



*Charles Rennie Mackintosh  
The Glasgow School of Art  
Glasgow, Scotland, Great Britain  
1897-99, 1907-09*

*Text by Andy MacMillan  
Edited and Photographed  
by Yukio Futagawa*

*Global Architecture*

世界建築



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世界建築 No. 49

格拉斯哥藝術學校 / 英國，蘇格蘭，格拉斯哥 / 1897—99年・1907—09年  
建築師 / 查理斯・雷尼耶・馬肯塔希

攝影 / 二川幸夫

本文 / 安迪・麥米倫

中譯 / 王淳隆

審訂：浩群建築師 / 蔡榮堂 陳乃城 黃模春 楊逸詠  
黃長美建築師

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# 創造性及獨特性：馬肯塔希藝術學校的再評估 —— 撰 / 安迪·麥米倫

Invention and Identity: A Reappraisal of Mackintosh's School of Art, by Andy MacMillan

一個偉大的建築作品，應該不僅只是好或有趣而已，還得看它對後世有無持續的吸引力。就此而言，本藝術學校（1897～1909）之偉大已無庸置疑。在20世紀初期，它是現代化運動先驅者的靈感泉源；直至今日，對後現代世代在探索當代建築的對應哲學時，它仍然提示了洞見與典範。

對1900～1910年間的革命世代來說，這無疑是一棟簡潔創新的建築物，它揚棄了僵化的歷史主義風格，偏愛建築物本來面貌的生命力表現，拒斥古典主義的束縛，不遵守任何立面法則；端視需要而恣意開窗；順應基地的自然特性、使用者的活動狀況、材料及構造方式而決定其造型。特別是其構造方式，因為受了拉斯金（Ruskin）理論及當時日本藝術風潮的影響，其建築裝飾皆源自對自然清新脫俗的觀察，因而形成真正的“裝飾性構造”。

70年代的後期革命世代，對於前輩英雄所嚮往的理想——陽光、空間及綠地即是一切——已經感到幻滅。他們對於真實化及複製品等科技——即機械美學——的成見，以及對於都市需求的草率分析（即「雅典憲章」中所揭櫫的住居、工作、娛樂及交通等），由於官僚化陳腔濫調的一再重覆，反而不經心地破壞了一些富有歷史性建構的社區。而且減緩了群體認同及自我認同的成長腳步。本藝術學校却能提供這類認同的例證：不但是因為其獨特性，而且還因為它同時具備了將“此藝術學校”流傳下去的能

If what distinguishes a great work of architecture from the merely good or interesting is its continuing relevance to the interests of succeeding generations, then the greatness of the School of Art (1897–1909) has been established beyond doubt by the manner in which, having served as a source of inspiration to the innovating pioneers of the Modern Movement in the opening years of the 20th century, it continues today, to offer insight and example to the Post Modern generation in their search for a relevant philosophy for contemporary architecture.

To the revolutionary generation of 1900–1910 it must have seemed a simple and original building, eschewing the dead historicism of the styles in favour of a vital expression of what building was about; rejecting the constraints of classicism, following no rules for façades, but letting windows happen as and where required, its form determined by the nature of its site, the activities of its users and the materials and means of its construction, a true ‘decorated construction’ deriving its ornament from a fresh look at nature, in the light of the writings of Ruskin and the revelations of the newly discovered arts of Japan.

To the post revolutionary generation of the seventies, disillusioned by the facility with which the aspirational ideals of the heroic pioneers – sun, space and greenery for all – their preoccupation with the techniques of realisation and reproduction – the machine aesthetic – and their simplistic analysis of urban needs: the housing, work, recreation and circulation of the ‘Charte D’Athens’ – had led, via endless bureaucratic repetition of stereotypes to the mindless destruction of historic structured communities and a progress diminution of communal and personal identity: the School offers example by its uniqueness; its

力。這就是獨特的格拉斯哥藝術學校，在特定時代的特定文化裏，座落在特定城鎮中的特定山頭上的一棟特殊建築物。見證了它的創造者覺察並宣揚建築物中每一事物的獨特性的能力。

對第一個世代而言，形狀（shape）與形態（form）的嶄新形貌——後者乃是計劃性的決策，而前者則來自感性對各種機遇的把握並憑感覺來駕御：貼面石材、普通磚塊、水泥沙漿、成型木料等構造材料的明快表現；對鋼樑、鋼筋混凝土樓版、平板玻璃等新材料，以及對電氣照明及動力、中央空調等新式設備在繪圖房中率性的組合與運用等等，在在顯示了一個建築的新時代的來臨，一個源自穆塞休斯（Muthesius）所鼓吹的「英國住宅」運動美學觀的誠實而坦率的時代。

這棟看似簡單的建築物，它那去除無謂裝飾的平板外牆；大片平坦玻璃窗的工作室北向立面，與挖洞似地精雕細琢的南向立面的對比，以及抽象立體的山牆和黑白相間、複雜刺激的室內空間等等，使得與馬肯塔希同一時代的歐洲人，從中獲得了確證與靈感。

這棟在立面上表現出內外張力的互動，在內部表現出互相穿透之空間特性的建築物，當其落成時，這種實驗性的手法可說是非常前衛。經過時間的歷鍊且益增其抽象性。在1897～99年間與1907～09年間兩個階段完成的學校建築，剛好顯示出馬肯塔希成就的範圍與成長。而且巧合的是，當時的草圖並非僅只是單

ability to be simultaneously genotype – The Art School; and specific the Glasgow School of Art a particular building located on a particular hill in a particular town, in a particular culture at a particular time, bearing witness to the ability of its creator to recognise and celebrate the uniqueness of each and every aspect or event in building.

For the first generation, the fresh look at the shape and form, the latter programmatically determined, the former deriving from sensibility to every proffered opportunity and governed by impressive control; the manifest expression of the materials of construction; dressed stone, common brick, cement plaster, sawn timber; the effortless incorporation and exploitation of the new means of building, steel beams, reinforced concrete floors, plate glass windows; and of servicing, electricity for lighting and power, central heating for environmental comfort in the studios; all seemed a clear demonstration of the arrival of a new age in architecture, an age of honesty and directness deriving from the aesthetic of the ‘English House’ movement made famous abroad by Muthesius.

Mackintosh's contemporaries in Europe found confirmation and inspiration in this seemingly simple building, its plain walls stripped of extraneous ornament, the contrast of the great, flat glazed north facing studio wall with the pierced baronial modelled south elevation and abstract cubic gables and the complex exciting black and white interior spaces.

This experimentation, at the façade with the expression of the interaction between forces inside and outside, internally with the nature of interpenetrating space, was progressive as the building evolved, moving with time toward increasing abstraction, the building of the School



純的紀錄而已，它更是爲了新建築而對本土建築之潛力所做的有力的驗證。而這種對建築形態的探索，恰好搭配了新建築方法與材料的嚐試。

工作室開了大片的玻璃窗，因此白天充滿了北面的光線，晚上則利用均佈的燈光照明；地下室備有暖氣機房可以吹送暖風；而且利用吊在屋頂鋼樑上的活動隔牆，可將房間分隔成很多小間。這是建築物形態取決於其使用性，而非依建築構成的法則而定的證明。

對材料的率性運用，也一樣充滿了新意。諸如加工石材、普通磚塊；吊掛在工作室及走廊上以便打釘掛畫的成型材料；沿洗槽成列張掛以便清洗畫筆的帆布；間或插進一些彩色瓷磚以增加亮度的樓梯間硬灰泥護壁、或是加入順其形狀的簡單木頭綫腳等等。這些手法均非取自範本，而是得自於個人對自然形態的敏銳觀察。

這在本世紀初期是一種革命，而且遠超越流行於當時，以過度裝飾爲特徵的新藝術運動（Art Nouveau）。馬肯塔希所努力的是一種更根本的、更深刻地關聯著建築物的生產過程的工作。即因此，其作品顯得更有紀律，且更爲那一群追求以工業化大量生產爲基礎，試圖闡釋機械與工藝美學，找尋適應社會之造形的包浩斯新生代所接受。

他之所以能在歐洲備受矚目，實因他具有過人的功力，能將

in two stages between 1897-99 and 1907-09 reveals the range and development of Mackintosh's achievement, and incidentally, that the sketch books were an active examination rather than a mere recording, of the potential of vernacular building for a new architecture. This exploration of form was matched by an equal exploration of the possibilities of new building methods and materials.

The studio floors were flooded with north light via great sheets of plate glass by day, and lit by the steady glow of electric light by night, warmed by hot air from a heating plant in the basement, and capable of infinite subdivision along their length by virtue of moveable partitions suspended from the steel beams above, a demonstration of building form determined by use rather than by rules of architectural composition.

Equally fresh was the frank use of materials as built; dressed stone, common brick; sawn boarding to accept nails for picture hanging in the studios and corridors, canvas lining at the sinks on which to clean brushes, hard cement plaster dados in the stairways lightened nevertheless by the insertion of a few coloured tiles, or the addition of a simple timber molding deriving its shape, not from a pattern book, but from a keen personal examination of natural forms.

This at the turn of the century was revolutionary and went further than the decorative excesses of form which characterised the currently popular Art Nouveau, Mackintosh's work was more fundamental, more deeply related to the process of building, and thereby both more disciplined and more acceptable to a newer generation which sought to find appropriate forms for a society, founded on mass industrial production moving towards the exploration of

日常事物重新形塑、點土成金。利用它們創造出嶄新、質樸的建築空間，爽直地反映出機械所建構的社會中才可能有的素簡生活方式。

馬肯塔希的造形（shapes）的不理性，恰與其建築形態（forms）的邏輯性旗鼓相當。而且與他對建築與材料冷靜而自覺的考察，很矛盾地互成表裡。顯然其中存有更高層次的藝術感性，相當個人化、富有創造力；而且最重要的，對於提示更豐富、更強有力之答案的契機，具有敏銳的掌握能力。

在這個藝術學校中的桌椅、屋架、樓梯間、毛巾架、便器、甚至遍布各處的畫架等，都被他不可思議地加以變形。這就像是他以非凡的功力，從諸如門廊或窗洞等簡單的建築元素中，創造出獨特的事物或空間；或說是將高低、明暗、收放等空間序列譜成一首令人難忘的空間組曲。

馬氏作品中的這些觀點，在今日再度成爲典範並吸引著新的一代，他們已不再受機械化產品的催眠，而且意識到以純粹量化的方式來解決建築環境問題的貧乏無趣；他們試圖重新發掘建築師作爲一個形式與空間之創造者的角色。

今天，這個藝術學校可說是在過渡時代中的最佳建築典範，我們可以認知、探究、援用其建築形式的存在本質，而且套用雷尼爾·班罕（Reyner Banham）的話：「具有論證性」。來形容兼具收斂化及豐盛化的矛盾；這鼓舞了受范德利及摩爾影響的新

aesthetic of the machine and craft in the Bauhaus.

What most attracted the attention of his peers in Europe was his astonishing ability to reshape every day objects and transform them from simple every day objects into iconic images of great potency, using them to create a new, austere kind of architectural space which related directly to new simpler ways of living possible in such a machine based society.

Mackintosh's shapes were as irrational as his forms were logical, and paradoxically side by side with the sober conscious examination of the nature of building and materials, there clearly existed an artistic sensibility of a high order; personal, inventive and, above all, responsive to the opportunity offered for a richer, more intense solution.

His transformation of chairs, tables, roof trusses, staircases, towel rails, stools, and even the ubiquitous artist's easel is marvellously demonstrated in the School of Art, as is his equally astonishing ability to create a separate event or space out of simple building elements such as a doorway or a window embrasure or to orchestrate an unforgettable sequence of low and high, dark and light, closed and open spaces.

It is these aspects of his work which today again offer example and interest to a generation which, no longer mesmerised by the role of mechanised production, and conscious of the sterility of a purely quantitative approach to solutions in the built environment, is seeking to rediscover the role of the architect as a maker of form and of place.

Today, the School of Art can be seen as a prime example of a building conceived at a time of transition,



生代，他們以尋求複雜與矛盾的本質和自我認同的社會需求為職志——即是何人以及身在何處（who and where one is）的感覺，這個感覺因為人造環境中之記號（referents）的獨特性（uniqueness）及關連性（relevance）而被強化了。也因此而參悟了馬氏對創作之重要性，以及創造賴以產生之場所與文化背景間之關聯性的體認。

仔細研究這個藝術學校，會發現馬肯塔希一方面讓建築物自我展現，一方面也使它成為展示他建築技巧的傳達工具。這顯示出他對每一種特定需求都有創造性的反應；把握住每個機會以創造性的演出來完成建築的一事一物。

他工作的方法可從遺留下來的圖樣及記事本中窺見端倪：在決定了建築物主要部份的策略性分佈，也就是平面及剖面決定了以後，隨即對建築物的各部分一再反覆的檢討像細部設計或建築物的發展等問題。實際上，這就是因應各種特殊狀況之變數及可能性而採行的正面攻堅戰術。這在對建築物的固有意義，求取恆常的整體覺知上是一種有效的策略。這種設計過程，必然會導致非常複雜以至於難以理解及描述的建築形式。

讓我們來看看此平面出色而簡潔的組織：E字形，有三個儘量拉長的臨街面，隱藏了複雜的背面（本建築物有一背面及一正面）。在直線排列、可以再加以隔間的工作室樓層裏，有一條短而明顯的內部動線。體積或形狀特殊的房間則安排在兩端及中央

where the existential nature of architectural form is recognised, explored, exploited, and to use Reyner Banham's phrase, 'made demonstrative', a paradox of reduction and enrichment, exciting to a generation conditioned by Venturi and Moore, engaged in rediscovering the nature of complexity and contradiction and the social need for identity — the sense of who and where one is — a sense reinforced by the uniqueness and relevance of referents in the built environment, hence the relevance of Mackintosh's understanding of the importance of invention, the unique door, at the front or at the side, and of relevance, the locational and cultural context within which the invention occurs.

Close examination of the School reveals how Mackintosh attacked the problem of letting the building dictate its own expression and at the same time be a vehicle for a display of his architectural virtuosity; demonstrating a creative response to every specific requirement, seizing every opportunity to actualize and architectural event with some feat of invention.

His method of working can be deduced from the drawings and note books which remain. After the initial strategic distribution of the main areas of the building had been determined, i.e. the plans and sections, each part of the building was then examined and re-examined as detail design or building proceeds, in effect, a process of ongoing tactical confrontations with the unique parameters and potential of each particular situation, an adaptive strategy which demanded a constant holistic awareness of the forces inherent in building, a process which inevitably resulted in a built form of such complexity as to make both comprehension and description difficult.

，明示了建築物端部的特殊性。末端部份有兩側或多面的採光。做為入口最佳位置的中央部份則有一座中央樓梯直通展示廳及校長室——以便於立即傳遞消息及管理。

這只是一個簡單的圖式（schema），却能讓人了解，並從建築的層次轉換到水平及垂直空間體驗的流動序列上。

同樣簡明直接的剖面圖：重疊的工作室層及走廊的單純配置；地下室高低起伏以順應傾斜的基地；在適當的地方，空間向上突出屋頂的額外體積。由正面的大屋簷，顯示出在頂部的各種可接受的變化。整個剖面事實上是在經營各種特殊的採光效果，甚至包括工作室的北向採光、走道空間天光的動態變化、建築物自道路退縮使光綫能透射到地下室、以及隨處可見的，對屋頂採光的可能性的利用等等。

構造的方式也非常簡單，但却產生複雜的效果。平板的石牆，但加上精巧的質感處理、牛腿、綫腳以及鑿孔，以強調其雕塑或平面的性質。磚牆依結構方式砌出圖案。灰泥牆面貼上了鮮亮的瓷磚而顯得光滑。內部以木板隔間，在工作室及走道等地方漆成深色，以免弄髒；櫥櫃與管道間也漆成深色使它隱蔽而不醒目；而在其他房間則磨成砂面並漆白，以強調微妙的光影變化。而且這還可能襯托出這個學校的所有人——董事們——講究儀式的活動（這種黑底白面以及白底黑面的效果，正是馬肯塔希作品中不斷重覆的主題）。窗上的玻璃，有的是光亮平滑，有的表面塗

Consider the brilliantly simple organisation of the plan: E shaped, a maximised street frontage on three sides conceals the complexity at the rear (the building has a back and a front), a short sensible internal circulation serves a lineal arrangement of sub-dividable studio floors, the rooms of special volume or shape arranged at each end and in the middle, a clear recognition of the specialness of end; terminal, lit on two or more sides; and middle, the optimum position for entry, a central stair leading up directly to the museum gallery and the Director's room — immediate information and control.

A simple schema, recognised and transformed at the architectural level into a flowing sequence of horizontal and vertical spatial experiences.

The equally direct schema of the section: a simple arrangement of superimposed studio floors and corridors, swelling out and stepping down at the base to recognise and occupy the whole of the steep site, and expanding up in places into the extra volume of the roof, an acceptance of the possibilities of the top, manifested by the great eaves at the front; the whole section in fact conditioned by the exploitation of the special kinds of light available, even north light for the studios, dynamic changing sunlight for the circulation spaces, the set back from the road letting light penetrate the basement floor, and everywhere the utilization of the possibility of roof lighting.

The means of construction are also simple, but made to yield complex effects, plain walls of stone, but subtly textured, corbelled, modelled and pierced to emphasise their plastic or planar qualities, brick walls patterned by structural bonding, plaster walls trowelled smooth with inset glowing tiles; internal partitions, of sawn boarding,



鉛，有的嵌在牆內側、中間或甚至突出牆外，有的平直、有的加上鐵框、有的透明、有的是在幽暗中反映出明亮的影像，有的又恰好相反；這些手法不斷地創造出對光線的形形色色的感應。而嵌在門上的玻璃也是外塗鉛、或圖案化、或著色，使建築物內部充滿了意料不到的勃然生機和魅力。

建築物的內外，繃直的鐵件穿插在流暢而誇張的植物般的造形之間，這些鐵件當作樑、補強柱或支撐物，端部則切齊或成形以表現材料的張力性質，以及扶手終端、握持和終結等情況。

再看看這建築物裡面諸如給排水、暖氣、照明及動力等設備的簡單需求，都經由週詳的考慮而以一種輕鬆愉快的方式來表示它們的存在。電氣配管及開關箱組合成“日本式柱頭”。照明設備裝在牆上或天花板上或錯落的吊在一起，透過彩色玻璃而閃閃發亮。這些都是以建築的佈景來演出光的慶典。

將風管與高壓封閉空間整合的暖氣系統，不但是一種發明，而且也是形成建築物設備風格的豐富要素。考察它原來會議室中的散熱管架，可以看到即使是螺絲釘也是整體中的一部分，而雕塑室及走廊上突出的成型進氣口也是一樣。作為建築物中不可缺少的部份，暖氣系統展示出如同管絃樂組曲中的主調般的效果。

平面及剖面反映出影響決定平面剖面的使用、材料與構造方式等形成建築物的基本要素。但是將房子（**building**）提升到建築（**architecture**）的地位時，則有賴於涉及建築創造的社會期

stained dark to minimise dirt in the working and circulation areas, integrating or concealing cupboards and ducts; sanded and painted white in other rooms to emphasise the delicate modelling of light, and perhaps, set off the ceremonial activities of the occupants, the Governors; (the effect of white on black and black on white is a recurring theme in Mackintosh's work); glass, in windows, sometimes polished plate, sometimes leaded, sometimes in, or on, or even beyond the wall, sometimes flat, sometimes in framed iron bays, sometimes transparent, sometimes reflecting white on black, black on white, always creating awareness of light; and glass in doors, leaded, shaped, stained, glowing and magic — unexpectedly — inside the building.

And outside and inside too, iron, taut, linear railings breaking into flowing plant-like forms for emphasis, or used as beams or stiffening braces or corbels, the ends cut and formed to celebrate and reveal both the tensile quality of the material and the fact of end, of holding, of being finite.

Consider also, how in the building the simple needs of servicing, water, heat, lighting and power, have been examined, understood and exploited to manifest their presence in a joyful way, the 'Japanese column head' compositions of electric conduit and fuse boxes, the light fittings, on the wall or the ceiling, or hung in random groupings, pierced, polished or glowing through stained glass, a celebration of the arrival of electricity into the architectural scene.

The integration of the heating system with its ducts and plenum spaces, not merely an innovation in itself, but is used as an enriching element in the service of the style of

待以及設計者發展技巧的水準。

雖然格拉斯哥藝術學校的計劃書只是要求一棟樸實可用的房子，但因涉及以公款來建造供公眾使用、大規模的特定建築物，這當中自然隱含有對其特殊格調的期待。

當時「英國住宅（English House）」運動的影響，乃包含於一種革新的觀念：安排室內空間所根據的生活方式，應該能夠而且必須控制並影響建築物的外形〔這種創意最後落得成為“如畫（picturesque）效果的構成”而已〕。它主要的是關切當地的家居生活方式，而且重要的是這種運動並沒有真正的公共建築物產生，它缺少了對紀念性的認知或與之毫無關連。

格拉斯哥藝術學校之偉大處表現在其他許多方面：它不但巧妙的掌握當地生活的概念、再度主張發揚本土建築，而且還相對地了解到公眾的需求——不僅是使用者及業主，而且是建築物所座落處之社區民衆的“權利”。

這可從它正面及開口部的處理上看得相當清楚，在其中至少有五種不同的處理手法，但是在造形上仍舊保持著整體感。

建築物的沿街正面以大挑簷遮蓋，在平坦的方石牆上，開的是裝上大而平滑玻璃的方正窗戶。從街上斜望過去的中央入口，其作法恰成對比，它利用壁龕、柱跨間及圓拱等構成厚實的雕塑體。欄杆扶手及窗框斜撐等帶有神秘感的鐵件將建築物的影響力延伸到街上來。令人好奇的“牆上小窗洞”，以及窗頂的精細雕

the building. Examination of the grilles in the original Board Room reveals that even the screws are part of the schema, as are the shaped projecting inlets to the modelling rooms and corridors. Another celebration — of heating as an integral element in a total orchestration of necessary parts of the building.

Plans and sections respond to use, materials and construction affect it, from these basic elements a building is conceived, but what raises a building to the status of architecture is the level of social expectation involved in its genesis, and the skill of the designer in its development.

The Glasgow School of Art, although the brief demanded a plain and suitable building, nevertheless involved a spending of public money on a large and specialised building for public use; expectation of a particular quality was implicit.

The influence of the contemporary 'English House' movement lay in the innovatory idea that the life-related interior arrangement of the spaces could, and should, condition and affect the external form of the building (an innovation which eventually degenerated into a 'composition of picturesque effects'), it was concerned primarily with a domestic way of life and significantly the movement produced no real public building, it lacked or was not concerned with monumental conviction.

The greatness of the Glasgow School of Art lies, among other things, in demonstrating not only a masterly grasp of that concept, a reassertion of the ability manifest in vernacular architecture, but also an equal understanding of the demands of the public domain, an awareness of the 'rights', not only of the users, and owners of the building, but of the viewers — of the community in whose domain



琢，這些都顯示並強調了平整牆面的厚度。甚至是窗子的清洗問題也與抗風壓的支撐構件合併處理，藉以增加正面的豐富感和格調。

較早時東面山牆是傳統的粗石面外表，俾與正面平整的方石牆形成對比。然則平整的牆面爲了對應雕塑工作室的某些內部空間的想法而隆起。這一片小山牆一再表明它是牆面的構成元素，而且顯示出它是牆面的頂部。董事會辦公室的二連窗，從外面看顯示了牆的厚度。而端牆的彎曲起伏在室內造成了整體表面的效果。在此馬肯塔希接納並且整合了內部與外部的不同理論。

既是山牆也是一片退縮的平整牆面的西側山牆，它的造形上的曖昧性格，正是傳統造形崩解的具體開端。圖書室的凸窗(bay window)中，應該是負空間的空虛處變成了被金屬窗框之表面質感所強調的實體正空間。窗戶沉重頂部的形式主義作風，與水平窄窗形成強烈對比。山牆上的門證明了門的本質乃是對牆的貫穿。在這個設計案中，牆面加厚加大，藉以增加其深度感及貫穿感，並進一步加上盤曲的綫腳，以延伸門的影響範圍，強調進入動作的莊重性。最後，造形的佈局終止在大門楣樑上方的牆面退縮。這些手法表現出對最高秩序的藝術手腕。

轉過角落，這建築物又呈現出另一種形貌，以粗糙的表面材料強調了這種改變，令人想起古老的蘇格蘭住宅。因爲西面山牆是凸出牆面的作法，所以南面山牆反而是凹入的牆面，而且中間

and on whose behalf the building existed.

This can be seen quite clearly in the exploration of façade and fenestration treatments, of which there are examples of at least five different approaches, in a building which nevertheless remains a totality in form.

The street façade, contained by great overhanging eaves, has huge, flat, glazed yet solid windows, set in a plain ashlar wall, contrasted with a heavily modelled central entrance composition of recesses, bays and arches, designed to be seen obliquely in the street. The mysterious ironwork of the railings and the window braces extends the field of influence of the building into the street; a curious tiny 'hole in the wall window' manifests and points up the thickness of the flat wall, as does the subtle modelling of the window heads; even the event of window cleaning is synthesised with wind bracing to add richness and style to the façade.

The earlier east gable has a traditional dressed rubble surface in contrast to the smooth ashlar of the front; plane, yet how the wall swells out to respond to some inner idea of modelled space, the little symbolic gable both reasserts the fact of the gable as a constituent element and manifests the top of the wall, as the linked windows of the Board Room demonstrate its thickness by standing in it externally, while completing an undulation of the end wall inside producing an effect of total surface within the room. Mackintosh here accepts and integrates a differing rationale of inside and out.

The ambiguity of the west gable form, both gable and a set back wall, a flat plane, a realization beginning of the destruction of traditional form. In the bay windows to the library, the negative window void becomes a positive solid

窗帶從牆腳往上延伸，所佔牆面比例越高則越大，到頂上時就像某種玻璃常春藤一樣攀爬而上，它使得南面山牆清晰可見。厚牆內嵌入窗子，通常會在室內出現很深的邊框，在此這個邊框在內外同時展現，使得視線穿透到牆後面，並意識到牆的厚度想來這是前文所述，東面山牆上董事會辦公室窗戶的增強手法。

在此，馬肯塔希再次展現他對回應公眾及私人不同需求之必要性的理解力。

南向主要立面的處理，着重在滿足享受日光並降低日照強度的需求。而且明顯的是對蘇格蘭本土“塔屋(tower house)”美學的探討的結果，這甚至包括了女兒牆的處理方式。我們可以拿來跟他的另一個圖面：邦拔堡(Bamburgh Castle)比較——注意其對牆壁中設備開口之配置有驚人的自信，隨興將完全對稱的東西予以不對稱的安排；將通風管及防火梯轉變成令人愉快的創作——以玻璃牆圍繞置於屋頂的“養雞場(hen run)”，這種即興式的創作自現代建築開始發展以來即爲其主要特徵。試觀那出挑的凸窗及溫室如何展現出牆面的透明性並吸引觀者的注目，甚至於連煙囪都提供即興表演的機會。

這個南向立面與建築物的正面形成極端的對比，它以強烈的背面性來強調出正面之所以爲正面，而仍然反映出它本身所屬的脈絡。其牆壁下部空白，向上往展示廊看去，可以透過屋頂遙望遠山，對面向如此茫濶視野的人而言，以磚塊砌成牆拱的展示廊

volume emphasised by the surface quality of the metal sash; the mannerism of their heavy top, contrast increased by the horizontal slot windows; the door in this gable demonstrating the essence of door, a penetration of the wall, in this case a wall which swells out to increase the sense of depth and penetration, further reinforced by the moulding which writhes out to extend the field of influence of the door emphasising the seriousness of the act of entry, and finally game, set and match, the recession of the wall plane above the lintel. This is virtuosity of the highest order.

Turning the corner reveals another schema, emphasised by a change in materials to roughcast, reminiscent of old Scottish houses. As the west gable is modelled beyond the plane, so the south gable is modelled within the plane, and this is made explicit by the central window feature which proceeds up the wall with an ever increasing glass-wall ratio as it climbs up and over the wall onto the roof like some glass ivy plant. The insertion of a window in a thick wall normally yields a deep sided bay inside the room, here the bay is manifest inside and outside simultaneously, a recognition of the penetration of the eye behind the plane, and of the thickness of wall, a rethought intensification of the Board Room windows of the early east gable.

Here too, Mackintosh displays understanding of the need to respond to the differing demands of the public and private domains.

The main south elevation exploits the need to enjoy and reduce sunlight and is obviously an exploration of the Scottish vernacular 'tower house' aesthetic, even to the parapet walk. Compare it to Mackintosh's drawing of Bamburgh Castle — notice the marvellous assurance of the distribution void in the wall, incidentally in wholly



，因其尺度及堅實性，而讓人有安全感。

再回頭到正面，主入口也有類似的主題。一道堅實的玻璃牆靠在門邊，門本身由一段踏步引進，踏步上方有利用照明燈具圈成的圓拱，階級逐漸變窄縮小使得終端平台的貫穿性非常強烈，門四周的牆面突出顯示接納及歡迎的意象。最後，在開口的中央插入保守形式的立柱，深色的門上嵌著色彩鮮麗但幽暗的彩色玻璃。

進門後，壓力隨著有拱頂的入口門廊繼續引導向前，往下走進入底層的學校本身，兩側有大量採光的走廊，連接了端部樓梯的突出陽台及更遠處的空間。再往前行，屋頂天光傾瀉而下，主要樓梯間上升穿過塔狀柱林進入較高層的大廳或展示廊裏。這個展示廊以高度個人化的木構架搭設，而且釘上一列木條以便掛畫。從東西兩側精緻的開口，一邊沿著採頂光、上方充滿了以暗色襯底而閃閃發光的古典雕塑的走廊，到達牆壁漆白、有曲面窗戶的董事會辦公室；另一邊穿過一些窗龕——窗龕比地面高一階且擺了木製長椅，學生可以在那裏聊天或曬太陽——通達圖書館那個全英國最具震撼性的建築空間。其複雜程度只有約翰·索恩爵士（Sir John Soane）的博物館差堪比擬。

在此可以窺見馬肯塔希對舉凡整體、量體、構造及構成主義、家具、照明及裝飾（正確一點說，是裝飾性構造）等之先見。這個圖書館已不斷地被描述並一再地被評論過，在此無需贅言；

symmetrical groups, asymmetrically arranged, the acceptance of the need for ventilation inlets, the need for an extra fire escape turned into a delightful invention — the glass walled and roofed 'hen run'; this acceptance of improvisation is major characteristics of modern architecture as it has developed. See how the cantilever bay windows and greenhouse exploit the sheer of the wall and invite the viewer to stand over the void as he surveys the view. Even the chimney offers the chance of an event.

What a contrast this elevation is to the front, how by its very backness it emphasises the front as a front, and yet how responsive to its own exact context it is, blank below, viewing gallery above, looking over the roof to the hills, and the gallery inside, bayed, arched in solid brick, reassuring in scale and solidity to the human in the face of the vast exposure of the view.

Returning to the front, the main entrance has the similar theme, a solidifying of the glass wall adjacent to the door, the door itself approached up a stair, under an arch formed by the necessary light, the stair end fluently narrowing and compressing the landing to make penetration irresistible, the wall round the door swelling out to receive and welcome, and finally the mannerist insertion of a post in the centre of opening, with its dark doors inset with vivid but sombre coloured glass.

Inside the compression continues with a vaulted entrance hall, leading onwards, down into the lower school, sideways along high spacious sunlit corridors with space beyond hinted at by the projecting balconies of the end stairs, and ahead, flooded by light from above, the main staircase rising up amidst a forest of towering posts into an upper hall, or gallery, used for display. This gallery

倒不如觀察其內部空間，藉凸窗向外擴張；以及向上伸展通過展示廊進入上方的樓層。這種空間的整體性有它令人信服的內部秩序。而這個內部秩序與南面及西面山牆的外部秩序有關但並不依賴它。因為外部秩序是因其對基地及對公眾領域之關係的考慮而產生的。

這種手法的運用在南面的對稱山牆特別顯著：位於圖書館層的三面窗戶的中間一扇，是屬於外部大垂直面造形的一部分；但對內而言，則是相同的三扇窗戶當中的一扇。這啟示了我們，馬肯塔希洞察並彰顯建築物每一部份的存在及獨特本質，進而將之整合於單純而感人形態之整體的無比才能。

is spanned by highly personal timber trusses and lined with simple sawn boarding for picture hanging; east and west subtly emphasised openings lead, one way to the original white painted, bow windowed Board Room, along a top lit corridor filled with glowing white antique casts against the dark lining, and the other, past some window alcoves, lifted up a step and provided with settle like seats where students can talk and enjoy the sun, to the Library, the most intense architectural space in Britain, comparable only to Sir John Soane's museum, in its complexity.

Here Mackintosh's preoccupation with totality can be seen; with volume, with construction and constructivism, with furniture, with lighting and with ornament, or more accurately, ornamented construction. So often has it been illustrated and so much has been written about it that it is unnecessary to say anything more, other than to observe that the totality of the space internally which extends out via the bay windows, and upwards inside the bays past the gallery and into the floor above, has a convincing internal order, related to, but not dependent on, the external ordering of the south and west gables which derive their emphasis from a consideration of their relationship with the site and the public domain.

This is particularly emphatic in the symmetrical south gable where at the library level the central window of three is part of a large vertical feature outside, and one of three similar windows inside, a reminder of Mackintosh's supreme ability to recognise and manifest the existential and the unique nature of each and every part of a building, yet integrate it within totality of simple, memorable form.



*Charles Rennie Mackintosh  
The Glasgow School of Art  
Glasgow, Scotland, Great Britain. 1897-99, 1907-09*



























