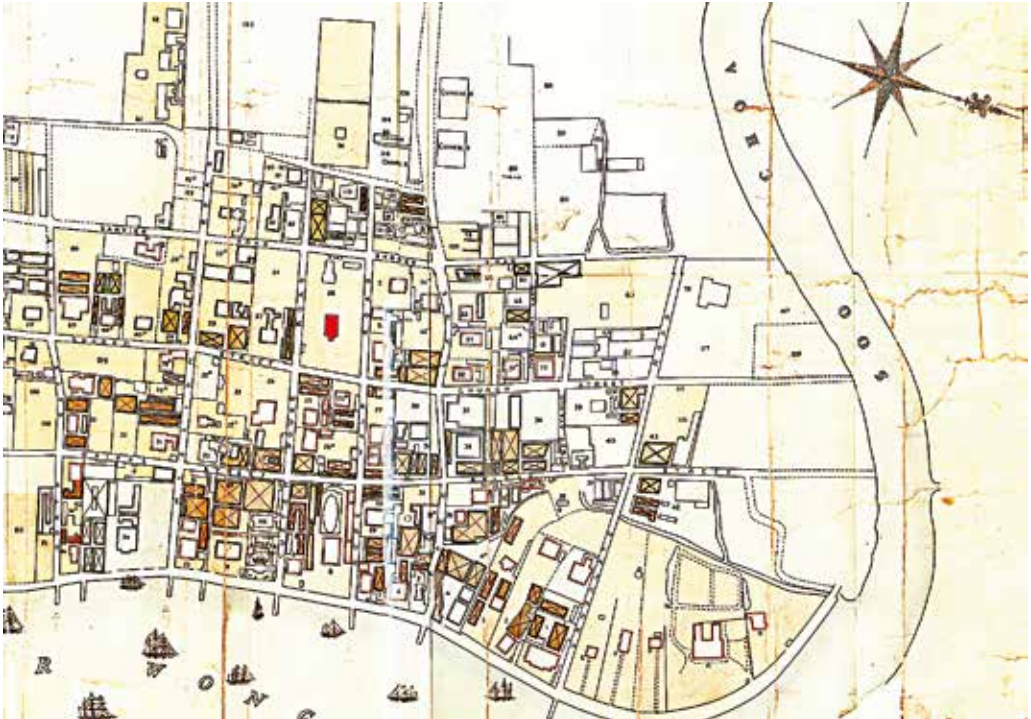


Fig. 4. *Detail of Ground Plan of the Foreign Settlement in Shanghai, 1855, showing the location of Trinity Church (north to right)*

Shanghai to seek more design commissions, becoming known as ‘the first architect by profession’ in Shanghai — a title that, as we have seen, was somewhat loosely applied.³⁸ Strachan’s transfer to Shanghai is indicative of the attraction of the new treaty port for building technicians from other colonies, with their arrival further promoting the professionalisation of architecture there.

Nonetheless, remote design was a reasonably common practice for the production of important buildings in new colonies, although it was usual for a resident architect or appointed clerk of works (who himself might be sent from Britain) to oversee construction. It is not clear why a clerk of works or supervising architect was not appointed in this case. It may simply have been to do with a dearth of local candidates. Whatever the reason, the lack of skilled oversight of the works caused huge problems.

The first problem to arise was a deficiency of knowledge concerning local conditions. As an architect based nearly a thousand miles from Shanghai and one who had apparently never been there, Strachan lacked understanding of the local climate, the site, available materials and skilled labour, as well as associated costs. He was thus not able to provide reliable estimates or a suitable design. Lack of face-to-face communication led to fundamental problems in understanding the brief. For instance, Strachan seems to have failed to grasp the basic finances of the scheme and the importance of the

number of pews. His design did not even contain enough seats: measuring 80 ft by 40 ft, it provided seats for only 216, far fewer than the 300 required.³⁹

Matters were complicated further by disagreements as to the exact operation of the church. The British wanted the church to be 'for the Foreign Community residing at Shanghai' and 'for the worship of Almighty God according to the forms of worship and discipline of the Church of England'.⁴⁰ But as an American missionary, Boone wanted the new church to be established on a 'free church' basis, unconnected with notions of establishment, either Scottish or English.⁴¹ Notwithstanding this fundamental misalignment, at the end of May 1847 a contract was made (with an unknown contractor) to complete the church in November 1847 for \$6500.⁴² On 6 June 1847, Boone laid the cornerstone of the new church and began to superintend its building personally.⁴³ Ceremonies for laying foundation stones were often lavish affairs, but only four or five people were present on this occasion and they later grumbled about the absence of the British consul. The consul, for his part, was insulted not to have been invited to lay the stone or even asked to attend as a spectator, and subsequently challenged Boone's authority to have laid it. All this is revealing of the tensions and hierarchies inherent in this small foreign community.⁴⁴

No drawings of Strachan's design survive, so it is only possible to reconstruct it from later topographical views and from descriptions. What we do know is that Strachan produced a simple design with gothic details and a tower.⁴⁵ It is interesting to note that his design for Trinity is very similar to the Anglican church that was built in 1847 in front of the foreign trade factories in Canton (Guangzhou), a hundred miles upriver from Hong Kong, following the riot there in 1846 (Fig. 3).⁴⁶ Although the architect for the church in Canton has not been identified, it might also have been designed by a British architect from Hong Kong, possibly even by Strachan.

The construction of a gothic church in Shanghai was understandably difficult as it had to rely on local Chinese builders who were completely unfamiliar with western construction techniques. This was to change over the ensuing decades, but in the 1840s, as would become all too clear, the local workforce had no understanding of western practices or expectations. As Charles Taylor, an American medical missionary who had experience in building houses in Shanghai in 1850, wrote: 'the native workmen are unacquainted with our mode of building, they require superintendence and direction at every step'.⁴⁷ There is a clear implication here that it was the duty of the expatriates to teach and guide the locals, and there was certainly no suggestion that any project might start by understanding why local building techniques were employed, or with any attempt to adapt or improve on them. Local builders were expected to learn what were considered 'superior' western methods of construction, and to be 'improved' by becoming familiar with western styles. This patronising stance was to have disastrous consequences in the case of Strachan and Trinity Church.

As was usually the case, a considerable amount of decision-making took place on the construction site and, because he was still in Hong Kong, Strachan had no part in it. Without a superintending architect or clerk of works on site, most of the supervision and decision-making was left in the hands of Chinese contractors, or to the committee consisting of foreign missionaries or businessmen with (presumably) little or no experience in building.⁴⁸ Under such conditions, it was virtually impossible to

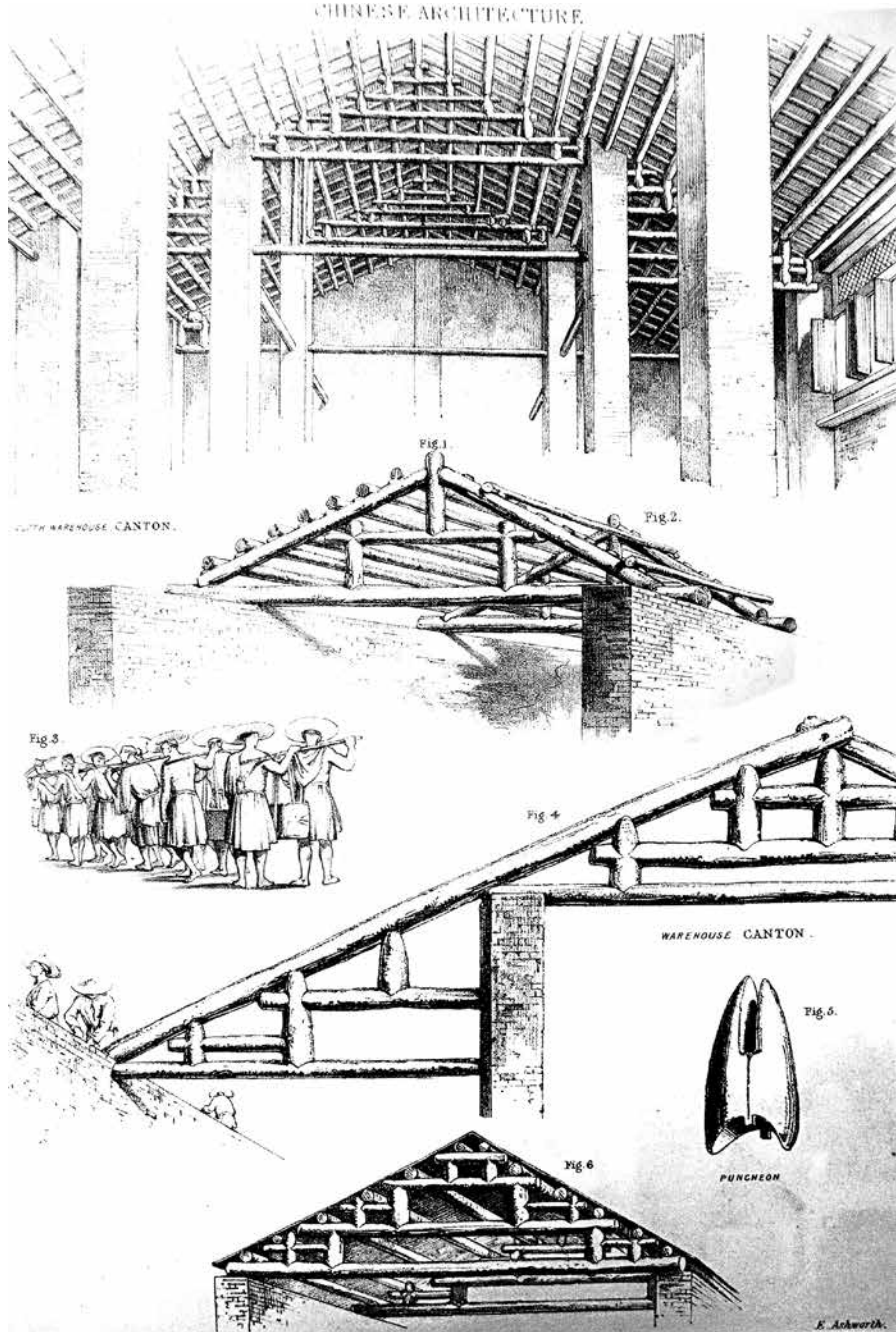


Fig. 5. Chinese roof frames used in warehouses in Canton (Guangzhou) around 1844 — four adaptations of traditional plug-in beam frames combining post-and-lintel and column-and-tie frames — from Edward Ashworth, *Chinese Architecture*, 1853, p. 69

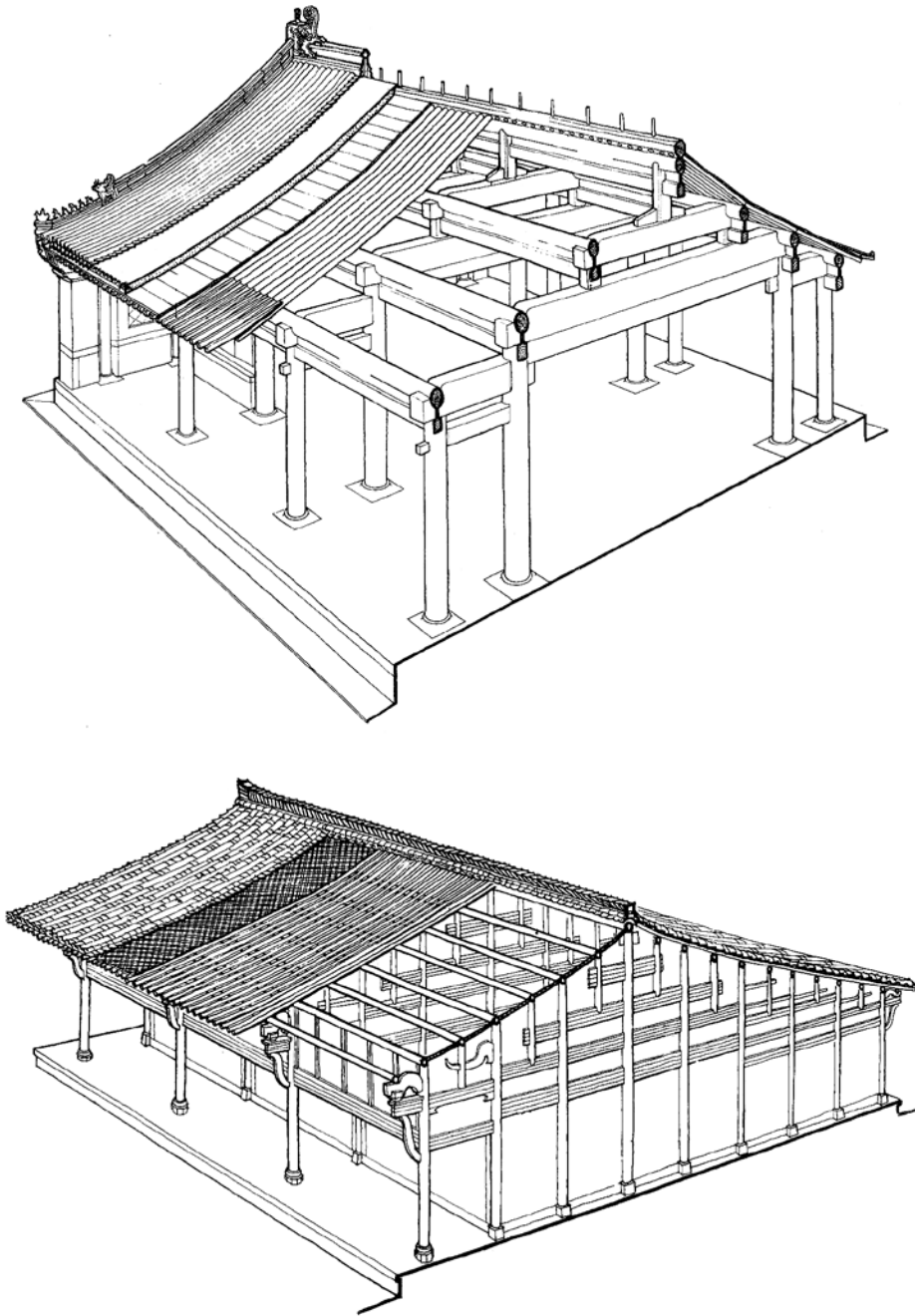


Fig. 6. Traditional Chinese roof construction — post-and-lintel frame (above) and column-and-tie frame (below) — from Liu Dunzhen, *Zhongguo Gudai Jianzhushi* [History of Ancient Chinese Architecture], 2008, pp. 4, 6

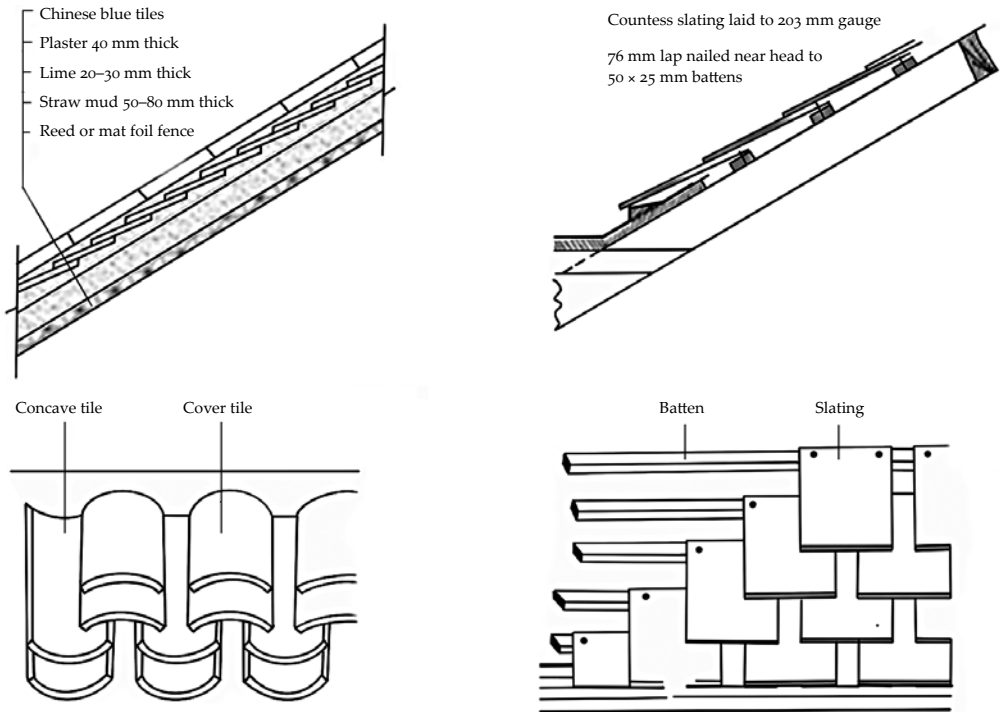


Fig. 7. Comparison between Chinese blue tile (left) and English slate (right) roof construction, redrawn by the authors from Wang Xiaohua, *Zhongguo Gujianzhu Gouzao Jishu* [Construction Technology of Chinese Ancient Buildings], 2018, pp. 282, 289, and C. H. Mitchell, *Building Construction and Drawing*, 1902, p. 322

guarantee effective oversight and proper construction. Trinity Church suffered from problems that might have been picked up by an experienced clerk of works, but which were evidently not spotted by Boone.

The church was aligned east–west, but with the entrance facing east (the Bund) and the altar west, reversing conventional liturgical practice (Fig. 4). The clock tower in the original design seems to have been sacrificed early on to save money.⁴⁹ The thin brick walls were punctuated by large gothic pointed-arch windows, with buttresses, pinnacles and parapets on the north and south sides.⁵⁰ Mostly importantly, there were no projecting eaves. In rainy and humid Shanghai, it was difficult to keep the brick walls dry without the protection of projecting roofs, even with the help of plaster. In this respect, the parapets made roof drainage more complicated, with concealed gutters and holes through which water was discharged.⁵¹ As the British architect Edward Ashworth observed, when writing about ‘how Chinese workmen built an English house’ in Hong Kong in 1840s, all the gutters were lined with hard lime instead of the lead commonly used in England because lead was not available in Hong Kong at that time.⁵² Lead was not available in Shanghai either.



Fig. 8. Comparison between Chinese blue tile (left) and English slate (right) roofing: Denghui Building, Fudan Middle School, Shanghai, 1904, photograph of 2019 by Qin Yue; and Trinity Church, Shanghai, George Gilbert Scott, 1869, photograph of 2023 by Hongbin Zheng

The use of lime for gutters instead of lead may be seen as an example of colonial hybridity. The realised building was neither European nor Chinese, but a 'hybrid' that looked superficially European but was in fact a mixture of Chinese and European techniques specific to its period and location. The result was not a success. For a start, the foundations were placed on wooden piles that were driven into the alluvial mud too far apart. The courses of brickwork on top of them were laid not on flat slabs of stone or well-seasoned timber but directly on the piles, without any means of distributing the pressure.⁵³ The biggest problems, however, arose from the hybrid roof construction.⁵⁴ Although the specific form of the roof frame is unknown, it was probably similar to those recorded by Ashworth when he worked in Canton from 1844 to 1845, given that many of the western buildings in Shanghai were built by Cantonese workmen at that time (Fig. 5).⁵⁵

These kinds of roof truss were the result of adaptive adjustments made by Chinese workmen from the traditional Chinese post-and-lintel frame (Tailiang Wujia) and column-and-tie frame (Chuandou Wujia) techniques in order to meet the needs of large spans (Fig. 6). This is because the Chinese builders had not yet fully mastered western

roof truss construction. At Trinity Church, the five-bay roof structure was supported on four rather than six principal wooden trusses, at a very wide span of 40 ft (nearly 12 m), with brick gables at both ends.⁵⁶ This was a traditional Chinese practice that led to the wooden purlins being directly inserted into the brick walls at the gable ends.

Constructional problems extended to the roof covering. Due to differences in materials and construction techniques, a Chinese roof is much heavier than a standard English one.⁵⁷ The Chinese blue tile (Xiao Qingwa) roofing, as widely used in traditional Chinese buildings and colonial verandah buildings in east China (Shanghai) and south China (Macau, Canton and Hong Kong), was much heavier than the slate roofing popular in England. While slates are fixed with nails on lathes with an overlap of about a quarter, Chinese blue tiles are laid in a thick layer of mortar on timber boards or bricks, with an overlap of up to 60 or 70 per cent of the total area (Figs 7 and 8). With no local supervisor to understand and deal with these issues, the local craftsmen did their best to interpret the design drawings they were given and to build a church that looked like the drawings using traditional Chinese techniques. The result was a building failure, although this was not initially apparent.

Trinity Church opened seven months late on 18 June (Trinity Sunday) 1848.⁵⁸ It was proudly proclaimed by Boone to be 'the first Episcopal Protestant Church built within the dominions of the Emperor of China'.⁵⁹ The land was worth \$1748.99 and the building cost \$6855.19.⁶⁰ Even without the tower, the cost exceeded the original budget by 14 per cent. Without sufficient funds and skilled technical support, the high initial expectations for Trinity Church were not met: it was described as 'a neat house', 'a small building of plastered brick' that 'had no pretensions to form or comeliness'.⁶¹ Later images, after its renovation and the addition of the tower, showed a simple buttressed chapel with gothic windows and strange pinnacles intended perhaps to highlight its gothic style (Fig. 9).

The church appears to have provided a reference for subsequent churches in Shanghai, because the two other churches under construction in 1849 within the city walls, including the American Episcopal Church, were also gothic (Fig. 10).⁶² In this sense, Trinity Church was perhaps a success, placing a distinctive and defiantly European and Christian landmark on the landscape of Shanghai. But as a symbol of cultural and technical superiority, it quickly proved woefully inadequate.

Celebrations of the church's completion were dampened by financial problems, with the parsonage (also known as the deanery, or chaplaincy) being postponed due to lack of funds.⁶³ The original plan to raise money by selling pews was abandoned in favour of a simpler one that involved renting them for \$75 per pew per annum.⁶⁴ This better reflected the transient nature of the population in the treaty port, where expatriates rarely stayed for more than a few years. Records showed that receipts from pew rents were \$1800 in 1850, and \$2206.25 in 1851.⁶⁵ This source of income was crucial, but finance was such a concern that it was considered by the trustees to be 'too difficult to be discussed'.⁶⁶ The original basis of Anglo-American cooperation in Trinity Church was also problematic.⁶⁷ This was solved only when, in August 1848, all the rights of church and land were conveyed to the British community and the trustees could then apply to the British government for a grant equivalent to the amount subscribed by British residents (which was not possible when the subscriptions included non-



Fig. 9. Trinity Church and deanery, Shanghai, photograph of October 1858 (Vacher-Hilditch Collection, reproduced with the permission of Bath Royal Literary and Scientific Institution Trustees)

British residents).⁶⁸ This was critical in funding the costs of the chaplain as well as the building's upkeep.

ROOF FAILURE AND THE REBUILD OF 1850–51

On 24 June 1850, almost exactly two years after Trinity Church had been officially opened, the roof fell in with a great crash at about 5.30 a.m. It happened so early on a Monday morning that fortunately no one was hurt. It may seem incredible that the building was so poorly constructed that it lasted only two years, but this was not entirely unusual in early treaty-port Shanghai. The British consulate had been demolished and rebuilt in 1852, for instance.⁶⁹ This reflected general problems of design and construction in Shanghai at the time: poor design, low construction costs, short construction periods, poor supervision and poor construction quality.

After the collapse, the church trustees instructed Strachan (who by now had moved to Shanghai) to survey the church and submit a report on its condition, along with an estimate for the cost of necessary repairs. Strachan found that one roof truss had given way and fallen into the body of the church, bringing down nearly half the smaller timbers and roof tiles. It appeared 'that a water spout had poured its stream just over

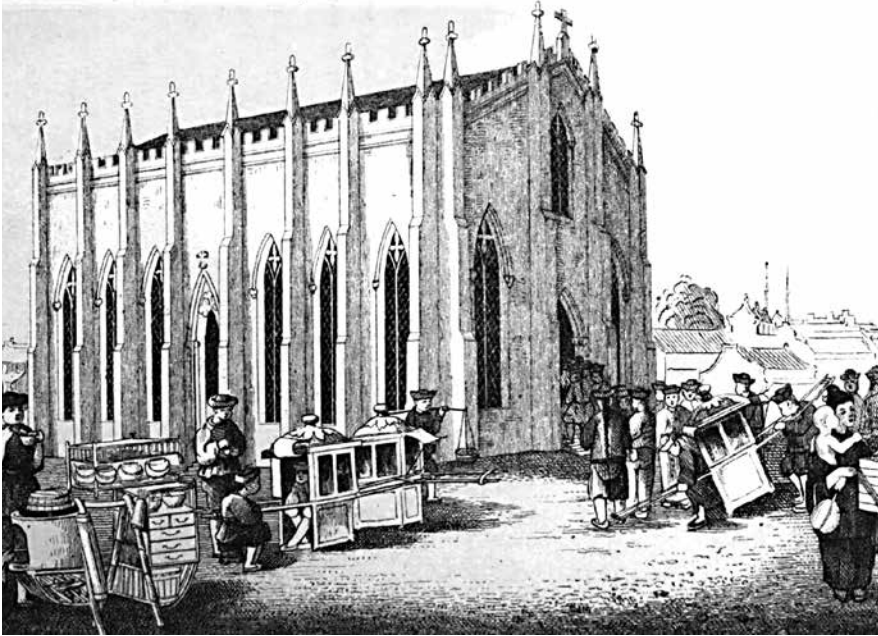


Fig. 10. *The American Episcopal Church in Shanghai in 1849, drawing from Spirit of Missions, 15, nos 11–12, December 1850*

the beam in the centre, and had so injured it and the surrounding brickwork, that the continued deluge of rain caused the walls to bulge out and give way'.⁷⁰ On the north and south sides of the church, the buttresses, pinnacles and upper parts of the main walls were damaged. He also found that 'part of the roof framing which was inserted into the wall, and rested only on the brickwork was entirely decayed [...] although generally the timber where not inserted in the wall is sound'.⁷¹ He was of the opinion that the severe thunderstorm which had preceded the destruction of the roof by some eight or ten hours had caused the collapse, although he stated that an immediate and thorough repair of the roof would have been necessary in any event. Accordingly, he recommended that the whole of the roof be entirely taken down and replaced by a new one using a different construction process. He also advised that all the pinnacles and parapet wall, along with up to four or five feet of the main walls, be taken down and rebuilt, along with some other minor repairs.⁷²

Strachan estimated that these repairs would cost around \$3200 and take four months to complete. He offered his services free of charge in overseeing the work, presumably in an attempt to reduce the reputational damage of having his name associated with the original faulty building.⁷³

On 22 July 1850, the trustees made a resolution to obtain the funds for the repairs by raising a subscription, which was apparently inspired by a successful subscription the previous year to help the family of the late Rev. John Lowder.⁷⁴ Fundraising went well and \$4731 was raised: \$4206 from British subjects and \$525 from foreign (that is,

American) residents.⁷⁵ Given that the subscription exceeded expectations, the trustees decided not only to repair the church, but also to complete the original design by adding the tower, asking Strachan to supervise the whole.⁷⁶ The building of the tower was not unopposed. One contributor to the fund questioned the legitimacy of building a new tower in a 'restoration' or 'repair' work, considering it 'a useless and wasteful expenditure of valuable funds'.⁷⁷ However, the trustees disagreed and decided to proceed, and the foundations of the tower were laid at the beginning of October 1850.⁷⁸ After eleven months of construction, the repaired Trinity Church opened for divine service on 4 May 1851, with the British and other residents summoned by the sound of the bell from the new-built tower.⁷⁹ The total cost was \$4761, including a little more than \$1400 for the new tower.⁸⁰ The whole expense exceeded the subscription fund by only \$30, which was 'a rare result in brick and mortar estimates' and 'credit was justly given to the Architect for the correctness of his estimate'.⁸¹

During the works, however, further problems were discovered and the demolition had to be more drastic than anticipated. In the end, the entire roof, the west wall and a considerable portion of the east wall were taken down and rebuilt. The subsequent report stated that, 'while externally the general outline of the Church was necessarily retained, the details have been improved and better adapted to the requirements of the climate'.⁸² These improvements included removing the original parapets, gutters and water spouts. An eave overhang to the roof was also introduced to facilitate direct drainage and protect the walls from rain (see Fig. 9). Although this reduced the problem of roof drainage, the roof was still covered in Chinese blue tiles and the buttresses still protruded from the roof as pinnacles, causing problems with detailing that would lead to more issues later. The changes internally included six new pillars to support the tie beams along their lengths, improving stability.⁸³ The report concluded with the observation that 'generally, few or no ornaments have been introduced in the interior and exterior, and everything being finished in the plainest manner, consistent with neatness'.⁸⁴

The new tower was visually similar to that of St John's, Hong Kong, and of the Anglican church in Canton. It was described in the report as a 'plain but massive tower, rising to a height of nearly eighty feet' (more than 24 m), thus becoming an important feature on the skyline of Shanghai and providing a vantage point over the whole of the city.⁸⁵ Strachan proudly stated that 'the Tower did give a style, and an expression of fitness and propriety in the building to its sacred purpose, which the former Church could scarcely be said to possess'.⁸⁶ More prosaically, it also accommodated an entrance porch.⁸⁷

While the restoration was going on in November 1850, \$3180 (£1060) was received from the British government towards the cost of repairs, and \$1377 (£459) towards the former cost of the building's maintenance for the period from October 1848 to December 1849.⁸⁸ This signalled the church's change of status, as it had been fully incorporated into the British overseas colonial network. It alleviated some of the church's debts, but the liabilities still amounted to \$4718.59 by the end of 1851, due to the repair and additions.⁸⁹ The trustees made applications to the government for another grant for half of the repairs to the church and half the cost of building the tower, but only \$700 (less than half) was given, equalling the amount subscribed towards the tower by local British expatriates.⁹⁰ It appears that the government was reluctant to pay for putting right faulty construction.

The contractor for the repairs and additions was described in the reports as a 'carpenter'.⁹¹ Although there were several foreign carpenters, bricklayers and plasterers in Shanghai at that time, construction was generally carried out by Chinese builders.⁹² With Strachan's on-site supervision, the project seems to have progressed in a satisfactory manner, but the construction was still a hybrid of Chinese and European methods. An account by Dean Trivett described the walls as 'being of brick covered with Chinese plaster'; the roof was 'tiled, with pinnacles of a Chinese design at the gable ends and along the eaves'.⁹³ It was also said to have had 'Chinese dragon cornices at the ends of the roof beams of the main building'.⁹⁴

Elsewhere, Strachan had encountered problems with Chinese workmen. Records show that in 1851 he was attacked by labourers who had been employed in building one of the merchant's houses he designed because the Chinese contractor had disappeared without paying them.⁹⁵ Nevertheless, as the only architect in Shanghai for a ten-year period (1849–59), it is generally thought that Strachan contributed to the improvement of Shanghai's construction skills. In his 1893 article in the *North-China Herald*, Kingsmill wrote that Strachan 'introduced a marked style of his own, a version of the so-called Greek at that period fashionable in England [...]. Under his instruction the art of building made considerable progress, and a school of workmen, mostly Ningbo men, was developed and did excellent work.'⁹⁶ While the language perhaps sounds patronising — an example of what James Hevia has termed the 'pedagogy of imperialism' — on site the Trinity Church reconstruction seems to show Strachan working as best he could to build a suitable church using the skills and materials available.⁹⁷

It is worth noting here that, in the 1840s, Strachan was still in his twenties. Like so many others, he was a young Scottish expatriate seeking to make his fortune in China before returning home. Like many in such a situation, he was undertaking large works in China on his own account, before he had had time to accumulate sufficient practical experience, either in Britain or abroad. Many of the failures in the construction of the church, and subsequent attempts to rectify them, were undoubtedly due to this.

TOWARDS THE 1862 DEMOLITION AND THE APPOINTMENT OF GEORGE GILBERT SCOTT

After the opening of the repaired church, another subscription was launched in 1851 for building a wall around the church property. This raised \$825, with \$525 from British and \$300 from American residents. The further sum of \$1264 (\$1044 from British and \$220 from American and other foreign residents) was also raised for the purchase of a clock for the tower.⁹⁸ The clock was ordered from England and was installed in 1852. Historical photos show that there was a flagpole on the top of the church tower, and a painting of 1853 shows the Union Flag proudly flying on it (Fig. 11). This flagpole may also have been added in 1852, because an observer wrote to the editor of the *North-China Herald* on 26 March 1852 seeking an explanation for this 'extraordinary' occurrence, which 'has astonished the understanding of the more sober Christians of Shanghae'.⁹⁹ 'A Sober Minded Christian' wrote back and stated that 'I can see no possible objection to a display of our national Colours in commemoration of any national event [...] that flag has been raised to the eminence it occupies, solely and wholly, by the pure doctrines

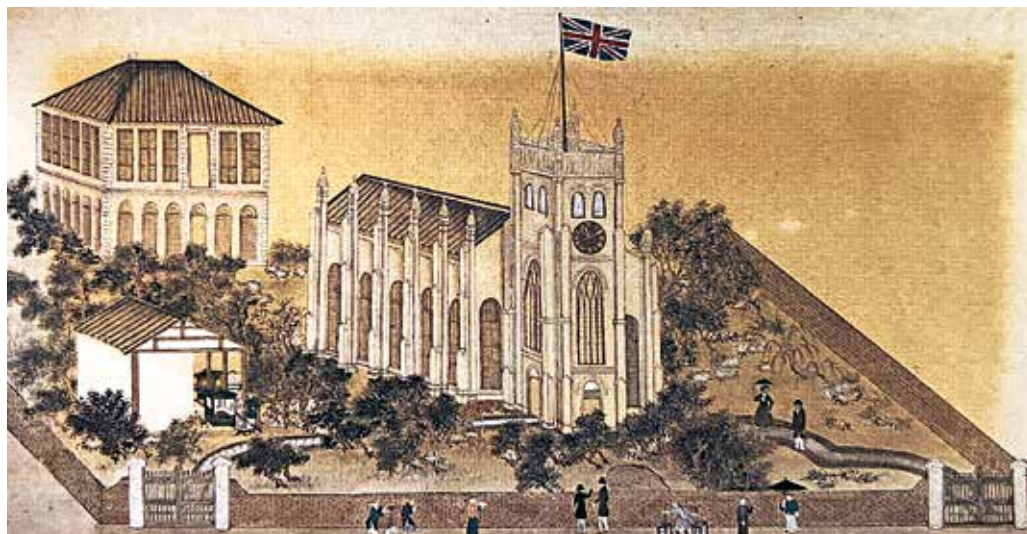


Fig. 11. *Trinity Church and deanery, Shanghai, c. 1853, gouache by a Chinese artist from David S. Howard, A Tale of Three Cities, 1997, p. 179*

that the Church propagates.¹⁰⁰ As well as housing a bell and a clock, and sporting a flagpole, the tower was useful as a lookout. During the Chinese rebellions of 1853 and 1854, it was constantly used by the naval guards on shore, and by the community in general, as a watch tower.¹⁰¹ In March 1854, a large number of people crowded into the tower to watch the progress of the Battle of Muddy Flat. The local press issued a warning against ascending in large numbers, noting that the upper portion of the tower was very slightly built.¹⁰²

The warning was well made and in late 1854, barely three years after it was completed, the tower became so dangerous that it had to be closed for repair.¹⁰³ The repairs were carried out by J. W. Wright, an English cabinet-maker, which may indicate a distrust of Chinese contractors.¹⁰⁴ The repairs, which cost a total of \$497.29, covered the belfry, clock-room and roof of the church (Fig. 12). The bills for the repairs show the problems were mainly due to poor construction and design. The details of materials and expenses for the repairs indicate that lead had been used in the roof reconstruction in 1850 and that it needed the replacement of some wooden beams and many roof tiles after only three years. Imported Singapore planks and English nails were used in the repair in 1854, which shows that building construction in Shanghai in this period relied on the British colonial maritime trade system to provide materials. Even if it had never been occupied beyond its intended capacity, the internal timber structure of the tower was utterly unsuitable for the Shanghai climate. The incident can hardly have inspired confidence in Strachan's abilities as an architect. He left Shanghai and returned to Hong Kong in 1859, and by the time he was forty he was back in Scotland, where he spent the remainder of his life. Nothing is known about his subsequent career.

While Strachan's badly designed and badly constructed building was in a poor state, the church's financial position gradually improved thanks to the annual government grant. In the report for 1857, the trustees mentioned that the church would be free of debt once the grant for 1856 was received, and they were asked to examine how more pews might be added to accommodate the increasing congregation.¹⁰⁵ At the end of 1858, the trustees reported back that the present building did not admit any such proposed extension and there was no absolute necessity for the extension as there were still eighteen vacant seats. But considering that the edifice would require thorough renovation in the near future, they recommended that funds be accumulated 'with the probable aid of Government' to erect 'a Church worthy of the growing importance of the Port [...] without recourse to private loans for the purpose'.¹⁰⁶ However, seeing the church accounts for 1859 with a balance of \$3208.18, the British government decided to halt further payments but stated that it would 'be prepared at the proper time to take into consideration the propriety of making a special grant in aid of the expense of constructing a new church'.¹⁰⁷

According to the 1860 census, there was a resident population of 419 English and American expatriates in Shanghai, plus a large transient population of merchants, mariners and ship crews.¹⁰⁸ There were now only ten available seats in the nave of the church and fifty in the gallery. The trustees believed that the shortage of seats deterred people from attending and that an increase in the church's capacity would lead to a corresponding enlargement of the congregation and hence of income from pew rental. They also believed that it would take at least two years before another church could be built and that the population would have outgrown the present building entirely by then.¹⁰⁹ They therefore recommended that funds should be raised for a larger building through a combination of public subscription, a government grant and, as a last resort, loans to make up any deficiency. It can be seen that the trustees were looking for funds from a wider range of sources, and commercial loans were to be avoided.

Meanwhile, the trustees asked a local British civil engineer, Charles William Gribble (d. 1862), to survey the existing building to determine whether it was safe, if it could be extended and, if so, what the cost would be. Strachan had already left Shanghai and Gribble had arrived in January or early February 1861. Taking out advertisements in the local press, including one in the *North-China Herald* of 2 August 1861, he set himself up as 'Charles W. Gribble, Civil Engineer, Architect, Surveyor and General Building Agent'. Gribble seems to have been the only practising architect and civil engineer in Shanghai in 1861, and remained so until George Whitfield joined him in March 1862. Surveying the church was one of the first projects he undertook there.

In his report, submitted on 6 February 1861, Gribble stated that the existing church was in a very poor state due to faulty construction and workmanship. Alarming he estimated that, with ordinary repairs and care, it would last for only another six years. The foundations were generally unsound, except those under the recently completed tower. The bases of the buttresses of the church had all sunk considerably, especially on the northern side, and the walls were weak and poorly built. This, combined with the effects of the severe climate, had led to the walls cracking, which let in water, leading to continual dampness. The tower was in a particularly poor state of repair, with severe cracks extending through each window, and on the northern side the weather had

The TRUSTEES OF TRINITY CHURCH,	
SHANGHAI,	
To J. W. WRIGHT,	Dr.
To Repairs of Belfry, Clock-room, and Roof of Church—	
2 Beams of hard-wood for joists and roof,	\$40.00
12 Singapore Planks for flooring,	9:00
36 Spars for lining roof of belfry and shutters and partitioning off clock-room,	21:60
Hard-wood for railing on tower, &c.,	32:00
Sheet Lead for roof (284 lbs.)	34:28
Remelting old lead off roof, at 50 cts. per catty,	4:11
Solder and Charcoal—plumber's work,	19:09
Rope for scaffolding and flag-staff,	4:70
Zinc, paint and oil,	11:00
Padlock, &c.; for clock-room,	:82
40,600 cove tiles and 7,000 flat,	41:75
Sawing Wood, 104 days	12:23
Carpenters, 577 "	96:16
Masons, 821 "	96:58
Coolies for ditto, 70 "	6:17
Labor for painting,	12:00
English Nails for roof and flooring,	3:50
Iron fastening and screws for shutters,	1:10
	<hr/>
	\$447:29
Superintendance, &c.,	50:00
	<hr/>
	\$497:29

Fig. 12. Invoice for the 1854 repairs to Trinity Church by J. W. Wright, from the North-China Herald, 13 January 1855, p. 97

severely affected the exposed wall surface. The new woodwork was already completely rotten. Gribble stated that the roof was 'in fair order' and 'probably the best part of the Church', but that the wall and pole plates were unsound and the ends of the purlins on the east end had slipped, causing bricks to slide from under the purlins on to the ceiling.¹¹⁰ The form of the tower exposed its brick walls to the severe weather of Shanghai, leading to accelerated decay of its internal wooden structure.

Gribble reported that 'the only way in which Trinity Church can be altered so as to afford more accommodation, and the only way in which it can be (to a certain extent) repaired so as to be a more sound and substantial building than it is at present' was to pull down the tower and build another one 35 or 40 ft in front of the current building. This would allow the body of the church to be extended eastward, adding a transept and a chancel at the west end). Owing to the approaching Chinese New Year, Gribble observed that he would not be able to obtain an estimate for such alterations from a respectable (Chinese) contractor.¹¹¹ Considering that, in Gribble's plan, the church's fourteen-year-old side walls would be the only portions left, he

advised that they should be pulled down as well, concluding that a new church was the only sensible option.¹¹²

The trustees accepted his recommendation and took immediate steps to commission a new building. At the general meeting held on 12 February 1861, it was agreed that the trustees, along with the British chaplain John Hobson, should form a committee for the purpose of procuring plans and estimates and for raising the necessary funds. By then the committee still believed that 'local architects did not possess enough taste and skill to produce an edifice worthy of Shanghai'.¹¹³ On Hobson's recommendation, in June 1861 they acquired a design from the architects H. I. Stevens and F. J. Robinson in Derby, England.¹¹⁴ While this was going on, and money was being raised for the new church, the first church had deteriorated much faster than expected: rain was beginning to pour through holes in the roof, the wind was blowing away tiles and a portion of the roof had fallen on to the pews.¹¹⁵

The dangers were obvious. At a meeting held on 2 April 1862, the trustees were instructed to erect a temporary church within six months.¹¹⁶ The first Trinity Church was demolished, and some old materials were used for building the temporary church, which was finally completed and ready for use by January 1863 at a cost of \$5450, almost as much as the first church had cost to build. In the meantime, the designs produced by Stevens and Robinson were assessed but deemed too expensive. In June 1863, the trustees finally decided to give them up as they saw no hope of raising the required funds.¹¹⁷ They decided instead to approach a new architect, George Gilbert Scott, who designed the highly successful church (largely built 1866–69) that stands to this day.

CONCLUSION

The first Trinity Church was in effect a failure, having lasted just fifteen years. However, its story is important. It sets the background for the very successful subsequent structure that was built to Scott's designs. The church's trustees and building committee had learned many lessons from the first church. First, Scott's church was much better adapted to the local climate. Second, the construction was overseen by a suitably qualified architect, namely William Kidner, on site. Finally, it was built using local building firms, but with imported materials, to a much higher specification and with a better understanding of local ground conditions.

Perhaps the most important change, however, was in the skills of the local building firms. The first church had been built in the 1840s by local building contractors unfamiliar with western methods. By the 1860s, there was a much more sophisticated set of building contractors operating, still generally run by Chinese businessmen. Having worked on sufficient projects for the foreign concessions, they had by this time worked out methods that combined the skill sets of the local craftsmen; developed a much better understanding of imported materials and specially produced or sourced local materials equivalent to their western counterparts; and acquired a greater understanding of what could best be achieved in the prevailing circumstances. The result was a much more sophisticated form of hybrid construction that superficially mimicked western construction but was successfully adapted to local conditions.

Gribble's successors, Whitfield & Kingsmill, claimed that by 1865 Chinese builders had learned to understand the requirements of foreign architects, to adopt their ideas, and generally to conform in some measure to their method of doing business.¹¹⁸ In this we can see Hevia's 'pedagogy of imperialism' in action.¹¹⁹ As it turned out, this hubris was precisely what led to the church's downfall, literally.

The construction history of Trinity Church also shows that architectural production in Shanghai in this early period was not an isolated local activity, but on the contrary was closely related to the development of Shanghai as a treaty port and the larger constellation of architectural production linked to British colonial networks and the global maritime trading system. It was the result of a combination of the spiritual needs of the Christian community, a certain will on the part of the concession authorities, and the global circulation of British architectural expertise. It involved interacting with building materials and related products (both local and imported), the local climate, site conditions, labour dynamics and the organisation of the construction process. American missionaries and settlers also played an important role. Overall, Trinity's history may be considered a typical case of what Julie Willis has described as a 'significant, complex and interwoven collective architectural history — an "entwined history" — across British colonies and concessions'.¹²⁰

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BIOGRAPHIES

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- 46 Jonathan Farris, 'Thirteen Factories of Canton: An Architecture of Sino-Western Collaboration and Confrontation', *Buildings & Landscapes*, 14, no. 1 (2007), pp. 66–83 (p. 80). The riot in 1846 was incited by an English merchant's bad behaviour in Old China Street, which caused a crowd of Chinese to chase him into a neighbouring factory. After the riot, foreigners were permitted to redesign the surroundings of their factories to limit potential routes for rioters. A church was then built in front of the factories, but this was destroyed by fire in 1856.
- 47 Charles Taylor, *Five Years in China* (New York: Derby & Jackson, 1860), p. 187.
- 48 Charles M. Dyce, *Personal Reminiscences of Thirty Years' Residence in the Model Settlement: Shanghai, 1870–1900* (London: Chapman & Hall, 1906), pp. 34–35.
- 49 'We give publication this week to the Church Papers annexed to the Circular of H. B. M.'s Consul [...]', *North-China Herald*, 23 August 1851, p. 14.
- 50 [Anon.], 'Falling in of the Roof of Trinity Church', *North-China Herald*, 3 August 1850, p. 3.
- 51 James Stevens Curl and Susan Wilson, *The Oxford Dictionary of Architecture*, 3rd edn (Oxford: Oxford University Press, 2016), pp. 555–56.
- 52 Edward Ashworth, 'How Chinese Workmen Built an English House', *Builder*, 1 November 1851, pp. 686–88 (p. 688). See also Pan Yiting, 'Yincang zai Xishi Limian Beihou de Jianzaoshi: Jiyu 1851 nian Yingshi Jianzhu Shigong Jishi de Anli Yanjiu' ['Revealing a History of Construction behind the Western Façade: Based on an Architect's Memoir of an English House Project Published in 1851'], *Jian Zhu Shi [Architect]*, no. 170 (August 2014), pp. 117–26.
- 53 [Anon.], 'Architects Report. Shanghai, 6th February 1861', *North-China Herald*, 16 February 1861, p. 27.
- 54 'Trinity church had been finished and opened on Trinity Sunday [...]', *Chinese Repository*, 17, no. 9 (1848), pp. 487–88 (p. 487).
- 55 Edward Ashworth, *Chinese Architecture* (London: Architectural Publication Society, 1853), p. 69; Kingsmill, 'Early Architecture', p. 825.
- 56 'Falling in of the Roof of Trinity Church', p. 3.
- 57 Li Haiqing, Guo Wenbo and Zhu Zhenyu, 'Zhuanyi Dawuding de Kenengxing Jiqi Tiaozhenxing – Huaxi Xiehe Daxue Xiaoyuan Jianzhu Sheji de Kuawenhua Xingshi Biaoda' ['Possibility and Challenge of Translating Chinese Roof? On Transcultural Formal Expression of Architectural Design of West China Union University in the Perspective of Engineering'], *Jian Zhu Xue Bao [Architectural Journal]*, no. 9 (2022), pp. 103–07 (p. 105). According to Li's rough calculation, a Chinese roof may add about 100–120 kg per sq m compared to an equivalent western roof.
- 58 'Trinity church had been finished and opened on Trinity Sunday [...]', p. 487.
- 59 'Trinity church had been finished and opened on Trinity Sunday [...]', pp. 487–88; 'Report. Shanghai', p. 14; 'American Interest in Trinity Cathedral', p. 639.
- 60 [Anon.], 'Holy Trinity Cathedral', *North-China Herald*, 7 June 1932, p. 395.
- 61 'Trinity church had been finished and opened on Trinity Sunday [...]', p. 487; Kingsmill, 'Early Architecture', p. 826.
- 62 Bridgman, 'Shanghai: Protestant Missions', pp. 520, 522. The other church was built for the English Church Missionary Society.
- 63 The parsonage was finally built by John Hobson on the church land in 1858 and sold to the trustees for \$4500 in January 1859: 'Minutes of a Public Meeting [...]', *North-China Herald*, 15 January 1859, p. 94.
- 64 The adjustment of selling pews to renting pews occurred early, in May 1847. See 'Letter from A. G. Dallas in Shanghai to Hong Kong, dated 24th May 1847', p. 179.
- 65 [Anon.], 'Summary of Trustees' Account', *North-China Herald*, 3 January 1852, p. 70.
- 66 'Trinity church had been finished and opened on Trinity Sunday [...]', p. 487.
- 67 Syle, 'Church at Shanghai', pp. 67–68.
- 68 The Consular Advances Act of 1825 enabled the government to provide not more than half the cost of a church establishment in a foreign port where the British residents undertook the other part. On the conveyance of the rights of church and land, on 26 August 1848, see 'Church Notes', p. 708.
- 69 [Anon.], 'The Foundation Stone of the British Consulate', *North-China Herald*, 1 June 1872, p. 426.

- 70 'Falling in of the Roof of Trinity Church', p. 3.
- 71 'Falling in of the Roof of Trinity Church', p. 3.
- 72 'Falling in of the Roof of Trinity Church', p. 3.
- 73 [Anon.], 'Trinity Church', *North-China Herald*, 24 August 1850, p. 15.
- 74 The earlier subscription was made in September 1849 after the Rev. John Lowder, the first chaplain of Trinity, drowned when bathing at the island of Puto. An appeal was launched to all the foreign residents within the limits of the port. Within forty-eight hours more than \$8000 had been raised to send his family home and permanently provide for them after their return — impressive given there were only 175 foreigners in Shanghai at the time. This made the trustees realise the possibility of solving the problem of church funds through local subscription.
- 75 'Report. Shanghae', p. 14.
- 76 'We give publication this week to the Church Papers annexed to the Circular of H. B. M.'s Consul [...]', p. 14.
- 77 'A Contributor to the Editor [...]', *North-China Herald*, 19 October 1850, p. 42.
- 78 'Trustee to the Editor [...]', *North-China Herald*, 19 October 1850, p. 46. 'ART. III. Journal of Occurrences [...]', *Chinese Repository*, 20, no. 8 (1851), p. 553.
- 79 'On Sunday last, the British [...]', *North-China Herald*, 10 May 1851, p. 162.
- 80 'Summary of Trustees' Account', p. 90.
- 81 'We give publication this week to the Church Papers annexed to the Circular of H. B. M.'s Consul [...]', p. 14; [Anon.], 'To the Editor of the *North-China Herald* by One of the Minority', *North-China Herald*, 9 August 1851, p. 7.
- 82 'Report, Shanghae', pp. 14–15.
- 83 'Report, Shanghae', pp. 14–15.
- 84 'Report, Shanghae', pp. 14–15.
- 85 'Report, Shanghae', pp. 14–15.
- 86 'Report, Shanghae', pp. 14–15.
- 87 'Report, Shanghae', pp. 14–15.
- 88 [Anon.], 'Church Notes', *North-China Herald*, 13 September 1913, pp. 783–84.
- 89 'Summary of Trustees' Account', p. 90.
- 90 'On Saturday, a Meeting [...]', *North-China Herald*, 24 April 1852, p. 154.
- 91 'Summary of Trustees' Account', p. 90.
- 92 In 1848, Nicolas Burns and George Hume were listed as bricklayers and plasterers, and J. B. Davey and J. Meredith as carpenters: see [Anon.], *Hongkong Almanack and Directory*, p. 73. Another carpenter was R. Meredith, who operated as a house and ship carpenter and builder in Shanghai before 1851: see the advertisement in the *North-China Herald*, 15 March 1851, p. 129.
- 93 'Holy Trinity Cathedral', p. 395.
- 94 [Anon.], 'Cathedral's History Told on Patronal Day', *North-China Daily News*, 7 June 1950, p. 5.
- 95 'On Tuesday the first [...]', *North-China Herald*, 26 April 1851, p. 154.
- 96 Kingsmill, 'Early Architecture', p. 826.
- 97 See Hevia, *English Lessons*.
- 98 [Anon.], 'Report. Shanghai, 29th December 1851', *North-China Herald*, 6 January 1855, p. 70.
- 99 'To the Editor [...]', *North-China Herald*, 27 March 1852, p. 137.
- 100 [Anon.], 'The Flag-staff on the Church-tower', *North-China Herald*, 24 April 1852, p. 154.
- 101 [Anon.], 'Shanghai, 28th December 1854', *North-China Herald*, 6 January 1855, pp. 90–91. The old city was occupied for seventeen months by Guangdong and Fujian rebels during what became known as the Small Sword Uprising.
- 102 'We have been requested [...]', *North-China Herald*, 1 April 1854, p. 138.
- 103 'Shanghai, 28th December 1854', pp. 90–91.
- 104 [Anon.], 'List of Foreign Residents in Shanghae, 1850', *North-China Herald*, 3 August 1850, p. 1.
- 105 'Minutes of a Public Meeting [...]', *North-China Herald*, 9 January 1858, p. 95.
- 106 [Anon.], 'Report of the Trustees of Trinity Church for 1858', *North-China Herald*, 15 January 1859, p. 94.
- 107 [Anon.], 'No. 31. Foreign Office, April 6th, 1859', *North-China Herald*, 16 February 1861, p. 27.
- 108 'It is now thirteen years since TRINITY CHURCH was finished [...]', p. 14.
- 109 'It is now thirteen years since TRINITY CHURCH was finished [...]', p. 14.
- 110 'Architects Report', p. 27.
- 111 'Architects Report', p. 27.

- 112 'Architects Report', p. 27.
- 113 'The question of Church [...]', *North-China Herald*, 9 September 1865, p. 142.
- 114 [Anon.], 'Report', *North-China Herald*, 8 June 1861, p. 91.
- 115 John W. Maclellan, *The Story of Shanghai* (Shanghai: North-China Herald Office, 1889), p. 67.
- 116 'Minutes of the Annual General Meeting [...]', *North-China Herald*, 12 April 1862, p. 59.
- 117 'Minutes of a Meeting [...]', *North-China Herald*, 20 June 1863, p. 5.
- 118 [Anon.], 'Trinity Church, Shanghai, February 24th, 1865', *North-China Herald*, 25 February 1865, p. 31.
- 119 Hevia, *English Lessons*.
- 120 Julie Willis, 'Architectural Movements: Journeys of an Inter-colonial Profession', *Fabrications*, 26, no. 2 (2016), pp. 158–79.