

On Bigness and the Problem of Urban Form

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The title of this essay borrows the term ‘bigness’ from Rem Koolhaas, who introduced it into the urban lexicon to describe multifunctional large-scale buildings. The problem posed by Koolhaas is twofold, implicating both urban and architectural design. Our concern here is restricted to urban form.

The view on the city as a complex process with multiple actors which cannot be controlled by the planner harks back to the critique of the modern utopian visions and dream of ‘total planning’. One strand of the postmodern critique maintained the emphasis on form and type. A line of thought within this strand is represented by Kevin Lynch, who rescued a tradition extending back to Camillo Sitte’s aesthetic approach to urban design, interpreting urban form through Gestalt psychology. As Alan Colquhoun has noted, however, Lynch’s strictly phenomenological approach avoids all typological analysis, failing to demonstrate how to provide the city with a coherent urban structure.¹ The lines of thought represented by Aldo Rossi and Colin Rowe, in turn, acknowledge the impossibility of ‘total planning’, seeing the city as an urban continuum accommodating a set of interconnected parts, each of which may adopt a formal or typological principle of its own.² Faced with the inoperability of the traditional planning instruments, planners have more recently shifted to notions such as that of open-ended planning, focusing on strategic interventions capable of securing large-scale urban principles, while granting a degree of flexibility to accommodate the ‘spontaneous’ processes of the various

urban actors. To the most extreme visions within this strand, the city can no longer be thought of in terms either of form or type. All that remains for the planner is to attempt a strategic functional structure to be delivered to the unpredictability of the market and life. Koolhaas’s theories carry this reasoning to the extreme. For him, the contemporary city is the generic city, the unplanned city emerging in areas of urban expansion that have managed their liberation from the historic core, opposing permanent mutations, utopian fragments, irrational phenomena, and ‘fractal and endless repetition’, to history, identity and character.³

Koolhaas’s provocative vision is of the skyscraper as the ‘final, definitive typology’ of the contemporary city, operating an irrevocable split with urban history since large-scale buildings are allegedly independent of context and incapable of establishing relationships with the ‘classical’ city. They rather compete with planning, he adds, acting as a city within the city. Although acknowledging that the contemporary city is the product of multiple actors and that the metropolitan scale leads to a system of multiple parts, the question we would like to pose is this: is bigness really incapable of establishing a dialogue with the existing city? Or, on the contrary, can it be seen as a tool with which to rework and/or continue the city’s formal and typological principles? Put differently, can bigness reopen the debate on urban form and type in the context of the contemporary city?

Unlike Koolhaas, our focus is neither the Asian context nor areas of urban expansion liberated from the historic core. Our concern is mainly the context of European cities and the way bigness can operate as a mechanism through which to put urban expansion in dialogue with existing urban types, thus avoiding the homogenisation and lack of identity and character of the generic city.

Urban form and type are therefore seen here as an evolving process. Type, as Rafael Moneo has noted, is not a 'frozen mechanism' but 'the frame within which change operates'.⁴ If cities such as Manhattan are the product of bigness itself, for the European cities, bigness is a relatively new urban type introduced in a late phase of their 'natural development', generating a conflicting tension with their functional, symbolic and formal structures. How can bigness inform new areas of urban expansion within an evolutionary framework of typological continuity?

In order to answer this question, we will look back at Paris and Berlin in the early twentieth century, when the problem of the metropolitan scale was first addressed in a consistent way in Europe, and the American skyscraper was brought into the discussion inaugurating the debate on bigness.⁵ Then we will look at three designs by Jacques Herzog and Pierre de Meuron which illustrate the legacy of this early debate in the contemporary context. The first design is the recent Elbphilharmonie building in Hamburg, Germany (2003–2017).⁶ It is a 100-metre-high building that incorporates a mix of urban uses, with programmes ranging from a large concert hall to a hotel and from flats to health and fitness facilities, internalising public space by creating an elevated 'plaza'. [Fig. 1] The second is the design for the exhibition *Ideen für das Herz einer Großstadt – Berlin Zentrum* (*Ideas for the heart of a big city – Berlin Centre*), shown at the Deutsches Architekturmuseum, Frankfurt, between 26 January and 24 March 1991. [Fig. 2] It consists of

four large-scale buildings for vacant sites around Berlin's Tiergarten, to the west of the city centre. Each of the four large cubic volumes was to be deprived of architectural visual characteristics and referents. The communicative dimension of architecture was to be replaced by electronic information displayed on the façades, elaborating on arguments of conceptual art.⁷ Lastly, the 2006 Triangle building for Paris, to be completed by 2020. [Fig. 3] This is a high-rise multifunctional building with a triangular shape, to be built at the Porte de Versailles beside the peripheral belt of the city, mediating between Paris's centre and the peripheral urban conurbation to the south.⁸

In accepting the notion of type as a framework of change, it seems reasonable to see the skyscraper as the ancestor of these buildings. Like these, the skyscraper eludes easy categorisation. It is a building type that is not defined by function, as other types are, but mainly by dimension, which is not absolute but relative to its surroundings. What is more, the objectual condition of these buildings substantially differs from the explorations in megastructures of the 1960s such as those of Archigram or the Metabolists, who thought of the city as a growing structure where there is no clear distinction between architecture and urban design. True, the mixed-use nature of buildings such as the Elbphilharmonie or the Triangle building seem to fulfil Fumihiko Maki's 1964 definition of megastructure as 'a large frame in which all the functions of a city or part of a city are housed'.⁹ Yet they lack the scale needed to cannibalise the existing city and become the city itself, as envisioned by the megastructure theories.

In sum, we are concerned with large-scale buildings rooted in the technological developments of the late nineteenth and twentieth centuries, conceived of as autonomous formal entities, presenting (though not forcibly) multiple programmes, and the role this kind of building may play in the urban form of existing cities such as Hamburg, Berlin and Paris.



Fig. 1: Jacques Herzog and Pierre de Meuron. Elbphilharmonie, Hamburg, Germany, 2003–2017. Photo: Iwan Baan.

The early European debate on the skyscraper and the metropolitan urban form

The first debates on the skyscraper in Europe took place in France and Germany in the early twentieth century, inevitably accommodating the American referent to the specificities of these countries' urban and cultural contexts.¹⁰ In Paris, the debate on urban planning was still marked by Haussmannian design. Although still incomplete, and despite the growing conservatism with regard to unrestricted demolition required to street penetrations, the Haussmannian intervention had established and consolidated an urban dominant order. This contrasted with the surrounding suburbs, with the continuous movement of the poorer classes outward from the centre giving way to haphazard urban growth. Due to political and financial limitations, planning efforts in the early decades of the century focused on short-range projects rather than on comprehensive long-range planning.¹¹

Although this context did not leave much space for the debate on the skyscraper, the latter emerged associated with a debate on an extension plan for Paris centred on the ring of old fortifications and the axis of Saint-Germain, a twenty-kilometre-long straight artery linking the Étoile to Saint-Germain.¹² Discussion on the obsolete military structure had started in the 1880s. The idea of replacing it with a ring boulevard and some building development in the early twentieth century was influenced by the contemporary debate on the Garden City movement and the park system designs in American cities.¹³ Based on these discourses, Auguste Perret envisioned, from 1905 to the 1920s, a ring of regularly spaced skyscrapers and greenery for it (Paris 'surrounded by a belt of huge buildings').¹⁴ For the Saint-Germain axis, and others to come, he envisioned the same essential model: 250-metre-wide avenues with spaced skyscrapers on both sides, interspersed by green spaces.

As Passanti has noted, Perret was approaching the skyscraper through the images of the medieval turreted city wall and the 'boulevard ramparts and royal roads around the Paris of Louis XIV'. Although there was no serious debate on the skyscraper in Paris, Perret shows how the new typology was equated with the tradition of Parisian urbanism, its broad axes and monumental buildings. The same can be said of Eugène Hénard's urban visions, as suggested by his 1910 *Ville de l'avenir*, a circular arrangement of high-rise buildings dominating the urban fabric and creating a new hierarchical order which, nevertheless, reinforces the concentric layout of Paris.¹⁵

In Berlin, by contrast, the debate on the skyscraper was more serious and it followed the American model more closely. Skyscrapers were thought of in terms of a central business district. One reason for this was Berlin's urban context, which was radically different from that in Paris. Despite radical peripheral growth, a major problem in Berlin was the city centre, with its crowded Mietkasernen and traffic congestion.

In terms of urban form, the background to the German reception of the American model was the debate on urban planning that took place at the turn of the century in German-speaking countries, leading to the 1908 competition for Greater Berlin.¹⁶ The competition had two main objectives. On the one hand, it aimed at a unified strategy of urban planning capable of solving the traffic and sanitation problems and the housing shortage. On the other hand, it should provide the German capital with the necessary dignified expression to represent the German Empire—a beauty and grandeur which, in contrast to Paris, Berlin did not have. Berlin's lack of beauty and representativeness had been a theme of debate since the beginning of Kaiser Wilhelm II's reign, resulting in interventions in the city centre, varying from state administration



Fig. 2



Fig. 3

Fig. 2: Jacques Herzog and Pierre de Meuron. *Ideen für das Herz einer Großstadt – Berlin Zentrum*, 1991.

Photomontage : Herzog & de Meuron.

Fig. 3: Jacques Herzog and Pierre de Meuron. Triangle building, Paris, 2006–2020. Photomontage: Herzog & de Meuron.

buildings to monuments and from cultural facilities to public spaces. The Reichstag, Museum Island and Siegesallee are examples of this policy. Yet these interventions were relatively fragmentary and lacked a comprehensive strategy.

The debate around the industrialised metropolis provided two main strategies that would resurface in the entries for the competition: the monumentalisation of the city centre and the uniformity of the urban fabric.

Joseph Brix and Felix Genzmer's entry for the competition of Greater Berlin (first prize) proposed the monumentalisation of the centre through a monumental square – a forum – as an endpoint to a monumental avenue. In addition to the monumental centre, the entry proposed various groupings of cultural buildings, certainly influenced by Paris and its Haussmannian homogeneous urban space punctuated by monumental buildings.¹⁷ The same can be said of Bruno Schmitz's entry (fourth prize), which proposed a monumental centre with huge axes, high-rise and domed buildings, and town squares. [Fig. 4] The model for the nationalist representativeness of the tower was at hand. The Bismark Towers built all over the Empire from 1898 onwards had the capacity to awaken the national sentiment and unify the German people, as explained by art historian Karl Scheffler: 'The mass of the people is always in favour of the tower. It lies in their blood from time immemorial.'¹⁸

Hermann Jansen (also first-prize winner) and Bruno Möhring (third-prize winner), in turn, searched for monumentality in the uniformity of the residential blocks and urban tissue. Jansen explicitly rejected the need for monumental squares and buildings in the preface to his submission, although he considered the aesthetic dimension of urban design as paramount. The philosophical and sociological fields provided the basis for the debate on uniformity. Sociologist Georg Simmel, building

upon Ferdinand Tönnies's 1887 *Gemeinschaft und Gesellschaft* (Community and Society), saw the problem of the cosmopolitan city in terms of a conflict between individual and society.¹⁹ On the one hand, he saw state buildings and educational and cultural institutions as signs that surpass the personal and express communal life and culture, thus presenting a suprapersonal urban image. On the other hand, however, the plea for a collective urban dimension also led to the categories of uniformity and organic cohesion. Simmel conceptualised it through the image of Italian cities, where he saw variety integrated into the unity and cohesion of an organic whole. The meaning of uniformity and organic cohesion is clearly expressed by Scheffler, for whom the homogeneous appearance of the cosmopolitan city due to the uniform plans and façades of apartment blocks – as in Haussmannian Paris – was an expression of modern democratic urban society and uniform social demands, generating a democratic monumentality.

The attempt to apply the notion of unity to the new metropolitan scale was one aspect that cut across all the competition entries. If, in terms of form, the key notions were uniformity and organic cohesion, from the functional point of view the strategy consisted of turning the several neighbouring cities and villages involved in the competition into a 'unified whole' through the design for a solution to the traffic problem.²⁰ Jansen had a pioneer's vision in this respect. He saw the city as a flexible organism composed of dispersed urban components, introducing the notion of city region as a synthesis of various differentiated urban areas, each with key public buildings. These urban areas were to be structured by the 'skeleton' of a traffic network, providing the basis for urban growth. Jansen was initiating the concept of the flexible, strategic urban plan, open to growth, change and negotiation according to need.²¹ In short, the metropolitan scale had led to the notion of an organic whole which did not imply a continuous urban tissue. In this context,

the skyscraper was interpreted differently than in Paris, though equally anchored in history, as it provided the means to reconcile formal unity and the flexible organic whole of the metropolis.

The skyscraper as *Stadtkrone* of the metropolis

The idea of a metropolitan unified whole emerging from the Berlin competition was thought of not only in terms of function and circulation, but also in terms of form, applying the notions of centrality and uniformity to the new scale. The skyscraper had a key role in this respect. Due to its scale, it provided the opportunity to transpose the view on the city as a formal whole to the metropolitan scale through the notion of *Stadtkrone* (city crown).

Several aspects of the overall debate on the city were preparatory to this view. The aesthetic approach to the city that had been inaugurated by Camillo Sitte's 1889 *Der Städtebau nach seinen künstlerischen Grundsätzen* (*City Planning According to Artistic Principles*) was gradually put in terms of *Grossform* (the large-scale form of the city). Theodor Fischer's 1903 *Stadterweiterungsfragen mit besonderer Rücksicht auf Stuttgart* (*City Expansion Issues with special consideration for Stuttgart*) had rescued the image of the organic unity of the medieval city as a unified formal entity crowned with the Gothic cathedral, conceptualising it in the notion of *Stadtkrone*. The Berlin-Charlottenburg Seminar on City Planning (1908–20), founded by Brix and Genzmer and triggered by the Berlin competition, placed an emphasis on the city as a whole, and developed to include the visual connection with the surrounding landscape, introducing the discussion in terms of the overall silhouette of the city as a unified object in the landscape.²² In 1916, in his *Kulturarbeiten* (1901–1917), Paul Schultze-Naumburg introduced the notion of *Stadtlandschaft*, or urban landscape, which took on the meaning of *city as landscape*.²³ And in 1919, Bruno Taut's *Die Stadtkrone* propagated Fischer's notion, conceptualising the city as an entity crowned by a dominant

building – or set of dominant buildings – with symbolic meaning capable of giving cohesion to the overall image of the city.

The German discussion on New York's and Chicago's skyscrapers was built on, and fostered, this larger debate on the city conceptualised as a unified formal entity, composed of a uniform urban fabric dominated by a monumentalised centre – a *Stadtkrone* – set against the surrounding landscape and punctuated by secondary symbolic buildings. Through its scale, the skyscraper could become the *Stadtkrone* of the city region.

This is expressed in a 1912 opinion poll conducted by the newspaper *Berliner Morgenpost* on the use of the skyscraper in the city of Berlin. The most significant statement is by Peter Behrens, who expressed how strong an impression was made on him by the towering business buildings looming on the horizon on entering the port of New York. Seeing in these high-rise buildings the germ of a new architecture, he argued for the aesthetic and symbolic role of the American model in turning the overall view of the large horizontal city of Berlin into an entity 'graspable as an architectural image', with a 'uniform character and stylistic idea'.²⁴ In other words, the skyscraper would provide the 'uniform' metropolitan urban fabric of Greater Berlin with a *Stadtkrone* endowing it with a recognisable urban form. As Scheffler put it, 'a business zone which forms the nucleus of the metropolitan image' composed of 'skyscrapers – office buildings comprising a large number of identical storeys'.²⁵

The role of the skyscraper was increasingly addressed in the 1920s, with a continuing emphasis on the overall form of the city. The main argument was that the mass of buildings should be punctuated by a set of skyscrapers strategically located in order to endow Berlin with a modern urban expression, while avoiding the lack of order of Chicago and New York. The notion of *Stadtkrone* underlying

these statements lingered, as demonstrated by many sources, from Ludwig Hilberseimer's 1926 urban plan for the *Wohlfahrtsstadt* (Welfare city—a circular city with fourteen-storey high-rises at the centre, and density and height gradually diminishing to single-family houses at the periphery), to Erich Mendelsohn's portrait of Lower Manhattan with Brooklyn Bridge in the foreground, intentionally framing a pyramidal silhouette of skyscrapers in the background, or even the iconic representation of the city of the future in Fritz Lang's film *Metropolis*, a dense concentration of skyscrapers forming a pyramid, also portrayed in Boris Bilinsky's 1927 design for the film's poster.²⁶

In sum, with the contribution of sociology, German architects conceptualised the metropolis as a discontinuous urban tissue with homogeneous masses of residential buildings of identical height and an understated architectural language (expressing the common needs of democratic society) from which representative buildings stood out for their scale (expressing cultural identity). The skyscraper provided the possibility of transposing the formal imagery of the traditional city to the metropolitan scale, that is, of reconciling the metropolitan scale with the image of the city as a formal entity.

These ideas spread beyond Germany. A paradigmatic example is provided by Le Corbusier. Although obscured by the rationalist emphasis of his discourse, aesthetics played a central role in Le Corbusier's urban design, as illustrated by the 1922 *Ville Contemporaine*.²⁷ [Fig. 5] Its design incorporates the garden city model and a geometric and axial system, reflecting both the Parisian planning system and the American utilitarian urban grid. These principles are, however, submitted to a formal synthesis of the city conceived of as a formal entity: a pyramidal silhouette formed by the central *Cartesian* skyscrapers – the downtown business district – crowning the geometric layout and

uniformity of the residential buildings and greenery. The fact that the plan is limited in growth only reinforces the aesthetic nature of the design and the concept of *Stadtkrone* on which it is based.

For Le Corbusier, this diagrammatic conceptualisation of the 'ideal city' played no small part in reshaping existing cities. The Plan Voisin – the practical application of the model to Paris – proposes a new crown for the city. [Fig. 6] Although this new *Stadtkrone* of skyscrapers implied a new hierarchical order that would transform the city's *Grossform*, it was conceived of as continuing the French tradition of urban planning and the urban history of the city of Paris, its monumental buildings and axial structure of streets.²⁸

Unsurprisingly, the dialogue between the skyscraper and the existing city is clearer in less radical projects, such as the 1930–31 project for the Porte Maillot square, in the peripheral belt of Paris. Le Corbusier proposed two skyscrapers defining a monumental entrance to the city and promoting continuity between the Grand Armée avenue, linking to the Étoile to the east, and the avenue of La Défense to the west, beyond the peripheral boulevard, thus continuing the Champs-Élysées axis and the principle of large axes and monumental focal points of Paris's urban design.²⁹ [Fig. 7] Another example is the 1932 Plan Macià for Barcelona. Here Le Corbusier proposed a group of skyscrapers lining up in front of the old quarter along the port, forming a massive front towards the sea. The skyscrapers would mark the geographic urban limit and establish a large-scale *Stadtlandschaft* composition with the hill of Montjuïc and the ring of mountains surrounding the city, exploring the *Grossform* of city and landscape.³⁰

All this illustrates how the European import of the skyscraper was framed by the contemporary debate on urban form.

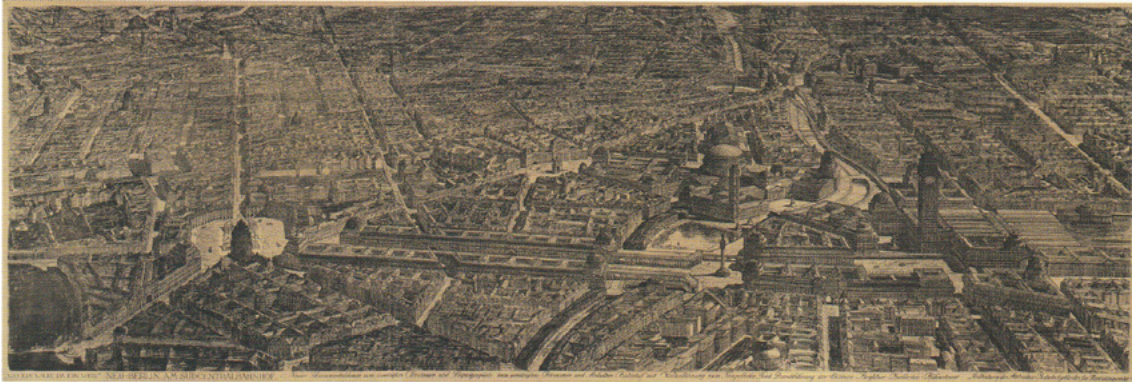


Fig. 4



Fig. 5

Fig. 4: Bruno Schmitz and Otto Blum. Entry of the competition for Greater Berlin, 1908–10. Architekturmuseum der Technischen Universität Berlin, Inv. Nr. 8008.

Fig. 5: Le Corbusier. Diorama of the Ville Contemporaine, 1922. Drawing: FLC/Pictoright, 2017.

Urban form vs. architectural form

In playing the role of *Stadtkrone*, skyscrapers had a central aesthetic role to play in the overall image of the city, leading to an emphasis on the object. On another level, the early twentieth century European import of the American skyscraper took place with great acclaim for the formal role that the structural frame could play in modern architecture. Whereas the frame was, for the Chicago architects, 'convincing as a fact', constituting a pragmatic response that did not aspire to a rationalist manifesto, in Europe it became an *idea*.³¹ By turning the structural frame into the basis for architectural language, European modernism sought to create a symbol of the second machine age. How was the objectual condition of the skyscraper as *Stadtkrone* reconciled with the modernist plea for truth in architecture, focused on turning the structural frame into the basis of architectural form?

The answer lies in the glazed curtain wall. Through it, modern architects sought both an emphasis on volume and its correspondent urban expression, on the one hand, and a focus on the frame as architectural expression on the other. For Le Corbusier, transparency rendered the 'machine' visible from the exterior, as illustrated in the drawings of the skyscrapers for the Ville Contemporaine.³² At the same time, his concern with urban form led him to search for volumetric definition. As a product of the machine, skyscrapers could be seen as geometric prisms 'cut with a precision of theory', perceived through the 'epidermis ... of an enveloping gesture'.³³

The double aesthetic role that Le Corbusier ascribed to the glazed façade is more clearly expounded by Mies van der Rohe and his well-known entry for the 1921 competition for the Friedrichstrasse skyscraper. [Fig. 8] Passanti has noted that several elements of Mies's design echo Le Corbusier's.³⁴ This influence would be accommodated in Mies's German intellectual framework,

through which he could interpret the glazed façades through essentially the same duality. At the architectural level, glass meant, for Mies, the possibility of revealing the structural system through transparency. In 1922 he published his design, together with the design of his second glass tower (1922), in *Frühlicht*, Taut's Expressionist journal, writing that

Only skyscrapers under construction reveal the bold constructive thoughts, and then the impression of the high-reaching steel skeletons is overpowering. With the raising of the walls, this impression is completely destroyed; the constructive thought, the necessary basis for artistic form-giving, is annihilated and frequently smothered by a meaningless and trivial jumble of forms. At the very best one remains impressed by the sheer magnitude, and yet these buildings could have been more than just manifestations of our technical skill. This would mean, however, that one would have to give up the attempt to solve a new task with traditional forms; rather one should attempt to give form to the new task out of the nature of this task.

The novel constructive principle of these buildings comes clearly into view if one employs glass for the no longer load-bearing exterior walls.³⁵

Mies owes his allusion to constructive thought as a necessary basis for artistic form-giving to Scheffler, who, in his 1913 *Die Architektur der Großstadt* had associated a new aesthetics of the metropolis with unfinished buildings as Ur-form.³⁶ Yet, at the urban level, glass was a matter of plasticity:

The use of glass, however, necessitates new approaches. In my design for the skyscraper at the Friedrichstrasse railroad station in Berlin, intended for a triangular site, a prismatic form corresponding to the triangle appeared to offer the right solution for this building, and I angled the perspective façade fronts slightly toward each other to avoid the danger of an effect of lifelessness that often occurs if one employs

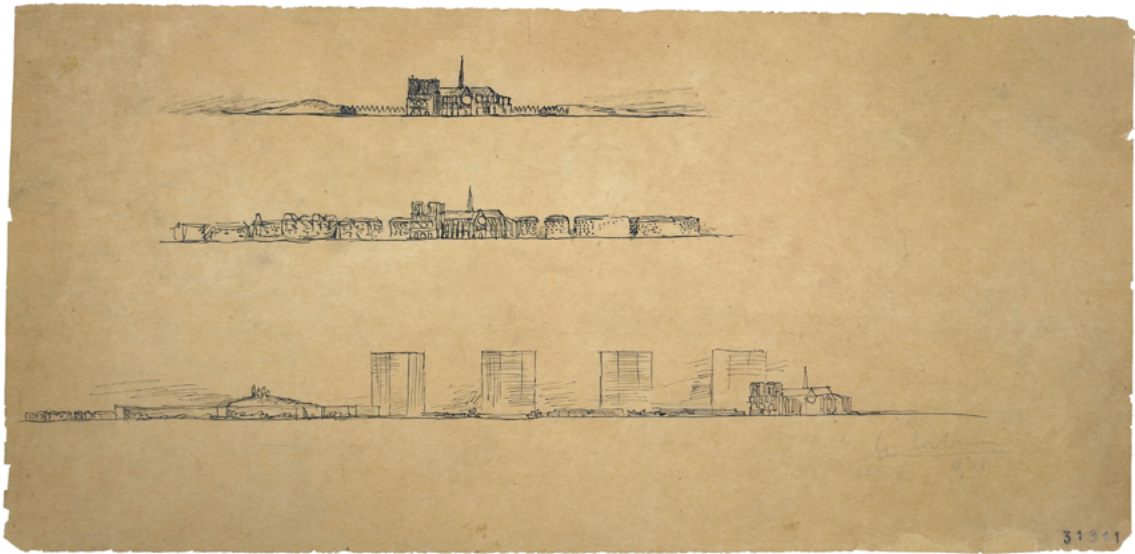


Fig. 6

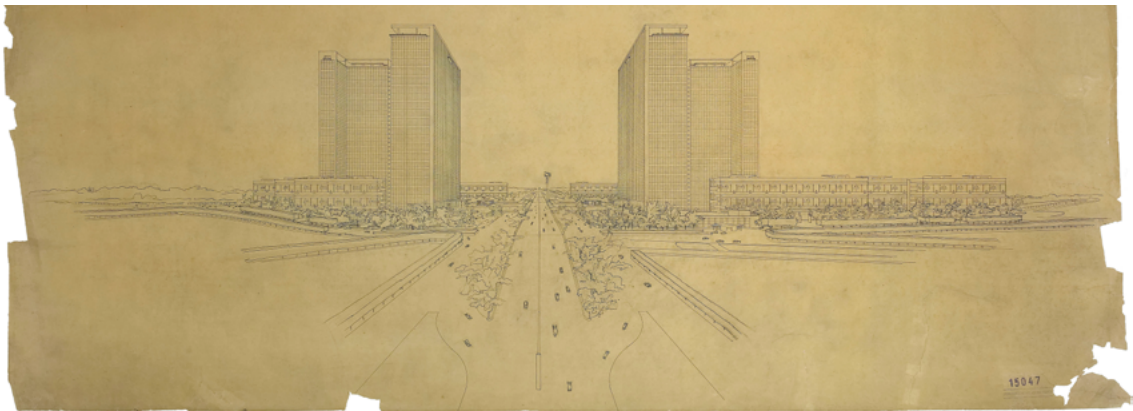


Fig. 7

Fig. 6: Le Corbusier. Plan Voisin seen as continuing the history of Paris's urban skyline, 1925. Sketch: FLC/Pictoright, 2017.

Fig. 7: Le Corbusier. Porte Maillot, Paris. View of the two skyscrapers and the continuous axis of Grand Armée and La Défense avenues, 1930–31. Drawing: FLC/Pictoright, 2017.



Fig. 8a: Mies van der Rohe. Friedrichstrasse skyscraper, 1921. Photomontage: Bauhaus-Archiv Berlin.



Fig. 8b: Mies van der Rohe. Glass Skyscraper, 1922. Model: Digital Image @ 2017 MoMA, NY/Scala, Florence.

large glass panels. My experiments with a glass model helped me along the way and I soon recognized that by employing glass, it is not an effect of light and shadow one wants to achieve but a rich interplay of light reflections. That was what I strove for in the other design published here [the 1922 skyscraper]. ... The curves were determined by the need to illuminate the interior, the effect of the building mass in the urban context, and finally the play of the desired light reflection.¹³⁷

Here, Mies was building upon the ideas of novelist Paul Scheerbart and his influence on Expressionist aesthetics, disseminated in *Frühlicht*. For Scheerbart, *Glasarchitektur* (architecture with walls made of coloured glass) was a symbol of and means to construct a purified, changed society.³⁸ The aesthetic dimension involved in the Expressionist experiments is well known and is certainly related to Mies's interest in the changing 'interplay of light reflections'. Yet his concern with the 'effect of the building mass in the urban context' is essentially the same underlying Le Corbusier's emphasis on geometric definition: the role of the skyscraper in shaping a new urban form.

In Le Corbusier and Mies, then, the problem of form of the large-scale building type imported from America was exploited through its enveloping surface: it was both a plea for 'truth' in architectural language and an expression of the urban form through volume. Modern architects were as interested in an exterior expressing the interior as in the volumetric and objectual presence of the skyscrapers in giving shape to the city. In what concerns urban form, the skyscraper was delivered as an urban gesture, a structuring and formal landmark. Scale and objectual condition were the main arguments through which modern architects explored the role of skyscrapers in reshaping the city.

In this respect, it seems worth noting that, today, the objectual condition of large-scale buildings and

their independence from the interior is not simply a particular feature of bigness and its programmatic complexity and instability, as suggested by Koolhaas. Instead, it is first the result of a process through which architectural language came to prevail over the modernist plea for truth, concerning a general problem of form that extends back to the postmodern quest for a historically based architectural language. The postmodern search for a communicative architecture through the recovery of the classical repertoire of architecture discarded the correspondence between meaning and type. A high-rise building could be an office block and simultaneously evoke Italian medieval towers, as with Milan's *Torre Velasca* (1956–58), by the BBPR architectural partnership. Postmodernism destroyed the idea of typological unity, in which interior and exterior were one, reducing type to image and attributing to this image the communicative dimension of architecture.³⁹ The surface treatment of buildings in many of Herzog and de Meuron's designs is a good example of this postmodernist legacy and its exploration through contemporary discourses on art.

Thus, the problem of architectural language in the realm of bigness – its objectual condition and independence from the interior – concerns a general problem of form: it is first a problem that reflects the *a priori* rejection of the modernist formal preconceptions rather than a technical impossibility. The point to be made is that, beyond the symbolic meaning and message its architecture may or may not communicate, today, the intrinsic formal value of bigness for the city rests on scale and the objectual condition of the building – a fact the moderns themselves were well aware of.

It seems therefore reasonable to argue that the crux of the formal problem of bigness in terms of urban design extends back to the early European debate on the skyscraper. It lies in the presence of the building in the city and in its capacity to become an agent of information at the city *Grossform* level.

It is the exploration of this capacity in the contemporary European city that we would like to discuss now.

Three designs by Herzog and de Meuron

Having this early European debate on the skyscraper and urban form in mind, we may now return to the three designs by Herzog and de Meuron mentioned earlier in this article, and illustrate the possibilities opened up by bigness to rework formal specificities of the existing city and expand its typological principles.

In the case of Hamburg, the aim of the Elbphilharmonie building is to create a symbolic and programmatic centre to the 'HafenCity Hamburg', a project of urban expansion of the city centre. [Fig. 9] The building aspires to be an agent of consolidation and urban renewal fostering urban life in the surrounding neighbourhood. The strategy is twofold. In programmatic terms, it creates an exceptional and attractive mix of urban uses. In formal terms, it adopts the principle of monumentalisation of a building, creating a landmark signalling the centre of the new urban area of the harbour, which is to expand the centre of Hamburg.

In formal terms, bigness thus acts here in a rather 'classical' way. First, it explores the notion of centrality through the monumentalisation of a particular building. Secondly, through the emphasis on the form and scale of a singular building, the Elbphilharmonie gives continuity to the urban principle of Hamburg's city centre, expanding the city's *Grossform* with the same logic – an urban system generated by relationships between individual buildings or an individual arrangement of buildings dominated by those with exceptional programmes.

The continuity of the dialogue between the traditional city, modernism and bigness further resurfaces in the building's architectural form. The aim, the authors argued, was to create a 'crowning

symbol of the expansion of Hamburg's city centre towards the south into the harbour district along the shores of the River Elbe' by designing an 'iridescent, multifaceted crystal' with a broad 'undulating sweep' of roof, while the 'crystalline glass façades' were meant to reflect water and city, 'blending into optical illusions the surrounding area.'⁴⁰ These words recall Mies's as much as the design evokes Scheerbart's architectural visions and Taut's Expressionism, with their imagery of constant change, transmutation and apparent movement of form, and notion of *Stadtkrone*. The flaring light emanating from the building in Herzog and de Meuron's early three-dimensional visualizations is equally telling.

In the Berlin Zentrum design, the four large-scale buildings have no defined use, although they were thought of as 'condensed centres' of their surrounding urban areas. The main strategy lies at the urban level: to create a 'visible urban expression' or landmark to define a specific urban location, providing visual focus at the urban scale. [Fig. 10] The buildings were to be located around the Tiergarten, the park to the west of the Brandenburg Gate, at the junction of the main axis through the centre of Berlin, linking the Brandenburg Gate to the Museum Island to the east via Unter den Linden, and Ebertstrasse, running in a north-south direction. The intervention, with its central focus on the park, would thus signal the end of the central axis of old Berlin, extending the city centre to the west and making it visible from a distance.

Again, the design proposes a *Stadtkrone* for Berlin. A close architectural reference seems to be Mies's entry for the 1929 competition for Alexanderplatz, with its box-like buildings of different sizes loosely connected to one another around the roundabout. At the level of urban form, however, the strategy can be seen in the light of Berlin's twentieth-century urban history, during which time the idea of city crown continually arose as a main design argument, from Behrens's 1912 statements to the paradigmatic

cases of the 1957–58 Hauptstadt Berlin international competition and the early 1990s competitions for Potsdamer Platz and Alexanderplatz.⁴¹

In strictly formal terms, then, the Berlin Zentrum design means the continuity of the discourse on Grossform and belief in the capacity of large-scale architectural structures to endow the city with some kind of formal intelligibility and unity.

The same can be argued with regard to the Triangle building for Paris. The main strategy of the high-rise multifunctional building, to be built in the Paris Expo area, lies in the urban principles that characterise Paris's urban design: its broad axes, open axial views, focal points and monumental buildings rising above the organic cohesion of the urban tissue. [Fig. 11] Today, the Expo area, together with the peripheral boulevard, constitutes a rupture between Haussman's fifteenth district to the north and the communities of Issy-les-Moulineaux and Vanves to the south. The intervention in public space and the location of the high-rise building aim at solving this problem by restoring the continuity between Avenue Ernest Renan, to the south of the Porte de Versailles, and Rue de Vaugirard to the north. This re-establishes the historical radial axis that leads to the city centre. The extensive façade, positioned along Avenue Ernest Renan, is intended to strengthen the axis and diminish the presence of the peripheral boulevard. [Fig. 3]

The strategy is essentially the same adopted by Le Corbusier in the project for Porte Maillot, with a similar position beside the peripheral belt. Like Le Corbusier's pair of skyscrapers, the high-rise building is to be perceived at the metropolitan scale. Its silhouette – an axial focal point – lends visibility to the Porte de Versailles, integrating and giving continuity to the system of axes and monuments of the Parisian urban design. The comparison of these two cases with the late 1950s urban strategy for La Defense is instructive. Although extending

the Champs-Élysées axis outwards to the west, La Defense generates a *Stadtkrone* outside the city core that is alien to the design of the existing city and radically alters its *Grossform*. The Porte Maillot and the Triangle, in contrast, recognise the urban principles of the city based on axes and monumental focal points, and adopt them as a design strategy at the metropolitan scale in an attempt to establish continuity with the peripheral fragmented urban tissues.

Thus understood, each of these designs by Herzog & de Meuron establishes a strategy of formal and typological continuity with the existing city, re-equating arguments of the modernist discourse in new contemporary contexts.

Conclusion

The first conclusion suggested by these three designs is that the symbolic meaning of bigness may vary and even be absent. There is not a correspondence between meaning and type. The early European explorations into the skyscraper design are framed by the modernist attempt to replace the correspondence between architectural classical vocabulary and symbolic meaning with a new system of significance based on industrial building techniques and allegedly timeless aesthetic values, as reflected in the double role of the glazed façades. It was, nevertheless, based on a correspondence between meaning and type. Both Mies and Le Corbusier conceived of their skyscrapers as office buildings to be integrated into the 'cité des affaires', symbol of a new modern era and urban expression. With postmodernism, the double communicative role that the moderns ascribed to the enveloping skin came to an end, together with the correspondence between meaning and type. Today, meaning can lie in an exceptional programme, as in the Elbphilharmonie. But given the end of the idea of typological unity, the specific contribution of bigness lies not so much in meaning, but in the possibilities of form opened up by scale—its intrinsic



Fig. 9: Jacques Herzog and Pierre de Meuron. Elbphilharmonie, Hamburg, Germany, 2003–2017. Site plan: authors.



Fig. 10: Jacques Herzog and Pierre de Meuron. *Ideen für das Herz einer Großstadt – Berlin Zentrum*, 1991.
Photomontage: Herzog & de Meuron.

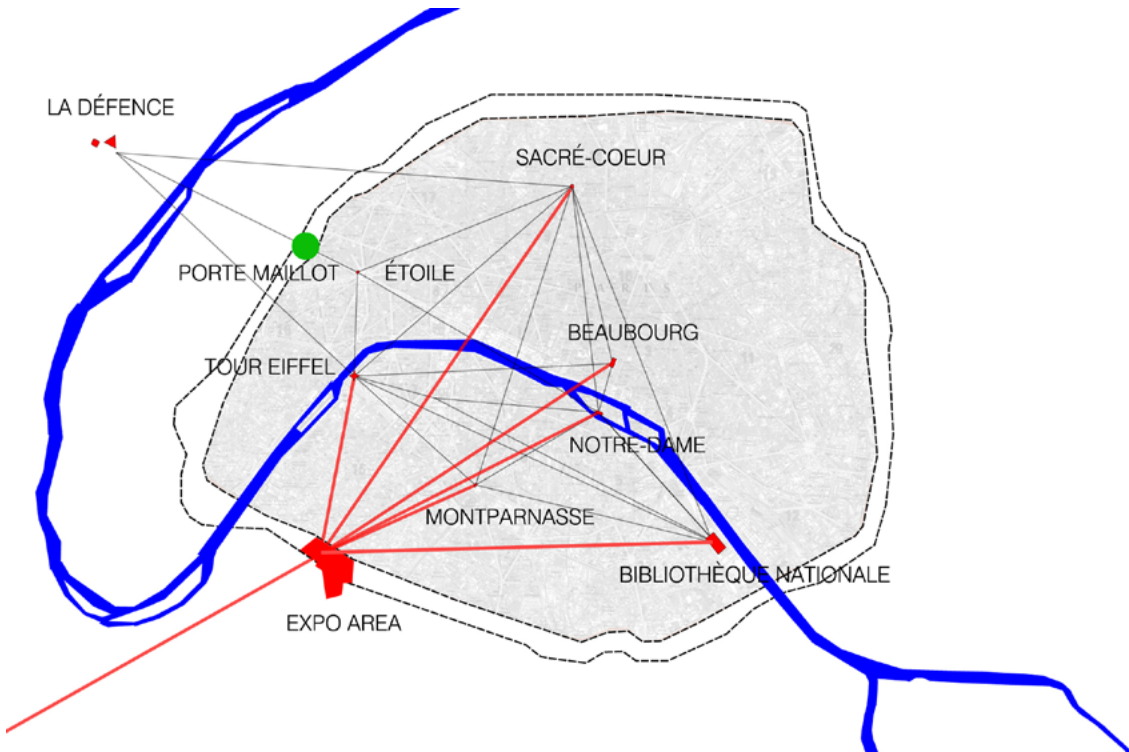


Fig. 11: Jacques Herzog and Pierre de Meuron. Relationship between the site and Paris's urban landmarks and axes.
Photomontage: Herzog & de Meuron (Porte Maillot site, our mark).

characteristic—as in the Berlin Zentrum design and the Triangle building. With bigness, architecture is mostly confined to the objectual value of the building in shaping specific urban contexts. Herein lies the value of bigness for urban form.

This leads us to the second conclusion illustrated by the cases discussed above: that the possibilities afforded by scale do not forcibly jeopardise the existing city. When strategically planned and conceived of as part of a comprehensive composition of architecture and cityscape, i.e., in terms of *Stadtlandschaft*, bigness can integrate and enter into a dialogue with the formal and typological principles of the existing city, reinforce them, and reintroduce the possibility of thinking of the city in terms of *Grossform*. The Elbphilharmonie building adopts the principles of the historical city enlarging the centre of Hamburg by expanding its *Stadtkrone*. The Berlin design explores bigness as a tool to rework the latent *Grossform* implied by the horizontal city. The Parisian case explores bigness as a focal point associated with a boulevard, restoring and expanding the typological principles of Parisian urbanism. These cases seek a dialogue with context and urban type rather than to deliver bigness to the realm of the 'generic city'.

The third conclusion is that bigness can be seen as continuing the modern debate on the skyscraper and urban form. The Elbphilharmonie continues the debate on the *Stadtkrone*, as the proposal for *Berlin Zentrum*, continuing a debate on Berlin's urban design which has lasted for more than a century. As for the Triangle, it explores the urban principles of Paris in the same way Le Corbusier had explored in the Porte Maillot project, aiming at structuring the generic city in the suburbs by reworking identity values of the city core's urban typology.

As these cases illustrate, bigness provides an important tool in the design of the *Grossform* of the contemporary European city. The aim is not a

return to the modernist dream of 'total planning', but to secure a large-scale, dominant form through typological values within which there is place for the 'spontaneous' processes of the various urban actors.

This approach to bigness in terms of the city *Grossform* is by no means restricted to these cases and their geographic, typological and cultural specificities. Within the varied contexts and scales of the contemporary city, bigness can mark urban centres and exceptional programmes in the multi-centred metropolis, establish dialogues with the natural surroundings, or define urban limits.

Thus understood, bigness reopens the debate on the grand-scale form of the city that had been put aside by postmodern critique. The large gestures made possible by bigness can be seen as a structuring tool of the 'collage city'. Through its objectual condition, bigness becomes a landmark or urban referent rendering legibility to the city. In this sense, it operates in phenomenological terms in a similar way to Lynch's Gestalt principles. But since phenomenological approaches per se are incapable of providing the city with a coherent urban structure, the operative dimension of bigness seems to depend on its links with the specificities of the existing city. As in cities such as those discussed here, bigness may establish a dialogical relationship with the existing urban principles, whether through continuity, transformation or subversion, providing a methodological basis that goes beyond the architectural object to encompass its full potential as a link between architectural and urban form.

Notes

1. Kevin Lynch, *The Image of the City* (Cambridge, MA: The Technology Press, Harvard University Press, 1960); Alan Colquhoun, 'The Superblock' (1971), in *Essays in Architectural Criticism: Modern Architecture and Historical Change* (Cambridge, MA: MIT Press, 1985), 96–97.
2. Aldo Rossi, *The Architecture of the City*, trans. Diane Ghirardo and Joan Ockman (Cambridge, MA: MIT Press, 1982 [1966]); Colin Rowe and Fred Koetter, *Collage City* (Cambridge, MA: MIT Press, 1978).
3. Rem Koolhaas, *Delirious New York: A Retrospective Manifesto for Manhattan* (New York: The Monacelli Press, 1997 [1978]); Rem Koolhaas, 'Bigness, or the Problem of Large. Manifesto, 1994', in O.M.A., Koolhaas and Bruce Mau, *S,M,L,XL*, (Cologne: Benedikt Taschen Verlag, 1997), 495–516; Rem Koolhaas, 'The Generic City', in *S,M,L,XL*, 1239–1264.
4. Rafael Moneo, 'On Typology', *Oppositions* 13 (Summer 1978): 22–45.
5. On the influence of America on European modernism see Jean-Louis Cohen and Hubert Damisch, eds., *Américanisme et modernité: L'Idéal américain dans l'architecture* (Paris: Flammarion, École des Hautes Études et Sciences Sociales, 1993); Jean-Louis Cohen, *Scenes of the World to Come: European Architecture and the American Challenge 1893–1960* (Paris and Montreal: Flammarion and Canadian Centre for Architecture, 1995). The radical positioning of Koolhaas – proper for a manifesto – leads him to assert that 'Bigness has been, for nearly a century, a condition almost without thinkers.' Yet the diversity of contexts and discourses on mixed-use large-scale built structures is larger than Koolhaas seems willing to accept. The last century is precisely the one during which the problem of bigness emerged as a central theme of urban design and architecture, from the early debates on the skyscraper to the megastructures of the Team X, Situationists and Metabolists.
6. On the Elbphilharmonie see *El Croquis*, no. 129–130 (2006): 436–445.
7. The project was developed with the collaboration of the conceptual artist Rémy Zaugg, which is apparent in the solution of the façades, reworked in later designs by the authors. See Alejandro Zaera, 'Continuities: Interview with Herzog and de Meuron', *El Croquis* XII, no. 60 (1993): 6–23.
8. On the Triangle building see Nobuyuki Yoshida, 'Herzog & de Meuron: Project Triangle in Paris by Herzog & de Meuron', *Architecture and Urbanism. Sustainable Architecture in Germany*, no. 459 (December 2008): 7; Herzog and de Meuron, 'Triangle Building', *El Croquis*, no. 152–153 (2010): 322–329.
9. Banham, *Megastructure: Urban Future of the Recent Past* (New York: Harper & Row, Icon Editions, 1976), 9.
10. On the German and French reception of the skyscraper see Francesco Passanti, 'The Skyscrapers of the Ville Contemporaine', *Assemblage*, no. 4 (October 1987): 52–65 and a different version of this essay published in Cohen and Damisch, *Américanisme et Modernité*, 171–190.
11. On the Parisian and Berlin urban contexts and debates on urban planning see Anthony Sutcliffe, *Towards the Planned City* (Oxford: Blackwell, 1981); Norma Evenson, *Paris: A Century of Change, 1878–1978* (New Haven: Yale University Press, 1979); Evenson, 'Paris, 1890–1940', in *Metropolis 1890–1940* ed. Anthony Sutcliffe, (Chicago: Chicago University Press, 1984), 259–288; Horst Matzerath, 'Berlin, 1890–1940,' in Sutcliffe, *Metropolis*, 289–318; Vittorio Magnago Lampugnani, 'Berlin Modernism and the Architecture of the Metropolis,' in Terence Riley and Barry Bergdoll, eds., *Mies in Berlin* (New York: The Museum of Modern Art, 2001), 34–65.
12. Passanti, 'Skyscrapers'.
13. On the influence of the American debate on parks in France and Germany see Cohen, *Scenes of the World to Come*, 26–31.
14. Auguste Perret, 'Une maison de dix étages. Terrasse fleurie. L'Hotel des Sportsmen', *La Patrie* (21 June 1905), 3, quoted in Passanti, 'Skyscrapers', 56.
15. On Eugène Hénard see his *Études sur l'architecture et les transformations de Paris, et autres écrits sur l'architecture et l'urbanisme* (Paris: Éditions de la Villette, 2012).

16. On the competition for Greater Berlin see Wolfgang Sonne, *Representing the State: Capital City Planning in the Early Twentieth Century* (Munich, Berlin, London, New York: Prestel, 2003), 101–148.
17. The results of the competition were decided in 1910, awarding two first prizes, one to Hermann Jansen and the other to Joseph Brix and Felix Genzmer.
18. Karl Scheffler, 'Der Kampf um Bismarck', in *Kunst und Künstler*, vol. 10 (1911–1912), quoted in Sonne, *Representing the State*, 105.
19. For a general approach to Ferdinand Tönnies's 1887 *Gemeinschaft und Gesellschaft*, Georg Simmel's 1903 'Die Grossstädte und das Geistesleben' (Metropolis and Mental Life), and the sociological and artistic debate on Germany in this period see Francesco Dal Co, *Figures of Architecture and Thought: German Architecture Culture 1880–1920* (New York: Rizzoli, 1990); Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge and New York: Cambridge University Press, 1995), 146–52.
20. The competition included the surrounding cities of Charlottenburg, Schöneberg, Rixdorf, Wilmersdorf, Lichtenberg, Spandau and Potsdam, as well as more than 200 villages in the districts of Teltow and Nieder-Barnin.
21. Katharina Borsi, 'Drawing the Region: Hermann Jansen's Vision of Greater Berlin in 1910', *The Journal of Architecture* 20, no. 1 (2015): 47–72.
22. George R. Collins and Christiane Crasemann Collins, *Camillo Sitte: The Birth of Modern City Planning* (New York: Dover Publications, 1986), 107–10. The seminar debates were published in the periodical *Städtebauliche Vorträge, gehalten im Seminar für Stadtbau an der Kgl. Technischen Hochschule zu Berlin*, I-X, 1908–20.
23. Jean-Louis Cohen, 'In the Cause of Landscape,' in Cohen, ed., *Le Corbusier: An Atlas of Modern Landscapes* (London: Thames & Hudson, 2013), 35–36.
24. Mies van der Rohe, quoted in Passanti, 'Skyscrapers', 55; Lampugnani, 'Berlin Modernism', 40; Cohen, 'German Desires of America: Mies's Urban Visions,' in *Mies in Berlin*, 363.
25. Karl Scheffler, *Die Architektur der Großstadt* (Berlin: Bruno Cassirer Verlag, 1913), 14, quoted in Cohen, *Scenes of the World to Come*, 31.
26. Mendelsohn's photograph of Lower Manhattan was published in his *Amerika* (Berlin: Rudolf Mosse, 1926). For a reproduction of Bilinsky's advertising see Regina Stephan, ed., *Eric Mendelsohn: Architect 1887–1953* (New York: The Monacelli Press, 1999), 66.
27. The seminal essay on the significance of aesthetics for Le Corbusier's urban design remains Passanti, 'The Aesthetic Dimension in Le Corbusier's Urban Planning', in *Josep Lluís Sert: The Architect of Urban Design, 1953–1969*, ed. Eric Munford, Hashim Sarkis, and Neyran Turan (New Haven: Yale University Press, 2008), 25–37. On the vital influence of Germany in Le Corbusier's urban design see Christoph Schnoor, *Le Corbusier, La Construction Des Villes, Charles-Edouard Jeanneret's Erstes Städtebauliches Traktat von 1910/1911* (Zurich: Gta Verlag, 2008).
28. On Le Corbusier's plans for Paris and the French tradition see Barry Bergdoll, 'Paris: Le Corbusier and the Nineteenth-Century City', in *An Atlas of Modern Landscapes*, 246–49.
29. Le Corbusier, *Le Corbusier et Pierre Jeanneret, Œuvre Complète 1929–1934*, vol. 2 (Zurich: Girsberger, 1934), 63–65.
30. *Ibid.*, 90; Passanti, 'Aesthetic Dimension', 27.
31. Colin Rowe, 'Chicago Frame' (1956) in Rowe, *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, MA: MIT Press, 1987), 89–117.
32. *Le Corbusier, Le Corbusier et Pierre Jeanneret, Œuvre Complète 1929–1934*, 92. In *Urbanisme*, for example, Le Corbusier published a photograph of the frame of an American skyscraper under construction with the caption 'A building ... we envelop it with glass'. Le Corbusier, *Urbanisme* (Paris : Éditions Vincent, Fréal & Cie, 1966 [1925]), 185.
33. Le Corbusier, 'La leçon de la machine,' *L'Esprit Nouveau*, no. 25 (1924), no page numbers.
34. Although the Ville Contemporaine dates to 1922, Le Corbusier had published the design of the skyscrapers in January 1921 in *L'Esprit Nouveau*. The magazine

- was known in Germany, and Le Corbusier had personally sent the issue to various German architects. Passanti, 'Skyscrapers', 60–61; Le Corbusier, 'Trois rappels à MM. les architectes: le plan,' *L'Esprit Nouveau*, no. 4 (January 1921): 465–466.
35. Mies van der Rohe, no title (1922), trans. Mark Jarzombek in Fritz Neumeier, *The Artless Word: Mies van der Rohe on the Building Art* (Cambridge, MA: MIT Press, 1991), 240.
 36. Lampugnani, 'Berlin Modernism,' 43.
 37. Mies, no title, 240. In 1968 Mies reaffirmed his intentions, writing on his 1921 design: 'Because I was using glass, I was anxious to avoid enormous dead surfaces reflecting too much light, so I broke the façades a little in plan so that light could fall on them at different angles: like a crystal, like cut-crystal.' On the second design: 'I tried to work with small areas of glass and adjusted my strips of glass to the light and then pushed them into the plasticine planes of the floors. That gave me the curve ... I had no expressionist intention. I wanted to show the skeleton, and I thought that the best way would be simply to put a glass skin on.' 'Mies Speaks', *Architectural Review* (December 1968), quoted in Frank Russell, ed., *Mies van der Rohe, European Works* (London; New York: Academy Editions; St. Martin's Press, 1986), 38, 40.
 38. This symbolism ascribed to glass had obvious links with German mysticism and the idealisation of Gothic architecture of authors such as Wilhelm Worringer and Scheffler. See Rosemarie Haag Bletter, 'Paul Scheerbar's Architectural Fantasies', *Journal of the Society of Architectural Historians* 34, no. 2 (May 1975): 83–97; Bletter, 'The Interpretation of the Glass Dream – Expressionist Architecture and the History of the Crystal Metaphor', *Journal of the Society of Architectural Historians* 40, no. 1 (Mar 1981): 20–43.
 39. Moneo, 'On Typology', 39.
 40. Herzog and de Meuron, 'Elbphilharmonie, Hamburg', *El Corquis* no. 129–130 (2006): 441.
 41. On the international competition Hauptstadt Berlin see Helmut Geisert, Doris Haneberg, and Carola Hein, *Hauptstadt Berlin: Internationaler Städtebaulicher Ideenwettbewerb 1957/58* (Berlin: Gebrüder Mann

Verlag, 1999), esp. 157–192. The entries for the competitions launched in the early 1990s for Berlin were widely published. See, for example, the special issue *Domus Dossier 3, Berlin* (1995).

Biographies

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