

# docume

## Hans Scharoun and urban structure

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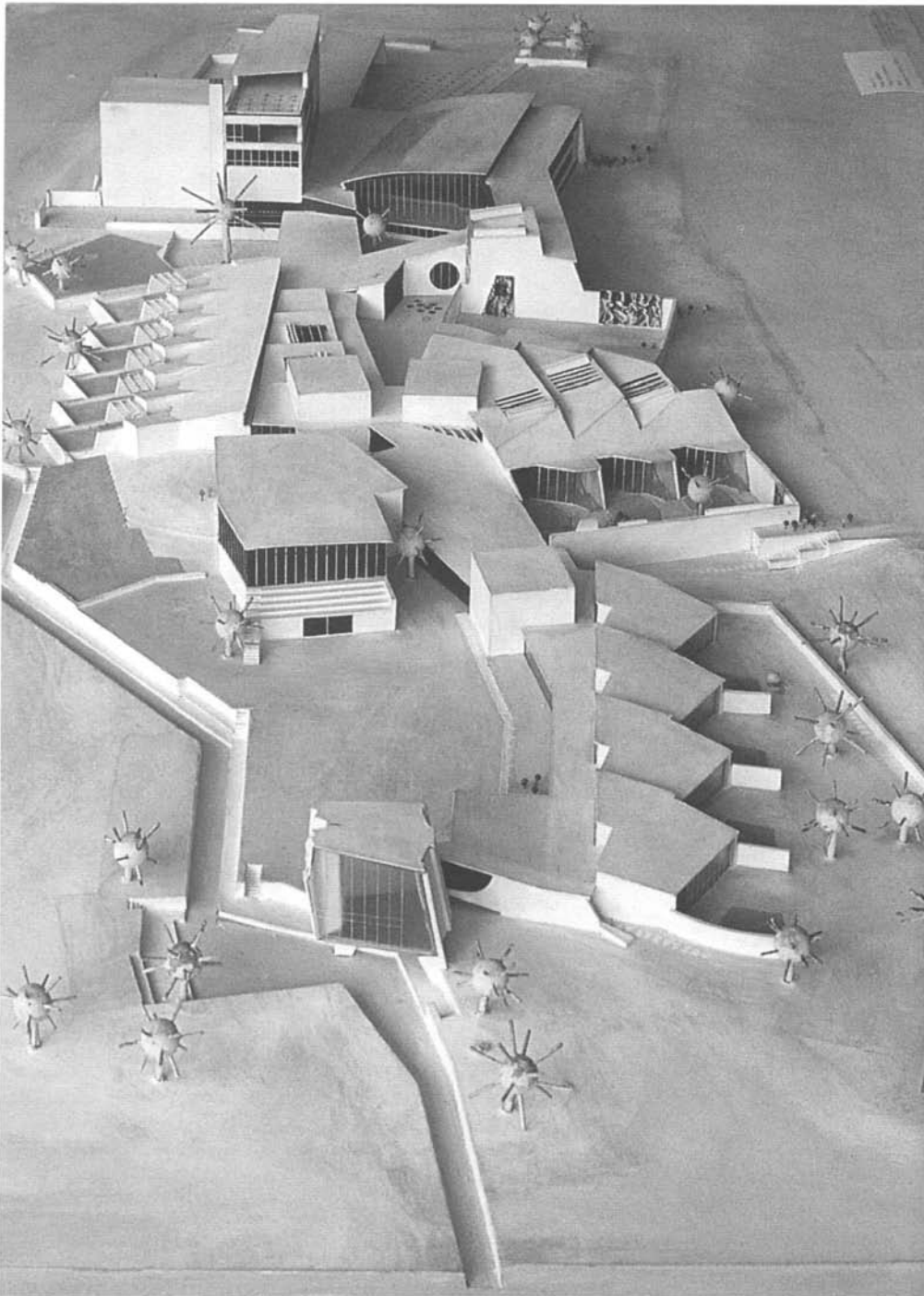
**In February of this year an exhibition of the work of Hans Scharoun devised by Nasser Golzari and Peter Blundell Jones was put on at the RIBA in London, in connection with which was held a Scharoun Symposium on 17 February. This included two German speakers sponsored by the Goethe Institute. Günter Behnisch spoke as the leading practitioner in what could be called a Scharounian direction. Also invited was Alfred Schinz, one of the most articulate of Scharoun's assistants from the rich period of the early 1950s, when Scharoun devised the prototypes for all his later work. Schinz's health unfortunately let him down, and he suggested that his place be taken by Friedrich Mebes, an architect friend from Essen who had been a student of Scharoun in Berlin in the 1940s and who still practises rather well in a Scharounian direction. With some help from Schinz, Mebes prepared what turned out to be an inspiring and informative paper, and it is printed below slightly shortened and with some tidying of the translation. Peter Blundell Jones**

I have been asked to speak about town-planning ideas and research into urban structure in the work of Scharoun. This is not easy, for the drawings and designs seem at a first glance to be the work of an artist, aiming for form, for aesthetics, comparable perhaps with pictures by Kandinsky or Klee. This impression is deepened in the executed buildings by the beauty of spaces and details. When I first saw the model of the Darmstadt School in 1951 [Fig. 1], I thought I would like to hang it on the wall of my room and look at it. Whoever has had a chance to be in rooms created by Scharoun and to use them will have been fascinated by their charm – or rather, their magic – and will have felt the self-evident ease with which one moves through them. The reason for this is not only the masterly creation of space, the sensitivity to materials and colours. For before the process of design comes the recognition of the gap between commission and task, and in consequence a very intensive, complex research into the foundation issues: not only the quantitative,

statistical, material ones, but especially the more spiritual ones, such as the value of the landscape, the morphology of the site, the history of human interaction with it, the associated intellectual developments, and so on. The task is defined not only in its measurable material quantities, but also in its essence – in German we say its *Wesen*.<sup>1</sup> I am afraid this is hard to translate, but it is a very important concept in the so-called organic approach to architecture.<sup>1</sup> Scharoun spoke of seeking 'structure in space and time'.

How can we more closely approach this work and understand it? Scharoun begins his explanation for the Darmstadt School with a quotation from the philosopher Kant, who designates space, which is nothing outside and independent of us, as the form of consciousness (*Bewusstseinsform*). The form of consciousness presumes something special, distinguishable, comparable. Knowing this we can gain insight into the task and develop an approach to our work. Over a large

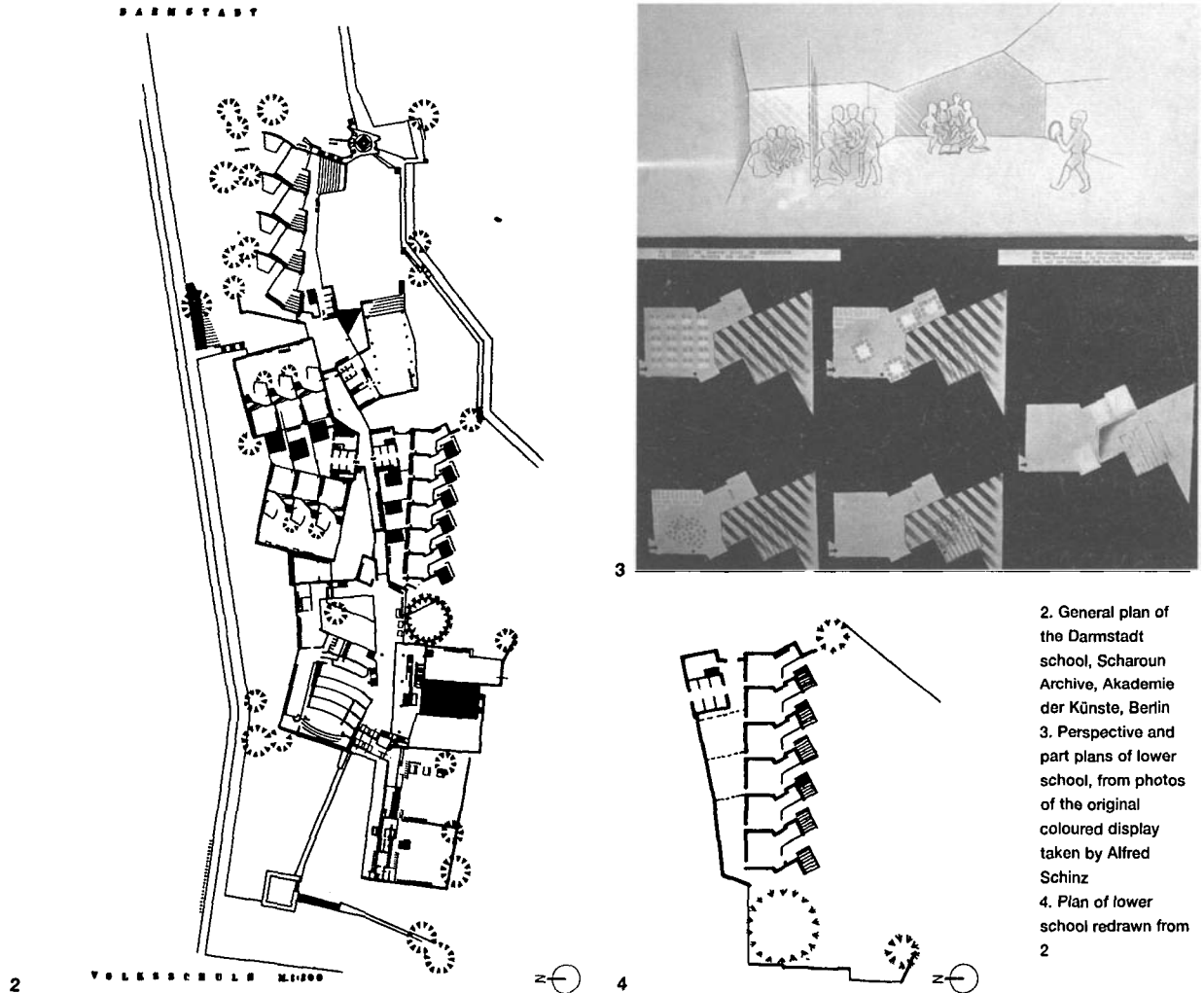
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1. Photograph of the original model of Scharoun's Darmstadt School project 1951, held at the Akademie der Künste, Berlin

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2. General plan of the Darmstadt school, Scharoun Archive, Akademie der Künste, Berlin  
 3. Perspective and part plans of lower school, from photos of the original coloured display taken by Alfred Schinz  
 4. Plan of lower school redrawn from 2

region such as Europe, the different powers of intellect and mind give form, or shape (the more accurate German word is *Gestalt*), to the tasks which are set for mankind. The distinguishable part of space in the *Gestalt* can be recognised in the local styles, which follow the demands of the times, of religions, of political power, of the church and the state. The experience of space, and the explanations of it, take place within the local view of its essence – its *Wesen*.

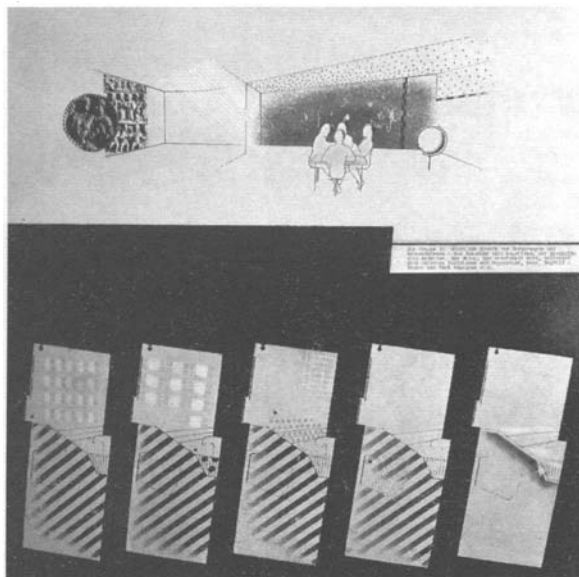
The specificity of the task, which is here a school, is bound in time by its theme. So each child has to engage him or herself with his or her own time, for this is the condition of all phenomena, all shapes, and a supposition to give shape a *Gestalt*. The architect follows the task of making intuitive – making obvious, making evident – these inner forms in the structure, the building. The *Gestalt* of the school should reflect the *Wesen* of the life in the school. And this *Gestalt* has to be honest, it should not be strange to its *Wesen*, not fake as is usual in advertising today. Therefore the structural order cannot be merely on the principle of addition. The simple ranking of rooms, though they might be functional and technically excellent, is not enough. The different parts of a school are members of a whole, operating together like organs in an organism. The whole is the life of the school, the

education as well as the learning.

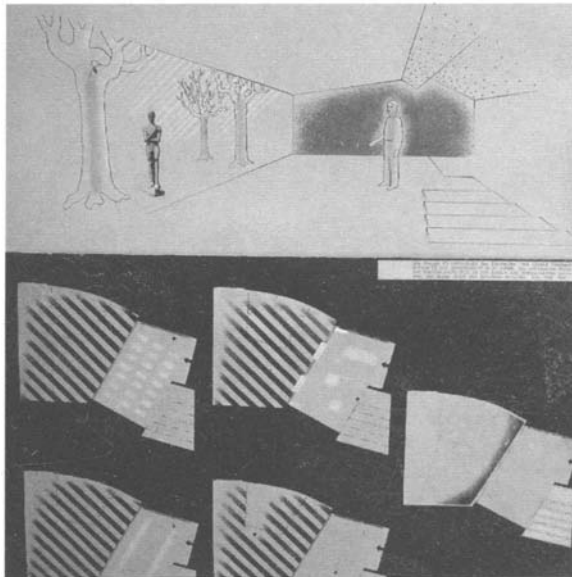
In Scharoun's plan [Fig. 2], the relations between the school and the environment are arranged in three age groups, following the children's bodily and mental growth. His scheme shows how this knowledge, these deductions from research, serve as the fundamental principle of the architectural structure. The particularity of space, the *Wesen* of space, corresponds to the spiritual growth of the child. Thus for the group aged from 6-9 (lower school), the classrooms have a nest-like and cave-like character [Figs. 3, 4]. The spaces are designed for the still subconscious creativity of the play-orientated mind and soul. This more vegetative state needs the warmth of a nest, the growth of body and mind in sun and light. The subconscious social grouping, the instinctive transformation from isolated self to group, needs caves where they might settle. So here is the yellow light of the sun, supported by the warm colours of the different parts of the rooms. Group A is orientated south.

For the group aged from 9-12 (middle school), the spaces are more geometric, reflecting increased exactness [Figs. 5, 6].

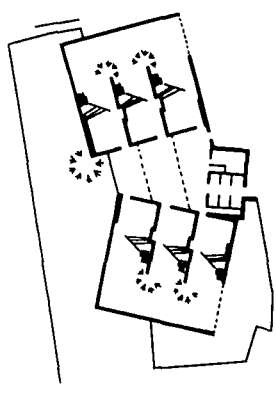
This is a time of experience and forming, shaping, and the work of humankind stands in the centre,



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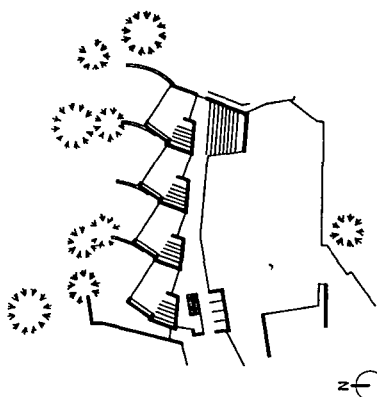


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5. Perspective and part plans of middle school, from photos of the original coloured display taken by Alfred Schinz  
6. Plan of middle school redrawn from 2



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7. Perspective and part plans of upper school, from photos of the original coloured display taken by Alfred Schinz  
8. Plan of upper school redrawn from 2

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experienced with growing interest. The singular, the comparable and measurable from nature and science, are sought. The space is orientated clearly, east-west, with neutral light, and a safely enclosed external space.

For the group aged from 12-14 (upper school) the space is stretched to two-foldness [Figs. 7, 8]. Here the discovery of the self, the finding of the pupil's own personality, stands in the centre. The whole is the theme, the subject, and the understanding of connections. Instead of the safe, tight enclosure comes width, expanse. The orientation to the north with its cool light accents concentration on the personality. The external space on to which the children look is bathed in sunlight, accentuating the sculptural and the interrelatedness of things. The tendency is research, study, to demonstrate and to mediate oneself. The spaces are mainly lit from the sky, with some sunlight added.

Thus the classes and groups of classes differ in size and arrangement by essence – in their Wesen. The proportions, the width of openings and the height of rooms also vary with the growth of the children.

These principles were worked through in the construction, the details and colours. Each group of classes includes a room for break, for play time, and this is connected to the rest of the school by an entrance like

a gatehouse, including cloakrooms and toilets. So each group has its own, clearly determined house in the house, the Schulschaft.<sup>2</sup> Understanding of the school as a whole is attained by the central street-like space which Scharoun called 'the way of meeting', of meeting each other. All the other parts are also recognisable by their specificity, their Wesen. The teachers' rooms, for example, were arranged on several floors in a tall block, at first glance apparently to screen a high building immediately adjacent. But its height has another and important effect for the otherwise flat school: it gives a sign to the neighbourhood, a connection between the cultural activities within and those of the community. To report about all the very complex further ideas in the design would take too long, but I should mention the consideration of even the smallest differences in topography, the use of water, the trees, a special room to experience the seasons, the 'cosmic room', and of course the fulfilment of all functional demands, such as a separate, direct entrance to the gymnasium. That all these ideas were well developed technically is shown by the complete design of the construction, a system of prefabrication, as this was a big theme at this time of European reconstruction. Think of your own CLASP system, for example. If all these ideas seem a bit



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9. Scharoun's school at Marl-Drewer in 1972  
10, 11. Plans of Mannheim in 1699 and in 1920, two from a series of drawings drawn by Alfred Schinz in

Scharoun's office interpreting the growth of the city: Scharoun Archive, Akademie der Künste, Berlin  
12. Plan of Mannheim showing the projected

theatre on various sites. The chosen site was that marked 'Gothepplatz': Scharoun Archive, Akademie der Künste, Berlin

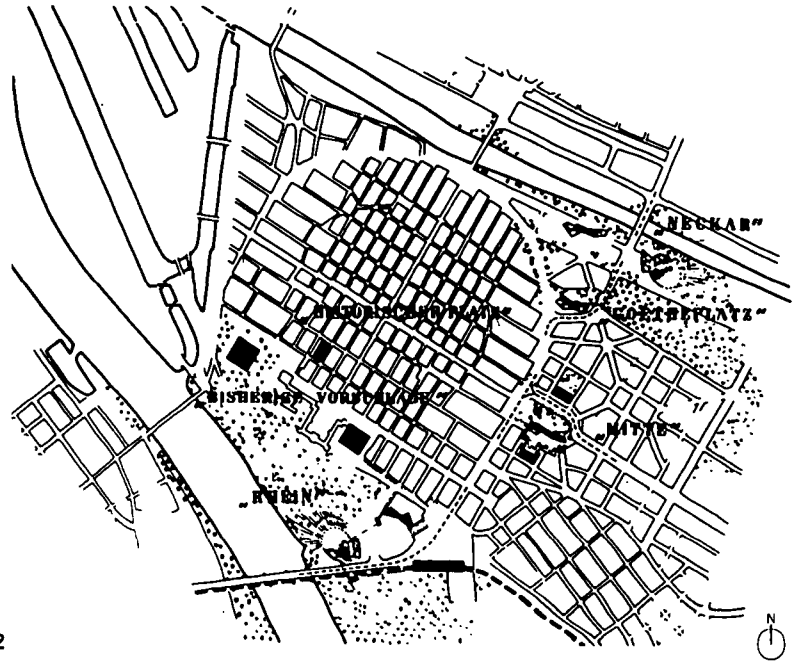
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sophisticated, let me remind you of what Ortega y Gasset said at the same conference at which Scharoun first presented his school: God needs thinking men to keep the others from falling asleep.

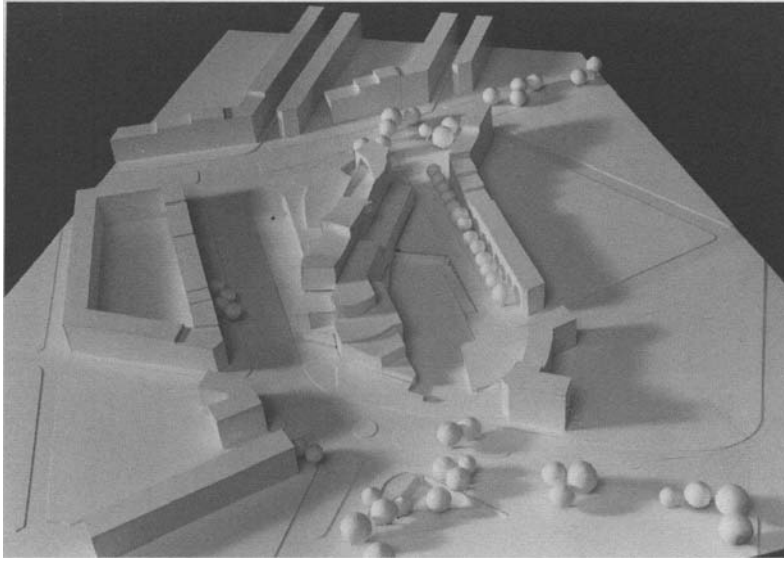
The Darmstadt School Project was part of a cultural event, the Darmstadt Conference of 1951, entitled *Mensch und Raum*, 'Man and Space'. There were reports and discussions by philosophers, politicians and architects, and Scharoun's design prompted a very intense, vehement discussion about whether this was an appropriate way to specialise a building for such a purpose. The discussion of these problems has continued until now, and in this connection I had an interesting experience. Some ten years ago I was asked to write an article about Scharoun's later built school in Marl [Fig. 9]. I had not visited it for a long time and went there to refresh my memory. The director told me that for many years the school had to be used for a different system than that planned for, not as a primary school, but for older children and with completely different requirements. She was adamant that nothing would fit their demands, that most of the rooms were wrong for them, that there was no point in the groupings, and so on. I was rather confounded by this news, and somewhat helpless. But suddenly this director said that last year the community had offered her another school, of exactly the type she needed, big rectangular rooms in a row, completely

suitable. So she discussed it with all her teachers, but they turned out to be unanimous: they would never leave Scharoun's school, under no circumstances, because all of them, teachers and pupils, were so happy there. They felt so good, they just loved it, and in comparison with that, the lack of the right rooms did not mean anything at all.

#### Mannheim Theatre Project

While the Darmstadt school is a good example of Scharoun's attempt to relate space to the society housed, the Mannheim Theatre project of 1953 is a clearer example for his other great interest: the relation of a building to its context in the city and landscape. The principal approach to the design of this theatre was the same as before. On the one hand there was research into fundamental questions of theatre, from ancient times until today but also looking forward. On the other hand there were the demands of the site, beginning with the city and its historical development, which led to its present structure. These researches led to investigations about possible alternative sites for the theatre, with different connections to city and surroundings.

The study of the development of the city [Figs. 10, 11] showed the change from the neutral pattern of streets at the beginning, to a domination by the north-south axis towards the castle, then later a pair of crossing axes, and

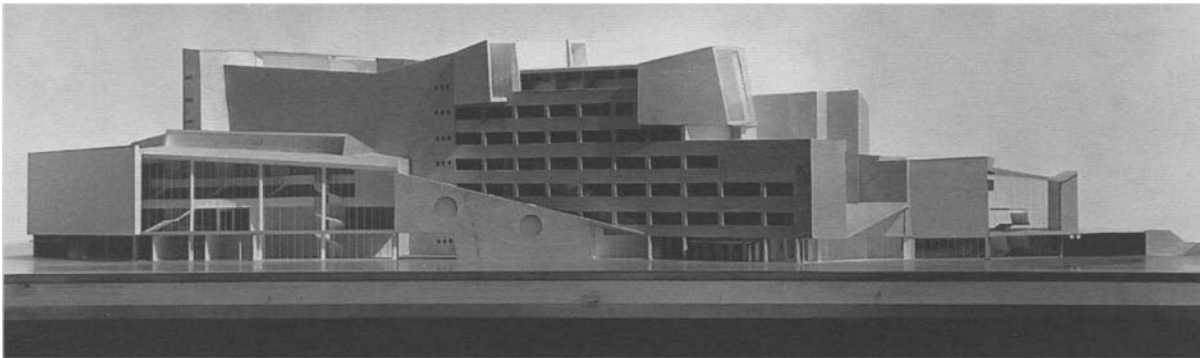


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13. Model of Scharoun's Mannheim Theatre in context: its diagonal block is aligned with the grid of the old city centre beyond. New model by students at the School of Architectural

Studies, Sheffield University  
14. New detailed model of Scharoun's Mannheim Theatre project 1953, made by students at the School of Architectural Studies, Sheffield University

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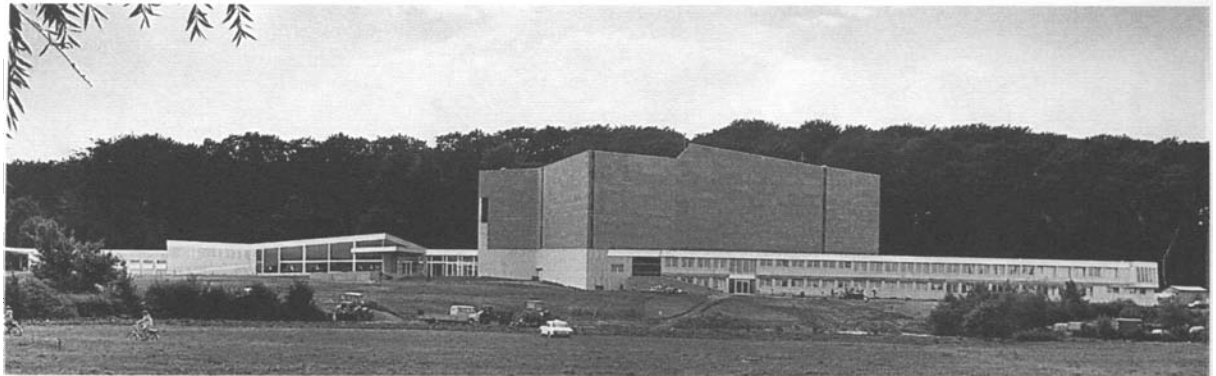
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later still the takeover of the east-west axis. The change reflects the shift in power from the court to the citizen. At the same time, the principle of order shifted from the streets to the buildings, which became steadily larger with a tendency to extend over a whole block. This process was set to continue, and it was settled that these larger buildings should run mostly in an east-west direction. The intended site, Goetheplatz [Fig. 12], was open, situated at the border of the inner city on the outside of the inner ring road. It looks like a gap, and possible connections to the sides seem to be casual. Seeking a form for this site that might correspond with the whole of the city, Scharoun introduced the east-west tendency of the city here, too. This allowed the theatre to be fitted into the city structure without any change in the square and the surrounding streets. It would have been an important dominant element, reflecting in its form the development process of the city structure. The introduced direction could be followed further in the development of the surroundings, with the park on the west extending to the river. This is shown in the design too.

A clear order results from the east-west direction of the building (Figs. 13, 14). The fly towers and workshops, very high in every theatre, form an east-west sculpture that sits diagonally in the square. The two auditoria are arranged on either side, so fitting into the whole of the square. That way the two theatres – the large house and

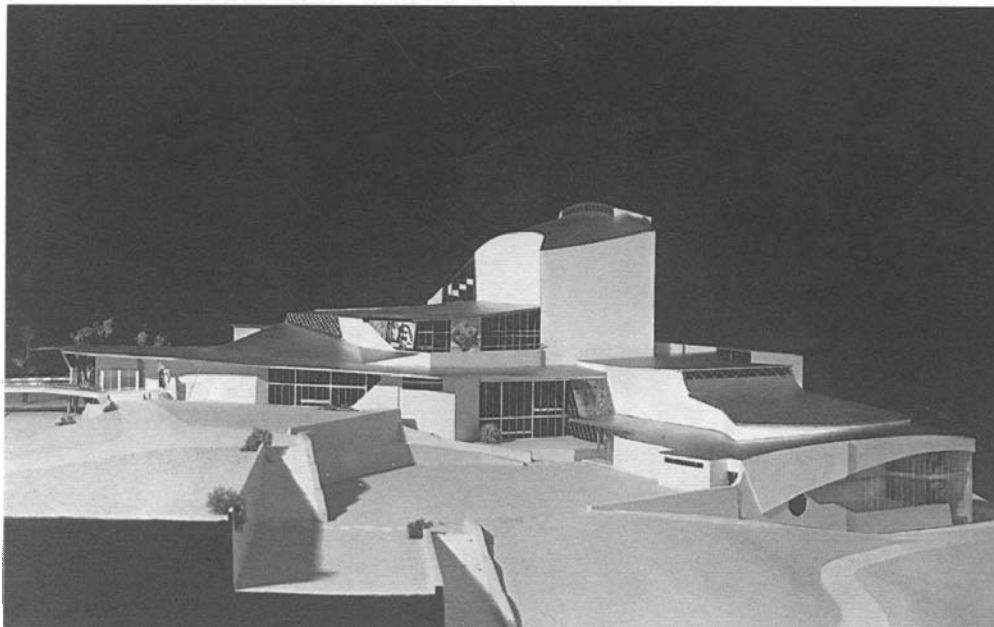
a small experimental one – could be developed freely, each according to its own, special demands, but at the same time connected together inside in a reasonable and functional way. So, what looks at first strange and accidental, explains itself as a part of the city's structure, grown from history, connected with the existing and carrying it on.

Buildings that seem different from their neighbours, or otherwise strange, are often characterised as *Solitär*, solitary, and this accusation is made rather often with designs by Scharoun. But a *Solitär* is something extraordinary, isolated, something not fitting into the normal, like the big diamond Richard Burton gave to Elizabeth Taylor. So one should recognise, looking more closely, that the design of Scharoun's theatre is the very opposite: it is fitted in precisely, in close relationship with the city and its structure. In comparison with it, the other designs for the competition show rectangular buildings on the central axis of the square, an axis with no connection to the city and that leads nowhere – these others are really the *Solitären*, relating only to themselves. Here Scharoun's complete opposition to Mies van der Rohe's claim that 'one cannot invent a new architecture for every building' is clearly shown. What is intended is not a relationship to an abstract style of architecture, but to a structure as part of environment in the widest sense. It means, too, that one cannot know how a building will



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15. Scharoun's  
Wolfsburg theatre  
1965-73  
16. Scharoun's  
Kassel theatre  
project 1952, photo  
of model: Scharoun  
Archive, Akademie  
der Künste, Berlin

look before the complex research is done. A building is more than just architecture, it is '*Neues Bauen*', the alternative tradition.<sup>3</sup>

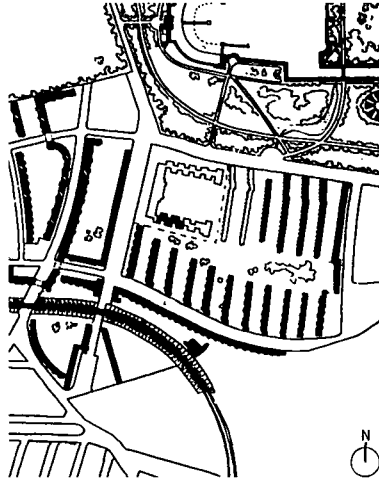
The design of the theatre auditoria was approached in the same way, beginning with the recognition that today the form of the perspective theatre with its scenes presented one after another might give way to the aperspectival theatre with scenes side by side, and with a tendency to change the location of the action. The result is a very wide broad stage, free and open for all kinds of performances, and the likewise broad, articulated auditorium, the seats as much as possible offering equally good conditions. As always with Scharoun, technical aspects were investigated: for example, a proposal to open the theatres to natural light.

#### **Kassel and Wolfsburg theatres**

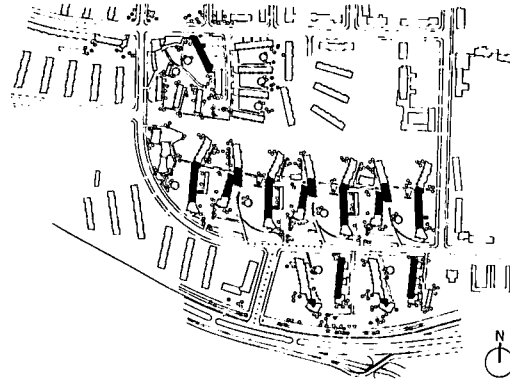
The challenge of the site also influenced the two other theatre-projects that would like to show you. In Kassel, the proposed site was at the edge of the old city, too, but this time the border was a break in the topography, a wide place, surrounded on three sides by buildings, but open with the fourth to the landscape – a green valley with river, and wooded hills in the background. Scharoun

placed his building not on the axis where the former theatre which was destroyed in the war had been, but he shifted it to the side, so that the view from the square out of the city into the landscape, would be free [Fig. 16]. Furthermore he proposed to lay a busy road that ran across the open side of the square somewhat lower, so that one would look over it. A bridge leads from the square to the theatre, which in most parts was designed to be not higher than the surrounding buildings. Only the fly tower had to be higher, and this structure was shaped in sympathy with the hills, connecting the building visually with the landscape beyond. This project was worked out with all plans for execution and ready to begin when it was stopped by local intrigues: it was one of the first big building scandals in Germany after the war.

The theatre of Wolfsburg results especially from the situation of this small city – Volkswagen's city – in a free and open landscape [Fig. 15]. It is a small theatre for all kinds of performances, from opera to the small play. Research into the structure of city and landscape showed that nature and buildings had a rather equal significance. There are large buildings: the Volkswagen factory, the town hall, the cultural centre by Aalto, and a great wide landscape with low, wooded hills. The given position for



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17. General site plan of Siemensstadt, 1929-30, based on the chosen layout by Hans Scharoun. His own blocks are the irregular ones south of the railway.

Scharoun Archive, Akademie der Künste, Berlin

18. Blocks by Scharoun at Siemensstadt

19. Charlottenburg-Nord, Scharoun's

extension to Siemensstadt built 1959-65, general plan: Scharoun Archive, Akademie der Künste, Berlin

the theatre was on a ridge with a backdrop of trees behind, some distance from the centre. From this the structure of the building is developed, forming the free space between city and hills with a flat, linear building below the trees. Only the proper rooms of the theatre – the auditorium, stage and flies – are put into a tower, and this is a great sculptural form corresponding with the other big buildings. Following the linear principle of the design, the auditorium is entered on its longitudinal axis. The foyer opens on to the landscape with a view across to the city.

These three theatres with such very different inside and outside forms show clearly what a great influence structural research had in Scharoun's design process. Pure formal motives, abstract theories or accidental fashions are completely out. The art of the 'Baumeister', the design of space and detail, the selection of materials and colours, follows on from the research into structure.

### Housing

Finally, let us turn to quite a different task, housing. Scharoun was engaged with this theme all his life, with the single house for a special client as well as with the different forms of housing for many. Since the end of the last

century there was broad, international movement away from dense tenements to better forms of housing, such as, for example, the English garden-city. In the cities this development led away from the closed and concentrated block with narrow interior yards to more open forms, and, consequently, in the search for good conditions in every apartment – and for equality – to Zeilenbau, parallel rows. At the end of the 1920s this scheme was very much in use, but mostly in a very monotonous rigid geometrical form. In 1929 at Siemensstadt, Scharoun created the layout-plan for a settlement with more than 1000 apartments – settlements of this size were usual at this time, resulting from the public housing programmes – following the scheme of rows. For once a lucky circumstance in Scharoun's life allowed him after nearly 30 years to go on building there, and he added the development, Charlottenburg Nord, completed in the 1960s.

Back to the start in 1929 [Figs. 17, 18]: If you are walking through these rows, you will notice something different, something more liveable, more wide and free than in the many other suburban developments of the time. If you look closely at what was done, again it is the close observation of the specificities and opportunities of the site, as well as of human needs and human scale, that distinguish it. There are small but important divergences from the potential monotony. The shifting of the rows along the curved street, for example, or a small break in the long, straight buildings: the two rows not exactly in one line, and most important, the addition of a green, interior space, small but decisive in shaping the whole. Looking back today, one should bear in mind that all this was executed in an astonishingly short time: decree by the community at the end of 1928, plan of layout by January 1929, plans for the buildings in March; and the first inhabitants moved in on the 1 April 1930. The first design of the layout was changed to a higher density, but the idea remained untouched. Scharoun himself designed the houses south of the railway, giving an entrance to the whole, in intensive use of the situation, taking into account the existing streets and houses, groups of trees, etc. The size and number of apartments was given, and he developed different types in accordance with the different situation of the three buildings, while the demands from the apartment itself were thought of as well – functionality, an order of rooms varying from the ones which are more orientated to the

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outside to others of more intimate character. And here again an attention to technicalities: flexibility of layout was a theme of the time, but it was found that construction with columns, or better with posts of steel or concrete, would be much too expensive. But Scharoun followed these ideas through and succeeded with a cheaper system in masonry.

Just before the war more buildings were added on the eastern side, but without respect for the initial plan. Then in the 1950s Scharoun was commissioned to develop the housing as far as the new highways planned to east and south [Fig. 19]. This time the planning started with a complex structural research, investigating issues such as:

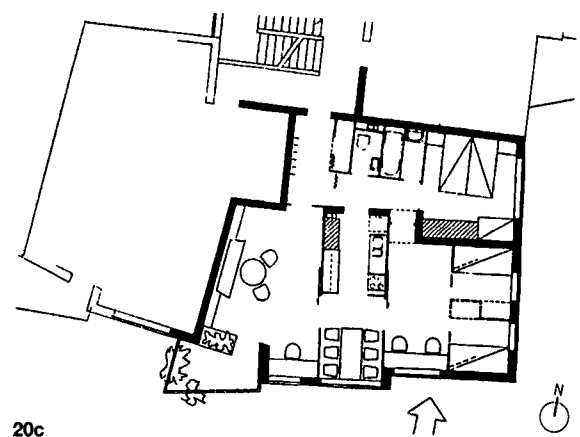
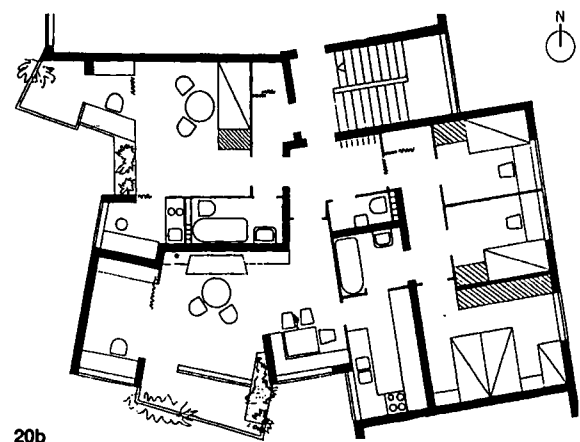
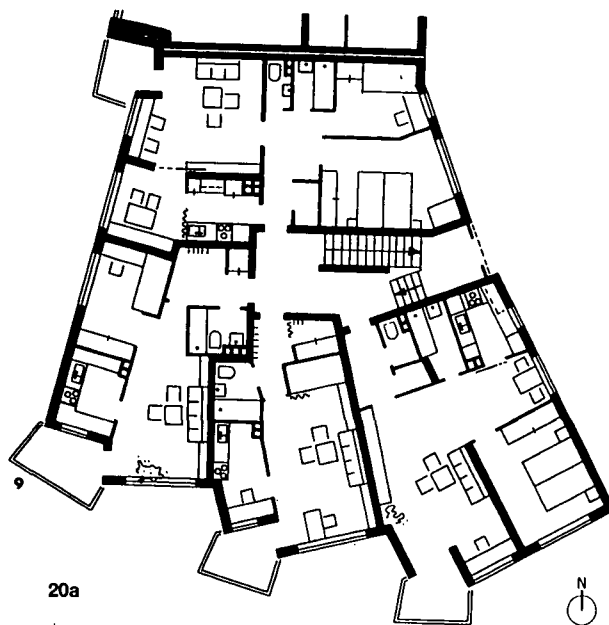
1. the landscape: the morphology of nature and city.
2. the situation regarding the whole city, the demands from the outside.
3. the need for uses other than housing, such as shops, smaller industries etc.
4. the different kinds of traffic, connections, and demands.
5. the expected inhabitants, their ages, the kind and size of families, the connections between relatives.
6. the economic situation, trade, business, etc.

The fundamentals of planning were derived from this research. From this, the principal structure of a city-landscape was created, formed as a belt, following the

existing belts of landscape, city and traffic. There is not the space here to report in detail on the many research directions and their effect on the planning, so I will take just one example. From analysing the statistics about the population of four existing districts of Berlin, the number and distribution of different kinds of inhabitants was calculated, and the group size to encompass all possibilities came to about 450. Regarding the situation of a city the size of Berlin, and the demands of the public housing authority, this number was increased to 650, seen as the population of one building or a connected group of buildings with 310 apartments. For this group there were certain minimal social and cultural needs to be taken care of. Further investigation showed that nearly all demands for the housing of this population could be fulfilled with 36 different types of apartment. From these deductions the idea of the *Wohngehöft* was created, a pair of buildings each containing a mixture of all the different types of apartments.

Fig. 20 shows some apartments in detail: for a family with two or three children, and for a single person. If this person was a relative such as a grandmother, there could be a connecting door. It should be mentioned that there were ateliers for artists, too, high up on the roofs, the only ones built in a public housing programme at the time in Germany. Scharoun himself lived and worked in one of them after 1960, and before that he had been living in one of his Siemensstadt apartments. These *Wohngehöfte*

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20a, b, c.  
Charlottenburg-  
Nord, typical flat  
types: Scharoun  
Archive, Akademie  
der Künste, Berlin.  
21. Charlottenburg-  
Nord



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should be indivisible, complex parts of the lowest grade: it should not be a question of concentration. Their density, their size, is related to the size function and character of the city they are part of. Size and Wesen changes with the character of the city. They are elements for the construction of a city allowing great variation, and with them the usual monotony of cities could be avoided.

As so very often, at Charlottenburg Nord the execution was not always consistent with the plan [Fig. 21]. The officials did not take note of all the research, and there was no cooperation at all. The main road runs not, as planned, along the north-side of the Wohngehöfte, but right through the middle, cutting them in two. In the façades of the buildings there are forms and details strongly influenced by the housing company. It is interesting that in spite of the many different types, the lively forms of the building, the changes in the height etc, the costs were no more than allowed by the public-housing programme, and that the whole thing was an economic success. But it seems it was too much for the convenience of our building bureaucracy. After it was finished, an official said: 'Never again we will do such a thing – too much explaining to the people which of all these apartments would be the best for them.' I think this would be a good topic for further research: how much the laziness of bureaucrats and investors determines the face of our cities! I end here, but I hope I have managed to give you some insight into the complex and important work of this great architect.

#### Photography credits

1, 9, 15, 18 and 21 by Peter Blundell Jones.  
13 and 14 by Peter Lathey.

#### Notes

1 *Wesen* is both the verb to be and a noun meaning being or essence. (PBJ)

2 *Schulschaft* is a variant on *Nachbarschaft*, German for neighbourhood. It might therefore be translated, if unsatisfactorily, as 'schoolhood'.

3 *Neues Bauen* was a general term for modern architecture in Germany in the 1920s, but was used by Scharoun's mentor Hugo Häring to describe their approach, with particular distinction from the French term *Architecture*, which they saw as the province of Le Corbusier. (PBJ)

#### Biography

Friedrich Mebes practises as an architect in Essen.

Peter Blundell Jones is Professor of Architecture at the University of Sheffield and is author of a monograph on Scharoun and a forthcoming work on Häring.