

¹ Charles Rennie Mackintosh, rose detail from bookcase for Windyhill, 1901

Steven Holl's new building for the Glasgow School of Art stands across the street from Charles Rennie Mackintosh's original. This paper questions the scope for relations between them.

Putting Holl and Mackintosh in multi-perspective: the new building at the Glasgow School of Art

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The announcement that American architect Steven Holl had won the competition to design a new building for the Glasgow School of Art opposite Charles Rennie Mackintosh's original (built 1897–1909), and the revelation of his plans to the public, provoked plenty of criticism about the possible relationship between the two buildings. Professor William Curtis first wrote on the topic in the *Architects' Journal* almost a year from the announcement, and his opinions on the relationship were forthright: 'Rather than dialogue', he argued, 'there is a dumb lack of articulation in construction and material.' A response came in the following issue of the *AJ* from David Porter, then Professor at the Mackintosh School of Architecture. He disagreed with Curtis, claiming that the new building will have 'an extraordinary spatial richness' and that 'the original sketch Curtis saw in Glasgow last December has progressed very rapidly', for it was but an early stage in 'a design strategy driven forward with a mixture of poetics and ruthless pragmatics: qualities that are singularly appropriate in this context, and developed with artistry and skill'.²

Curtis subsequently wrote a further open letter to 'the Governors, the Director, the Faculty, Students, Staff, Alumnae and Alumni' of Glasgow School of Art, which was published in facsimile in the *Architects' Journal* on 3 March 2011:

What a disappointment then to contemplate Steven Holl's proposed addition. It is horrendously out of scale, it dominates Mackintosh, it does not create a decent urban space, it fails to deal with the context near and far, it is clumsy in form and proportion, it lacks finesse in detail, has no relationship to the human figure, and is a stillborn diagram dressed up in Holl clichés such as 'iceberg' glass.³

Even if the two professors were unable to move in dialogue from their respective positions, what about the buildings themselves? The new Holl building has been on site on Renfrew Street since early autumn 2012, so what scope is there for relation and dialogue between it and the Mackintosh School of Art across the road? Perhaps it would be more profitable, at this stage, to start with an analysis of elements of the 'ready' end of that relationship, the Mackintosh

building, which might predispose it towards dialogue. The thesis in the present essay is that it is the proto-modern aspects of Mackintosh's work which play an important role in enabling the contemporary user or designer, and Steven Holl in particular, to approach the building and engage intimately with it. Holl seems to strive consciously after all – if we are to take his writings as a manifesto for his built work – for a refinement of the notion of the 'modern'. In one essay he writes of his own vision of architecture as:

an attitude reaching toward the full sensation of those earliest freedoms of modern architectural thought that could take architecture beyond neo-modernities and post-modernities into a realm where ideas have no boundaries – and the final measure of architecture lies in its perceptual essences – changing the experience of our lives.⁴

But what are those proto-modern aspects in Charles Rennie Mackintosh's work, what does Holl mean by 'modern architectural thought', and where, if anywhere, would the two find common ground?

Nikolaus Pevsner's claim for Mackintosh, in his 1949 *Pioneers of Modern Design*, as some type of high-prophet of modernity ('a forerunner of Le Corbusier', 'not a single feature derives from period styles')⁵ has long since been thoroughly criticised for, among other things, ignoring the myriad influences on the Art School from the Arts and Crafts Movement, from the vernacular styles of regional England as well as Scotland, from Art Nouveau, Symbolism and the Vienna Secessionists. One recent critique, for example, refers to Pevsner's 'authoritarian didacticism'.⁶ It is thus with the rigidity and unsteadiness of Pevsner's argument in mind, rather than with the simple pertinence of his emblematic boldness, that, even now as the builders dig 14 metres deep in black clay to start the construction of Holl's new Glasgow School of Art across the road from Mackintosh's original building, I aim to prepare some deeper and steadier foundations to the argument for a proto-modern Mac. If Holl's 'design strategy' can be understood, as Porter put it, as 'driven forward', at least in part, by 'ruthless pragmatics' which are 'singularly appropriate in this context', then it seems

that it may indeed be the proto-modern aspects of Mackintosh's building which are best investigated for a promise and possibility of relationship to Holl's hypermodern work.

Thus I'm going to do several things in this essay. First, I'm going to establish a working definition of 'modernity' which satisfies those conditions set out by Holl in the quotation above. Next, I will discuss how Mackintosh's work can be seen in that context, where that context will neither be one which excludes or denies all other possible contexts and influences, 'period' or otherwise, nor is set in some totemic relationship with the latter-day Modernist masters of the twentieth century. Then I will examine how Mackintosh's own historical studies paid into his work, and how he took inspiration from the past to make a leap into the future. Finally, I will explore what sort of 'dialogue' Holl's designs propose with the Mackintosh thus understood.

Heightened relations between objects

'The modern' has been defined as entailing a new apprehension of our relationship with the world.⁷ But what sort of apprehension of the world was it replacing? We might take the single point perspective system of representing objects as a simplified example, a caricature of the conventional ingrained attitude of the Western person to the world around them. All perspective systems are of course endowed with distinct symbolic meanings of their own. That the Renaissance, through Brunelleschi, Alberti and Leonardo, had come up with both that system, and the image of Vitruvian man, the perfect naked subject created by God and situated at the heart of the ideal forms of the universe, speaks volumes about a hierarchy of values and meaning. This clear separation of the perceiving subject from the objects which surround it has been seen by some thinkers, for example Heidegger, as disastrous for Western civilisation inasmuch as it drives those subjects on to an ever-increasing quest for efficiency in their dealings and their dispositions of objects, which latter remain alienated from them. For some other modern thinkers, such as those in the Frankfurt School, this drive to efficiency in our dealings with objects leads ultimately to the subject treating other humans in the world as objects, as mere coordinates for categorisation in Cartesian space, and thus locking them into the same economic drive to efficiency which culminates in the mechanised, rational, organised slaughter of Auschwitz.⁸

For Heidegger the art work in general escapes this disastrous separation of subjects and objects and its frightful conclusion, rescuing the object from its designation as dumb, inert and meaningless by forming and foregrounding its full being not merely as an object but as a 'thing'.⁹ For other thinkers, such as Maurice Merleau-Ponty, it is with the modern attitude that there is a rediscovery of things; and this is achieved through the methods of phenomenology, which – as a philosophical study of experience and consciousness, of how we experience things – also manages to blur the subjective/

objective dichotomy. Steven Holl is much influenced by phenomenology in general and by the writings of Merleau-Ponty in particular. Holl often cites Merleau-Ponty in his book *Questions of Perception: Phenomenology of Architecture*. At one point in that publication Holl describes his method of work:

We must consider space, light, colour, geometry, detail, and material as an experiential continuum. Though we disassemble these elements and study them individually during the design process, they merge in the final condition, and ultimately we cannot readily break perception into a simple collection of geometries, activities and sensations.⁰

In *The World of Perception*, Merleau-Ponty describes the modern as when the relationship between humans and things is 'no longer one of distance and mastery'. He writes of a 'vertiginous proximity', which

[...] prevents us both from apprehending ourselves as a pure intellect separate from things and from defining things as pure objects lacking in all human attributes.

Thus the modern attitude is to let things come to us themselves, under their own conditions, and not to subject them purely to our reductive systems and hierarchies of reception. The artistic paradigm here, of course, is the case of Cubism, where there is an attempt to let the manifold aspects of the being of the thing emerge in their own right, simultaneously and not in sequence under the imposed space-time framework of one idealised perceiver. In a crude juxtaposition, you could say that where classicism imposes order and allows objects to be experienced in terms of a preconceived Euclidean framework of measurement, proportion, symmetry and so forth, Modernism attempts to release things to be themselves. Nor is it mere coincidence that the Cubist movement, with these notions of how the object presences itself in space, arises in the same first decade of the twentieth century as the original development of phenomenology by Edmund Husserl.² In his essay in the *Handbook of Phenomenological Aesthetics*, Andrea Pinotti writes of a critical 'history of rapprochement between cubism and phenomenology' where

Since early attempts, it is clear that the real point does not consist in a phenomenological interpretation of cubism, that could accompany other readings (hermeneutical, formalist, iconological, etc., all equally legitimate), but rather in the hypothesis that cubism does the same as phenomenology, that it performs a parte imaginis the same operation that philosophy performs a parte philosophiae.³

We may also note that Mackintosh was completing his Glasgow School of Art at the same time,⁴ in the same year (1909) as such a prominent Cubist work as Picasso's *Harlequin Leaning* was painted. There is no evidence that Mackintosh was influenced by, or even knew of Husserl or the Cubist movement's work but, nonetheless, his contemporary architecture can be demonstrated to have similar concerns. Just as John Berger says that: 'The Cubists were concerned with the interaction between objects',⁵ then so, Mackintosh, I intend to show, lets objects and aspects of the world come to us through heightened

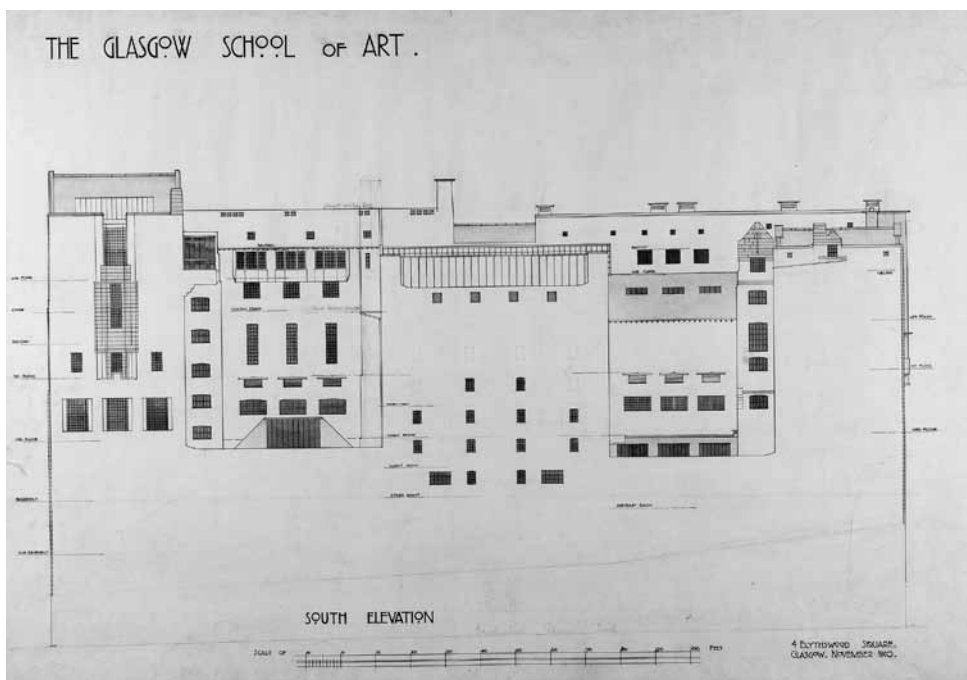
relations with other objects. This heightened relation is usually one of tension. I will show how it is in tension with other objects that the qualities of 'things' in his world emerge as strengthened and refined – it is a dialectic, in other words, not between objects as in Heidegger's etymological definition of them as existing merely as 'over-against' a subject, but between 'self-supporting' things.⁶

Tensions in Mackintosh's work

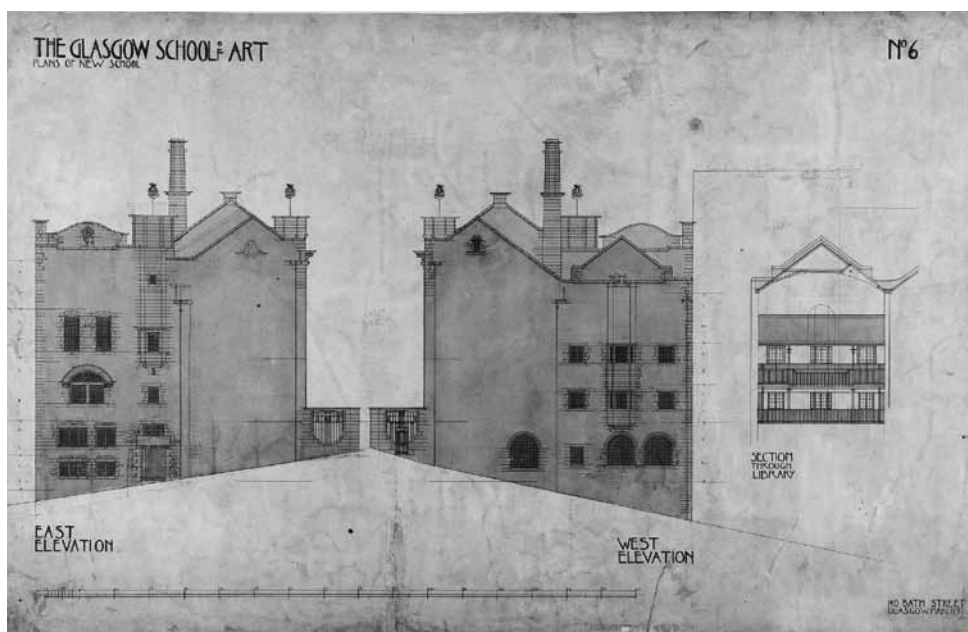
The provenance of this idea of tensions in Mackintosh's work – hinted at by David Porter when he addresses the appropriateness of both 'poetics' and 'pragmatics' – comes from David Brett's critique *C. R. Mackintosh: The Poetics of Workmanship*. Brett describes the theoretical and poetic tension of a graphic design rooted at once in the positivistic and scientific approach of Christopher Dresser, and in the naturalistic approach of Ruskin which, when overlaid with further symbolist overtones, becomes the vehicle for an integration of architectonic, structural and decorative elements throughout Mackintosh's mature work.⁷ At its most simple level this would be seen, for example, in the tension between the geometric and biomorphic forms in numerous of Mackintosh's well-known floral designs [1]. I want to examine here, however, the creation and exploitation of such tensions specifically in Mackintosh's Glasgow School of Art that will bring Holl's building into a set of particular relationships, which cannot be reduced to merely that of two objects posed indifferently 'over-against' one another across Renfrew Street. A palpable tension is already evident through all aspects of that existing building as it is experienced by the user, in the 'styles' Mackintosh adopts, in the materials, in the forms, in the construction methods, in the working out of the architectural programme and so on. A brief exposition of some of these aspects follows:

Style

As the Art School was built at the close of the nineteenth and beginning of the twentieth centuries, at the height of the period of architectural 'styles', we might wonder in which style Mackintosh designed the facades of his school: is it a nineteenth-century Glasgow tenement, or a seventeenth-century Scottish castle? Of course, the answer is neither. As both David Brett and Frank Walker show, Mackintosh, influenced by the Arts and Crafts ethos, was more concerned with the 'character' of a building as a particular 'natural and authentic' architectural expression of its symbolic or functional meaning, than with 'style' as a form of 'copyism', a coordinated and strictly planned composition following established precedents.⁸ Nonetheless, we cannot fail to notice that three outer facades of the Art School form a perimeter block of blond sandstone which conforms to (and is often indistinguishable from, to the newcomers' eye) the surrounding grid blocks of the Glasgow tenement cityscape in terms of material, colour, dimension and proportion. The fourth facade on a typical perimeter block would usually be hidden away from public street-level view to the interior of the block and thus, in the tenement case, that facade is often built of a less expensive material like brick or sandstone rubble. But the peculiar aspect of the block in which the Glasgow School of Art sits, is that the north side is on the ridge of Garnethill some height above the south, so that the facade facing the interior of the block (normally hidden from street view) is in fact almost totally visible, seen from Sauchiehall Street over which it towers. Mackintosh exploits this visibility by modelling that facade as a Scottish castle – like Fyvie Castle, for example (built and adapted from the thirteenth to the nineteenth centuries) in terms of traditional materials⁹ – grey harling, the rhythm of fenestration, and forms such as crowsteps adorning the broad frontage (actually



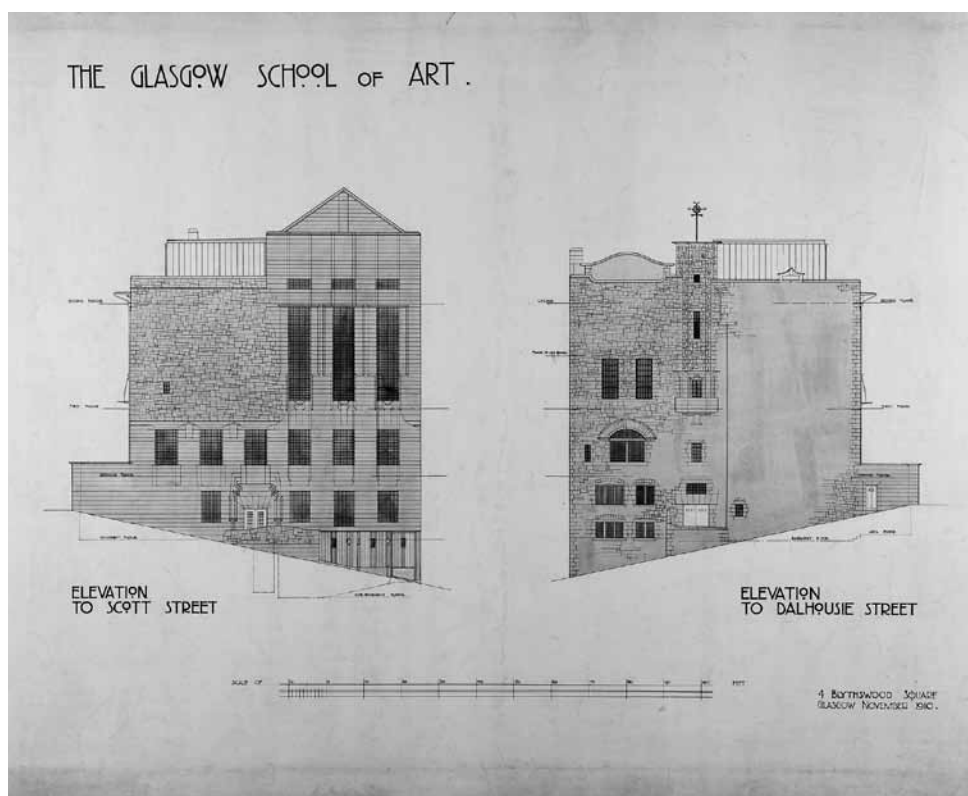
2 Mackintosh, Glasgow School of Art, south elevation, 1910



3 Mackintosh, Glasgow School of Art, elevations to Scott and Dalhousie Streets (east & west), 1897

4 Mackintosh, Glasgow School of Art, elevations to Scott and Dalhousie Streets (east & west), 1910

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the rear) which sits high looking out over the top of the city to the distant Lanark and Renfrewshire countryside, much like a castle surveys from on high the spread of its policies [2]. So the Art School is also then, in a formal sense, both a castle and a tenement.

Material

The next question to ask is whether the Art School is a stone building or a timber building? It seems obvious from the outside, and from the above descriptions, that it is a stone building, even if it has some steel support. Yet, when we enter the building, we seem to find apparently autonomous timber buildings inside with their own system of supports and structure. The central stair structure and the

gallery on the first floor seem at once to be hung from, and to support, a complex and heavy set of timber trusses at the skylight; and the library, surely one of the most delicate and evocative spaces in Western architecture, is entirely timber, with a whole forest of dark timber pillars evidently holding it up.

Light

The cardinal orientation of the Glasgow street grid allowed Mackintosh to set up a strict tension between workspaces and circulation/social spaces which is heightened through the quality and quantity of light brought into those spaces. The large studio workspaces are ranged across the four storeys of the north-facing facade, with huge factory-style windows

to give artists plenty of natural light to work in, but no glaring sunlight. The circulation corridors and stairs are disposed across the southern elevation warmed by the sun, distinctively patterned by the light from the irregular window formations there (see the castle features above).

Form

The Glasgow School of Art was built in two stages. Mackintosh was still in his twenties when he began the design of the eastern side of the building, completed in 1899. The second, western half was commenced in 1907 and he was into his forties when it was completed two years later. By then, Mackintosh was quite a different and more accomplished artist and architect than he had been on completion of the first half. For one thing he was now a partner in his architectural practice, Honeyman and Keppie, and was properly acknowledged as the designer of the building (he had not been for the first half). He had also completed a number of other accomplished buildings under his own name by this time (Scotland Street School, the Hill House, the Daily Record building, Queen's Cross Church), and he had achieved some fame across Europe, particularly with exhibitions in Turin and in Vienna, where he was associated with the Secessionists. The contrast between the architecture of the eastern half of the building as an early work and that of the western half as a mature work is accordingly, another source of tension in this structure. It is most obvious in the forms on the respective east and west facades. As Drew Plunkett says:

If the defining characteristic of the first phase of the Art School is organic decoration laid over a robust palette of raw materials derived from the traditions of Scottish vernacular building then the second phase is defined by the geometric severity of aggregated squares.²⁰

This contrast can be viewed in the context of Brett's antagonism of the geometric and biomorphic. The 1899 facade can be seen as influenced by Mackintosh's study of vernacular Scottish forms, Maybole Castle in particular, and his sketch of that building gives credence to the genealogy.² The Scottish tower house like Maybole has been described in terms of its verticality and its 'ornamentation' as 'confined to the parapet and upper portions, where it often bursts out with extraordinary profusion and richness'²² (with bartizans, turrets, corbelling and crowsteps all jostling one another in a jumble of forms on the roofscape). Mackintosh's original 1897 drawings for the then unbuilt west facade show it designed in a similar style [3]. By the time he came to redesign and actually build the west side in 1907–09, however, it is a more geometrical, indeed a more Secessionist, design with the long gridded oblong oriel windows displaying the industrial and technological spirit which abounded in Edwardian Glasgow, in contrast with the vernacular and organic forms on the opposite, earlier, eastern facade [4].

Construction

There is a disorientating and vertiginous quality to the mixed information which Mackintosh allows us to see about how his building supports itself. On the



5 Mackintosh, Glasgow School of Art, library

northern street facade, we note the long steel lintels above the main windows which clearly support the stonework above, and, in the Mackintosh Room and the Lecture Theatre for example, the structural steel beams supporting the floors above are prominent. Yet, in the main stairwell, it is unclear whether the timber cage around the stairs is structural or mere decoration hanging in the void. Back in the library again, Mackintosh gives us a tantalising clue as to the structural reality of the forest of supporting timber pillars we find there. On the gallery facade around the library, he has a series of timber boards in abstracted forms which hang down below the skirt of the balcony. On study of these boards we realise (*pace* Pevsner and no period forms) that they are in fact a particularised variation on the form of Ionic columns (whose design provenance deep in prehistory, according to some Romantic theorists, is the tree trunks in the forest).²³ Mackintosh not only has those columns free floating, not supporting anything, but hung upside down, with the top of the column suspended pointing down from 2 metres high in the air. It is only when our further researches into the building reveal to us that the timber pillars which do appear to be supporting this room are in fact vain, because the whole timber room is really suspended in the stone building from unseen giant metal pins attached to a steel beam on the ceiling of the room above the library, that we realise the abstracted upside-down columns on the gallery are really an elaborate and dizzying structural joke at the expense of 'classical style' [5].²⁴

Programme

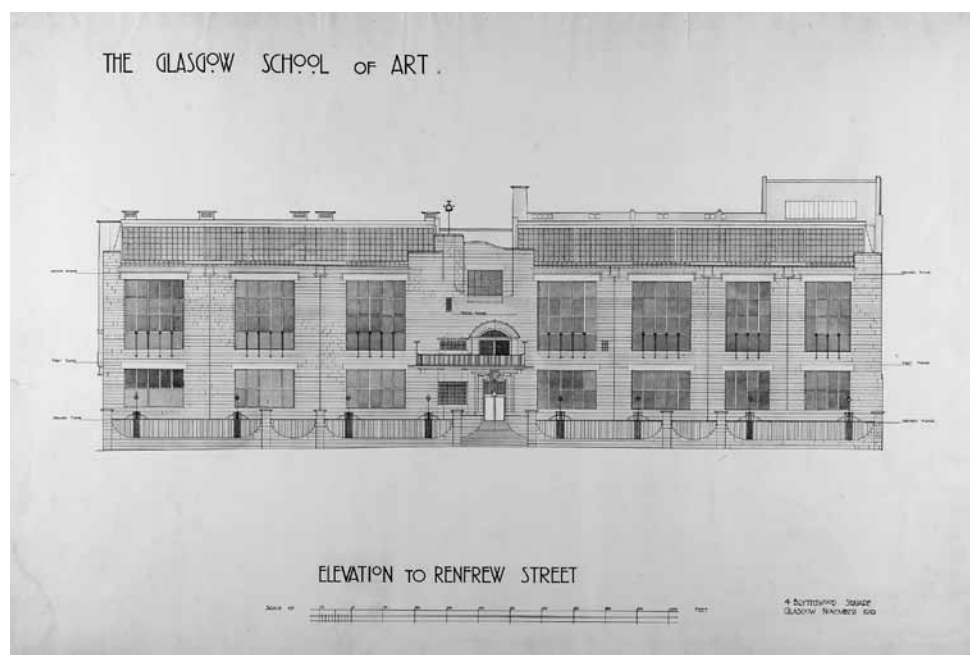
As part of Glasgow's 1990 European City of Culture celebrations, several established architects from other parts of the world were invited to come to Glasgow School of Art, to engage with the building by constructing a temporary structure on or around it,

and by mounting a critique of its architecture. Among them were Stanley Tigerman, Aldo Van Eyck, Arata Isozaki and Leon Krier. A book of the proceedings, edited by Murray Grigor, was published as *The Architects' Architect*.²⁵ Leon Krier gave one of the most negative assessments of Mackintosh's architecture. He pointed to the multitude of fine solid sandstone school buildings in Scotland constructed contemporaneously with the Glasgow School of Art, the product of a building campaign in the wake of the Education Act 1872 which transferred the obligation for universal education to local government from the church in Scotland. Krier points out how successful most of these schools are in terms of gathering the public and opening access to large numbers of people. He claimed that the Mackintosh building is weak in its public role. He concluded that it has 'the scale of a factory with the door of a cottage',²⁶ referring to the industrial scale windows on the north facade and the single 'in' and single 'out' doorways at a scale more normally associated with domestic building than public building [6]. This draws attention to the tension in scale. How could Mackintosh get this doorway so wrong? In fact Mackintosh's genius is shown here, in that he understands that the artist operates exactly at the fulcrum of that tension between their work as a single individual and the meaningful relationship of that work to society, to culture, and to the world in general. When the student enters that small door into the vast building they feel the formal significance of that relationship of the particular to the general: every morning they are given a master-class in how to manoeuvre between the two.

A tactic of pragmatic adaptations

If the tension achieved in Mackintosh's work through the creation of forms and spaces is a pivotal aspect of his modern approach to the world, inasmuch as the things in this world are allowed to emerge on their own authentic terms in dialectic

with other things, then the question remains about how he came to this way of working while other contemporaries in Edwardian Glasgow were still exploiting styles like the neo-Baroque and *Beaux-Arts*-influenced ways of working? A simple strand emerges from the complicated narratives and sources of Mackintosh's development in his study of Scottish vernacular architecture, specifically that of the Baronial period from the thirteenth through to the sixteenth centuries. His interests mirrored a revival of the Baronial which arose in the nineteenth century, arguably given impulse by Sir Walter Scott, not only through his historical fiction but with the actual building of his neo-Baronial 'castle' in the Borders at Abbotsford; an impulse sustained in scholarship including Robert Billings' *Baronial and Ecclesiastical Antiquities of Scotland* (1845–52) and subsequently David MacGibbon and Thomas Ross's *The Castellated and Domestic Architecture of Scotland* (1887–92). As early as 1891, Mackintosh gave a talk to the Glasgow Architectural Association in which he leant very heavily – some would say almost to the point of plagiarism – on the interpretation of the evolutionary phases of the Baronial idiom set out by MacGibbon and Ross. Through these phases, we can see the architecture adapting to historical needs and circumstance as they arise over centuries, rather than seeking to conform to a set of established rules of the kind we find in 'classical' architecture with its canon of precepts regarding proportion and symmetry. Thus there is an accumulative and pragmatic sense to the forms of the castle, as we see it develop gradually from a tower to an L-shaped plan, from a defensive dwelling into a luxurious residence. Introducing a transcript of Mackintosh's talk 'Scotch Baronial Architecture', Frank Walker draws attention to important points of the tradition for Mackintosh, who 'speaks of a versatile "grouping of parts" and a readily varied "external outline", both qualities resulting from an ability to respond to the contingent'.²⁷ Not only that but, in this tradition,



6 Mackintosh, Glasgow School of Art, elevation to Renfrew Street (north), 1910

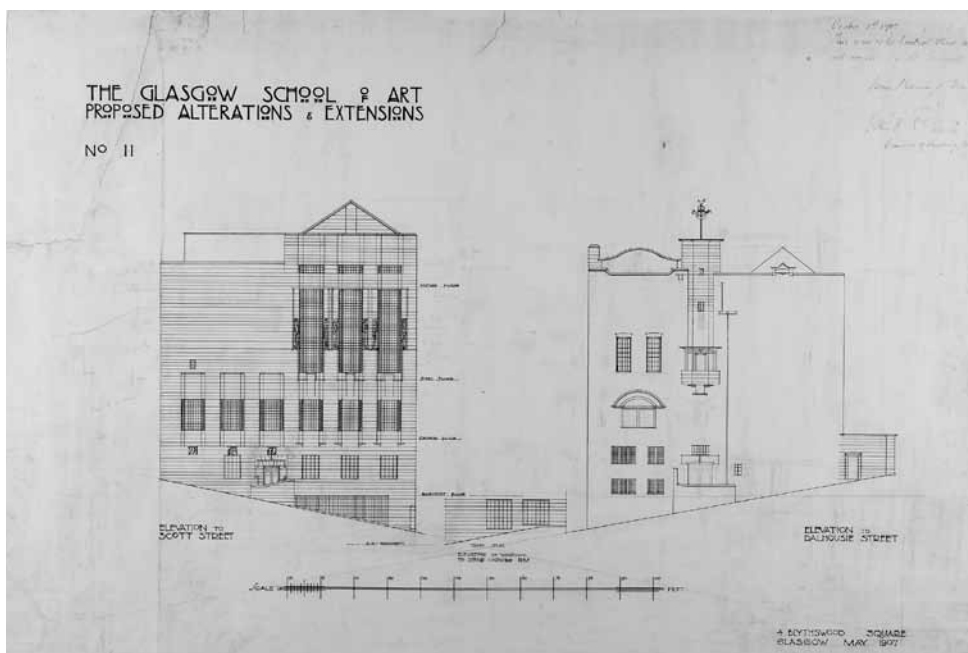
through this process of building, the structure is itself decoration and a plastic poetics develops its own vocabulary and symbolic content, grounded in functional necessity, such that these buildings develop as iconic images of great strength. Mackintosh operates with the same pragmatic and adaptive spirit at the Glasgow School of Art – of course he is not designing and building over three centuries, the time period for his adaptations are much shorter at just over a decade – but they are there nonetheless. Andrew MacMillan comments on the practical aspects of this pragmatic approach, noting that it is a tactical procedure, inasmuch as important design decisions are continually being made and revised even as the building is under construction:

*basic plans and sections were completed, each part of the building was then subjected to examination then re-examination as detail design or building work proceeded, a process of tactical confrontation with the potential of each particular situation.*²⁸

We may take one example of how this pragmatic approach worked on one elevation, and how that elevation changed in design as Mackintosh built and developed a richness of spatial, architectonic and plastic vocabulary over time. Three elevation drawings of the west facade are shown here: the first is his drawing of 1897 (refer to [3]); the next is the 1907 drawing [7] showing how he intended to build the facade when he restarted the project; the final drawing is a presentation drawing made in 1910 (refer to [4]) showing the facade as completed. Looking first at the 1897 drawing, we see that – as Robert Mantho and Drew Plunkett pointed out in their 2007 book *Speculations on an Architectural Language*²⁹ – it is not any more or less decorative with its ‘varied external’ roofscape than the later designs, but it offers just a different type of decoration. In 1907, we note a few details: the simple form of the door on the west facade, that the whole facade is to be built in polished ashlar stone, and the height of

the stone oriels above the three lower windows (to the north). By 1910, Mackintosh must have realised as he worked on the building that, in order to stress the verticality of the long oriel windows of the library, he would have to differentiate that side of the facade from the rest, otherwise their slender forms would be lost in the breadth of the wall. His final, masterly, solution was to remove the stone tops of the other three shorter oriels and to build the bulk of the windowless part of the elevation with squared snecked rubble (as seen in the 1910 drawings). This has two effects: first of all it leaves the slender part of the wall containing the longer windows accentuated through its smooth ashlar stone, and with the curve of stone sweeping up from the lower window level, such that it almost seems to stand out as a tall slim tower on its own. Secondly, this rubble wall now reminds us of the rubble on the neo-vernacular east wall, relates this elevation back to that older one, brings that tension between the two elevations into the foreground and emphasises for us in our imagination the sheer volume of the whole building. Finally, as the roofscape has been altered from the ‘varied external’ type, Mackintosh builds the little wall in front of the door in the same form as the segmental pediment on the east elevation which we can no longer view now because of the new height of the west wall. He also builds the bulk of that wall in snecked squared rubble, again to force into consciousness a physical presence of the contrasting forms of that earlier east elevation. In effect, then, we are presented on this west elevation with a simultaneity of Mackintosh’s early and mature styles, a multi-perspectivity, which allows us to view both elevations of the building and compare them at once, ‘merge[d]’ as Holl says, ‘in the final condition’, without having to take the time to walk around the building and view them in series.

Thus we see that the drawings do not constitute for Mackintosh a basic finished outline of the building form to be further decorated. Rather they



7 Mackintosh, Glasgow School of Art, elevations to Scott and Dalhousie Streets (east & west), 1907

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represent a structural intention, while, as work carries on, the spatial character of the structure is developed and adapted to particular situations as they arise. This expands and enriches the symbolic vocabulary of the whole work as a mutual and tactical engagement of 'things'. The building thus draws us into 'vertiginous proximity' through the restless dynamic of its tensions, and does not allow us to feel distant, separate, and abstracted from it as if it were a merely inert object.

Holl and Mackintosh in relation

The ultimate question for Curtis then, might be whether Steven Holl's drawings – which he read as 'dumb' and lacking 'finesse' – operate in a similar way to Mackintosh's. That is to say, from the starting point proposed by those drawings, will the new structure develop and adapt into Porter's 'extraordinary spatial richness' as it rises out of the black clay and into dialogue with things which Mackintosh proposes to it from across the street? This depends on what is meant by 'dumb': if it means non-verbal, then Holl might agree; but if, however, it means something closer to 'inert', then he would surely beg to differ. Holl writes of how architecture 'more fully than other art forms engages the immediacy of our sensory perceptions', describing that immediacy as:

[...] sensations of textured stone surfaces and polished wooden pews, the experience of light changing with movement, the smell and resonant sounds of space, the bodily relations of scale and proportion. All these sensations combine within one complex experience, which becomes articulate and specific, though wordless.³⁰

Our problem at the moment, however, as the building rises out of the ground, is that we cannot directly experience the 'articulation' of those myriad sensations of touch, sound and smell described by Holl, but only project and imagine their effects from the architectural drawings and the description of materials. What we can do, however, is analyse from the drawings how these 'things' – the old Mackintosh and new Holl buildings – will interact on a formal level, partly to do with relations of proportion and scale.

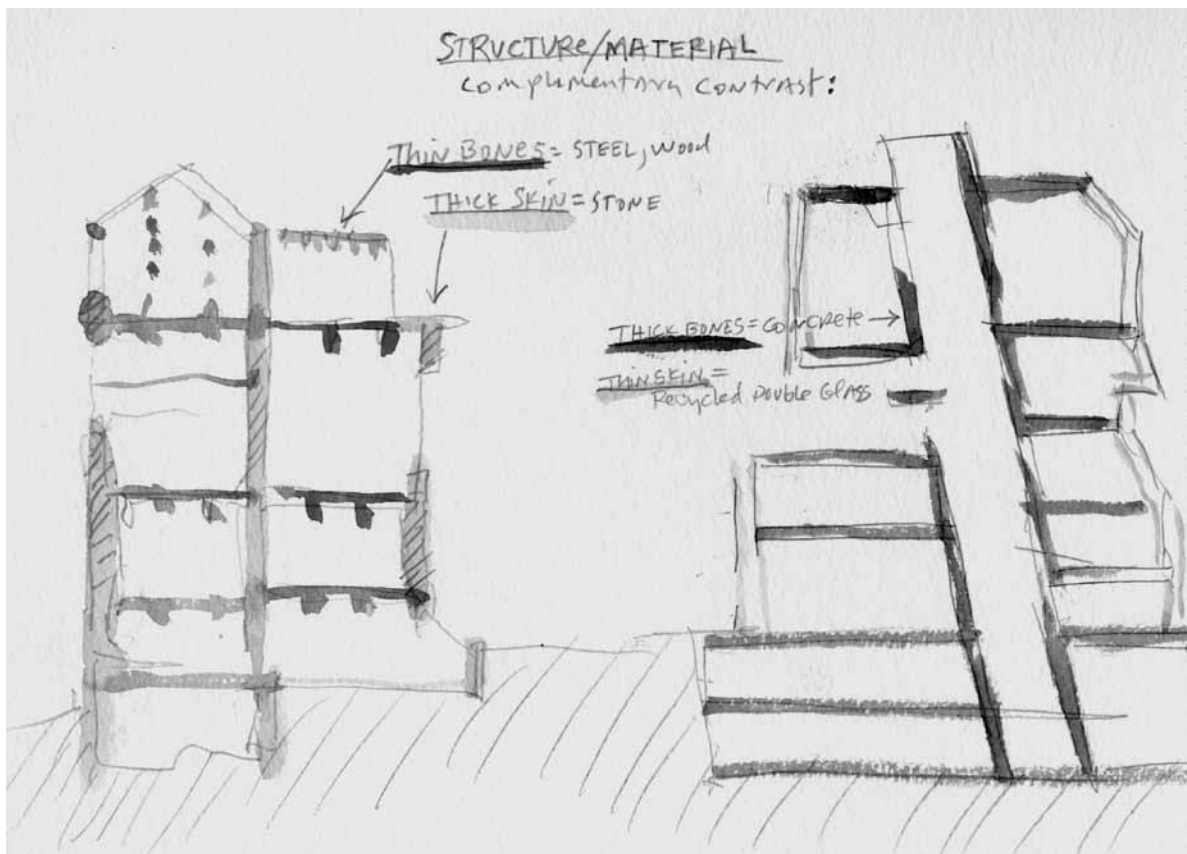
If we follow then the analysis of Mackintosh's building above, and take the drawings of Holl's new

west elevation, we can attempt a description of what that interrelationship will be. We see that Holl will raise his building around the retained stone facades of the 1930s Assembly Building that already occupies the south-west corner of the site [8]. Thus, in effect, Holl's design performs a variation of Mackintosh's simultaneous presentation of two facades from different eras on the one plane. But where Mackintosh gives us a *metaphorical* juxtaposition of different facades from different time periods through subtle use of material and form, Holl heightens that tension by giving us an *actual* superimposition of a modern facade against an older one. The variation on the theme is taken further. Not only does the superimposition allow for the formal division and the breaking-up of the bulk of Holl's building – that bulk being something specifically criticised by Curtis as 'out of scale' and 'clumsy in form and proportion'³ – but, in a similar manoeuvre to Mackintosh on his west elevation, it allows for the emphasis of the tower-like slimness and the vertical orientation of the concrete wall supporting Holl's overarching structure. This break-up of the forms, dimensions and materials on the elevation is also cleverly manipulated in Holl's design so that it enters into formal proportional dialogue with Mackintosh's west side. The tension thus stretches across Renfrew Street as the cuts and reveals in Holl's facade reproduce and play on Mackintosh's forms, such as the rectangular expanse of his rubble wall and the horizontal band of his attic storey.

So much for one facade, but the sheer bulk of this building does, nonetheless, continue to pose a problem for its context. Central Glasgow is built up with perimeter blocks on a regular grid. Until recently, the height of the buildings on the grid was fairly regular but, now, several buildings break out beyond the regularity of their fellows. This puncturing of the grid has taken place in the central business district of the city centre, where the buildings are occupied largely by offices and are generally bulky and robust. The grid layout continues up over the steep-sided mound of Garnethill where the Art School is located but it is

8 Steven Holl, Glasgow School of Art, west elevation, 2011





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9 Holl, Glasgow School of Art, Principle 6 – complementarity contrast: structure/material, 2010

10 Holl Glasgow School of Art, view from Renfrew Street, 2011

softer edged there, with a predominance of four-storey sandstone tenements and also some educational, cultural and religious buildings. Most of the residential buildings on the north of Renfrew Street have small front gardens. Holl pays homage to this softer street edge with his garden terrace (Holl uses the Scottish Gaelic term, *Machair*, for this feature) on the second storey, which also serves as an outdoor viewing platform looking directly at the Mac. There are, then, concessions made by Holl to the quieter and more suburban edge of the grid here in terms of the voids breaking up the facade of the building, of the garden, and so on. But, nonetheless, the sheer bulk of the building, which might sit happily among the robust blocks in the central business district, seems to dominate everything – including Mackintosh's building – in the more delicate ambience of Garnethill.

When it comes to the structure and materials of this bulky building, Holl has published drawings to argue that the interaction between the two buildings is one of complementarity. Again, the Holl design has been criticised for posing a facade of glass – albeit non-reflective laminated glass – against the tall northern windows which bring cold light into Mackintosh's studios. The reflected glare will ruin the effect in Mackintosh's studios, says Curtis, unless it is a 'miracle glass'.³² But it is interesting, nonetheless, that Holl, through his use of glass, aims

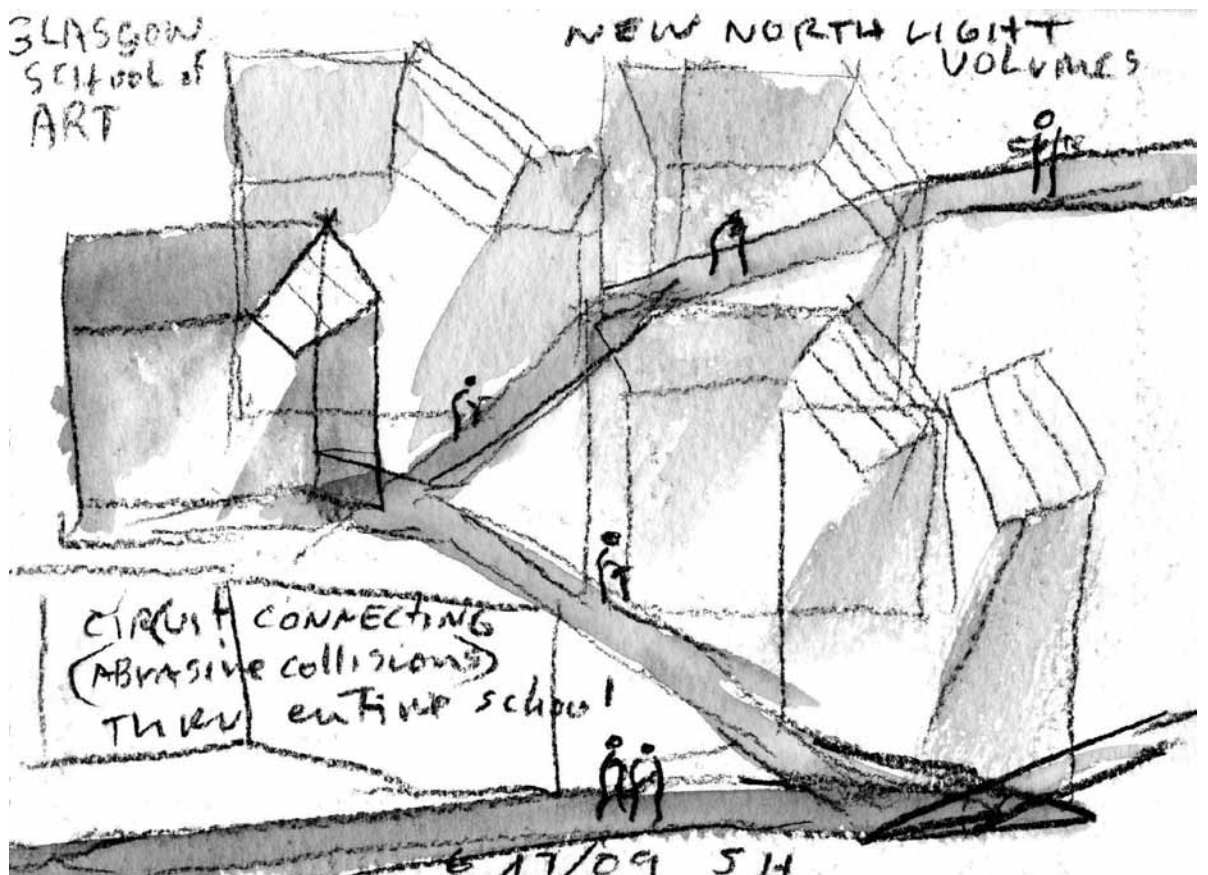


10

explicitly to exploit those tensions and playful revelations of structural reality, as discussed above, in the Mackintosh between a building which can be imagined as stone, as timber and as steel. Holl denies this problem of glare, and gives a novel anthropomorphic reading of the anatomy of those materials in the School of Art which reminds us of the 'human attributes' in objects referred to by Merleau-Ponty. In one sketch, Holl proposes a structural and material dialogue between the metaphorically living bodies of the two buildings [9]: the Mackintosh with its slender steel and timber framework ('thin bones') and its sandstone cladding ('thick skin'); and the new building with a heavy concrete frame ('thick bones') and a light alabaster-like cladding of laminated non-reflective glass ('thin skin'). The question is, then, whether the delight the



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11 Holl, Glasgow School of Art, circuit of connection, 2010

12 Holl, Glasgow School of Art, Principle 3 – circuit of social connection, 2010

user might find in the dialogue between the delicate timber framing of, say, the Mackintosh Library, and the heavy cylindrical concrete forms of the voids driven through the new building; and that contrast between the mute sandstone and the ineffable translucent patterning of the laminated glass cladding will be the enduring impression. Or, if as Curtis asserts, will the 'Japanese lantern' that is the Mackintosh by night simply 'be destroyed by a surfeit of light from the fully glazed facades opposite'?³³ The question of light to the interior and the language of light distribution through the building – and how a tension is maintained between the different types of spaces and their functions, the circulation between these spaces, and the varying quality of light in those spaces – is a principle evidently just as important for Holl's design as it was for Mackintosh.

The entrance to Holl's building is, unlike Mackintosh's, a large rectangular double-height portal at ground level, off-centred to the west side [10]. Besides setting up an interesting set of proportions on the site, this off-centring enables various strategic aspects to come into play. It allows for a certain deference from the new kid on the block towards the Mackintosh, and makes room for the large picture windows and terrace on the second floor to be focused for viewing the historic masterpiece. It also enables exploitation of the long latitudinal axis in the building for interior circulation. It is in a cleavage along this axis that Holl has designed a series of ramps and broad tread stairways, which rise at a low gradient through the height of the building [11]. This circulation acts like Mackintosh's corridors on the south side of his building, as a social space rather than just for strictly utilitarian access. The long stretch of these staircases is lit in distinctive patterns by light brought down through the irregular cutaways in the full-height tubular lightwells (the 'driven voids'), and by borrowed light from the fenestration on the south side. Holl calls this circulation space the 'social condenser' [12]. The spaces off this circulation – studios, workshops and offices – will, in turn, have varying forms and strengths of light from the windows to the south, skylights to the northern

facade, from the balconies and always from the subtle translucent effects through the laminated glass cladding. Again, however, Curtis is doubtful about any subtlety of treatment here, asking if 'his light tubes risk becoming dull holes clogging up the section of the building' and, more rhetorically, if Holl 'has experienced those short grey winter days in Glasgow?'³⁴ Porter, on the other hand, seems to have more confidence in Holl's managing of the light, noting that he is 'an architect raised in Seattle, a city of Glaswegian dampness and clouds'. Porter's final judgement on the use of light and its relation to the Mackintosh is more positive, asserting that the new building will be 'a subtle reflector and refractor of light in and around the building, taking care to let any reflections sit gently on Mackintosh's facade opposite'.³⁵

For a building, then, which is explicitly designed by Holl to create sensory interrelationships within its context, and to draw on the 'complexities of perception', it is difficult to predict its effects purely from the design drawings before we can actually step inside the completed edifice and experience it, as intended, through our senses. So much seems to depend at this stage on our imagination. What contribution, for example, will be made to the experience of the cleft of that circulation space cutting through the breadth of the building by the sound of the footfall of lingering passers-by, by snippets of conversation heard, and by the noise of work filtering out from the studios? Holl himself gives us a hint of an answer to this question when he draws attention to the simultaneity of experience when he argues: 'The live reflection and re-echo within a stone cathedral increases our awareness of the vastness, geometry, and material of its space'. He then invites us to, 'Imagine that same space with a carpet and acoustically softened [...]'.³⁶ Curtis and Porter both demonstrate in their critiques how imagination – laden in this case with their own personal experiences of and associations with the local weather – is their route to judgement. But then, is not a fully imaginative projection from personal culture the only proper way to confront a design which sets out from the principle of dialogue?

Notes

1. William J. R. Curtis, 'Facing Up to Mackintosh', *Architects' Journal*, 232.17 (4 November 2010), p. 14.
2. David Porter, 'Facing Up to Mackintosh 2', *Architects' Journal*, 232.18 (11 November 2010), p. 14.
3. William Curtis, 'An Open Letter', *Architects' Journal*, 233.8 (3 March 2011), p. 14.
4. Steven Holl, 'Questions of Perception: Phenomenology of Architecture' in *Questions of Perception: Phenomenology of Architecture*, ed. by Steven Holl, Juhani Pallasmaa, Alberto Pérez-Gómez (San Francisco: A+U and William Stout Publishers, 2008), pp. 39–119 (p. 119).
5. Nikolaus Pevsner, *Pioneers of Modern Design* (London: Penguin, 1949), pp. 158–65.
6. James Macaulay, *Charles Rennie Mackintosh: A Biography* (London: W. W. Norton, 2010), p. 279.
7. Peter Eisenman, 'Aspects of Modernism: Maison Dom-ino and the Self-Referential Sign', in *Oppositions Reader*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 188–98 (p. 189).
8. Theodor W. Adorno, *Negative Dialectics* (London: Routledge and Kegan, 1973), pp. 361–407. Adorno portrays the Holocaust as at once the logical culmination and betrayal of the Enlightenment.
9. Martin Heidegger, *Poetry, Language, Thought* (New York: Harper Collins, 1971), pp. 165–82.
10. Holl, p. 45.
11. Maurice Merleau-Ponty, *The World of Perception* (London: Routledge, 2002), p. 66.
12. Edmund Husserl's *Logical Investigations: Part Two, Investigations in Phenomenology and the Theory of Knowledge* was originally published in German in 1901, and his *Ideas: General Introduction to Pure Phenomenology* in 1911.
13. Andrea Pinotti, 'Cubism', in *Handbook of Phenomenological*

- Aesthetics*, ed. by Hans Rainer Sepp and Lester Embree (New York: Springer, 2010), pp. 63–66 (p. 64).
14. John Berger, 'The Moment of Cubism', *New Left Review*, 1.42 (March–April 1967), 75–94. Berger claims on p. 75 that 'the few great Cubist works were painted between 1907 and 1914'.
 15. *Ibid.*, p. 86.
 16. Heidegger, p. 167.
 17. David Brett, *C. R. Mackintosh: The Poetics of Workmanship* (London: Reaktion, 1992), pp. 46–74.
 18. *Ibid.*, p. 47; Frank Walker, 'Scottish Baronial Architecture', in *Charles Rennie Mackintosh: The Architectural Papers*, ed. by Pamela Robertson (Wendlebury: White Cockade, 1990), pp. 33–35.
 19. Walker, pp. 34, 61. Walker compares the rear elevation of Glasgow School of Art with the front elevation of Fyvie Castle in Aberdeenshire. He writes: 'Mackintosh's drawing shows a similar solid: void relationship and aggregation of symmetries to those evident at Fyvie.'
 20. Robert Mantho and Drew Plunkett, *Speculations on an Architectural Language* (Glasgow: CRM Society, 2007), p. 16.
 21. Charles Rennie Mackintosh, Sketch of Maybole Castle, 1895, GLAHA 53012/22, Glasgow University, Hunterian Art Gallery Collection.
 22. David MacGibbon and Thomas Ross, *The Castellated and Domestic Architecture of Scotland* (Edinburgh: W. & R. Chambers, 1887–1892), II, p. 3.
 23. Antoine Laugier, *An Essay on Architecture* (London: Osborne and Shipton, 1755), pp. 9–14.
 24. Brett, p. 25. Brett points out on Mackintosh's relation to Glasgow's great shipbuilding tradition that: 'The method whereby the ceiling of the Library of the School of Art is hung from the joists of an upper room, thought to be unusual from the perspective of conventional architecture was, and still is, a common device in ship construction.'
 25. Murray Grigor and Richard Murphy, *The Architects' Architect* (London: Bellew, 1993).
 26. *Ibid.*, p. 40.
 27. Walker, p. 38.
 28. Andrew McMillan, 'A Modern Enigma: A Paradox of Reduction and Enrichment' in *Mackintosh's Masterwork: The Glasgow School of Art*, ed. by William Buchanan (Edinburgh: A. & C. Black, 1994), pp. 51–72 (p. 66).
 29. Mantho & Plunkett, pp. 12, 16.
 30. Holl, p. 41.
 31. Curtis, 'An Open Letter'.
 32. *Ibid.*
 33. Curtis, 'Facing up to Mackintosh'.
 34. *Ibid.*
 35. Porter, 'Facing Up to Mackintosh 2'.
 36. Holl, p. 87.

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Biography

Johnny Rodger is Reader in Urban Literature at the Mackintosh School of Architecture. His published work includes *Contemporary Glasgow* (Rutland Press, 1999), *Edinburgh: A Guide to Recent Architecture* (Batsford/Ellipsis, 2001), and the monograph *Gillespie, Kidd & Coia 1956–87* (RIAS, 2007). His new edited collection *Demolition Proof* (NGS) was published in April.

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