

“The works of the past always influence us, whether or not we care to admit it, or to structure an understanding of how that influence occurs. The past is not just that which we know, it is that which we use, in a variety of ways, in the making of new work.... The typology argument today asserts that despite the diversity of our culture there are still roots of this kind which allow us to speak of the idea of a library, a museum, a city hall or a house. The continuity of these ideas of type, such as they are, and the esteemed examples which have established their identity and assured their continued cultural resonance, constitute an established line of inquiry in which new work may be effectively grounded.”

Hancock, John E. Precedent and Invention. Between History and Tradition: Notes Toward a Theory of Precedent. The Harvard Architectural Review. Vol. 5

Building Materials, Typology and Design.

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Building technology and materiality are constantly being improved upon. These increasingly efficient tools and systems for building are advantageous to architecture and architectural design, so long as the focus of design remains upon the functional program and does not stray to a vain focus on the materials themselves. The study, reinterpretation, and application of building typology facilitates a successful design by learning from the architectural past and its precedents. The utilization of typology prevents the architectural folly of succumbing to an overemphasis of style, and provides a starting point from which modern building materials may be used to assemble a truly current and significant architecture.

Steel was perhaps the single most influential design material of the twentieth century, and continues its stronghold over architectural construction as we enter the twenty-first. A versatile material, extremely strong and capable of supporting enormous physical loads, it is markedly ductile, effective under both tension and compression, and able to take on any shape at a wide variety of scale. For architects, steel is a material of the utmost importance, allowing the utmost versatility in structural design.



MVRDV's WoZoCo Apartments for the elderly in Amsterdam



Steel trusses make dramatic cantilevers a possibility in MVRDV's WoZoCo building.

The WoZoCo Apartments for the Elderly in Amsterdam, designed by the Dutch architectural studio MVRDV, well exhibit the versatility of steel design and construction, with apartments cantilevered a distance of almost ten metres from the main structure of the building. These enormous cantilevered boxes protrude from the structure, exhibiting a 'hanging box' effect.¹ Steel trusses at a two-storey scale made the realization of this design possible, allowing the apartments to jut out aggressively and seemingly defy gravity. This gesture is twofold: Firstly, the maximum area of useable ground plain is accomplished, along with adherence to the site's maximum height regulations.² Secondly, the striking projections and their play on gravity capture

the attention of the public, establishing an awareness of architecture and placing an emphasis on the importance of design in everyday living.³ The WoZoCo Apartments for the Elderly are an icon of modern architectural design and innovation, made possible by an expressive use of a powerful building material.

With an ever increasing palette of materials and structural systems, architects must be responsible when engaging in the process of design. Ostentation in design can easily result from a lack of focus on the true architectural problems. Rem Koolhaas, in his characteristic sardonicism, explains that design based in ostentation can result in “architecture [acquiring] the properties of Bigness. The best reason to broach Bigness is the one given by climbers of Mount Everest: ‘because it’s there’. Bigness is the ultimate architecture.... an ideological problem, independent of the will of it architects.”⁴

Building materials, their structural and aesthetic capabilities, have a direct effect on architectural design. With advancements in building technology one might expect parallel advancements in architectural design, yet this is not necessarily the case. Architect David Chipperfield worked in the office of Norman Foster and Richard Rogers, and expresses his concern that investigation and fixation on design materials can distract from solving the multitude of problems inherent in an architectural program. He is

“suspicious of the pseudo-deterministic approach, it seemed spurious. At the offices of Rogers and Foster, it was necessary to identify the ‘problem’ at the beginning of a project. [The problem of a cultural centre was to have no columns. What’s wrong with having a few columns around?] Having a single problem to solve is a wonderful freedom. Once you identify the problem you then solve it. Rather than solving hundreds of problems all at the same time....[Any] number of stainless steel junctions doesn’t guarantee a good building.”⁵

In order for a building to be successful it must resolve many issues. Certain building types, such as theatres, libraries, or museums, have been designed thousands of times, iteration after iteration, throughout history. Each time building is redesigned it can learn from the designs of the past, as these types all focus on the solving similar, if not identical concerns⁶. John E. Hancock explains that “[the] continuity of these ideas of type, such as they are, and the esteemed examples which

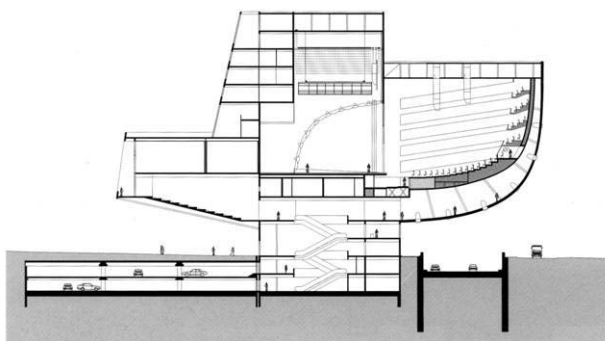
have established their identity and assured their continued cultural resonance, constitute an established line of inquiry in which new work may be effectively grounded.”⁷

Le Corbusier, after spending much of his youth investigating the architectural past, concluded that

“a level-headed person, when launched into the uncharted waters of architectural invention, has no real choice but to pin his enthusiasm on to the lessons of bygone centuries. Those witnesses to the past that have survived the passing of the centuries possess eternal value for mankind. We could term them folklore by which we mean the finest flower of popular tradition.... [A] link in the traditions they embody: each link in the chain represents a step forward that was, at the time, at least innovatory and often revolutionary; a contribution to civilization. History leans on steps such as these....”⁸

The occurrence of such building types throughout history means that the existence of typology itself is unquestionable. Rather, the question becomes whether we accept or reject typology as a means of achieving our architectural ambitions. Willem Jan Neutelings states that

the history of architecture contains an incredible wealth of concepts and typologies. But architecture seems to be one of the few disciplines in which new developments seem not to rely on earlier achievements, but rather on their rejection. The reason for this [lies] in the neglect of earlier concepts on the basis of style, an architectural taboo never stated explicitly but always imminent. The reuse of powerful types in a contemporary version is a more effective and less wearying approach.⁹



Longitudinal Section of the Concert Hall in Bruges

Architects, in the search for a resolution of given problems, must be careful not to fall into the trap of designing for ‘style’ in and of itself. To design a successful building, it’s typology must be studied, interpreted, and worked with to find an appropriate solution.

The Concert Hall in Bruges, Belgium, by architecture firm Neutelings Riedijk, is an example of a theatre design established through “recycling typologies

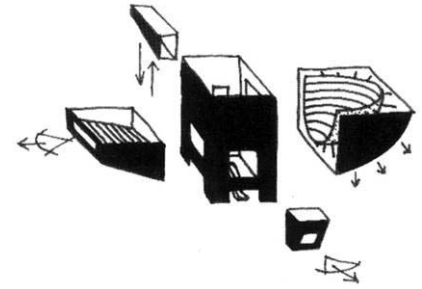


Diagram of Neutelings Riedijk's Concert Hall in Bruges, Belgium.

and concepts”¹⁰ in order to circumvent the ostentation of an architecture generated by style alone. Here, the typological elements of a performance theatre are isolated; a flytower, incorporating the stage and stage service areas; a grand hall; a small hall; and an entrance/lobby area. These individual components are then rearranged in a manner suitable for the building site, an area of land bridging the medieval city and the newer outskirts. The resultant “vertical organization of the building means that the classic problem of how to treat the front and the back of a theatre building is circumvented: the building faces all directions. All sides of the building are used, not only by the public, but also by staff and artists, so there is no longer any specific front or back.”¹¹ Structural steel is a vital component in the design of the Concert Hall in Bruges, where customized steel trusses and dynamic steel cantilevers make the dramatic suspended feel of the main and small halls possible. Through typological research, and then an innovative use of modern building materials, Neutelings Riedijk have designed a modern and relevant performing arts theatre.

Germany-based architecture firm Bolles + Wilson studied geometric theatre typology in their strategy to design the New Luxor Theatre in Rotterdam, Holland. The typology of the conventional



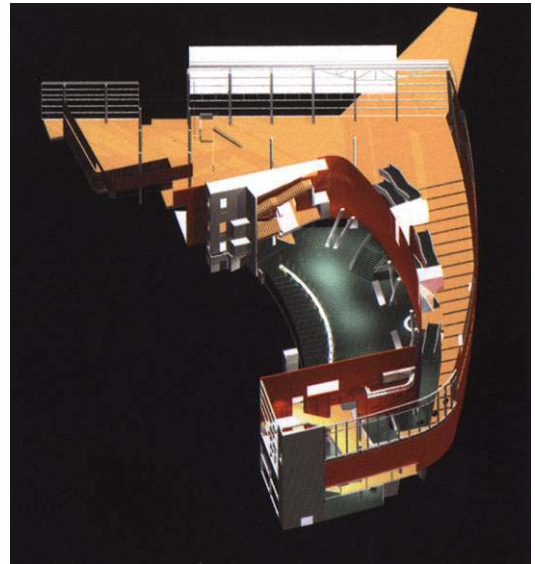
Bolles + Wilson's Luxor Theatre in Rotterdam, Holland

European theatre was studied, and yielded a specific dimensional strategy, which was in turn used to inform the design of the building.¹² The Luxor theatre then incorporates “a very dramatic internal choreography, based on rotational flows of people, and sequences of spaces around a conventional symmetric stage and auditorium,”¹³ which was derived from a study of western theatre typology. The result is architecture rooted in the history of its type, featuring one procession from bottom to top, in a manner comparable to that of an English garden, “which has a climax, the show and the view over the harbour and the city.”¹⁴

The Luxor is a communal event.... In a wider sense [the theatre is] tied to the social and political frame of the city. The Luxor Theatre has a very important role in Rotterdam, placed in the south of the Maas [River], opposite the city centre, and activating an important new residential and office area. It has a public role while the

program is specifically for a variety theatre. So it is an architecture with wider implications.¹⁵

The success of the New Luxor Theatre can be largely attributed to the clever study and adaptation of building typology. Architects Julia Bolles-Wilson and Peter Wilson state that “the tradition of typology is present, [but] there is always a radical reconstitution of that tradition....”¹⁶ The architectural style of the building is dictated largely by typological study and application, clad in vibrant red panelling, justified by the notion that “[in] its origin, the [European] theatre was provisional and subversive, distanced like the Luxor from the City itself. [These] red panels are somewhere between the red of the stage curtains and this archaic prototype.”¹⁷ Oversized steel trusses, slanted steel columns, and lightweight steel shading devises, combine to make the composition of the Luxor theatre possible.



A computer-generated model of the Luxor's spiralling procession of circulation (auditorium removed from model)

Bolles + Wilson managed to avoid the creation of architecture based on style alone, instead grounding their design in precedent theatres, allowing the building's style to be informed by decisions based on these historical types. Commenting on this, Peter Wilson suggests that “buildings have more than one life. One life is in photographs, which actually is only a minor reflection of the range of dimension they have as a physical entity. To visit a building is to discover first hand its space, its aura. Often good buildings do not reveal their secrets to the camera. Others are predestined to become calendar images.”¹⁸

In designing building types with typological precedents it is essential for an architect to study the lessons of the past. In doing so, with the aid of modern building materials, the design of a truly current and applicable architecture is possible. By falling prey to the trap of design based on style alone, architects run the risk of missing essential lessons in functionality and purpose which typological precedents may have solved throughout their evolution. As we begin the twenty first century, we are responsible not only for the interpretation of existing building typologies, but also for the birth of new typologies never before seen by history. In the treatment of these new types, such as airports, and city-to-city infrastructure, we must be careful to draw from history what we

can, and to use our better judgment in their first iterations, avoiding architectural 'Bigness' and the application of style for its own sake.

"[Each] project should determine its own character identity and logic. On the cusp of the twentieth century, we should be able to deal with the past without parody, and look to the future without whimsy."¹⁹

"Why see modern architecture as a discontinuous point in history? Does it not have as much to do with the past as the future? We tend to polarise, and people either are nostalgic for the past or want to live in the future. What's wrong with now? What's wrong with representing the continuity of time as opposed to the fantasy of Dan Dare or the fogeyness of the 1860's?"²⁰

Endnotes:

- ¹ Floornature: Winy Maas architect, an interview by Matthew Peek
<http://www.floornature.com/worldaround/articolo.php/art16/5/en/arch25#>
- ² Mozas, Javier. *Sobre la vida de las casas. Otra manera de ser flexibles. (Concerning the life of houses. Another way of being flexible).* p. 11.
<http://www.aplust.net/javiermozas/castellano/articulo13.pdf>
- ³ Floornature: Winy Maas architect, an interview by Matthew Peek
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- ⁴ Koolhaas, Rem. *Bigness: or the Problem of Large.* N.p. 1994.
- ⁵ Caruso, Dan, and Peter St. John. "A Conversation with David Chipperfield." El Croquis Vol. 87 1998: p. 6.
- ⁶ Hancock, John E. *Precedent and Invention. Between History and Tradition: Notes Toward a Theory of Precedent.* The Harvard Architectural Review. Vol. 5
- ⁷ Hancock, John E. *Precedent and Invention. Between History and Tradition: Notes Toward a Theory of Precedent.* The Harvard Architectural Review. Vol. 5
- ⁸ Le Corbusier. *Entretien avec les étudiants des écoles d'architecture.* N.p. 1943.
- ⁹ Neutelings, Willem Jan. "On Laziness, recycling, sculptural mathematics and ingenuity." El Croquis Vol. 94, 1999: pp. 7-8.
- ¹⁰ Neutelings, Willem Jan. "On Laziness, recycling, sculptural mathematics and ingenuity." El Croquis Vol. 94, 1999: pp. 7-8.
- ¹¹ "Works and Projects." El Croquis Vol. 94, 1999: p. 206.
- ¹² ibid
- ¹³ ibid
- ¹⁴ ibid
- ¹⁵ Zardini, Mirko. "The Scale of the Eurolandschaft [a conversation with Julia Bolles and Peter Wilson]" El Croquis Vol. 105, 2001: pp. 15-17.
- ¹⁶ Zardini, Mirko. "The Scale of the Eurolandschaft [a conversation with Julia Bolles and Peter Wilson]" El Croquis Vol. 105, 2001: p. 15.
- ¹⁷ Zardini, Mirko. "The Scale of the Eurolandschaft [a conversation with Julia Bolles and Peter Wilson]" El Croquis Vol. 105, 2001: p. 8.
- ¹⁸ Zardini, Mirko. "The Scale of the Eurolandschaft [a conversation with Julia Bolles and Peter Wilson]" El Croquis Vol. 105, 2001: p. 13.
- ¹⁹ Caruso, Dan, and Peter St. John. "A Conversation with David Chipperfield." El Croquis Vol. 87 1998: p. 19.
- ²⁰ Caruso, Dan, and Peter St. John. "A Conversation with David Chipperfield." El Croquis Vol. 87 1998: p. 22.

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"*Works and Projects: Concert Hall in Bruges*." El Croquis Vol. 94, 1999: p. 208.

'Diagram of Neutelings Riedijk's Concert Hall in Bruges, Belgium'

"*Works and Projects: Concert Hall in Bruges*." El Croquis Vol. 94, 1999: p. 206.

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"*New Luxor Theatre*" El Croquis Vol. 105, 2001: p. 133.

'A computer-generated model of the Luxor's spiralling procession of circulation (auditorium removed from model)'

"*New Luxor Theatre*" El Croquis Vol. 105, 2001: p. 140.