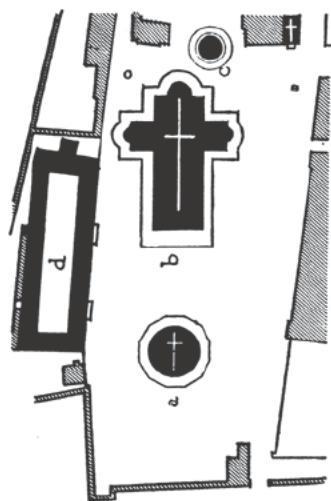
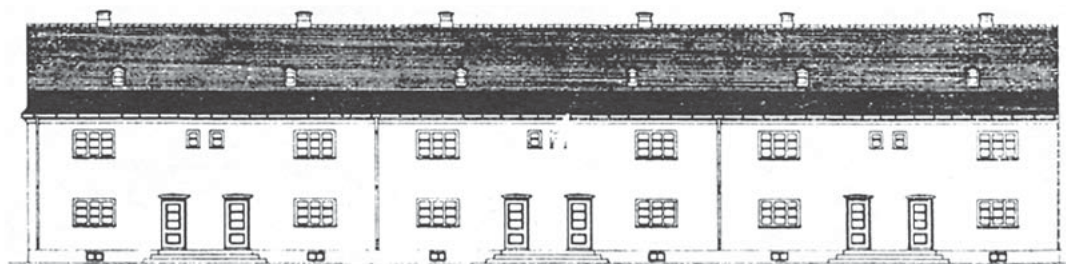
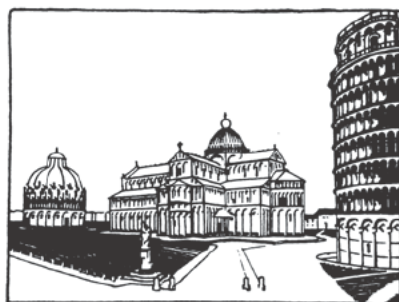


Henk Engel and Jan de Heer

CITYSCAPE AND MASS HOUSING



Camillo Sitte, Pisa, Piazza del Duomo



Ernst May, homes for *Das Schlesisches Heim*, 1921

In these few words, Albert Erich Brinckmann captures the leading architectural paradigm of the twentieth century. Within architecture and urban planning, mass housing is the field in which the contrasting schools of architectural thought have sought to demonstrate their distinctiveness. Among these schools, the modernists hold a special position. In the challenge of mass housing, they see the foundation of a new architecture.

During the economic crisis of the First World War, private construction of housing came to a complete standstill. The production of housing could only be maintained through government subsidies. Ernst May claims that this fact was of historic significance for the architectural development of cities: 'For the first time in a hundred years, he [the city architect – H.E.] can truly hope to bring about a new age of architectural harmony through deliberate action.'

May considered city governments, in their roles as clients, financiers, and supervisors of the construction of public housing, to be the pillars of the *Neues Bauen*, the new international style: 'Gone are the days when spiritual and secular rulers who aspired to imperial power could build magnificent private buildings, districts and even entire cities, practically overnight. In our democratic age, city governments have replaced these leaders. They are the great commissioning authorities whose commissions will set the tone for the development of the *Neues Bauen*.'²

Unlike in the nineteenth century, the construction of mass housing is no longer seen as a practical matter, a variety of ordinary building, but as one of the greatest cultural challenges of the modern era. After the First World War, the concentration of housing production in the hands of local governments opened up new prospects for the pursuit of a contemporary style and a harmonious cityscape, concepts which had been central to architectural debate around the turn of the century. For more than 20 years, theoretical debate had centred on the same fundamental themes, first among them the integration of mass housing into the field of architectural challenges. This trend led, first of all, to the breakdown of the conventional artistic view of architecture as a visual art. Mass housing fell outside the definition of the architectural work in idealistic aesthetics, which involved the concept of the autonomous work of art.

As Theodor Fischer put it in his book *Stadterweiterungsfragen*: 'The rented home will always remain unsatisfactory as an independent work of architecture. Architectural works only have an individual character when they are not tossed onto the market like merchandise, but designed for a specific goal with a personal quality. In contrast, mass products such as rental homes produced before there is a known user must, in architectural terms, be treated as masses.'³

The individual dwellings in mass housing have no individual identity; they are anonymous products on the market and, from an architectural point of view, only of interest as a basis for a higher-level task: grouping dwellings into blocks and cities. Elevating the city as a whole to the status of an art object salvages the idea of the self-contained work of art and leads to the emergence of an aesthetic object into which the phenomena of capitalist rationalization can be integrated. Individual initiatives must be aimed at a common goal. In his studies of the history of urban planning, the art historian Albert Erich Brinckmann attempts to show how this is possible.⁴

1
Albert Erich Brinckmann, *Platz und Monument, Untersuchungen zur Geschichte und Aesthetik der Stadtbaukunst in neuerer Zeit* (Berlin, 1908), 170.

2
Ernst May, 'Organisation der Bautätigkeit der Stadt Frankfurt a.M.', *Der Baumeister*, vol. 27, no. 4, 98-104.

3
Theodor Fischer, *Stadterweiterungsfragen* (Stuttgart, 1903). Cited in Walter Curt Behrendt, *Die Einheitliche Blockfront als Raumelement im Städtebau* (Berlin, 1911), 77.

4
Albert Erich Brinckmann, *Deutsche Stadtbaukunst in der Vergangenheit* (Frankfurt, 1911); *Stadtbaukunst, Geschichtliche Querschnitte und Neuzeitliche Ziele* (Berlin, 1920).

Brinckmann considers himself above all an art scholar. His findings have strong general applicability and practical relevance to current issues. In his writings, he formulates architectural problems through comparison with similar situations in the past. Take, for instance, the conclusion of *Deutsche Stadtbaukunst in der Vergangenheit*: 'There is mounting evidence that private architecture, too, will play a more modest role in the streetscape. It will not be long before people abandon their pointless attempts, so wasteful of money and artistic energy, to give rented homes a personal look. The rented home must once again become a mere part of the cohesive wall, so that it derives its aesthetic appeal precisely from that wall.'⁵

This same train of thought forms the basis for Walter Curt Behrendt's study of the housing block. In *Die einheitliche Blockfront als Raumelement im Städtebau*, Behrendt examines the development of uniform housing blocks through the lens of their historical antecedents.⁶ In architectural terms, seventeenth and eighteenth-century blocks are especially relevant to the present day, precisely because of the economic and organizational conditions under which they came into being. According to Behrendt, urban planning's greatest achievements came in periods when a central governmental authority was able to ensure compliance with particular architectural guidelines by means of subsidies. The regimes of Enlightenment monarchs were exemplary in this respect. In their works, Brinckmann and Behrendt develop the urban aesthetics of Camillo Sitte in a significant way. In *Der Städtebau nach seinen künstlerischen Grundsätzen*, Sitte laid the groundwork for the modern spatial, architectural approach in urban planning.⁷ According to Sitte, urban planning should no longer be the domain of surveyors and engineers, but should be approached as a work of architecture. Urban development plans, he argues, must go beyond two-dimensional indications of building lines, which are no more than outlines, formal abstractions that attempt to capture the cubical, three-dimensional appearance of the cityscape.

Only architects have the ability to design city plans based on the spatial image of the cityscape – in other words, as representations of the spatial sequence of streets and squares that will be formed by buildings. Sitte suggests that architects should strengthen this capacity for spatial design by studying the historic centres of Europe's cities.

Sitte's studies focus primarily on aesthetic issues in the design of squares and the placement of monumental buildings. He strives for painterly, 'Mahlerian' variation in the cityscape. Unlike Sitte, Brinckmann and Behrendt concentrate on the great mass of dwellings forming the neutral background to the city's special places. Behrendt identifies the mass production of housing as a critical factor in the modern cityscape: 'The appearance of the city, especially that of the recent expansion sites, is not greatly influenced by the architecture of independent buildings. Grouping grand monumental buildings for public or commercial purposes will never yield more than a few highlights, though conspicuous ones, within the city as a whole.'

'Having learned this lesson from experience, we know that the cityscape is shaped primarily by the products of private building companies meeting the general public's demand for housing. The systematic organization and management of this mass production must therefore be regarded as a challenge for urban planners, and ought to be one of the main tasks of local authorities today.'⁸

Sitte's wish was for the discipline of architecture to have the opportunity to design special places in the city, as an artistic counterbalance to the

5
Brinckmann, *Deutsche Stadtbaukunst*, op. cit. (note 4), 159.

6
Walter Curt Behrendt, *Die Einheitliche Blockfront als Raumelement im Städtebau* (Berlin, 1911).

7
Camillo Sitte, *Der Städtebau nach seinen künstlerischen Grundsätzen* (Vienna, 1889). See also George R. Collins and Christiane Crasemann Collins, *Camillo Sitte and the Birth of Modern City Planning* (New York, 1965).

8
Behrendt, *Die Einheitliche Blockfront*, op. cit. (note 6), 12.

rationalization and commercialization which had seized hold of urban life.⁹ Brinckmann, and Behrendt along with him, rejected this type of eclecticism. 'Now that the tradition has been destroyed, the art of urban planning cannot be cobbled together from our studies of past periods. It must be developed out of our own practice of residential building.'

Brinckmann claims that housing provides a living basis for the development of architectural forms: 'The architectural styles of residential building and urban planning are very closely connected. The nature and style of residential life affect the form of the urban complex, which is therefore subject to constant change. Every step forward in public housing entails the transformation of the cityscape. It follows that, though we may admire the appearance of an older city, we can never truly take it as a model.'

Brinckmann concluded from this that the study of historical forms should not be guided by the particular modes of expression linked to the particular circumstances in which those forms came into being, but should focus on general laws of form: 'The ephemeral mode of expression changes; the laws of form remain. One must observe those laws and yet find new forms of beauty. And the earlier they appear, the less people will cling to special modes of expression, to motifs.'¹⁰

Brinckmann and Behrendt's aim is not so much painterly variety in the cityscape, which can only result from an accumulation of accidents, but the rhythmic articulation of the body of the city. In Sitte's framework, the architectural object is formed by the closed image of a separate space, such as a square or street bounded by buildings. As an alternative to that closed image and its characteristic mode of reception, Brinckmann proposes the *Raumprinzip*, which is intended to make possible a comprehensive image of the city. Because the city as a whole cannot be experienced, however, a time dimension is introduced. Rhythmic articulation makes the continuity in the great body of the city palpable. In opposition to the here-and-now experience of separate, self-contained images, Brinckmann proposes the rhythmic succession of regular units, producing an abstract experience of the whole: 'Rhythm requires a certain regularity, or in any case a prior intention . . . Rhythm is the artistic rule of well-considered work in urban planning; this working method will not, like "picturesque design", wage a continual, frenzied battle between design and implementation. If urban planning has been well thought through, a restrained style of management is sufficient to achieve the objectives of the development plan.'¹¹

One of the primary elements of urban planning is the plastic structure of the development plan, the relationship between the open spaces and the built masses. In this context, the development of the regular housing block can become the point of departure for the composition of the cityscape. The features of the façade are then no longer a romp through the history of style, alluding to a magnificent past with its more grandiose projects; instead, they are a structural element, mediating between the internal articulation of the housing block and the three-dimensional bordering of the street and square areas: 'Turning a housing block's frontage into a coherent whole through architectural design is not a matter of superficial decoration to satisfy a desire for representation. The use of such means would inevitably lead to destructive measures. If what is at stake, however, is the development of the architectural form of mass housing with typically repetitive floor plans, then the uniform frontage of a housing block is a social consequence which is, as it were, demanded by aesthetic necessity.'

9
Carl E. Schorske, *Fin-de-siècle Vienna* (New York, 1961), 62 ff.

10
Brinckmann, *Deutsche Stadtbaukunst*, op. cit. (note 4), 23 and 159.

11
Ibid., 81.

'Furthermore, in the historical art of urban planning, merging multiple houses into a greater whole is a deliberate technique for giving form to space, because the street space is easier to control with a self-contained mass resulting from such merging than with a jumble of small, insignificant parts.'¹²

After the First World War, Herbert Boehm, a close colleague of May's, built on these ideas, speaking of a new 'will to form'. Boehm tells us that after a period of experimentation with mixed results, urban planning began heading in a more sustainable direction. This new turn was closely related to contemporary tendencies in other areas of cultural life, such as architecture, painting, clothing, and norms of social interaction. From this vantage point, he traces a half century of urban planning, culminating in the cubic approach of the 1920s: 'The age of schematism, in which cityscapes were constructed on the drawing board with a ruler and compasses in a misguided attempt to emulate the great traditions of classicism, was followed by a period of romanticism. In an overzealous and, again, misguided imitation of their master Camillo Sitte, urban planners would ideally have liked to create countless little Nurembergs, and they hoped to build cityscapes of enduring value out of twisty roads and picturesque nooks.'

'This period was followed in turn by an exaggerated naturalism, which came to full flower in combination with *Siedlungsbau* and is rational in the sense that it limits itself to the objective. This naturalism initially took the orientation and characteristics of the building site as the sole basis for a design. In doing so, it lost sight of formal concerns about the whole. What was forgotten was that, unless it limits itself strictly to ensuring an adequate supply of housing, urban planning is always a form of architecture. In other words, it is plasticism (*beelding*), design, which takes individual dwellings and groups of dwellings as its building blocks and creates large cubic and spatial wholes.'¹³

Boehm contends that only the use of formal rules brings architectural cohesion to the city plan. This does not mean that the main criterion for harmony in the cityscape is to be found in a generally accepted formal vocabulary. The many attempts to introduce a collective architectural style had led only to a chaotic cityscape, composed of as many individual styles as there were architects. According to Boehm, coherence in the cityscape can only be the result of spatial plasticism, the tectonics of the development plan. One's attention should not be focused on ornamental details, but on the formative powers that generate a style.

In *Typ und Stil*, May criticizes the misconception that a style can be introduced through agreements between the organizations involved: a style cannot be made. 'Only gradual development arising from progressive expansion of our understanding of the nature of architecture can lead to change.'

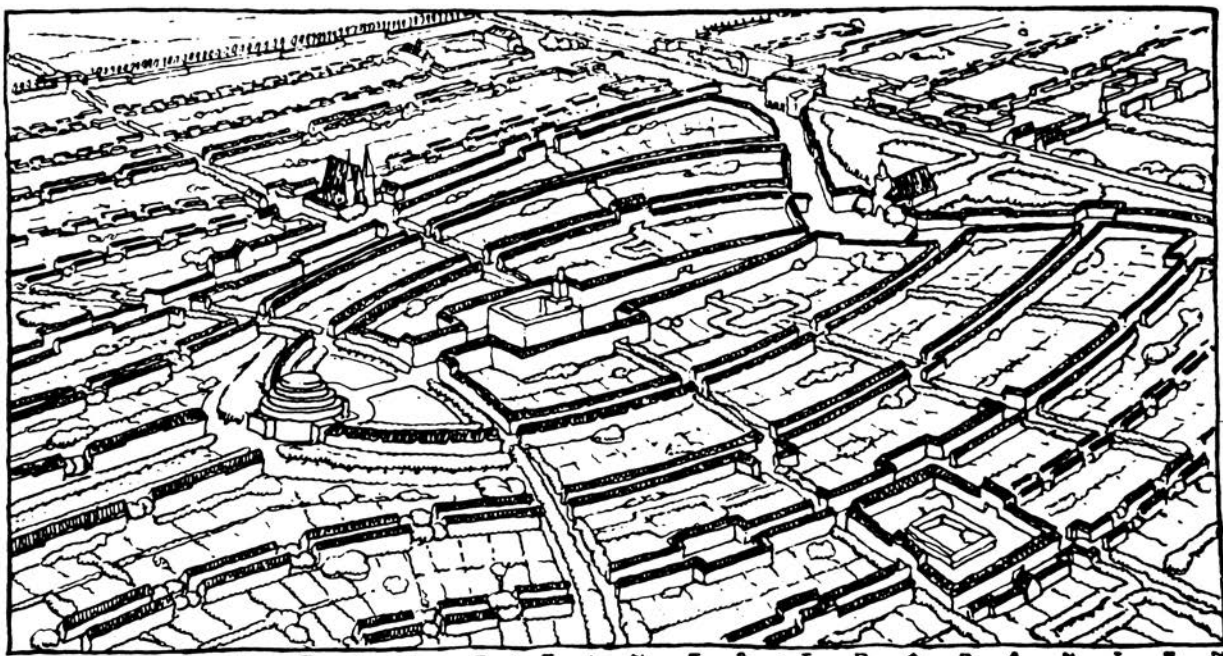
May thus regards the continued tendency towards creating typologies in public housing, during the crisis following the First World War, as a groundbreaking step: 'It is above all when one builds small dwellings that the identical or related requirements which apply in each case form the first, rudimentary foundations for agreement on the general principles of building. The standardization of residential floor plans, which has been going on for decades, has been accelerated enormously by post-war conditions. Necessity has brought about what rational reflection could not.'¹⁴

In the development of new types of building, May sees a common basis for a future style. Behrendt shares this view. In *Zum Bauprobem der*

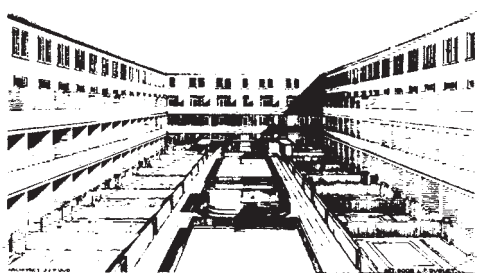
12
Behrendt, *Die Einheitliche Blockfront*, op. cit. (note 6), 13.

13
H. Boehm, 'Besiedlungsplane', *Das Schlesische Heim*, 1922 no. 9.

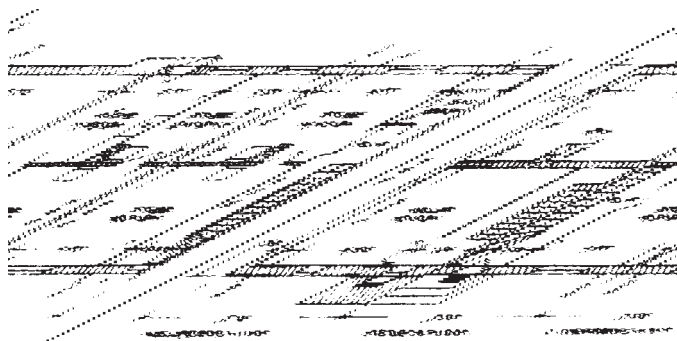
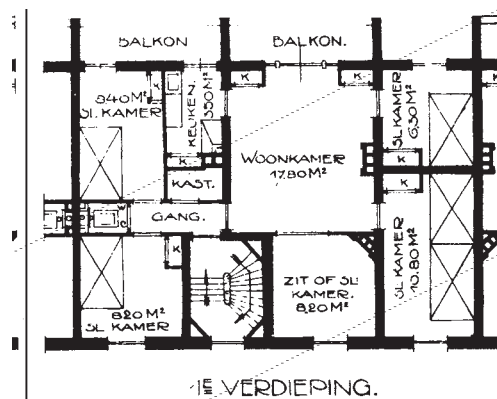
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Ernst May, 'Typ und Stil', *Das Schlesische Heim*, 1924 no. 2.



Ernst May and Herbert Boehm, satellite town from the expansion plan for Breslau, competition, 1922



J.J.P. Oud, Tusschendijken, 1921



Ernst May, dwelling type for *Das Schlesisches Heim*, 1921

Zeit, he writes, 'The problem of architecture is the problem of plasticism, a formal issue. But how can architecture arrive at forms of its own – and thus develop a style of its own – in this day and age, when no new fixed forms of labour and work have yet developed anywhere? For example, how can one speak of a formal problem of the city when there is hardly any consensus about the most basic questions, about habitation and the settlement?'

In his discussion of modern building, Behrendt raises the issue of architecture's relationship to social stability. His text emphasizes the fragility of the functionalist theory of form. We can see that where functions are unclear and inconstant, form eludes the grasp of functionalist architects. In such cases, the determination of form becomes deeply problematic. Behrendt, too, sees types of building as the first general ideas of form, an essential basis for further development of the differentiated formal vocabulary of an architectural style. He regards the problems that face architecture because of technological, economic and social development primarily as constructive problems.

Before we can speak of a modern building style, we will need new types of building that provide a stable basis for it: 'The only way to accomplish anything is by focusing our attention more on the essential than on the superfluous and incidental, more on the generally applicable than on the individual, more on the type than on the detail. We will need all our strength to bring the new typology into existence, and we will have reason for joy and satisfaction if we manage it. We can leave concerns about the details for future times.'¹⁵ For the time being, we will have to make do with an elementary, pared-down conception of form.

In general, 'habitation' is referred to as the living basis on which a new style can be founded. It is the point at which architectural style and lifestyle merge. This opens the way to a fundamental transformation of the form of the city based on the requirements of interior design, but that is not to say that the problem of form can be directly reduced to a problem of multiplying an organic kernel, the housing unit.

New forms of spatial organization, such as single and double rows of housing, make it possible to meet the requirements posed from within individual dwellings. May discusses such forms in this sense, as a correction of the flaws in the traditional building method, namely closed-off housing blocks without open spaces at their centres.¹⁶

The abstract, anonymous fact of mass housing cannot, however, give shape to the city on its own. The problem of the modern city is in fact projected onto the mass reproduction of housing units, which threaten to become an excrescence destroying the city, choking its heart and blurring the boundary with its surroundings.¹⁷

Alongside sound principles for the interior design and spatial organization of the dwellings, we need an architectural model that brings order to unbridled growth: 'We must study not only the parts of a city plan and its realization, but also its construction and borders, so that instead of spreading over the surrounding area like a rising tide, the city develops along predetermined lines and in accordance with predetermined principles.'¹⁸

The experience of historical cities plays an especially dominant role in the development of expansion models. In all models, alongside the internal articulation of the buildings, the relationship between the city centre and the periphery is seen as crucial to the cohesion of the cityscape.

15
Walter Curt Behrendt, 'Zum Bauproblem der Zeit', *Der Neubau*, 1925 no. 1.

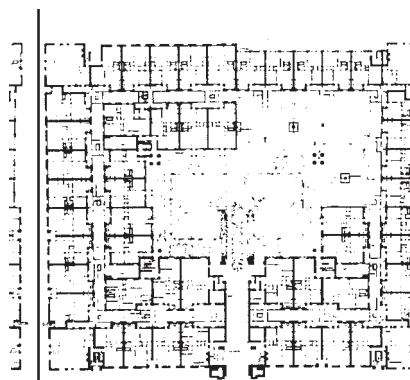
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Ernst May, 'Fünf Jahre Wohnungsbauarbeit in Frankfurt a.M.', *Das Neue Frankfurt*, 1930 no. 2/3.

17
Ernst May, 'Stadterweiterung mittels Trabanten', *Der Städtebau*, 1922, 41. See also *Das Schlesisches Heim*, 1922 no. 11; H. Boehm, 'Die Städtebauliche Planung', *Das Schlesisches Heim*, 1925 no. 1.

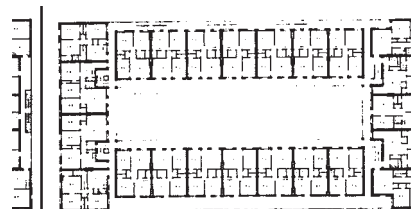
18
Raymond Unwin, in a lecture given in Amsterdam in 1922 for the Netherlands Instituut voor Volkshuisvesting (Dutch Public Housing Institute). See F. Smit, 'Van tuinstedebouw tot stedelijke uitwaaiing', *Wonen-TA/BK*, 1975 no. 13.



H.P. Berlage, The Hague expansion plan, 1908



Frank Lloyd Wright, Lexington Terraces, 1909



Frank Lloyd Wright, Francisco Terrace, court with access galleries, 1885

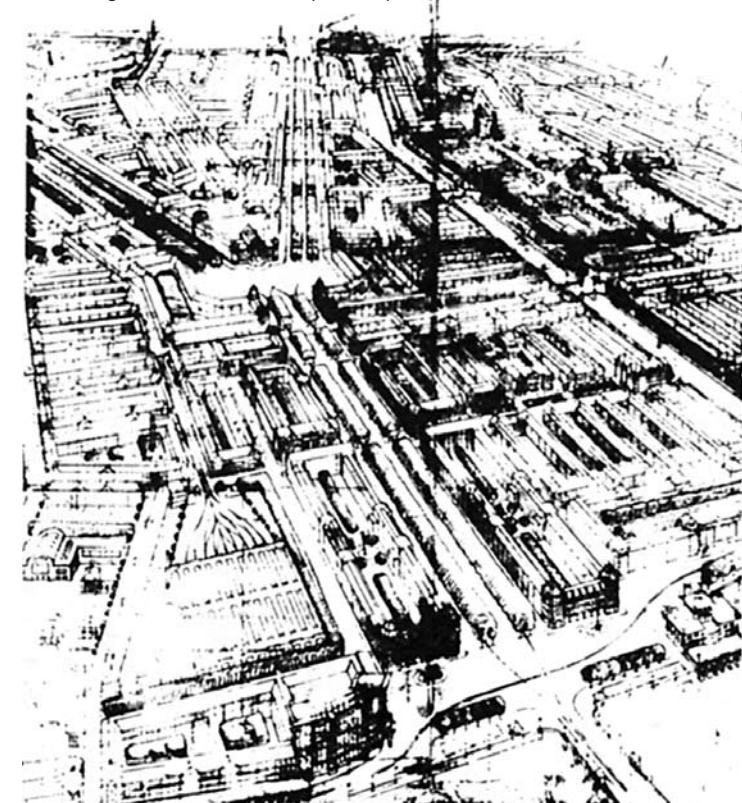
BERLAGE, OUD, VAN DOESBURG AND VAN EESTEREN

The Dutch architects Hendrik Petrus Berlage, and later J.J.P. Oud and Cornelis van Eesteren, developed positions stemming from the German theoretical tradition in architecture and mass housing, and these positions were of critical importance in the Dutch *Nieuwe Bouwen* movement, the counterpart of the German *Neues Bauen*. Berlage took issue with Sitte and Brinckmann's ideas, steering an independent course. Oud drew on Berlage's thinking and, in his period as a member of De Stijl, elaborated on the relationship between the housing block and mass housing. This provides the context in which German architects' admiration for Oud's work should be understood.¹⁹ Ideas about the regular housing block, such as those espoused in Germany by Brinckmann and Behrendt, played a pivotal role in Oud's experiments.

In the first issue of the journal *De Stijl*, Oud calls the housing block the greatest challenge facing modern architects: 'Architecture is a plastic art, the art of defining space and thus expressing the most general truths in the cityscape: in individual buildings and in the combination and juxtaposition of buildings.'²⁰ In a later article, Oud describes the characteristics of modernism in greater detail, explaining that the modern spirit 'is not defined in terms of the individual (inside: the house), but in terms of the crowd (outside: the street – the city). In the streetscape, a unique house is contraband to him, even if it is aesthetically pleasing, and spatial continuity is essential.'²¹ As a result, Oud says, 'the architecture of the block [will] profoundly influence the character of modern aesthetics in Architecture'.²²

Unlike the German purists, Oud's objective is not to simplify the traditional forms and return to the essence of the house and the city. He sees

H.P. Berlage, Amsterdam-Zuid expansion plan, 1917



19 See, for instance, H. Boehm, 'Blick über die Grenzen, Reiseeindrücke aus Holland und England', *Das Schlesisches Heim*, 1925 no. 9.

20 J.J.P. Oud, 'Het monumentale stadsbeeld', *De Stijl*, 1917 no. 1.

21 J.J.P. Oud, 'Architectonische Beschouwingen. A. Massabouw en Straatarchitectuur', *De Stijl*, 1919 no. 7.

22 J.J.P. Oud, 'Het monumentale stadsbeeld', op. cit. (note 20).

mass housing and the big city as entirely novel phenomena. Oud takes the perfected nineteenth-century block as his point of departure, offering a thorough reconstruction of it in his work.

Van Doesburg, who at first sympathized with Oud's approach, took a radical turn with his experiments in the early years of De Stijl. During his time in Weimar, Van Doesburg wrote, 'Putting residential boxes and housing units next to each other or on top of each other according to a particular typology or standard is not all there is to plastic (*beeldend*) building either. That makes the activity of building mechanical, repetitive, comparable to the work of a photographer or the use of historical building styles. The (apparent) spatial economy (of normalization), organized at the level of the town or city, forms an obstacle to plasticism in building.'²³

And a year later, in the manifesto 'Tot een beeldende architectuur' [later published in English translation as 'Towards plastic architecture'] that accompanied the exhibition of his Parisian models, Van Doesburg aimed to move beyond all concepts of form, in the sense of predetermined typologies: 'Unlike all previous style, the new architectural method has no fixed typology, no fundamental form.'²⁴

Van Doesburg rejects not only any notion of form as a reflection of content, but also the elementary composition techniques to which German purists preferred to restrict themselves: symmetry and repetition. In his General Expansion Plan for Amsterdam, Van Eesteren then seems to extend the consequences of Oud's elaboration on Berlage's proposals to their utmost limits.

As early as 1883, in his essay 'Amsterdam-Venetië' (Amsterdam-Venice),²⁵ Berlage had used the categories of the picturesque and the monumental in his urban-planning assessment of the city of Amsterdam. Forty years later, he was still using them. Both categories are rooted in Hegelian philosophy and form the systematic polarity in Berlage's urban designs. Initially, they are equal in value and represent two different fundamental artistic concepts. The picturesque is synonymous with emotion, whimsy, Gothic style, and the beauty of nature, while the monumental stands for reason, geometry, classicism and composition based on motifs from nature.

In his book review of Sitte's *Städtebau* (City Planning),²⁶ he maintained the equilibrium between the two approaches, concurring with Sitte's views and, in particular, his conclusions about the aesthetic function of squares, namely to create a self-contained architectural whole. In the essay 'Bouwkunst en Impressionisme' (Architecture and Impressionism),²⁷ however, he pointedly distanced himself from the Romantic approach to urban planning, which he associated mainly with Sitte and described as seeking to add a picturesque effect to the rational street plan for the city. 'That sort of Romantic art has had its day,' Berlage said.

Like Sitte and Brinckmann, Berlage was interested in the aesthetic aspects of urban planning and kept his distance from the legal and civil-engineering sides. Nevertheless, he believed that the aesthetic elements of a new approach to urban planning would have to come from the technical-rational plan for the city, which is based on practical requirements. Consequently, he considered monumental urban architecture superior to the Romantic variety: 'The great monuments, and/or the distribution of mass – crucial! . . . modern perspectives on time and money force this on us. First and foremost, those modern perspectives have more to do with urban planning in general, ordaining long, perfectly straight streets that intersect

23
Theo van Doesburg, 'Von der neuen Aesthetik zur materiellen Verwirklichung', *De Stijl*, 1923 no. 1.

24
Theo van Doesburg, 'Tot een beeldende architectuur', *De Stijl*, 1924 no. 6/7.

25
Hendrik Petrus Berlage, 'Amsterdam en Venetië, schets in verband met de tegenwoordige veranderingen van Amsterdam', *Bouwkundig Weekblad*, 1883.

26
Hendrik Petrus Berlage, 'De kunst in stede-bouw', *Bouwkundig Weekblad*, XII, 1892.

27
Hendrik Petrus Berlage, 'Bouwkunst en Impressionisme', *Architectura*, II, 1894.

at right angles and the inviolability of the public road. This approach to urban planning, which differs from those that preceded it in literally every way, always inherently suggests a general tendency towards both simplification of residential building en masse and a mass view of housing blocks. Instead of a speculative housing block that can be interpreted as a whole, each dwelling is now turned into a traditional Dutch house, according to a complete programme based on avoiding monotony.'²⁸

Architecture must become impressionistic, restricting detail with the utmost austerity in order to create a distinctive silhouette. Berlage worked out the implications of this monumental approach to urban planning in his expansion plan for The Hague and the accompanying essay, 'Stedebouw' (Urban Planning), which opens with Brinckmann's pithy remark, *Städte-bauen heisst mit dem Hausmaterial Raum gestalten*.²⁹

When trying to solve the problems of the modern city, of traffic and hygiene, Berlage says, one is pushed towards the greatest possible simplicity, including aesthetic simplicity. This naturally leads to the classical preference for a simple delineation of the street grid. Urban construction and architecture must be brought into harmony with each other, he argues, and the design must therefore proceed from the square around which the main buildings are located and strive to create a self-contained visual whole. Berlage also warns of the great danger of the geometry of the traditional approach, the danger of monotony.

To stave off that threat, Berlage introduces the principle of pleasant accident, corresponding to the romantic spirit, which is intended to allow a transition from strict geometric standards to an urban plan with a rhythmic pattern of geometrically structured districts, the spatial structure of which is based on the city squares: 'And the fact that in the present day one must look far ahead – one is forced, in other words, to make an urban plan long in advance – pushes one naturally towards regularity. This measure, if it comes about through artistic insight in the spirit of the classical masters, in fact represents a higher beauty. That is why I believe that local sections should be designed according to a regular plan, as long as no natural obstacles stand in the way. On the other hand, all the natural features of the landscape, such as bodies of water, hills, stands of trees, and so forth, should not be removed but incorporated into the plan. If they are connected to regular features in an artful way, they will provide the pleasant variation needed to dispel the monotony of a regular plan that is extended to its furthest implications. Furthermore, this guarantees that the separate, regular sections will differ from one another, because the basis for each one is different.'³⁰

In a series of lectures delivered to the Vereniging Praktische Studie in 1913 and 1914, entitled 'Het aesthetische gedeelte van Stedebouw' (The aesthetic component of urban planning), Berlage again espouses this view.³¹ But, largely under the influence of Karl Scheffler's book *Die Architektur der Großstadt* (The Architecture of the Metropolis), he expands the scope of his attention to cover the entire territory of the city, rather than just the expansion areas. He proposes to view the city as the result of modern science – in particular, he has Langer's graphical statistics in mind – and of modern art: 'The modern urban plan should be a whole composed of a group of regular plan components, a chain of cells, each of which in turn is subdivided in a regular manner.'

The architectural nucleus of each unit, or cell, is the city square, the architectural space to which the streets (as autonomous plastic spaces,

28
Ibid., 105.

29
Hendrik Petrus Berlage, 'Stedebouw', in: *Beschouwingen over bouwkunst en hare ontwikkeling* (Rotterdam, 1911).

30
Ibid., 62.
31
C. W. Schwagermann, 'Het aesthetische gedeelte van Stedebouw, Verslag van lezingen door H.P. Berlage voor het Civiel- en Bouwkundige Studenten-gezelschap "Practische Studie" te Delft', *Bouwkundig Weekblad*, 1914.

beeldruimten) are oriented. The cells are connected in a 'natural' way. The spirit of the modern city is the idea of democracy: 'The character of the modern city is the plastic representation of that idea.' Berlage's views form the framework in which Oud developed his housing projects. In his essay 'Het monumentale stadsbeeld' (The monumental cityscape), he repeats Berlage's words.³² But his experiments focus much more on the architectural control of *Hausmaterial* than on *Städtebauen*.

Oud's interpretation of the housing block relinquishes the individual form of the Dutch house entirely. The house in all its components is transformed into a figuration that serves as a motif guiding the composition of the housing block.³³ This composition technique, which Oud further developed in his housing projects, may have been inspired by Frank Lloyd Wright's early housing complexes, such as Francisco Terrace and Lexington Terrace, but it also shows striking similarities to Van Doesburg's decorative art from the early years of *De Stijl*.

COMPOSITION AND THE CREATION OF MOTIFS

The concepts of composition and the creation of motifs characterize the working method that Van Doesburg used from 1917 to his Elementarist period. Almost all works are originally inspired by nature. Forms derived from nature are abstracted into an aesthetic image, and in the process the natural forms dissolve into purely visual elements. In 'Grondbegrippen van de nieuwe beeldende kunst' (Fundamentals of neo-plastic art), Van Doesburg describes this process of aesthetic reconstruction in detail.

Through the transfiguration of a cow, he demonstrates the stages in the process, which leads from the 'accentuation of relationships linked to form' and the 'annihilation of form' to an abstract painting of rectangular fields of colour drifting over a white background.³⁴

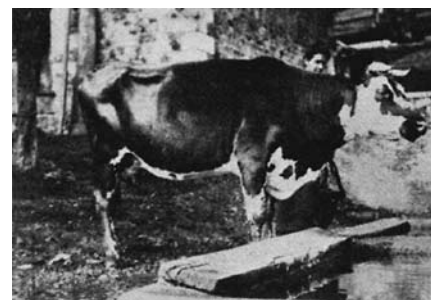
In the stained-glass *Compositions II* and *III*, the work is not completed through the aesthetic reconstruction of the natural object. The pared-down image, a seated figure in *Composition II* and a skater in *Composition III*, forms the basis for a new construct. The composition is an extension of the process of creating motifs. In *Composition III*, Van Doesburg uses various forms of repetition, in which the motif is reflected, rotated, or simply reiterated. Because the motif (which remains constant) changes its position, a rhythmic pattern of two-dimensional forms emerges, in which the original motif can be recognized only with difficulty, yet retains its identity thanks to the colour pattern, which is always identical.

Van Doesburg soon rejected the composition technique that he had developed in his first windows as being too simple. His ideal was the compositions of Bach. In a letter, he wrote, 'Still, there is a great gap in my work, of which I am fortunately aware. Once I have a motif, I hold it together too much in my manipulation of it. In music, especially Bach's music, the motif is constantly being manipulated in a new way.'³⁵

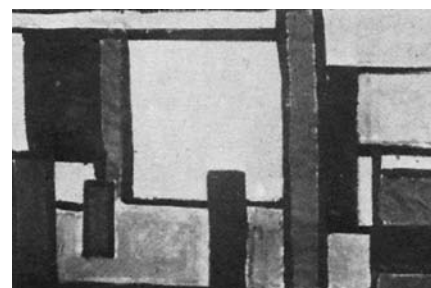
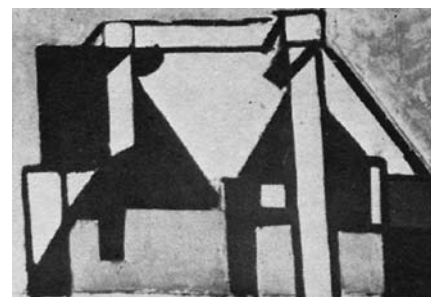
In *Composition IV*, Van Doesburg does not take a natural object as his point of departure. Instead, he deforms two parts of the motif from *Composition II* and varies them using not only the above-mentioned principles of reflection and rotation, but also by making the colour independent of the motif.

This independent use of colour releases the individual elements from their interdependence within the formal motif, and they can enter into

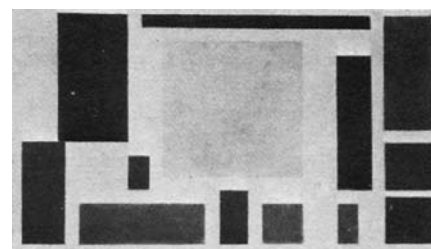
32
Ibid.



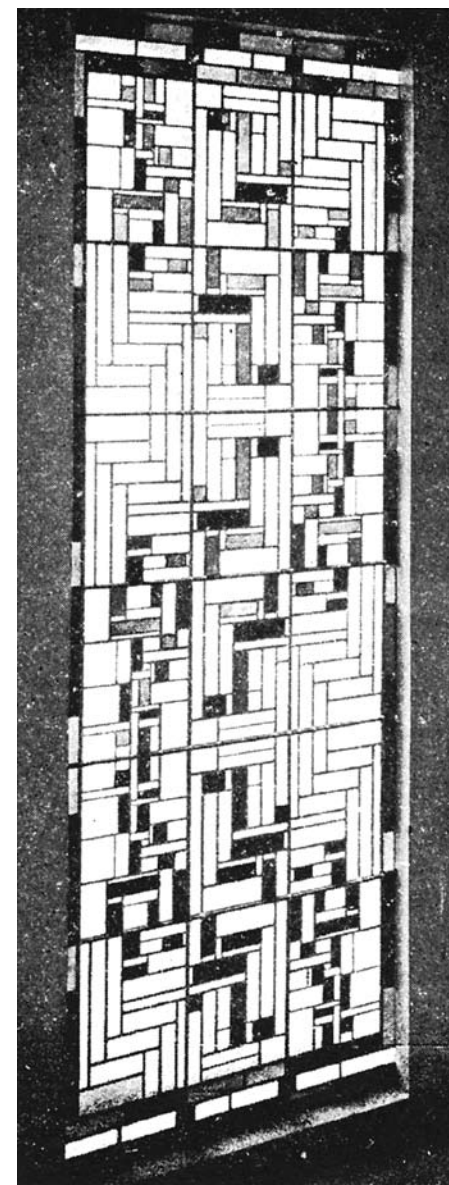
33
H. Engel,
'Van Huis tot
Woning, een
typologische
analyse van
enkele woning-
bouwont-
werpen van
J.J. Oud', *Plan*,
no. 9 1981.



34
Th. van
Doesburg,
*Grondbegrippen
van de nieuwe
beeldende kunst*
(Nijmegen,
1982).

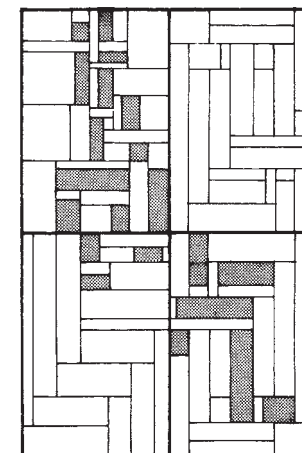
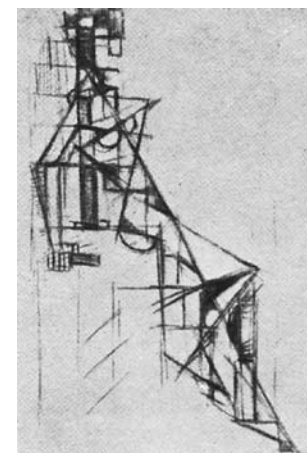


Theo van Doesburg, transfiguration of the cow, 1916-1925

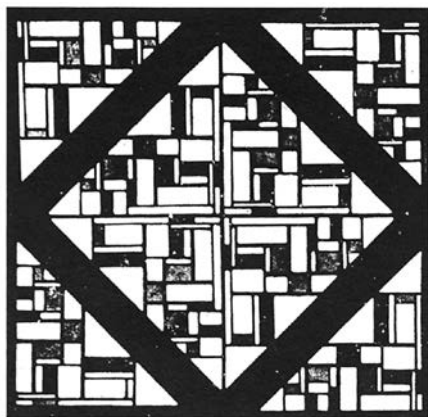


Theo van Doesburg, stained glass, *Composition II*, 1917

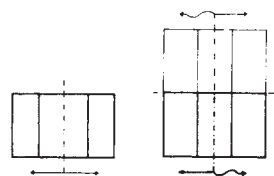
35
C. Blotkamp,
*De beginjaren
van De Stijl*
(Utrecht,
1982), 27.



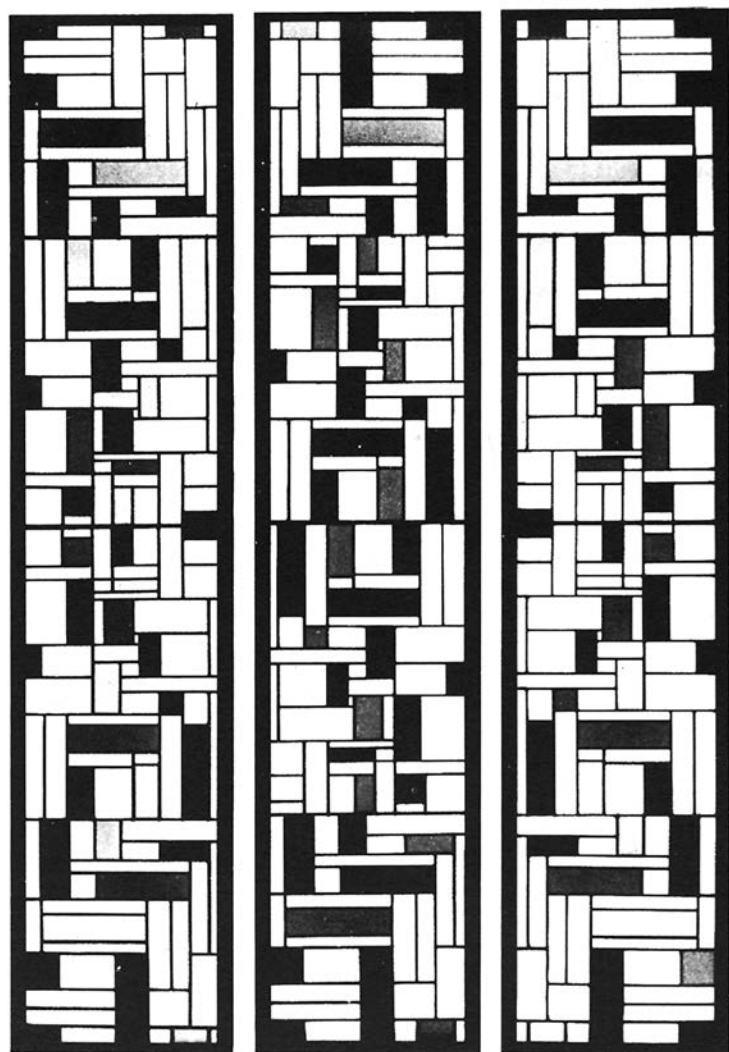
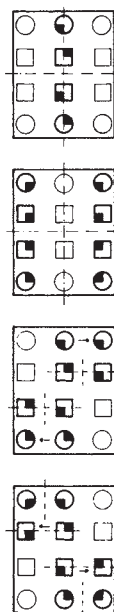
Derived from design for *Composition II*



Theo van Doesburg, stained glass, *Composition III*, 1917



Theo van Doesburg, stained glass, *Composition IV*, 1917



Theo van Doesburg, stained glass, *Composition IV*, 1917

new relationships throughout the picture plane. This led to a technique of free composition, not derived from anything in the natural world, composition based purely on formal relationships, articulated through colour. Van Doesburg not only frequently draws a connection between the development of this technique and similar working methods in painting and music, but also sees affinities with architecture, Oud's work in particular. In 'Aantekeningen over de nieuwe muziek' (Notes on new music), Van Doesburg writes, 'The destruction of naturally appearing forms in painting is analogous to the destruction of melody in new music. That is not to say that in the new conception of music the melodic element is wholly eliminated. That is impossible in a mode of expression that manifests itself in time (1 dim.). Because temporal progression (one thing after another) is the identifying characteristic of music, music is always tied to a melodic rhythm . . .' In a footnote he adds, 'In this respect, it displays a fundamental similarity to architecture, particularly Oud's architecture of the street, and his idea that harmonious balance can be attained only in the cityscape as a whole is therefore very logical.'³⁶

Street architecture is also based on accentuating the moment in time, the sense of one-thing-after-another (*het na-elkaar*), by reiterating a particular motif. In earlier notes on Oud's design for the promenade at the beach resort of Scheveningen, Van Doesburg says, 'Because an artist, in the design process, concentrates all his attention on what takes place within, and because he has grasped the unity of function in all houses, he can repeat a particular motif, both the inner and outer aspects of it. We see this motif dominate the entire work – not monotonously, but with great animation and expression – in the tension of horizontal and vertical relationships.'³⁷

One can regard Oud's housing projects as an exploration of the possibilities afforded by this composition technique. The identical function of each dwelling in mass housing provides the motif, which determines the form of the housing block and the street frontage through repetition and stacking. In this respect, the 'street composition' published in *De Stijl* is one of the most interesting experiments. A rhythmic pattern is developed on the basis of point reflection of the house plans around two intertwined stairwells.

Here, the process of creating motifs and of composition is linked to the total destruction of the natural form of the Dutch house. The row of dwellings in Hoek van Holland goes much further still. There, the repeated motif frees itself from the individual dwelling. The housing unit is a variable unit. The enduring elements of the composition are the components of the dwelling, rather than the dwelling in its entirety. Through the straightforward repetition of architectural elements, a variety of dwellings are created, with two, three and four rooms.

Thanks to this method, Oud sees no obstacle whatever to the development of architecture in the demand for standardization and normalization in construction work: 'If the standard types are well executed, in aesthetic terms, then they can be used to create a stylishly sculpted street (*stijlvolle straatplastiek*) of great monumentality, and then it will be possible, in future, to enjoy not only the dwelling in itself, but also the street as a whole. For then the standard types will bring the proportions and the rhythm that the cityscape now lacks.' Oud believes that the anarchy in the building sector can in fact be *reined in* by giving an aesthetic form to the output of mass production: 'The architect then acts as a director, stage-managing mass products into an architectural whole.'³⁸

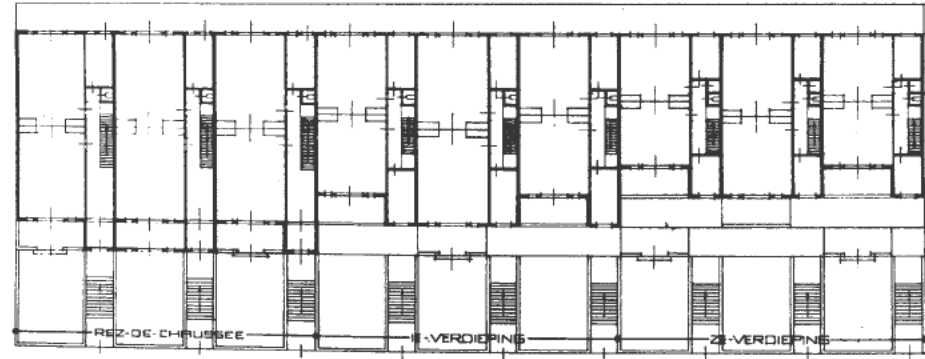
36
Theo van Doesburg, 'Aantekeningen over de nieuwe muziek', *De Stijl*, 1919 no. 1.

37
Theo van Doesburg, 'Bij de bijlagen', *De Stijl*, 1917 no. 1.

38
J.J.P. Oud, 'Bouwkunst en Normalisatie bij den Massabouw', *De Stijl*, 1918 no. 7.



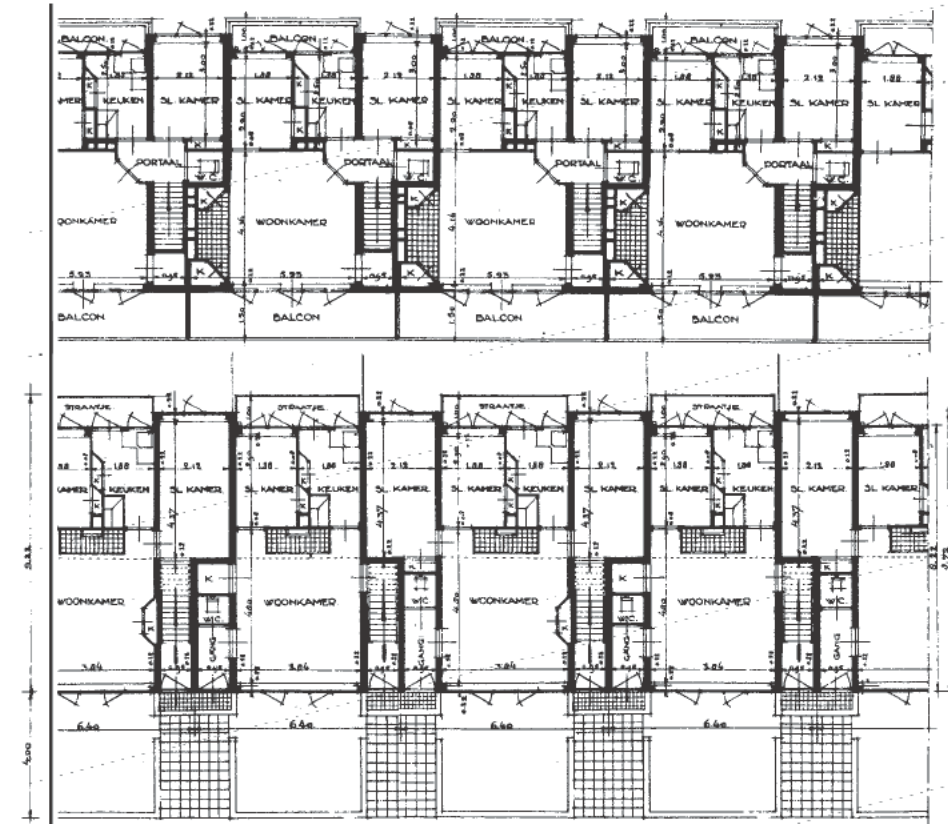
VOORGEVEL- EN-PLATEGRONDEN-VOOR-HUIZENRIJ-AAN-EEN-STRANDBOULEVARD



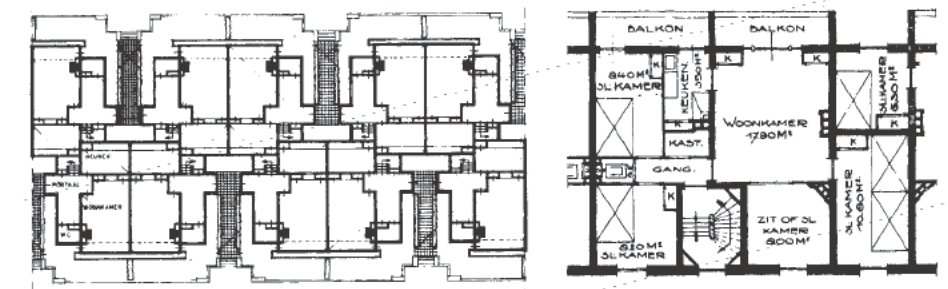
J.J.P. Oud, Promenade, 1917



J.J.P. Oud, Hoek van Holland, 1924-1927



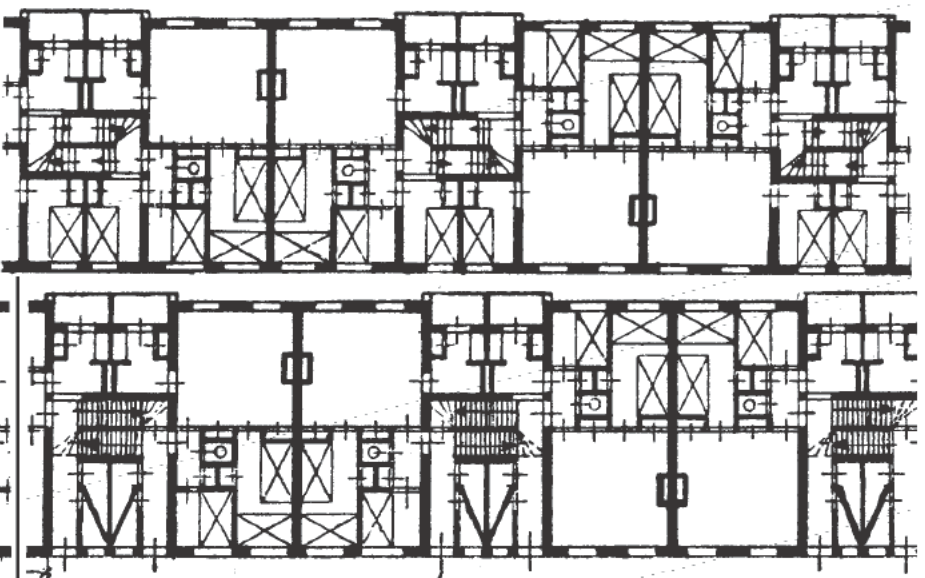
J.J.P. Oud, Hoek van Holland, 1924-1927



Jan Wils, Papaverhof Estate, 1922

Jan Wils, Papaverhof Estate, 1922

J.J.P. Oud, Tusschendijken housing plan with transitions, 1921



J.J.P. Oud, row of working-class homes, 1919

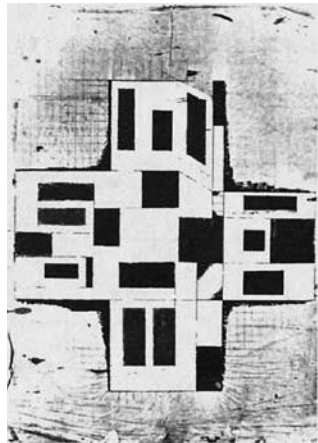
Oud's experiments remain scrupulously within the bounds of modern culture, as Kracauer described it in *Das Ornament der Masse*.³⁹ The composition of the mass elements can be manipulated in an entirely rational way, but never crosses the line into self-satisfied mechanism. Their serial nature cannot become a senseless game, because it is always dominated by the meaning attached to the transformation of received forms. For instance, 'natural transformation, which emerges from consistent normalization, [has] an inherently "ornamental" effect. But complete, harmonically balanced plasticism will only be possible in the cityscape as a whole . . . if the forward motion of the street, a result of the predominantly horizontal tendency, is interrupted by highly emphatic vertical elements, in the form of major corner solutions or detached buildings.'⁴⁰

Even in Oud's last housing projects, for the Weissenhofsiedlung and for Blijdorp, in which he adopted the row housing principle and swept aside the framework of streets and squares put forward by Berlage, the spaces are described as transformations of the traditional street and courtyard spaces.⁴¹

Starting from a free style of composition, Van Doesburg's experiments led in an entirely different direction.

MAISON PARTICULIÈRE, MAISON D'ARTISTE

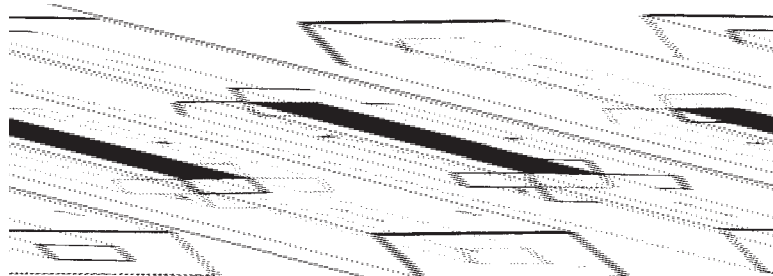
In Van Doesburg's work, repetition of the motif in the picture plane can take the form of a system of symmetry axes or, as in *Composition III*, rotation around a point; in sculpture, rotation around an axis; and in architecture, stacking, repetition and reflection, either around an axis or from an orthogonal midpoint, as in the model Van Doesburg called the Tesseract.



Theo van Doesburg, room for Bart de Licht, 1919



Theo van Doesburg, elementary forms of expression in art: painting, sculpture, architecture



Theo van Doesburg, Tesseract, ca. 1922

39
Siegfried
Kracauer,
*Das Ornament
der Masse*
(Frankfurt,
1977), 50.

40
Oud, 'Architectonische
Beschouwing',
op. cit. (note
21).

41
H. Engel,
'Het strenge
onderzoek naar
de woning',
in: *Architectuur
van J.J.P. Oud*
(Rotterdam,
1981).

In each case, this mode of 'repetition' of the motif is intended to bring the sense of one-thing-after-another into rhythmic harmony, to organize a simultaneous image of the object.

The colour scheme that Van Doesburg developed for his interiors and exteriors should be seen as the same kind of repetition of motifs, in which the *natural* form of the architecture is the formal object under attack. The geometric accentuation of the ceiling and the individual walls, in combination with the use of colour, is intended to make spatial relationships apparent in a single glance. In these colour schemes, straightforward repetition of the motif has been abandoned. Instead, they are based on variation and adaptation of motifs whose fundamental geometry is derived from the architecture itself, and on the independent use of colour. This working method is roughly equivalent to the free composition technique in the stained-glass *Compositions IV* and *V*.

The highly distinctive style in which the interiors are drawn in the design drawings – folded out upside-down and mirror-reversed – suggests that what mattered was not the actual situation, but the relationships between motifs.

The transition from this creation of motifs and composition to Van Doesburg's Elementarism is more or less marked by the models that he made with Van Eesteren in Paris in 1923. Let us crudely sketch that transition. With regard to the relationship between colour and architecture, we will examine the *maison particulière* in the light of the composition style discussed above, and contrast it with Elementarism and the *maison d'artiste*.

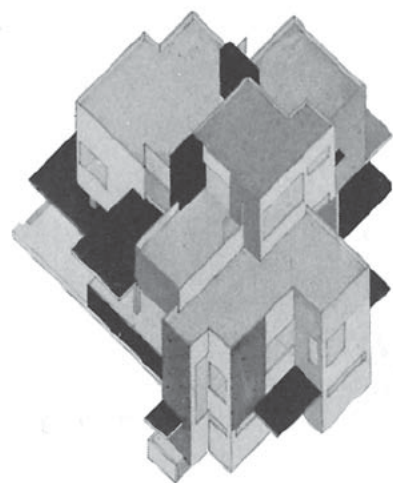
In the very first issue of *De Stijl*, Bart van der Leek defined the relationship between modern painting and architecture:

- 1 Modern painting is the destruction of the plastically natural, in contrast to the plastically-natural construction found in architecture.
- 2 Modern painting is open, in contrast to the connective, closed quality of architecture.
- 3 Modern painting creates colour and space, in contrast to the colourless, flat quality of architecture.
- 4 Modern painting is plasticism in spatial flatness: expansion, in contrast to the spatially limiting flatness of architecture.
- 5 Modern painting is plastically balanced, in contrast to the constructively balanced supporting and burdening found in architecture.⁴²

Colour is used, as it was in the stained glass windows, to represent relationships (in this case, three-dimensional ones). Colour is the counterpoint to architectural form. Although the *maison particulière* does not have a frontal structure, but is oriented towards all sides equally, the anatomy of the house is closely connected to that of the traditional country estate, with a service wing and private quarters. Inside and out, this house shows a high degree of *secondary* plasticism, through *arbitrary* dislocation of interior and exterior walls.

It has a full 11 external canopies. Some cover entrances and patios, while others are awnings over the window openings to keep out the sun. Along with the overhanging upper storey, they give the house a pronounced horizontal character, reinforced by the enormous canopy adjoining the *salle commune*, which detaches the house from the ground there. The vertical accent in the house is provided by the central hall, which is bordered by the two chimneys and the staircases.

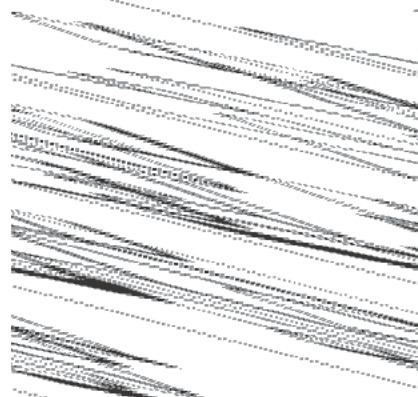
42
Bart van der
Leek, 'De
plaats van
het moderne
schilderen in
de architectuur', *De Stijl*,
1917 no. 1.



Projection of counter construction onto house

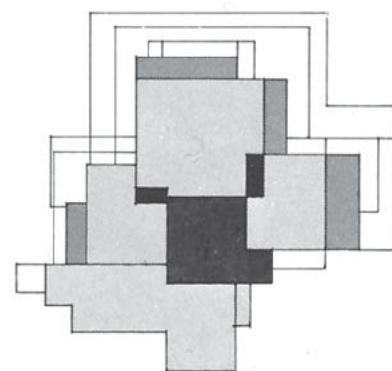


Grisaille and colour scheme; counter construction

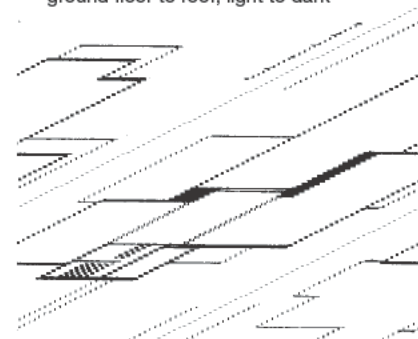


Counter construction; geometric abstraction of the outer surfaces

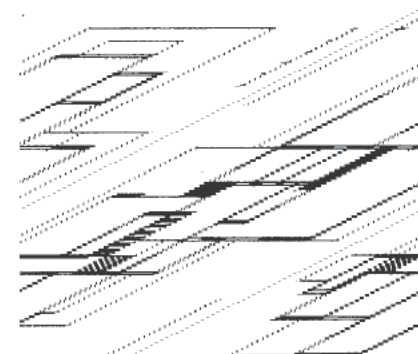
The floor plans by Van Eesteren and Van Doesburg do not provide clear-cut and adequate information allowing us to construct the building. In conjunction with the counter construction, they may be seen as conceptual memos.



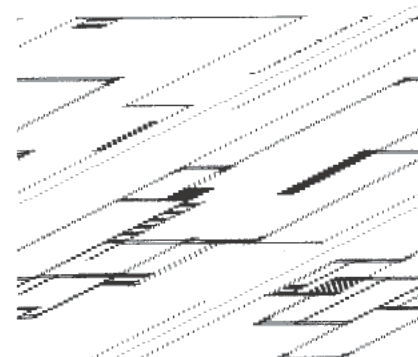
Projection of the floor slabs:
ground floor to roof, light to dark



2nd floor and roof



1st floor



Ground floor

Theo van Doesburg and Cor van Eesteren: *Maison Particulière*, 1923
Reconstruction of the floor plan (C. Maas, 1984)

The verticality is visible solely in the upward motion and the position of the chimneys. It should be added that there is a strict division between the lower and upper levels. From the exterior, one sees the vertical accent: the elevation of the central section and the towering chimneys. The window openings in the house front are defined from the inside out. From the exterior, they are *arbitrary* gaps, which will (at the next stage of design) form the borders of the areas of colour on the outer walls.

For the painterly plasticism of the house, Van Doesburg develops what he calls a contra-construction. He begins with an axonometric representation of the exterior of the house, displaying its plastic structure. Then he makes a drawing that abstracts away from the axonometry, showing only the exterior walls and canopies. The drawing displays a transparent interplay of rectangular horizontal and vertical planes, in which balconies and chimneys are indicated as opaque massive blocks contrasting with the transparent planes.

After that, he makes a grisaille showing this spatial interplay of geometric relationships, in which the non-colours white, grey and black are used for the transparent planes, accentuating their relationships in space. The next step is an axonometric colour design based on the grisaille. This axonometric abstraction is then projected onto the architecture again, and a final correction is made to the colour proposal based on the geometry of the wall openings.

There is a widespread misconception about this contra-construction. One might interpret it in a Mondrianesque way, thinking that it represents a manifesto for a new architecture, in which the mutual interpenetration of interior and exterior, of universal space, is achieved through an architecture of horizontal and vertical planes. But the interior of the house of which these drawings are an abstraction plays no role whatever.

Van Doesburg reduces the plastic structure of the exterior of the house to colourless flatness, so that he can create a sculptural harmony (*beeldende harmonie*) with the aid of colour. The contra-construction is a *spatial* representation of geometric abstraction, which we also find in the stained-glass windows and the paintings.

To illustrate this Elementarist procedure, let us now turn to the analysis of the *maison d'artiste*, by way of a quote from Van Eesteren and Van Doesburg's above-mentioned 1924 manifesto 'Tot een beeldende architectuur':

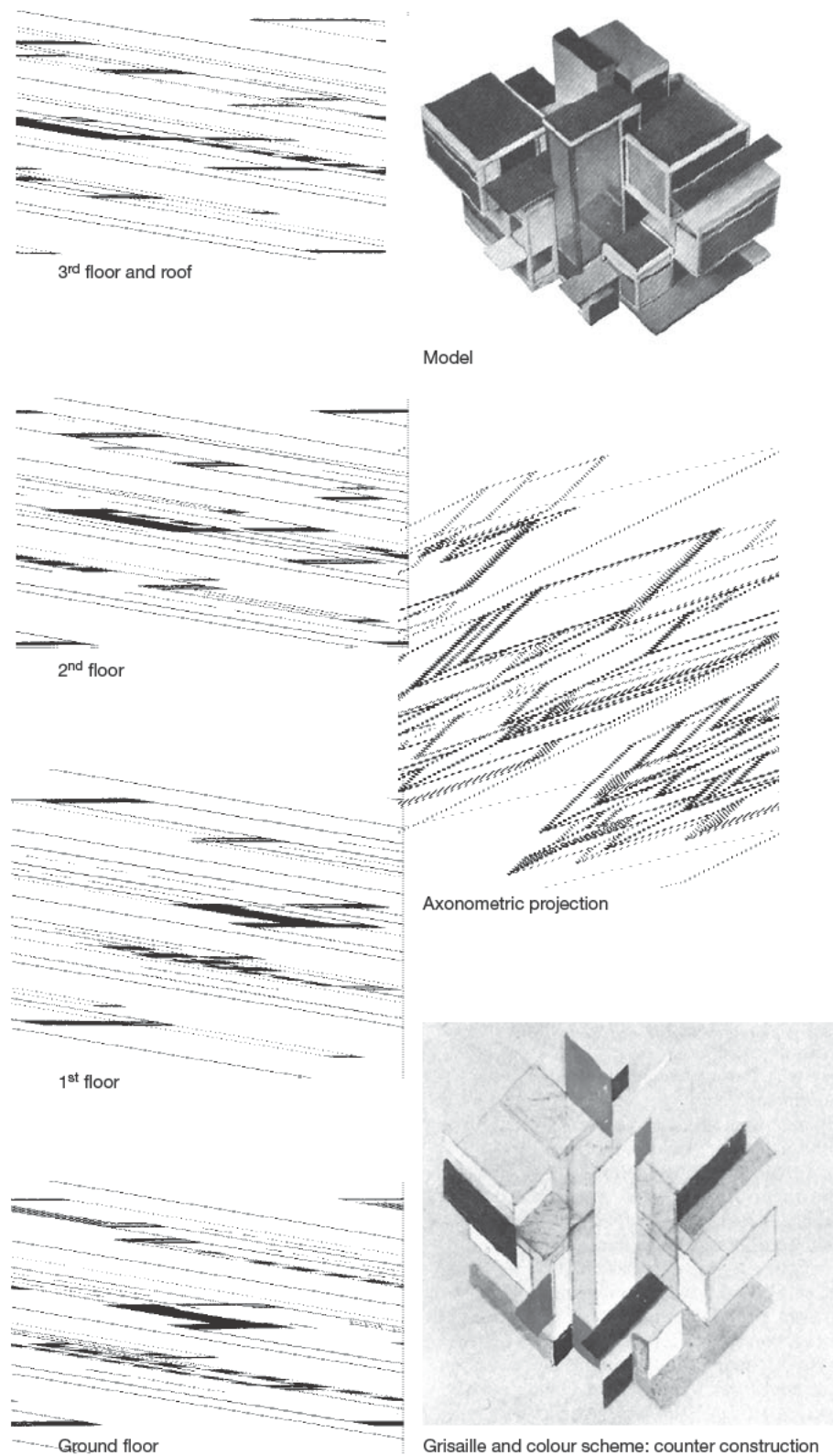
'14. *Colour*. The new architecture has done away with painting as a distinct, imaginary expression of harmony, whether secondarily through representation or primarily through areas of colour. The new architecture incorporates colour organically, as a direct expression of its relationships in time and space. Without colour, these relationships have no living reality; *they are not visible*.'

And from the manifesto '—□+ = R4', by the same two authors: 'VIII. L'époque de la destruction est totalement finie. Il commence une nouvelle époque. La grande époque de la construction.'⁴³

The *maison d'artiste* lacks *arbitrary* plasticism. Each room is conceived as a simple geometric form. This form also plays a predominant role in the external plasticism. Vertical areas indicate where one can enter the house; above them are horizontal canopies. A canopy is also used two other times, but less 'accidentally' than in the case of the *maison particulière*.

The stacking of box-shaped rooms around the central, transparent stairwell and the solid chimney, the use of overhanging architectural

43
Theo van Doesburg and Cornelis van Eesteren, '—□+ = R4', *De Stijl*, 1924 no. 6 & 7.



Theo van Doesburg and Cor van Eesteren: Maison d'Artiste, 1923

volumes, the interplay of the canopies and patios, the strange overlap between boxes – all this ultimately creates an appearance of extremely mobile, unstable, geometric plasticity. In this house, almost no use is made of 'accidental' openings in the outer walls, which are thought of as a panel construction, filled with glass or an opaque material. The opaque division of the panel filling in the construction coincides with the division of the colour areas.

The procedure of contra-construction was not used for this house. The painting was done directly on the axonometric projection of the house, with its geometric arrangement of outer walls.

The colour solution for the architecture, the reduction of the architectural form to a geometric relationship, and the destruction of the natural plasticism of the architecture are, in other words, no longer a part of the conceptual universe that underlies the *maison d'artiste*.

L'époque de la destruction est totalement finie. In the creation of motifs, natural form disappears amid a geometry of relationships. Then, in free composition, all reference to natural form disappears and colour is liberated to depict the balance of those relationships. The contrapuntal relationship between painting and architecture is also relinquished at this stage.

The Elementarist working method is not limited to painting and architecture.⁴⁴ Van Doesburg and Van Eesteren write in 'Tot een beeldende architectuur' that the creation and repetition of motifs in street architecture is no longer the right way to form a cityscape:

'(12) Symmetry and repetition – The new architecture has done away with both monotonous repetition and the rigid identity of two halves, the mirror image, symmetry. It has neither place for repetition in time, nor for continuous street frontage or normalization. A complex is just as much a whole as a detached house is. The same laws apply to both the complex of the city and the individual dwelling. In contrast to the symmetrical, the new architecture proposes the balanced *relationship of unequal parts*, that is, parts that differ in their position, measurements, proportion and placement because of differences in their functional nature.'⁴⁵

Urban planning therefore does not have to be based on cells combined from within to form complex entities, any more than street architecture does. This view has profound ramifications for the transformation of Berlage's ideas about urban design, since he sees urban planning primarily in the light of the expansion of the metropolis, which he achieves mainly by adding units.

VAN EESTEREN AND THE GENERAL EXPANSION PLAN

The 1934 General Expansion Plan for Amsterdam is in many ways consistent with Berlage's views on the modern city, the result of modern science and modern art. The differences between this plan and Berlage's are instructive.

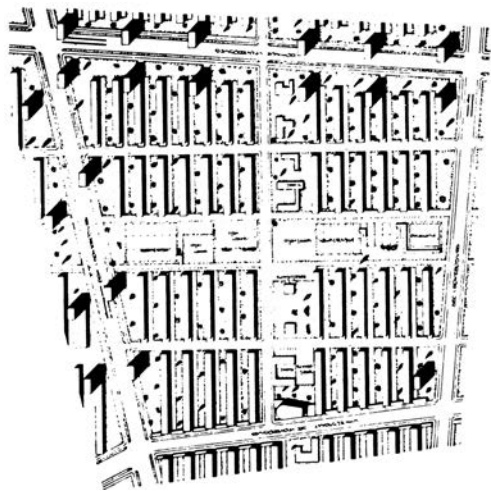
The plan drafted by Van Eesteren is also based on a system of cells, attached like lobes to the body of the existing city. The internal structure of the cells – the geometric street pattern emanating from the square, which is meant to form the architectural highlight of each cell – is absent. No indication of the architecture of the cell is given anywhere. Oud's systematization of the composition of the housing block within

44
Jan de Heer,
'AUP +
AUB(ette)',
in: *Raderwerk*
(Delft, 1981).

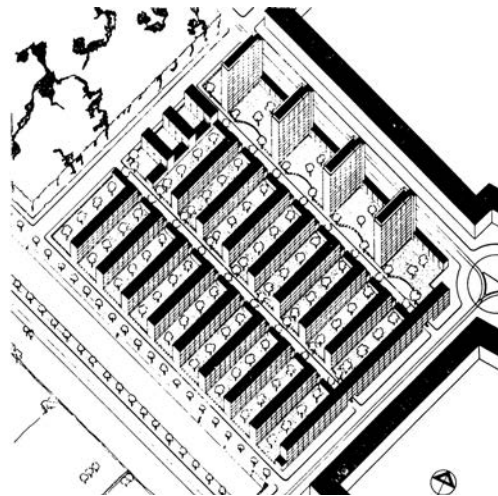
45
Van Doesburg,
'Tot een Beel-
dende Archi-
tectuur', op.
cit. (note 24).



Cor van Eesteren – General Expansion Plan Amsterdam, 1934



B. Merckelbach, Plan for an organic housing estate in open planning, 1932



J.H. van den Broek, Competition entry for 'Cheap working-class homes' with the motto 'Optimum', 1934

the formal urban plan provided by Berlage had, since his project for the Weissenhofsiedlung and the plan for Blijdorp, led to the breakdown of that recipe for urban space.

The use of row housing as an organizing principle eliminated some of the polarity between the street and the courtyard that is characteristic of the closed housing block.

It remained unclear what should replace that old framework. 'The organic residential district with low-density construction' also strongly resembles Berlage's cells.⁴⁶ The housing blocks are replaced with rows, and the street pattern is adapted accordingly. The most important buildings are not placed around a central square, but in a specified zone. In the most provocative entries to the 1933-1934 competition to design inexpensive working-class housing, such squares had disappeared entirely. What remained were the geometry of the housing and the accentuation of the peripheral buildings.

A second difference from Berlage's cell system was the *natural* connections between the cells. Berlage made use of natural obstacles in the landscape to dispel the monotony of geometry. The elements used to link the individual lobes in Van Eesteren's plan, however, are designed in a much more independent way. It is only there that the plan includes architectural specifications. The Sloterpas, the Nieuwe Meer with the adjoining Amsterdamse Bos, the Amstel, and the park, together with the parks on the west and south of the pre-existing city, form the *natural* border of the built-up area. In some places, this border is accentuated by tall buildings, while elsewhere – for instance, where new and pre-existing buildings meet – the edge is first carefully finished.

What Berlage saw, within his system of cells, as monumental architectural highlights of the urban plan, take on a new dimension in Van Eesteren's proposal, which is no longer based on street architecture that culminates in the symbolic centre of the cell. The geometry of the housing remains intact, though in a system of rows rather than blocks, and without any centre towards which it is oriented. The architectural accent has shifted from the centre to the borders. The reason these edges are important is, however, not primarily that they demarcate the district, but that they form the architectural borders of the city parks.

Translated by David McKay

46
De 8 en
Opbouw,
'De organische
woonwijk in
open bebouw-
ing', *De 8 en
Opbouw*, 1932.