Organisational Improvisation, Architectural ‘Piggybacking’ and Masonic Networking in the International Settlement, Shanghai: Building an Anglican Cathedral, 1864-1869

Ying Yong Ding
School of Business and Creative Industries
University of the West of Scotland, Paisley, United Kingdom
ying.ding@uws.ac.uk

Sam McKinstry
Independent Scholar
Glasgow, United Kingdom
sammckinstry2004@yahoo.co.uk

Peiran Su
Audencia Business School
Nantes, France
psu@audencia.com
Abstract

This study provides a business history of the construction project to build a large Anglican church in colonial Shanghai in the 1860s. Employing three theoretical lenses, it focusses on the project’s management, setting it in its social, political, economic and architectural contexts. As well as analysing the project’s progress in detail, the paper discloses circumstances that were being faced more generally by resident British and international traders in Shanghai at this unsettled time. It also identifies forces which would in due course influence the long process of change leading to the eventual transformation both of Shanghai and of China itself, enhancing our understanding of the region’s economic history.
INTRODUCTION

The economic and business history of Treaty Port colonialism in China, from its beginnings in the 1840s to its unwinding over the first half of the twentieth century, has been deeply and widely researched. However, there remain opportunities for fresh perspectives and insights. The field of architecture offers one such window. Banister Fletcher, in 1905, reminded us that architecture ‘is the outcome of conditions intimately bound up with the history of the human race’ and it follows that the investigation of architecture’s history can enlighten us concerning the circumstances of its creation.

Historians of business and accounting have recently begun to utilise architecture in order to shed light on aspects of the business world. Approaches have ranged from the investigation of architectural symbolism relative to the projection of organisational power, to the study of the business side of architectural practices themselves, but also include examining financial constraints on architectural quality. The present study will involve aspects of each.

Our study focusses on mid-nineteenth century Shanghai, a Treaty Port since 1843, where the British lived and worked in their local ‘Settlement’ on the Bund by the River Huangpu, in white, two-storey arch-verandahed homes and offices adjacent to their compounds. By treaty, they held UK, not Chinese citizenship (‘extraterritorial’ status) with land ownership and control remaining with the Chinese. The architectural history of Shanghai itself, with its striking and constantly mutating built environment, has recently attracted the intense interest of architects and architectural historians. Denison and Ren’s
superbly and lavishly illustrated historical review of the buildings of Shanghai, past and present, is an important work. From here we learn that the low-rise buildings of the British settlement we referred to above were in the ‘compradoric’ style of architecture, so named as compradors (Chinese middlemen) were required to engage and control local builders in erecting them.\(^5\)

Another important work by Roskam focusses on the politics of Shanghai’s architecture in the unstable environment of extraterritoriality and national zoning. Roskam explains that as confidence in the Treaty Port trading system strengthened after the Second Opium War (1856-1860), the erection of public buildings and infrastructure was begun by the spatially ambitious but economically less significant French, followed by the dominant British merchant community in their respective areas;\(^6\) this new architecture was intended to impress the importance, power and cultures of the two groups upon the host nation and upon each other.\(^7\)

The creation of new public infrastructure had more obvious and direct effects: it produced economic activity and value in the growing city, sometimes when international trade was low, and it called upon, at times, mutually distrustful British and Chinese enterprises and workforces to collaborate. Roskam has also discussed some of the labour difficulties that intermittently occurred, yet it was the synthesis of local and imported technologies and know-how that would prove indispensable in advancing the port’s physical and economic growth.\(^8\)

A major development in the British Settlement of Shanghai (merged with the much smaller American Settlement to become the International Settlement in 1863) was the building of a large Anglican Church, Holy Trinity, from 1864-69, raised in status to a cathedral in 1875 on the appointment of the city’s first Anglican Bishop.\(^9\) Buildings such as this were
erected across the Empire to provide a public space for Christian worship and mission while also providing the mercantile community with a prominent symbol of ‘home’ as they worked in far distant, sometimes alien, places. These churches also made visible and thus spread the influence of Anglican Christianity, the national Church of England, linked as it was with the British State and Crown. In due course the presence of this new church building in Shanghai would itself project the power and culture of the British; however, it would first have to be constructed, in the face of many managerial difficulties that would call for levels of resilience and inventiveness that provide a window into the mindset of those involved from the two communities that brought it to fruition, as well as an insight into contemporary local economic conditions.

This paper will make use of three avenues of business analysis to explore what happened in Shanghai to bring the Trinity project (as we shall call it) to a successful conclusion. The first of these is the notion of ‘improvisation’ in management, particularly in construction management. We will also explore how the management practice we refer to as ‘piggybacking’ was employed in the architectural process at Trinity, Shanghai. Third, we will explore the role of Freemasonry in the project’s realisation. Shanghai was, historically, an early centre of Freemasonry in 19th century China. The present case provides a historical application of the theoretical insights we examine in order to assist in creating a business history of the church’s genesis and construction. Architects tend only to be interested in archiving designs and drawings, seldom leaving business or financial records, and without the survival of the papers of Holy Trinity’s architect, William Kidner, which include extremely rare construction reports, our study would not have been possible.

The paper will enrich our understanding of an important area of the economy, construction, that has not been much attended to by business and economic historians. It
also utilises the research material to enable a better and broader appreciation of Shanghai’s often difficult, contemporaneous, localised economic and trading conditions to emerge. We shall see types of flexible and innovative response that, aside from the Trinity project, were often called for in doing business in the Chinese environment. These responses will also be linked to wider long-term trends in Shanghai’s and China’s economic history. We shall also, as we proceed, comment on the visual and symbolic impact that Holy Trinity was intended to make, as against what it has made, from the time it was built until the present day.

**ADVANCING THE TRINITY PROJECT**

Cathedrals and churches fulfilled several overarching objectives within the ‘colonies’. In his recent work on ecclesiastical architecture and Empire, Bremner notes at length ‘that religion had become a central plank in Britain’s wider imperial ‘mission’ by the 1840s … not concerned merely with developing the world commercially … but with ‘improving’ it through the inculcation of key civilisational institutions such as Christianity.’\(^\text{12}\) The propagation of the faith was intended to operate by means of the civilising effect of trade, which was believed to improve human behaviour by reducing opportunities for idleness and mischief, facilitating the conversion process. It is likely that the notion of trade as a civilising factor owed much to Smith’s ‘The Wealth of Nations’ which, as Philipson has noted, was rooted in his earlier empirical works of moral philosophy.\(^\text{13}\) As Brown has also recently shown, such ideas were consonant with the wide prevalence of the theological notion of ‘Providence’, namely, that the Empire was expanding as a result of the outworking of Divine will, a view held at the highest levels of British life, including Queen Victoria.\(^\text{14}\)

After the British victory in the Second Opium War, where they had received French military assistance, there were further signs that Shanghai and its international trade was
settling down. Although there was still some resentment in the minds of the Chinese population in the city at the (predominantly British) overseas presence, by whom some of them were employed, at governmental level, the appointment of Chinese-speaking Robert Hart, a UK diplomat, as Inspector General of the Qing government’s Maritime Customs Service, which he had joined in 1859, made an immediate difference. Starting first in Shanghai, then in all the Treaty Ports, Hart stabilised and reorganised the service, employing a mixed international staff, which substantially increased Chinese customs revenues through the elimination of corruption and thus enhanced government stability, which in turn built trust at governmental level in the British and their intentions.

It was against this improving political background that in 1860, the congregation of Holy Trinity Church, which had existed in Shanghai since 1847, decided that ‘a large and permanent church, worthy of the port’, should be built on the site of their old building, which had been destroyed in a storm, causing them to be in temporary premises. Amid some uncertainty among the British, US and other ‘extraterritorial’ European nations represented locally, this was a confident vote in Shanghai’s continuing future as a British trading centre and as a node of Christian witness. The city’s Episcopal (Anglican) Church Society, in 1863, wrote to George Gilbert Scott (1811-78) in London, Britain’s pre-eminent architect and the leading Gothic specialist of his day, regarding designs for a new church. At this point, the Gothic style, developed in the Middle Ages and featuring the pointed arch, was considered de rigeur for a new British Church in a British settlement overseas, as indeed it was at this time in Britain itself. It was to house 800 people at a cost of £20,000. Scott wrote back, confirming his willingness to provide designs, eventually sending drawings in an ‘early 13th century Gothic Style’ in November 1864. Scott’s custom was for such commissions to be pro deo, that is, to make no charge. It should be borne in mind that the time taken to
deliver a letter, and thus plans, depended on the sea journey from Britain to Shanghai, which took up to two and a half months.19

Meantime, Scott, with the agreement of the Shanghai church authorities, had, to obviate the problems of distance and time, chosen an assistant, William Kidner (1841-1900), to oversee the church’s construction. Kidner was already on his way to Shanghai by sea in early 1864. His surviving correspondence reveals that he wrote on 12 February from Malta to his sister in Somerset, again writing on 25 February, having left Egypt.20 This suggests that he would have arrived by some point in April. Kidner, son of a West Country farmer (not a Scot, as stated by Roskam), had been a part-time architecture pupil of Professor T L Donaldson at London University. Prior to this he had gained experience in a building firm, going on to become an Associate of the Institute of British Architects, and clearly had impressed Scott, in whose office he had lately worked.21

Scott’s designs, however, when they arrived, did not include a spire and only provided seating for 460, with a long chancel being provided. The chancel of a church is at the opposite end from the front entrance to the building and is the focal point of the church’s nave, its general seating area. Information is lacking, but it would have been in character for Scott to see the cost target of £20,000 for this size of church as incapable of producing a building ‘worthy’ of the port and adjusting his design accordingly.22 Omitting or deferring a spire was at this time commonly done in church-building projects in the UK in recognition of financial constraints but left open the opportunity to provide one later when resources became available.23 Kidner was soon at work altering the designs while an extra 20,000 taels (worth some £7,000) were being raised for the necessary amendments.24

Scott’s original design does not survive and has been the subject of much speculation, but it may be inferred from what was eventually built, together with later major
clues contained in Wright’s informative history of the Treaty Ports. In an article on ‘The Anglican Communion’ by Venerable Archdeacon Banister of Shanghai, Shanghai Cathedral is described as having a chancel that was ‘not as long as was intended by the architect’ and also that the design was ‘modified locally to meet the climatic conditions’.25

Clearly, Kidner’s revisions to the design, as revealed by his surviving plan, consisted of shortening the Scott-designed chancel (likely made long by Scott in anticipation of the church’s future adoption as a cathedral), in order to devote resources and space to extending the nave to accommodate the desired seating for 800.26 In his revised plan Kidner removed the chancel by substituting a shorter ‘apse’, a semicircular end space, to replace it. He then designed a cloister-like roofed and arcaded walkway along the two external walls of his lengthened nave, linking these to a porch at the main door in order to protect the congregation while outside from the strong sun and the at times heavy Chinese rain.

A further complication was that Scott had designed the church to be built in stone.27 The local stone in Shanghai was a hard granite rock which was slow and expensive to work, so Kidner decided instead to propose a building of brick walls and stone dressings, constructional materials that had been used in China for thousands of years.28 Both Scott and Kidner in their designs for Holy Trinity adhered to the symbolic characteristics of the mediaeval architecture on which Gothic cathedrals and churches were invariably based. The designs for Shanghai, before and after Kidner’s changes, remained cruciform in plan, the lengthened nave, shortened chancel and the two transepts that were provided forming the shape of the cross. Another symbolic device was to evoke in the three large lancet windows of the chancel, which all of the congregation would face, the threefold nature of the Holy Trinity, after which the church was named. It was to be ‘a builded prayer in stone and lime, a standing creed’.29
The progress of the project from the point that Scott’s design was received in late-1864 onwards was fraught with delays and difficulties, to be discussed below. On 10 January 1866 Kidner’s revised designs, having first been sent to Scott, were approved by the church Trustees and on 21 March 1866 the building contract was signed, when a build time of 18 months was committed to by S C Farnham, a local ship repairer and builder of small vessels, there being no anglophone builders in Shanghai. The completion date for the church was 30 December 1867. However, due to delays it was only able to be opened and dedicated for use on 1 August 1869. We shall analyse below the difficulties concerned and the management initiatives that resulted in the church eventually coming to be built.

ASPECTS OF MANAGEMENT THEORY AND METHODOLOGY

We shall now outline each of the three theoretical perspectives to be used in our analysis.

Managerial Improvisation

The literature of managerial improvisation is well developed. Since our study focuses on construction, we have paid extra attention to recent papers on improvisation in this specialist field. Of direct relevance is the recent study by Hamzeh, Faek and Al Hussein, which is motivated by a desire to improve construction practice. They state that ‘improvisation is the act of dealing with the unexpected without having the luxury of preparation’. They continue that ‘Organisational improvisation can be performed either by an organisation as a whole or by one or more of its members.’ This, as will be seen below, is of particular importance to the Trinity project.

These authors note that delay and misfortune are commonplace in business, especially in the area of large engineering or construction works. There are two parties affected by misfortune in such cases: the client and the contractor, together with any agents
they may have. The client invariably includes in his contract with his supplier legal provisions for lateness, including penalty or liquidated damages clauses related to the duration of delays in cases of contractor culpability. However, it has been recognised more recently that both parties to the contract have a central goal in common: to bring the project to full fruition, and so in many ways they operate as a single informal operation in order to further together its timely completion. This approach has been referred to in the recent literature as creating a ‘hybrid’ organisation. As we showed elsewhere, different legal entities from the Victorian period which had a common objective on occasions combined information and accounting data for the mutual benefit, as was also to prove the case in Shanghai. Further, delays and misfortunes often bring into play the exercise of managerial improvisation in overcoming setbacks, as we shall see below.

A presupposition of Hamzeh et al’s research is that workplace improvisation may be beneficially analysed from three points of view: a) its antecedents b) behaviours and c) consequences. Antecedents are the circumstances that call for improvisation, the non-supply of all necessary pre-requisites at the outset frequently being a major cause: the ‘incomplete kit’ perspective. Behaviours are the resultant improvisations. Their speed or novelty may be influenced by ‘stiff’ or flexible organisations. Consequences examines the benefits or costs of the improvisations and their success in helping finish projects. We employ these distinctions in our analysis to help us evaluate what was achieved and by whom.

Utilising the above three headings, we have produced the undernoted summary analysis of improvisatory steps taken in connection with the project, which we will discuss below:

[Insert Table 1 about here.]
As noted in the chart above, the initial problem of lack of communication due to time and distance resulted in Scott producing plans that did not accommodate the required numbers, did not provide external cover against the weather conditions and specified a stone building that was impractical in the local circumstances, without providing a design for a spire (Situations 1 and 2). Since these matters would ideally have been resolved in advance in a non-international situation, these may be classed as ‘antecedents’ of the ‘incomplete kit’ type.\(^{37}\)

The rest of the improvisatory responses (Situations 3 to 9 inclusive) were called out by ‘newly emerging constraints’, to borrow an expression coined by Hamzeh et al. This type of constraint would have been well-nigh impossible to predict, and as we will see, these shed light on conditions on site, in the building trade and in the economy generally in Shanghai at the time. As noted above, we shall also in our analysis differentiate between improvisatory acts that were ‘novel’ and those that were ‘repetitive’ in character.

Regarding item number 1 and 2 in the above table, we consider that Kidner was involved in substantial architectural creation in what he did. The general style of the building, which Bremner refers to as ‘Lombardic Gothic’, with its Northern Italianate combination of pointed arches and distinctive early 13\(^{th}\) century corbelled edges to roofs, remained unaltered from Scott’s design. This style may have owed its inspiration to the well-known but unsuccessful competition design by William Burges, a London acquaintance of Scott, for the Crimea Memorial Church at Constantinople of 1858.\(^{38}\) Kidner kept this style of detailing, but at the same time altered the building’s massing and overall form in elongating the nave while shortening the chancel, while covered cloisters were also added externally. This required the visual rebalancing and proportioning of form, which was successfully done, as the building shows, using his artistic judgement.
Another very considerable achievement was Kidner’s redesign of the building’s main fabric in red brick with white stone dressings, as the local granite was too hard and expensive to work and could not be used for the whole structure. As well as requiring Kidner to undertake the study of different suppliers and qualities of Chinese brick to substitute for this, he also had to decide on the placing, width and profile of the narrow, horizontal white stone moulding that was to run around all the walls at middle height to drive off rain; the edgings of gables were also made in white stone. This in its own right was an important design element of the church as built, standing out crisply against the red brick. As well as deciding on the use of granite pillars throughout the church, Kidner also found some supplies of softer white stone for areas of delicate internal carving. Not mentioned by Kidner, but clear from the church as built, the arched voussoirs of the red brick window openings were composed of alternating red and black bricks. Kidner had in fact produced a structure of three colours, red, black and white, utilising ‘constructional polychromy’ in the manner advocated by John Ruskin in his ‘Stones of Venice’ of 1838 and often used in Britain. Kidner deserves a great deal of credit for the aesthetic quality of his achievement, which we classify as ‘novel’ in creative terms.

Situation 3 was straightforward. The slow progress of manual piling was, because of the hardness of the ground, abandoned and substituted with mechanical piling, with the piles being hammered most probably with the help of steam engines. Although no longer novel in British construction practice, this was a more efficient and advanced development for Shanghai, but it seems likely that such devices would be in use elsewhere reasonably locally and were likely suggested by Farnham, the contractor. To an extent this was novel.

Situation 4 was also neat and fitting: mediaeval, spired, church towers in the UK were sometimes built separately from their churches, as they could not be put up on their
intended sites, usually due to ground conditions. So, likewise, the future spire and tower at Shanghai was moved to the other side of the church where the ground was harder. This probably involved Kidner’s knowledge of historical churches and some minor weighing of the tower’s exact placing for aesthetic purposes. This was thus a ‘repetitive’ step but one that still called for specialist knowledge. The tower and spire was not started until 1893.

The Collapse of the Shanghai Brick Company at the outset of the contract prevented J C Farnham from receiving supplies of the carefully chosen, locally supplied red bricks which were required as soon as the piling of the church’s site was complete, necessitating further improvisation (Situation 5). During the time piling was in progress, as Kidner put it, ‘some enterprising gentlemen undertook to work the plant and clay pits of the defunct Brick Company and to supply us with bricks for our Church’. Further details have now gone, but it is clear that informal networking and discussions had taken place, in an act of improvisation that reached into the international community within Shanghai and persuaded investors to step forward. This was no mean achievement, where the key managers of J C Farnham, with its long-standing local contacts, took the lead. Unfortunately, the new owners decided, after supplying 200,000 bricks (out of a final figure of 6 million bricks required, just over three per cent) that they would incur more losses by carrying on and decided to terminate the business. Kidner added that ‘unfortunately the new Company supplied us so slowly that the bricklayers were compelled to stop work, and the five-foot basement was not completed until the end of September [1866]’.

This crisis thus ushered in Situation 6, over which Kidner was forced to research importing the bricks from Foochow or Japan, but the samples received were not suitable. This time, an action was taken that is clear enough in its effect, but the buildup to which is not now known in detail. To put it in Kidner’s own words, ‘Eventually an arrangement was
effected with Chumsun-li to manufacture at the Company’s factory 6,000,000 - the number we estimated would be required to complete the building. He set to work in earnest and has now satisfactorily executed his contract so that no further hindrance can occur to the works as far as the supply of bricks is concerned’. 45

Making allowance for pre-Pinyin transliteration, often a problem in English-language research on China 46, we have identified Li as 李春生, Chunsheng Li (1838-1924), a highly regarded comprador at first operating from Amoy, his home city, with Elles and Company from 1858, selling tea to Dent’s in Shanghai. 47 The ground on which the new Holy Trinity was to stand had been donated to the church to build its predecessor buildings by Thomas Chay Beale (d 1857), 48 Dent’s former business partner, a plausible reason for Li’s involvement. 49

Situation 7 is not mentioned separately in the reports to the Church Trustees, but it is obvious that architect and contractor would have become involved in assessing Chinese bricklaying techniques and their suitability for aesthetic and construction purposes, ultimately accepting these, to which there was no alternative. Recent research on Victorian-era brick technology in Shanghai has clarified that Chinese laying of brick walls as at Holy Trinity employed three-quarter Chinese brick lengths as ‘closers’, as against English quarter-brick closers and with different transverse bonds. The authors of this recent study also state that, remarkably, the Holy Trinity bricks used at Shanghai were the only ones they could find there that were the standard size in general use in Britain at the time and the thickest produced in the port to date. 50 Builders were able to have bricks made locally to any size, but the British norm was preferred by Kidner. Holy Trinity’s brickwork thus represents some compromise with UK standards and practices, a blending of technologies, but which worked both from a structural and aesthetic point of view. 51 This choice was important, but perhaps enforced.
Ater all the many drawbacks were overcome, as discussed above, and just as all conditions seemed to point towards steady progress to completion, there was a further hiatus which caused ongoing improvisation. At the commencement of 1867, all the stonemasons began a strike for higher wages, and it took some time before the contractors could arrange to proceed with the work. The delay was caused by Farnham finding it difficult to obtain a good and regular supply of skilled craftsmen, which was only done at considerable financial loss to the contractor. Clearly, the church Trustees had concluded a contract at the outset which held Farnham responsible for delays with his own work force, which was standard practice in the UK, and he had to accede to their demands. As Kidner also observed, ‘At other times large numbers left us through some petty misunderstanding with their foremen or squabbles among themselves. Then again the discharge of a few bad workmen would sometimes cause us the loss of a whole gang, and in consequence of a custom which prevails among them, that every man must begin and finish the particular piece of work on which he is engaged, we were frequently compelled to send away men who were very useful’. Perhaps surprisingly, we discover that in Qing China, the Chinese trades guilds had many of the characteristics of trades unions, which were becoming increasingly powerful at the same time in Britain. There were heavy penalties under Chinese law for going on strike, but somehow this was avoided in this instance. By remarkable coincidence, there was an almost simultaneous strike of masons, seeking to enforce a ‘closed shop’ of union members taking place at Glasgow University, which was being rebuilt to the designs of Gilbert Scott.

As the contractor struggled with the supply of masons, which would have involved the frequent rescheduling of this trade with interlocking building trades, especially bricklaying, other problems gathered in the background (Situation 9). In March 1867, Kidner
had detailed Shanghai’s worsening economic circumstances in a letter to his sister: ‘The losses on tea & silk have been enormous and shirtings & other imports have also lost considerably’ he confided. He doubted the prediction that 1867 would be a better year than 1866, which had also been poor. He was proved right when in June 1867 the supply of funds to further the project dried up. Kidner reported that from this time on, ‘the works were carried on with less spirit and activity than formerly, until the beginning of September when they were altogether suspended’. It is not known whether the supply of funds raised had been underestimated, or whether promissors of funds were simply unable to provide them as intended. To follow on from the myriad small adjustments to schedules caused by these new circumstances, Kidner noted in November 1867 that ‘The walls have been covered up with straw to protect them in some measure from the effects of rain, but if the work is not resumed at once a more substantial covering must be substituted, or the heavy rains and frosts which we may expect during the winter months will cause considerable damage’.55 Through a series of small improvisations stemming from what appears to have been a ‘stop/start’ situation as money arrived, the project carried on towards completion as imported heating systems, stained glass windows, tiled pavements and ‘other costly fittings’ came in from England and were able to be fitted under cover of a completed roof. The church was opened on 1 August 1869.

Our utilisation of an improvisatory framework for this study shows effectively the challenging nature of building in Shanghai at this time by highlighting the sources and timings of the difficulties. Seven out of nine of the problems identified (Situations 3 to 9) were ‘newly emerging’, only appearing after the church was replanned and redesigned by Kidner (Situations 1 and 2) and the contract with the builder was signed and work started. Of these, it is unlikely any could have been foreseen. The project was therefore difficult from
the start, with no let up until completion. In terms of who was the prime mover in the solving of Situations 3 to 9, Situations 3, 5, 6 and 9 fell largely to Farnham, with Situations 4 and 7 falling to Kidner and 8 falling to the Trustees. Situation 4 required a collaborative solution, but in reality, as it was Kidner’s contractual obligation to ensure that the building was completed in line with the plans and specifications, both builder and architect had to collaborate and communicate frequently and harmoniously so that the project was completed late but not too late for the client. Flexibility of organisation, predictably, helped in improvisation. This reinforces the argument that construction projects, irrespective of the contractual lines of responsibility, are best treated as joint responsibilities in practice, indeed, as ‘hybrid’ projects.

We contend, based on the above, that an ‘improvisatory’ analytical framework can work well for historians in evaluating causation and contributions. We conclude that both Kidner and Farnham made timely and appropriate improvisatory responses that involved considerable experience and skill.

*Architectural ‘Piggybacking’*

What Kidner did for Scott in his Shanghai sojourn may be described metaphorically as ‘piggybacking’. This conveys the notion of a ‘carrier’ and a ‘rider’. The analogy is clear: Kidner can be seen as the ‘carrier’ of Scott’s design in Shanghai, with Scott being the ‘rider’, benefitting from Kidner’s resident architectural skills and opportunities to access the local knowledge required to deliver it. By seeing the arrangement through this lens, we are able to make an assessment of how successfully the Scott/Kidner liaison met the presumed criteria of both parties.

At the time, Scott’s office was famously in a state of almost permanent overstretch, as it processed the vast volume of commissions large and small that came its way as
Victorian Britain built itself. Scott himself was so busy with clients he was hard to access even by his own staff. His office of around thirty people provided architectural supervision and support for construction projects employing many thousands all over Britain. Starting an office in Shanghai, or anywhere else overseas was out of the question, especially for a single building, even on a temporary basis. The lines of communication were too long in the 1860’s, before the era of subsea cables made swift transcontinental dialogue possible. So there was nil geographical coverage, very limited human resource and limited, perhaps zero, foreign market knowledge, compounded by the unsettled state of Chinese society in the 1860’s, which represented unquantifiable risks.

Kidner took up the challenge of providing the lack of all three elements by going to Shanghai to erect Holy Trinity Church to Scott’s designs. It is clear from his surviving correspondence with family members that it was his intention to build up a local practice at the same time. His brother James, trained as a builder and architectural surveyor, joined William in 1866, writing home that ‘we have lots of jobs in hand which have been going on for some time but no new jobs’. Although there were episodes of fluctuating demand in Shanghai, as shown above, earnings from the Trinity project would be available from 1865-69 to Kidner as executant architect at some 5% of total costs, known to exceed £26,000, namely, £1,300, added to which there would be income from the other jobs referred to by James and doubtless related to the mercantile community’s more utilitarian buildings. The income from the church project alone would average £250 per year, as compared with the annual salary of £150 for a clerk of works in Scott’s employ at this time.

Among Kidner’s other jobs, we know that he designed a new court for the Shanghai Racquet Club, of which he was a member, in 1866. He also wrote a report on the construction of the French Embassy, built to ‘Gallicize’ the French area, newly completed
and, ignominiously, already with structural problems, in 1867. That year, he acted as executant architect to the new Masonic Hall on the Bund, with design inputs to original plans by George Clark, the mason, who had since left Shanghai. The year 1867 also saw him design a prison for the British Consulate and a church at Hankow. In 1874, he designed a new building for the American Consulate, which was unbuilt, the size of a large villa. His talents were given free rein in his 1876 design for the office of the Hongkong and Shanghai Bank, an opulently detailed and very substantial Renaissance-style palazzo. There followed a new office for the Mercantile Bank of India in Shanghai in 1877.

As well as hoping for a successful career in Shanghai, which he had achieved by the time he left in 1877, he probably also hoped for an interesting and enjoyable social life. His letters home speak of his participation in tennis, trips along the Chinese rivers shooting fowl and participation in shooting contests as a member of the local Shanghai Militia, a volunteer organisation, one of a number that had started up in the Treaty Ports. This was both recreational as well as a safeguard against attacks by residual supporters of the Taiping Rebellion, which had dwindled by 1864. By 1866, James Kidner, who had trained as a builder and surveyor, had come out to Shanghai to join his brother as the Trinity project got off the ground. The brothers were practiced marksmen, doubtless related to their farming roots. James Kidner’s correspondence with his sister shows that there were rifle shooting contests between expatriate staff at the various Treaty Ports, where William Kidner frequently emerged as winner, justifying his reputation as ‘the finest shot in China’.

A reciprocity of business advantage for both Scott and Kidner was aimed for through ‘piggybacking’ and was achieved through the Trinity project. The risk for Scott always lay in the quality dimension, but was much reduced through Scott having chosen Kidner, a former employee first. Later Kidner was required by the Holy Trinity authorities to send his
amendments to Scott’s designs to Scott for comment before commencement of work. We are entitled to assume that the client was pleased with these in advance of Scott seeing them. When Scott received Kidner’s revised designs, he praised his work, glad that Kidner ‘so thoroughly understood his views and ... appeared to be capable of carrying them out satisfactorily’. At the Masonic foundation stone laying ceremony for the Church held on 24 May 1866, it was made clear that in Shanghai, the designs for the church were seen as a joint production of Scott and Kidner, the inscription on the foundation stone reading: ‘Architects: G G Scott Esq., RA and William Kidner, Esq’.  

An arrangement such as this was very satisfactory to Scott. At St John’s, Newfoundland, where Scott had also designed a new Anglican cathedral, he had employed a Scots assistant, William Hay, a former trainee, to supervise the building of its nave on site in 1847. Scott was able to piggyback again in Christchurch, New Zealand, employing a resident architect, Benjamin Mountford, a former pupil, to erect his designs for Christchurch Cathedral in 1864. Two years later, his plans for Bombay University were cut down without permission on cost grounds, being carried out by resident architects George Twigge-Molecey and Walter Paris. Angry at the discourtesy of failing to give him the opportunity to revise his plans, Scott was not slow in expressing his displeasure and washing his hands of the commission.  

Present-day computerised communications and travel by jet plane have long rendered international architectural piggybacking redundant, as has the presence of a local architectural profession in the former ‘colonies’. At the time it was commonly used by architects where they could, so as to keep control of their designs.
Masonic Networking in Shanghai

Freemasonry\textsuperscript{68}, widespread in Britain, became strong across the Empire. Colonial merchants frequently employed ex-public schoolboys, who had often joined ‘old boy’ Masonic lodges named after their schools.\textsuperscript{69} Gratton’s history\textsuperscript{70} advises that when Kidner arrived in Shanghai in 1864 there were already three Lodges of English origin there, the Northern Lodge of China (from 1843) and two newer ones.\textsuperscript{71} Kidner joined the Northern Lodge soon after arriving, and the following year, was commissioned to take over the existing project to erect a new Masonic Hall, making design amendments. The project cost a substantial 40,000 taels, some £13,000. At the splendid Masonic Dedication ceremony of 17 September 1865, Kidner attended as ‘Deputy Grand Superintendent of Works’.\textsuperscript{72} There was a Masonic Foundation Stone laying Ceremony for Holy Trinity Church on 27 September 1866, where ‘Bro. William Kidner’ was the ‘Acting Grand Superintendent of Works’. The ‘Builder with the Plans’ was ‘Bro. S. C. Farnham’, the contractor. A magnificent procession of Shanghai’s Freemasons, a military band, The Shanghai Volunteers, seamen and marines, the New Church Trustees, the Municipal Council, the Commissioner of Customs, representatives of the American and French consulates and a cordon of six policemen paraded the streets. Kidner would go on to become Master of the Northern Lodge of China for 1871.\textsuperscript{73}

Whether his Freemasonry generated business advantage to Kidner cannot be evidenced. When he gained the Masonic Hall commission he was one of only two architects in Shanghai, the other a new arrival and Kidner with Scott’s commission to build Holy Trinity, reason enough to be chosen. Also, deal-making in Shanghai, as Rawski reminds us, was largely done by Chinese compradors, trading with Chinese firms, reducing potential masonic influence generally.\textsuperscript{74} S C Farnham receiving the building contract for the church is unlikely to have had anything to do with Kidner or Farnham being Freemasons. Farnham was the
nearest equivalent to a British builder. Certainly, Shanghai’s English Freemasons donated stained glass windows to Holy Trinity.\textsuperscript{75}

Undoubtedly, Freemasonry in the colonies provided social activity, diversionary ritual and welcome spectacle while abroad, reinforcing British identity and culture.\textsuperscript{76} Kidner’s experience supports the assertion of Harland-Jacobs that Freemasonry was a pillar of Empire in that sense.\textsuperscript{77} It also supports the view of Burt, who found no evidence of Victorian masonic networking opportunities influencing business dealings.\textsuperscript{78} Robertson reaches a similar conclusion.\textsuperscript{79}

\textit{Improvisation, Piggybacking, Masonic Networking: Summing Up}

At Holy Trinity, management improvisation was a necessary part of managing under pressure. Piggybacking, in Kidner’s case, was geared to satisfying his client and his principal, Scott, and to building his career. Masonic connections involved socialising and networking under the scrutiny of Shanghai’s small British community. We conclude that Kidner and Farnham handled their respective architectural and managerial duties with great distinction, that Kidner achieved his career aims through the Trinity Project (while Farnham lost money), but that both men enhanced their social and commercial reputations among Shanghai’s UK community and Freemasons as a result.

\textbf{CLOSING DISCUSSION: THE SHANGHAI ECONOMIC ENVIRONMENT OF THE 1860s AND ITS IMPLICATIONS}

Although there were some aspects of Shanghai’s situation that were improving in the 1860s as a result of the reducing threats of war, in other ways it was an unsettled era, as the progress of the Trinity project suggests. The table below presents some customs statistics for the period:
The above data encapsulate an uneven pattern in the export trade for the years shown, with 1863 being an outstanding year for Export Duties received by the Chinese Government as a result of high export volumes. These fall dramatically in 1864 to 488K, recovering in 1865, with 1866 showing the lowest level in the period at 418K, rising to 517K in 1867 and recovering further to £584k in 1868. This pattern is consistent with the financial fortunes of the Trinity Project from the commencement of its building phase in March 1866, at the low point for tea and silk export business noted by Kidner. However, there is recovery in 1867, with trade the highest for five years in 1868, corroborating that the Project’s funding lapse and subsequent recovery were linked with trade fluctuations.

There were several broad reasons for these fluctuations: relocations of large numbers of Chinese from the country to Shanghai to avoid the ravages of the Taiping Rebellion, and back to the country after the Rebellion stopped (in 1864) had caused speculative housing investment and subsequent losses. In addition, in 1865, a global depression coincided with the American Civil War and this caused an immediate recession in Shanghai.  

The Chinese building trade was unsettled in the 1860s. At this stage, Chinese building practice did not distinguish between the design and building processes, which were all carried out by the builder. Also associated with the Taiping Rebellion, there was an influx of rural Chinese tradesmen into Shanghai over the period and subsequently, which Roskam equates with the generation of friction within the building industry. As he puts it, ‘Different dialects, building methods and levels of experience further complicated … design and construction’. As an example, Roskam cites the use of the gong, a Chinese measurement of
length of 1,673 metres in parts of Shanghai, amidst other systems of measurement used in
the city and neighbourhood.\textsuperscript{81}

The various guilds of building trades in Shanghai were very powerful. These were
organised locally and centred on the Lu Ban Temple, shrine of a patron saint of carpentry,
responding to threats they perceived to their business as a result of the influx of tradesmen
from country areas and arising from the requirement for buildings by the international
trading community. Attempts were made by Shanghai tradesmen to exclude non-locals from
house building business in the city, restricting these outsiders to work for the international
traders. Some guilds struck up alliances with guilds of associated trades. Overall, there were
inconsistencies of methods in building, language difficulties and suspicion among the
international community that Chinese builders and workmen in Shanghai were unreliable.\textsuperscript{82}

The Trinity project was, with hindsight, unlikely to be easy, and among the difficulties
we analysed earlier was a range of restrictive practices among stonemasons that slowed
progress. It seems remarkable, given the high quality of the finished building, that it was not
carried out by a builder (See Figure 1). S C Farnham & Co were in the ship repairing and
shipbuilding trade, with a shipyard and foundry.\textsuperscript{83} Farnham had 13 office staff in 1874. As a
result of their small size and the fact that they employed indigenous manual workers,
including woodworkers for ship work, they could easily adapt to the construction of timber
roofs for buildings and other tasks.\textsuperscript{84} Farnham took the risk that managing a different mix of
trades while acting as builders, backed up by Kidner, could be successfully achieved but were
frustrated by the difficulties they met through brick supply problems, exacerbated by the
demands of hard- to- come-by stonemasons.\textsuperscript{85}

[Insert Figure 1 about here.]
Farnham suffered the financial penalty of having to pay more wages for masons than were priced into their contract with the church trustees. The firm completed the project late but honourably, showing a commendable flexibility and patience, perhaps influenced by S C Farnham’s Masonic membership and loyalty to Queen and country. The firm went on to merge with a competitor, Boyd, in 1901.\textsuperscript{86} Its successor firms existed successfully until their business was taken over by the Communist government in 1950.\textsuperscript{87}

It is also noteworthy in summarising the Trinity project, that, whereas extraterritorial UK entrepreneurs had failed to supply bricks, in spite of a welcome willingness to help out, the entrepreneur that came to the rescue, Chunsheng Li, was a Chinese businessman. His successors in Shanghai became more and more numerous, emulating western technology and creating lasting success with Chinese capital. He confirms the contemporary importance and versatility of compradors as highlighted by Rawski, Bickers and others.\textsuperscript{88}

Chinese labour power could be considerable, as was shown at Trinity. There the Chinese masons had their way, while a brilliant Chinese comprador saved the day by making a defunct brickworks produce a huge quantity of high quality bespoke-size red bricks (see Figure 2). This was all possible because a British-nationality shipbuilder, overseen by a talented immigrant architect, managed the resultant unplanned situation from one of near-chaos to a highly satisfactory conclusion. Underlying their achievements were what we now refer to as managerial improvisation and architectural piggybacking, in a context of Masonic social networking.\textsuperscript{89}

It is appropriate to conclude by noting with Muhlhann in his recent history of modern China that the Treaty Ports came to be regarded by the Nationalists after 1912 with resentment as seats of foreign privilege and constraints on Chinese growth.\textsuperscript{90} This paper has confirmed that the international firms were not the only beneficiaries of Treaty Port
business, as Rawski has also contended, with much of the profits of dealings going to compradors and Chinese suppliers. Indeed, at Holy Trinity, Farnham was the only party that lost money.\textsuperscript{91} In contrast, the ports, especially Shanghai, may now be seen as the source from which modern-day China’s prosperity has come, aided early on by the development of the western technologies of the railway, international telegraph and an infusion of western-style manufacturing technology, media and cultural industries.\textsuperscript{92} It was here that the successors of Chunsheng Li and his fellow Chinese port manufacturers, traders and merchants emulated the international traders and adopted their innovations, which they then introduced in their own factories, ship repair and shipbuilding yards. They took Shanghai and China forward economically in the pre-Communist years and beyond. Indeed, Chinese governments of recent decades, while ambivalent about colonialism, have put the Chinese ports at the heart of their economic policy.\textsuperscript{93}

Not to be forgotten either are the Chinese working class labour movements, centred on Shanghai, especially the guilds, who proved to be fine craftsmen but tough negotiators on the Trinity project.\textsuperscript{94} As Selden put it, ‘the Chinese labour movement was born in the craft workshop, not the dark satanic mills’.\textsuperscript{95} Their successors became very closely involved in China’s subsequent political change and economic progress, becoming a major force in shaping the country’s new future.

[Insert Figure 2 about here.]

\textbf{EPILOGUE}

Still standing today, Holy Trinity Cathedral has been subjected to remarkable fluctuations in popularity and fortune. It was admired by its socially and racially mixed congregation\textsuperscript{96} from 1869 for its very British red-brick, un-Chinese muscular Gothic form and the Christian
symbolism of its cross plan and ‘Trinitarian’ triple-lancet windows. The admiration likely grew when its tower and spire were built in 1893, greatly increasing the church’s footprint and visual impact. While members of the congregation might see the spire as ‘pointing up to God’ it is as likely to have been regarded by locals as an intrusive symbol of British power. Its spire was vandalised then destroyed in the Cultural Revolution of the 1960s/70s for that very reason, then the whole church was recently restored with Communist government money by the officially recognised Chinese Three-Self Church movement, who use it as a church and see it as a symbol of Chinese Christianity, erected and restored by Chinese hands.⁹⁷
Bibliography

Books


Bickers, R. *China Bound: John Swire & Sons and Its World*, Bloomsbury, 2020


Stamp, Gavin. *Gothic for the Steam Age: An Illustrated Biography of George Gilbert Scott.*


Willis, C. *Form Follows Finance; Skyscrapers and Skylines in New York and Chicago,* New York: Springer,1995.


**Articles and Chapters**


**Newspapers and Magazines**


**Unpublished Materials**


North China Herald and Market Report, 4 November 1867. William Kidner’s progress report to the Trustees of the Shanghai Holy Trinity Church.


**Archives**

China Directory, 1874


Grace’s Guide To British Industrial History,

https://www.gracesguide.co.uk/S._C._Farnham_and_Co, consulted 12 June 2023
Port catalogues of the Chinese maritime customs collection at the Austro-Hungarian
universal exhibition, Vienna, 1873,
<table>
<thead>
<tr>
<th>Situations</th>
<th>Antecedents/Causes</th>
<th>Behaviours</th>
<th>Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Unsuitability of Scott’s plans</td>
<td>Lack of communication re geographical distance</td>
<td>Kidner replans building with ‘cloisters’ and extra accommodation</td>
<td>Additional costs, added value</td>
</tr>
<tr>
<td>2 Stone not suitable</td>
<td>As above</td>
<td>Kidner redesigns in red brick and white stone</td>
<td>Lower cost, added value</td>
</tr>
<tr>
<td>3 Manual piling too slow</td>
<td>Newly emerging constraint</td>
<td>Novel solution: mechanical piling</td>
<td>Lower cost, added value</td>
</tr>
<tr>
<td>4 Soft ground found on site of tower</td>
<td>Newly emerging constraint</td>
<td>Novel solution: change site of tower</td>
<td>Avoid future subsidence</td>
</tr>
<tr>
<td>5 Liquidation of Shanghai Brick Company at outset of production</td>
<td>Newly emerging constraint</td>
<td>Persuasion of ‘new’ Brick Company owners to take over</td>
<td>Stoppage of further delays</td>
</tr>
<tr>
<td>6 Collapse of new Brick Company after 200,000- bricks produced</td>
<td>Newly emerging constraint</td>
<td>Persuasion of Chumsun Li to take over as new brick suppliers</td>
<td>Stoppage of further delays</td>
</tr>
<tr>
<td>Situations</td>
<td>Antecedents/Causes</td>
<td>Behaviours</td>
<td>Consequences</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Assessment of local bricklaying practices</td>
<td>Newly emerging constraint</td>
<td>Evaluation and acceptance of local bonding practices</td>
<td>Neutral consequences</td>
</tr>
<tr>
<td>Funds shortage</td>
<td>Newly emerging constraint</td>
<td>Covering of work surfaces against frost re delay</td>
<td>Protection of works</td>
</tr>
<tr>
<td>Strike of all masons for wage increases</td>
<td>Newly emerging constraint</td>
<td>Eventual concession of wage increase – loss borne by Farnham, contractor</td>
<td>Late completion of works</td>
</tr>
</tbody>
</table>

Sources: North China Herald and Market Report, 9 February and 4 November 1867, Kidner’s progress reports to Trustees.
Table 2 Exports and Export Duties for Shanghai, 1863-65 (Tael 000s)

<table>
<thead>
<tr>
<th></th>
<th>1863</th>
<th>1864</th>
<th>1865</th>
<th>1866</th>
<th>1867</th>
<th>1868</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Exports</td>
<td>n.a.</td>
<td>28,513</td>
<td>29,373</td>
<td>24,757</td>
<td>28,247</td>
<td>37,014</td>
</tr>
<tr>
<td>Export Duties</td>
<td>756</td>
<td>488</td>
<td>521</td>
<td>418</td>
<td>517</td>
<td>584</td>
</tr>
</tbody>
</table>

Note: n.a. = not available. 3 Tael = £1.

Source: Chinese Maritime Customs Returns, 1873.
Figure 1 Interior of Holy Trinity, 1869, prior to opening, showing the quality of the bricks and bricklaying

Note: By permission of University of Bristol, Historical Photographs of China, Fr 01 -128, c2018.
Figure 2 Exterior of Holy Trinity, post-1893
Endnotes


2 Fletcher, *History of Architecture*, viii

3 However, we have been sagely advised by Rappaport (1990) that in the area of architectural symbolism, there are users’ meanings and designers’ meanings, and thus we should not conflate these or assume without evidence that our own interpretations are the intended ones.


5 Denison and Ren, *Shanghai*, 47.

6 Roskam, *Improvised City*.

7 We are also aware of the conservation efforts of Professor Wu Jiang in Shanghai, see Jiang, *History*, which are less directly relevant to our study.

8 Roskam, *Improvised City, 118-121*


10 The British Embassy in Shanghai provided the predecessor of Holy Trinity with its first building committee trustees (Wright, *Twentieth Century Impressions*, 330)

11 See McKinstry and Wallace, *Cullen, Lochhead and Brown* and McKinstry and Ding, *Conradi* for coverage of this point.
Bremner, *Imperial Gothic*. 9. These views were fully expressed by Bishop Samuel Wilberforce, see 203.


Brown, *Providence and Empire*. Metanarratives such as these were not without challenge within the British political elite. For example, W E Gladstone and Richard Cobden denounced the Opium Wars. See Morley, *Life of Gladstone*, 660.


The Anglican Church Missionary Society worked cooperatively with other Protestant missionary societies in China (Wright, *Treaty Ports*, 332).

Bremner, *Imperial Gothic* see pages 91 & 98 for other *pro deo* examples.


Kidner Letters, William to Ann 12th and 25th February 1864.

Dictionary of Scottish Architects, William Kidner. The basis of Kidner’s inclusion is that he designed, later, several buildings in Scotland.

Scott, *Recollections*, 87. Here, Scott rails against cheap churches not worthy of their purpose. Bremner notes that Scott earlier expressed the view that £15,000 was not enough for the first phase of St John’s Cathedral, Newfoundland, see *Imperial Gothic* 93.

E.g., at Scott’s St Mary Abbott, Kensington, begun 1869. See: Stamp, *Steam Age Gothic*, 71.

The rate of exchange used throughout this paper is taken from Port Catalogues, 1873. The expanded budget of £27,000 is equivalent to some £3m today.

Wright, *Twentieth Century Impressions*, 331.

Roskam, *Improvised City*, 97.

Roskam, *Improvised City*, 95.

*North China Herald*, Kidner discusses the intractability of local granite in his report to the Trustees dated 9 February 1867.
A phrase coined by Bishop Forbes of Brechin on planning, with Scott, St Paul’s Church, Dundee (completed 1863) for an Episcopalian (Anglican Communion) congregation, which also had a cruciform plan and three lancets in the chancel.

http://anglicanhistory.org/scotland/apforbes/perry/chapter4.html, consulted 22 November 2023

North China Herald, Kidner’s report to Trustees’ meeting, 9 February 1867

In view of the scarcity of builders, there could be no competitive tendering process. An architect’s specification of materials and methods would be provided to Farnham, standard Scott practice.

See: Pressing, “Improvisation”; Mintzberg, Rise and Fall; Chelariu, “Learning to Improvise”; Leyburne, “Managing Change”.


McKinstry and Ding, “Hybridised Control”.


Ronen. “Incomplete Kit”.

Bremner, Imperial Gothic, 136-137.

Ruskin, Stones of Venice.

North China Herald, Kidner’s report to Trustees of 9 February 1867.

Friar, Companion, 451-452

Wright, Twentieth Century Impressions, 331. With its transient expatriate attenders, Holy Trinity was never a wealthy church. Shanghai Mercury, Shanghai by Day and Night, 20-24

North China Herald, Kidner’s report to Trustees of 9 February 1867.

North China Herald, Kidner’s report to Trustees of 9 February 1867.

North China Herald, Kidner’s Report to Trustees of 9 February 1867.

Denison and Ren, Shanghai, 7.

From: Encyclopaedia of Taiwan (online) Chunsheng Li, consulted 21 November 2023.

Following his father, Li had become a Christian in 1852 and would thus take satisfaction in advancing the faith in China by solving Holy Trinity’s brick supply problem. Renowned for his business acumen and his skill with ‘foreigners’, Li would go on to base himself in Taiwan in 1868, at first as comprador to tea trader John Dodd, with whom he opened up the Taiwanese tea trade. Li went on to become very rich as a merchant. He later wrote works of philosophy and Christian theology and became a civic leader in Taipei, involving himself in building projects, later helping to effect a peaceful takeover by the Japanese. His residence there explains his absence from the annals of the Treaty Ports and his fame in Taiwan. From Encyclopaedia of Taiwan.

Shu, “Western Construction”.

Shu et al. “China’s Brick History”.

North China Herald, Kidner’s Report to Trustees of 4 November 1867.

Roskam, Improvised City, 118-119.

McKinstry and Ding, “William Conradi”.

North China Herald, Kidner’s Report to Trustees of 4 November 1867.

Jackson, Recollections, 58-61; Cole, Scott 79. The Scott family managed to take a long holiday in 1859, the first since 1835.

Ding and McKinstry, “Business Success”.

Kidner letters. James to Ann, 24 October 1866.

Kidner Letters, James to Ann, 23 May 1867.

Roskam, Improvised City, 90-91.

Izumai, “Scottish Architects”, 94.

Kidner Letters, to Ann from James, 24 October 1866; 24 November 1866.

Stamp, Steam Age 158. While Kidner was in Scott’s office prior to sailing for Shanghai, Scott had completed Wellington College Chapel in Berkshire in red brick and white stone, so Kidner was very much in tune with his tastes. See also Cole, Scott 225.
Freemasonry is an international fraternal movement which meets for social and charitable purposes in local ‘lodges’, its ritual being based on the ancient craft practices of guilds of stonemasons.


Kidner met his wife through Shanghai masonic connections. Kidner letters, introduction.

Burt, “Victorian Freemasonry”.

Robertson, “Contribution”.

Denison and Ren, *Building Shanghai*, 66.

Roskam, *Improvised City*, 118

Roskam, 119

Graces Guide, SC Farnham & Co

North China Herald, 4 November 1867. The roof timbers were prepared in Farnham’s yard.

After Holy Trinity’s opening, an American partner in Farnham was turned down for a rent-free seat, in revenge for which he stood up in the pulpit and sang ‘The Star-Spangled Banner’. Shanghai Mercury, *Shanghai by Day and Night*, 1902, 23.
Graces Guide, Farnham and Boyd

Graces Guide, Boyd and Company of Shanghai


Izumeda, “Architects Abroad”. This article provides information on some of Kidner’s work post-Shanghai.


Rawski, “Chinese Dominance”


Roskam, *Improvised City*, 118-120


Kidner Papers, postscript; Los Angeles Times, *Shanghai’s Red Church Rises Once Again*, 27 February 2011.