

Hans Scharoun and the aftermath of the First World War

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The connection between the First World War experience and the inter-war German *avant-garde* is axiomatic. Current scholarship focuses almost exclusively on artists and writers although it was architects such as Walter Gropius, Bruno Taut and Hans Scharoun who led the German *avant-garde* in the 1920s. It is, of course, easier to uncover connections between art and war than between architecture and war since artists often drew, painted or sculpted pieces that directly addressed the trauma of war whereas buildings do not. Nevertheless, architects were profoundly influenced by the events of 1914–1918 and commented on the significance of the war experience to their work. The little scholarship that does examine architects focuses almost exclusively on war memorials and ignores the effect the war had on aesthetic ideas and the direction of progressive architectural design. This paper explores the case of Hans Scharoun, who was one of Germany's most important architects in the first half of the twentieth century, to probe the ways his war service, and the events he participated in and witnessed, may have affected the course of his inter-war practice.

Introduction

It was—after the First World War—a new departure. The question about the new reality, new form of the collective was posed ... Each of us attempted to convey his world view.¹

With this pithy statement Scharoun makes clear two aspects of the relationship between his architecture and the First World War: the war allowed him a new beginning and the freedom to express his worldview. The war caused a *caesura* after which the conditions for architects were altered radically. What is not clear, however, are the ways in which Scharoun's wartime service affected his worldview or how this view influenced his post-war production. Was the new beginning a break with the aesthetics he espoused in the pre-war period or a different kind

of beginning? It is challenging to uncover Scharoun's reaction to his war experience because he rarely comments directly on it in the surviving material (a great deal of archival material from the War and afterwards was destroyed). The archival material that remains from the war years describes Scharoun's wartime activities but not his feelings about them. This essay therefore creates an interpretive framework by piecing together the few direct comments Scharoun makes after the war with indirect comments, the record of his war experience, and a reading of his pre- and post-war design work.

Using Peter Chametzky's argument that art objects can be interpreted as historic texts, it is possible to hypothesise the relationship between Scharoun's war experience and the designs he executed

after 1918.² 'Art objects' here is understood to mean both the constructed work, when that exists, and the drawings of the work. Furthermore, there are several kinds of architectural drawing, including orthographic drawings, perspective drawings and impression drawings. Because of the paucity of written evidence, however, Scharoun's beliefs must be largely inferred. This paper argues that the grim repetitiveness, and lack of imagination, involved in Scharoun's wartime service influenced his rejection of pure Rationalism and Functionalism in favour of architecture's more humanistic and utopian possibilities and helped to confirm Scharoun's belief in the necessity of art. In so doing, Scharoun did not invent a totally new architectural expression but rather strengthened and augmented his pre-war convictions.

Historians who have written about Scharoun ignore his war experience, as well as the work he did in East Prussia immediately after the war, so there is virtually no secondary literature covering the subject. Peter Pfankuch devotes more attention to the period between 1914 and 1925 than most authors in his monograph on Scharoun yet he focuses almost exclusively on post-1918.³ Both Pfankuch and Heinrich Lauterbach highlight the fundamental humanity in Scharoun's mature architecture but they do not tie his approach to the war years. The more common treatment of Scharoun's work is either to situate it in Expressionism or in Organic Architecture.⁴ While this view is correct, it reduces Scharoun's work to a formal achievement without considering the motivations of beliefs driving Scharoun's formal choices. Another common view is that Scharoun was an idiosyncratic designer with

tenuous connections to modernism.⁵ Only Peter Blundell Jones mentions the war in relationship to Scharoun's design work, noting 'the lack of inventiveness' in Scharoun's wartime architecture. But Blundell Jones does not connect his observation about the nature of Scharoun's wartime designs to his reappraisal of Scharoun's work.⁶

Yet Scharoun spent twelve years based full-time in East Prussia and another six years working there while commuting from Berlin. He was first stationed at various military sites across the region, then in Insterburg, lastly in Breslau. He chose to remain in Insterburg for six years after the armistice, moved briefly to Breslau, then divided his time between Breslau and Berlin for seven years between 1925 and 1932. He was just twenty years old when the war began, so the years in East Prussia occurred when Scharoun was still maturing as a man and as an architect. In fact, these years were the foundation of his career as an architect and for this reason alone should not be ignored. His inter-war work is usually presented either as a continuation of the experimentation begun before the war broke out or as a completely new phase; in both views, Scharoun's work of the 1920s had little or no connection to what he did during the war years. Yet, according to Scharoun and other contemporaries such as Max and Bruno Taut, Walter Gropius and the eminent art critic Karl Scheffler, the war was a formative episode in their lives.

Max Taut wrote: 'The First World War was ended. *Jugendstil*, and copying of historic styles in building had been abandoned earlier. Still, many believed and treasured [the idea] that something new had to come after the collapse.'⁷ Scheffler, editor of

the influential journal *Kunst und Künstler* wrote an editorial on the war in 1915 in which he too predicted that the war would act as catharsis, would enervate artists and allow new ideas and forms to be explored. Bruno Taut articulated the expectations for post-war architecture: it should show the 'particular consequences arising from the War'.⁸ Schefler wrote: 'one hopes from [the war] for a regeneration of idealism ... in spite of the fact that the war kills and maims, it is, itself, an artwork'.⁹ Walter Gropius wrote: '... many artists who participated in the war, stand in a break from everything, and see everything anew'.¹⁰ Scharoun may not have broken totally with the past but he certainly saw his work differently—the war experience seems to have given him confidence, he was more daring and at the same time more skillful. It was only after the war that he developed a keen sense of architecture's humanitarian potential.

Contemporary historiographies, probing the relationship of the First World War to the avant-garde, support the view about the war's importance. In *The Great War and the Making of the Modern World*, Jeremy Black looks beyond individuals to chart the effect the war had on European culture.¹¹ He argues that the Great War was far more consequential to world history, especially the formation of the modern condition, than has generally been credited. In the area of culture, he underscores the 'accentuation of the already strong Modernist assault on traditional culture'.¹² Modris Ecksteins paints a general picture of how the war affected British, French and German modern culture in *Rites of Spring: The Birth of the Modern World*.¹³ He sees a causal relationship between the

war experience and modernism. Two scholarly works that are more closely related to this study are Kenneth Silver's *Esprit de Corps: the Art of the Parisian Avant-Garde and the First World War* (1992) and Michael White's *Generation Dada* (2013).¹⁴ Silver explores the social and political concerns that affected aesthetic choices during and after the war. Most intriguing for this study, Silver uncovers substantive differences between the work of members of the French avant-garde who served at the front and those who remained at home. White is the first to probe the German avant-garde reaction to individual war experience as opposed to the war as an abstract idea. White demonstrates direct connections between war experience and Dada art. In both instances, Silver and White use a combination of evidence including documents written by the artists and their contemporaries and interpretations of the artworks themselves.

In Scharoun's case, scrutiny of the archival textual and drawn evidence together with constructed projects suggests that the war experience affected his approach to design in two ways. For the first time, Scharoun adopted an anti-technology position, which included hostility to purely functional design solutions and sympathy for human-centered ones. At the same time, the more radically experimental forms of Scharoun's inter-war architecture can be seen as an intensification of ideas he began to explore before the war, heightened by the work he was forced to do during the conflict.

The pre-war years

When the war broke out in August, 1914, Scharoun was about to enter his third year at the Royal

Technical High School in Berlin where he had already won two silver medals for his designs, a sign that even at a very young age he showed extraordinary talent and promise.¹⁵ The little work that survives from the pre-war years offers a picture of Scharoun's aesthetic ideas at this age, even if very little writing survives from the period. What remains as text are the titles and mottos from his projects, which are often very revealing. Several of Scharoun's sketchbooks also survive. Not surprisingly many of Scharoun's earliest sketchbook drawings are of local vernacular buildings from his native Bremen and Bremerhaven. They typically show the steeply sloping roofs, ornate woodwork and dormer windows characteristic of traditional North German architecture, together with the beginnings of Scharoun's unique design voice. Scharoun later credited the Bremen and Bremerhaven traditional architecture and port lifestyle with having a meaningful influence on the development of his design ideas.¹⁶ In both cities the tensions between work and home, civic and private, but also port and city, had social and architectural implications for the young designer. Scharoun had a lifelong interest in architecture as a vehicle to improve wellbeing and he understood the social potential in architectural design, especially in public programmes such as housing. Scharoun's sensitivity to contrast and balance, to the different spatial requirements of function and to the importance of the sensory aspects of architectural space were probably outgrowths of his formative years.

Three early projects from 1910 and 1911 demonstrate the influence of vernacular form on Scharoun's work in their sweeping roofs and wooden construction.¹⁷ One 1910 design is

named *Kirche als Fels* [Church of Stone]. The perspective drawing shows a strange structure that appears to be a group of smaller buildings piled on top of one another in a manner closer to a geological formation than an architectural one. The building culminates in a steeply gabled roof on top of a narrow tower; other roofs cascade from the central portion, fanning out in every direction in an asymmetrical arrangement. The odd massing and expressive juxtaposition of elements that appear to be collaged together rather than rationally ordered pre-figures some of the formal freedom that would appear in Scharoun's work after the First World War.

The motto of the Church of the Stone reads: 'An independent Architect must not be governed by sensations but be guided by reflection'.¹⁸ By this Scharoun meant several things—that architects should not be ruled by what they see; either by historic precedent or by current fashion; nor by what they experience, the many material, spatial and light impressions—but by what they discover through personal contemplation.¹⁹ He did not mean that architects should not take what they see and experience into account when they develop their designs but merely that contemplation should take precedence over observation and that it should control the decision-making process. This belief was central to Scharoun's work throughout his life and helps explain the unique aesthetic path Scharoun would take after the First World War.

Scharoun's embrace of the importance of human sensory experience to good design goes hand-in-hand with his rejection of Functionalism and Rationalism. In a second early project dating to 1913, Scharoun competed to design Kaiser-Wilhelm

Square in Geestemünde. Again, both the title and the motto are revealing. Scharoun named his entry 'Experience'. The motto reads: 'In the development of the assignment, the applicant had to discover and include something characteristic to the overall system'.²⁰ In other words, two aspects of architecture of primary concern to Scharoun are the experience of the space and the uniqueness of each design. Scharoun would remain true to these beliefs throughout his career.

The war experience

In 1914 Scharoun joined the millions of other young Germans who volunteered to serve their country.²¹ He was initially assigned to the Queen Elisabeth Regiment but was quickly drafted by his former architecture teacher, Paul Kruchen, to serve as a military architect. For the next four years, Scharoun helped to design and construct military hospitals, military warehouses and quarters for prisoners-of-war, in particular watchtowers and fortifications, in Crossen, Cottbus, Gumbinnen and Frankfurt an der Oder, East Prussia (figs 1, 2).²² In 1915 Scharoun was transferred to the East Prussian reconstruction squad where he was appointed District Architect. As District Architect he supervised a 16-22-man task force, one of twenty-four, all ultimately under Kruchen's direction. The typical task force included two German foremen guards plus Russian prisoners-of-war generally in practical combinations from the trades. For instance, the foremen might have between two and four German masons, who worked with twelve Russian masons, and eight handymen. From Autumn 1915 to Spring, 1917, Scharoun headed the Gumbinnen Construction Advisory

Office; from Spring, 1917, to the end of the war and declaration of the Republic in November, 1918, Scharoun headed the reconstruction office in Insterburg.²³ Scharoun elected to stay in Insterburg after the war because he had personal connections there and commissions. He remained in Insterburg until 1925 when he was offered a professorship at the Academy of Fine and Applied Art in Breslau.

Scharoun arrived in the East on the eve of a crisis: the Germans were winning the war on the Eastern Front and as a result of their campaign captured tens of thousands of prisoners-of-war. In the very early days of the First World War, on 30th August, 1914, the German Eighth Army defeated the Russian Second Army near Allenstein. The victory confirmed the Germans' expectations of a swift victory in the war. In honour of the victory, the Germans renamed the location Tannenberg to counterbalance the historic defeat of the Teutonic Knights at the real Tannenberg, 30 km to the East, in 1410. In 1410 a group of Poles, Lithuanians and Tatars had vanquished the Germans; the battles of 1914 supposedly reversed that defeat to reinstate Germans in their rightful territory. This nod to Pan-Germanic ideology was symbolic but it resonated with many Germans and not just those who resided in East Prussia. When the initial conflict ended, Germany had taken approximately 92,000 Russian troops prisoner. However, in spite of their confidence, none of the Generals had expected to take so many prisoners-of-war or planned for this eventuality. The POWs were dispersed to camps around Germany but primarily in East Prussia, to those overseen by Kruchen and his men. In just a

Figure 1. Overview of the POW camp in Crossen, c. 1918 (courtesy of the *Bundesarchiv*).



matter of days, a trickle of 200 or so POWs transformed into an inundation as over 10,000 men poured into Cottbus alone.

The overwhelming demand for housing built quickly, efficiently and cheaply was the chief motivation for Paul Kruchen to develop both a basic plan for the camps and a method for working with POWs to construct military installations and reconstruct damaged civilian infrastructure.²⁴ The Russian invasion had left large areas of East Prussia destroyed. Estimates placed the total number of damaged or razed buildings at over 10,000 in 1914; by 1917

the number had increased to over 40,000.²⁵ Named after Paul Kruchen, the Kruchen System, was both an apprenticeship programme for POWs, supervised by German soldiers, and a massive military construction company. It was necessary because the civilian labour force was reduced by enlistment in the army and to 'accommodate the harvest, livestock [management], and cultivation' needs, so there were not enough people to work on construction.²⁶ The programme was very clever. It was organised around a series of rewards designed to encourage participation. POWs had ample



Figure 2. Unknown camp in East Prussia, c. 1915 (courtesy of the *Bundesarchiv*).

opportunity for promotion and were paid a modest salary. Prisoners began as lowly handymen who could gradually train to become more skilled and responsible master builders who earned double or triple the basic starting wage. Soldiers who were already skilled tradesmen and craftsmen were used together with those who had never tried their hand at manual labour.

Kruchen tested his organisational and design approach in Cottbus.²⁷ At Cottbus, POWs constructed barracks, baths, officers' quarters, service buildings and a water tower. The camp had an

unusual innovative feature that would become a standard: it included spaces expressly conceived to eliminate any louse infection among the POWs. The camp was probably the first that Scharoun helped to design. It was laid out as a group of eight company stations in a fan-like shape with a quarantine building, group yard and yard for isolation. The typical layout is similar to that used at Sachsenhausen and other later camps whose plans survive (although Sachsenhausen and later camps were Nazi concentration camps constructed for very different purposes and should not be confused

with the First World War POW camps). No plan drawings survive of the camp in Cottbus, or any of the other camps planned by Kruchen and his corps, although some photographs do remain. They installed a compulsory bath and disinfection centre at the camp gates where inmates were thoroughly de-loused before they entered the camp proper. Buildings were made of wood that was double planked and covered with earth. These were materials that were readily available in East Prussia and that unskilled, or relatively unskilled, construction labourers could handle without too much training, trouble or equipment. In addition to barracks, there were a host of service buildings—locksmith, shoemaker, tailor, wheelwright, smithy, basket maker and carpenter. Buildings were simple rectangles with gently pitched roofs and, in some cases, roof-mounted ventilation structures. There were only a handful of uninteresting windows in the buildings. The barracks seem to have had windows on one side only. Façades were utilitarian; windows were disposed for light but not visual effect. Everything about the buildings was practical; there was little art or imagination or freedom in the design.

In addition to supervising camp construction, Scharoun was appointed District Architect. Scharoun's responsibilities as District Architect were quite mundane. He was required to determine necessary reconstruction projects in his geographic area, calculate the likely costs, look for qualified local architects to execute the projects—but since there were very few, most of the work fell to him. Scharoun wrote of his tasks that: '(work for the improvement of construction techniques in town

and country', 'educate systematically' through lectures and exhibitions, through expert opinions on submitted designs and proposed building regulations, as well as general advice in all construction matters— all these elements comprised his assignment in Insterberg. He also had to check submitted construction documents then supervise the work. This latter task may have been the hardest of them all, for a declared aim of such a Consultancy was not to alter designs by itself, but to 'transfer design tasks to appropriate architects' — yet there were hardly any architects available, so Scharoun did do some design work himself, especially after the war ended. Still, design was secondary to administrative work. And design was less important than speed and efficiency of delivery. Imagination and creativity were not important and they had no place; by 1917 the region had lost over 60,000 dwellings in addition to the influx of POWs. Buildings needed to be designed and constructed post haste.

Contemporary photographs survive of the camp in Crossen (figs 1 above and 3, 4, 5, 6). They show an uninteresting wooden barracks architecture, of the log cabin type, with the occasional watchtower and larger, communal building. Other than the watchtowers, which were octagonal in plan, the buildings are simple, regular, rectangular forms, utilitarian in nature. The wood is covered with a mud plaster to seal the building from the elements. One photograph pictures a group of POWs in beds arranged in a line in the yard (see Figure 3). These too are simple wooden structures. The beds have substantial, square legs, a headboard and footboard, but otherwise they are unadorned. Another photograph shows the interior of the exercise



Figure 3. The POW camp in Crossen, c. 1914–1918 (courtesy of the *Bundesarchiv*).

house (see [Figure 6](#)). It is an enormous space covered with long-span metal trusses, supported on columns that sit in the outer wall, and topped by a wooden roof. This is the most elaborate of the structures documented in Crossen and clearly was an exception. One of the strange aspects of the surviving photographs is how sanitised they are: the fences and watch towers let us know we are looking at camps of some kind but they seem clean, neat and orderly.

The excessively pedestrian aesthetic, austere in its necessary regularity, stands in stark contrast to Scharoun's immediate post-war fantasies with their

bright colours, sweeping curves and dynamic formal composition. Once Scharoun began to build, he added animated spatial organisation to his design arsenal. The freedoms of both the unbuilt, visionary schemes and the built work hark back to and amplify ideas in Scharoun's pre-war designs. Scharoun's post-First World War production can be read as the antithesis of the rigid military architecture he designed during the war but also as a strengthening of his pre-war design work.

Scharoun's war experience was different from that of other leading figures in the German *avant-garde*. Bruno Taut avoided conscription and was

Figure 4. The POW camp at Crossen showing the POWs in front of the central tower (courtesy of the Bundesarchiv).



an active anti-war agitator, penning an anti-war manifesto, *Alpine Architecture*, in the last years of the war. Walter Gropius served as a lieutenant on the Western Front; Erich Mendelsohn served on both Eastern and Western Fronts. Because he worked in a non-combat position, Scharoun did not witness the violence and degradation seen by his peers on active service. His situation did, however, place him in direct contact with the enemy, which was also unique. He would have understood the humanity of the enemy in a way that was not possible for a soldier on the front.

The inter-war years

Scharoun first replaced the dry pragmatism of the war years with a hearty optimism. He called his 1920 competition submission for a building in Gelsenkirchen 'Man is Good'. The design included a Kulthaus, 'a combination of Folks House and Ritual Building—as the centre of the existence and sentiments of the city ...'²⁸ The building combined a Theatre, People's Palace and community spaces. In the competition explanation Scharoun appears more ideological than practical. He discusses the need to create a sense of community,



Figure 5. POWs at work at the Crossen camp (courtesy of the Bundesarchiv).

'Gemeinschaft', in 1920s' Germany. He believed that the war and its aftermath, the political and economic chaos, destroyed any sense of common cause. Scharoun hoped to use this new building type to foster community feeling. He proposed to replace the building used for religious worship with a new type, one dedicated to the arts that would be the community's spiritual and symbolic centre.²⁹ His choice suggests that Scharoun may have lost faith in traditional spiritual pursuits and been disillusioned with organised religion after the disastrous war and peace settlement. Theatre, dance, music, sculpture and painting would

provide the spiritual enrichment previously offered by the church. Revolutionary arts organisations such as the *Arbeitsrat für Kunst* [Working Council for Art] in fact proposed to use art as a secular programme that would replace religion. The design indicates the utopian aspect of Scharoun's thought at the time and his willingness to consider new programmatic combinations for architecture along with new formal approaches. His openness to experimentation is not new, however. What has altered is the degree to which he is willing to stretch his imagination. The Kulthaus, and other visionary projects that followed, stretch the interest in freedom of

Figure 6. Views of the camp at Crossen (courtesy of the *Bundesarchiv*).



Figure 7. Hans Scharoun, visionary watercolour from the inter-war period. Akademie der Künste (AdK), Berlin, Hans-Scharoun-Archiv, Sign. Sch-2352.



expression to an extreme that Scharoun was either unable or unwilling to explore before the war (Fig. 7).

In 1921 Scharoun entered a competition to design a Museum of Hygiene for Dresden (figs 8, 9, 10). He called this entry 'Culture and Civilisation' in a nod to contemporary debates. By naming the museum design after both culture and civilisation Scharoun was proposing a marriage of the two concepts usually seen as polar opposites. In fact, the plan

and elevation exhibit formal tensions that reflect the ideological ones represented by culture and civilisation. Here, culture and civilisation are represented by the tension between rational and intuitive thinking. Half the plan uses the rational orthogonal planning favoured by proponents of civilisation; the other half uses an 'irrational' conglomeration of canted and curved lines. Still, the plan is largely symmetrical about two axes. The elevation is similarly odd. It appears to be a rather ordinary building

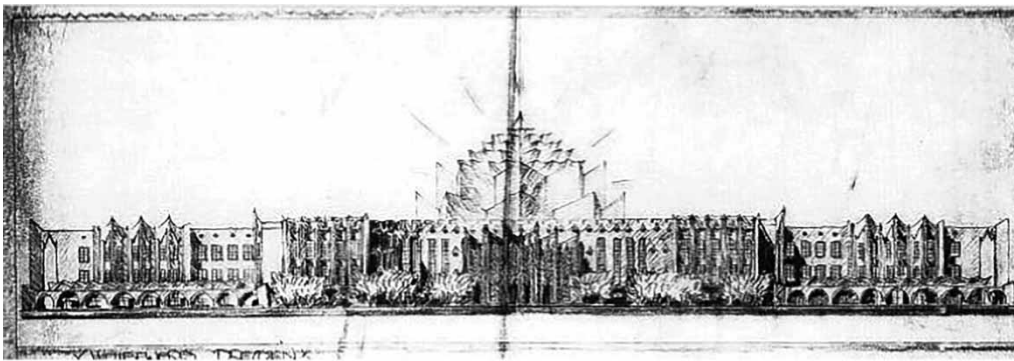


Figure 8. Hans Scharoun, design for the Museum of Hygiene in Dresden. AdK, Berlin, Hans-Scharoun-Archiv, Sign. Sch-1228, Bl. 28–1.

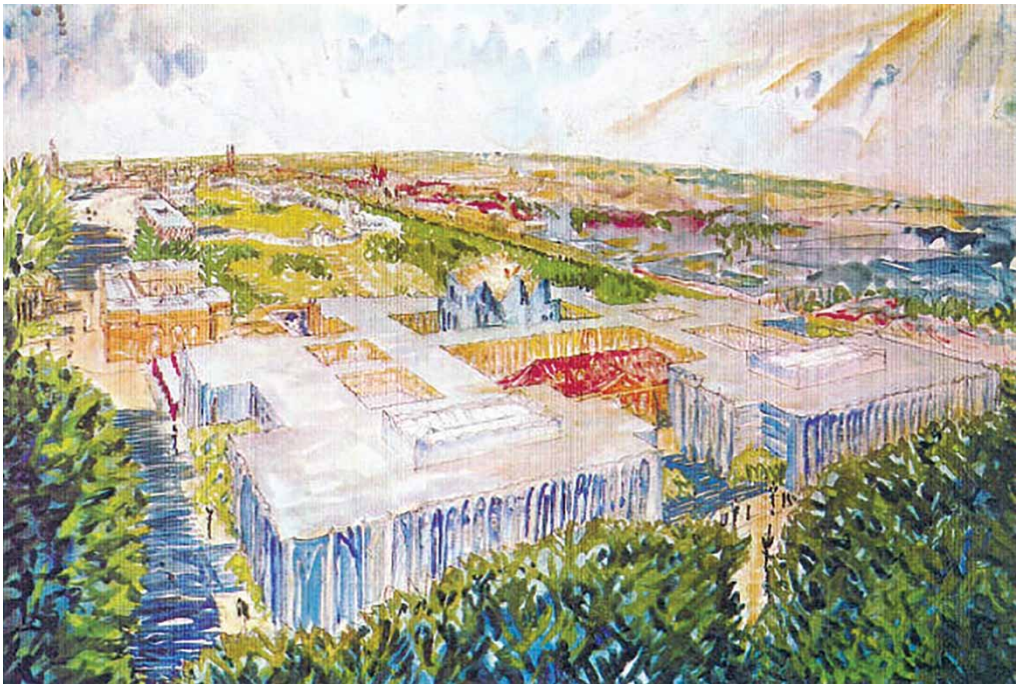
with strange projections at regular intervals along the façade, and a crystalline tower acts as a new type of cupola. The aerial perspective is more daring in its expression, which is a watercolour rendering that shows the building more as an impression than a buildable design. The drawing shows an enormous amorphous mass with an undulating façade that, unlike the elevation, is hard to read. Window and wall are melded into one almost crystal-like object that recalls Scharoun's crystalline schemes of the period. The project underscores Scharoun's interest in the combination of rational and intuitive, human approaches to design. More importantly, though, the project is an early indication that Scharoun will never embrace Functionalist methods to the exclusion of less rational aesthetic systems.

In 1920, 1921 and 1922, Scharoun participated in the Crystal Chain Correspondence with Bruno and Max Taut, Hermann Finsterlin, Walter Gropius and others. The series of letters was initiated by Bruno

Taut as a way of filling the gap during a period in which there were no architectural commissions. Utopian in the extreme, the letters imagined a new architectural future and were accompanied by sketches, watercolours and prints of visionary designs (see Figure 8). Scharoun made two types of design: crystalline structures similar to those developed by Taut in his *Alpine Architecture* and curvilinear structures like the 1921 Theatre and 1922 Music Hall called *Kultur und Alltag* [Culture and Everyday]. Scharoun's crystalline fantasies are even less believable as buildings than those drawn by Taut yet the names Scharoun gave his projects indicated his interest in designing good buildings for ordinary people. Scharoun's deeply held belief in the potential of architectural design to be humane plays an increasingly more significant role in his work after 1918.

Two crystal buildings from 1920 are labelled *Volkshausgedanke* [People's House Idea]. They are certainly influenced by the communal models for civic

Figure 9. Hans Scharoun, representative drawing, aerial perspective of the Museum of Hygiene. AdK, Berlin, Hans-Scharoun-Archiv, Sign. Sch-1228-BI. 28–11.



architecture emerging from the Soviet Union at this time. The drawings are painted in very bright watercolour. In one design, shades of blue radiate from the building, which is a yellow glass shell set inside red glass shards. A second design resembles a glass, layer cake with a red layer enclosing a blue and yellow one, enclosing the yellow crown. It radiates pink and blue light. The paintings are animated and vivid; they convey a sense of intensity and energy. Although they are visionary impressions rather than images of buildable architecture the designs are concerned with architecture's

potential to contribute to the social wellbeing of the community.

Scharoun's watercolour images for the theatre and music hall differ from other visionary schemes because of the pastel palette. Applied in gentle washes, pale pinks, purples and light yellow dominate the composition. The forms are rounded—very different from the jagged geometry of the crystal designs. Swirling rounded lines energise the space around the forms. Even the ground seems to be in motion. The materiality of these structures is difficult to ascertain. Practical details such as doors

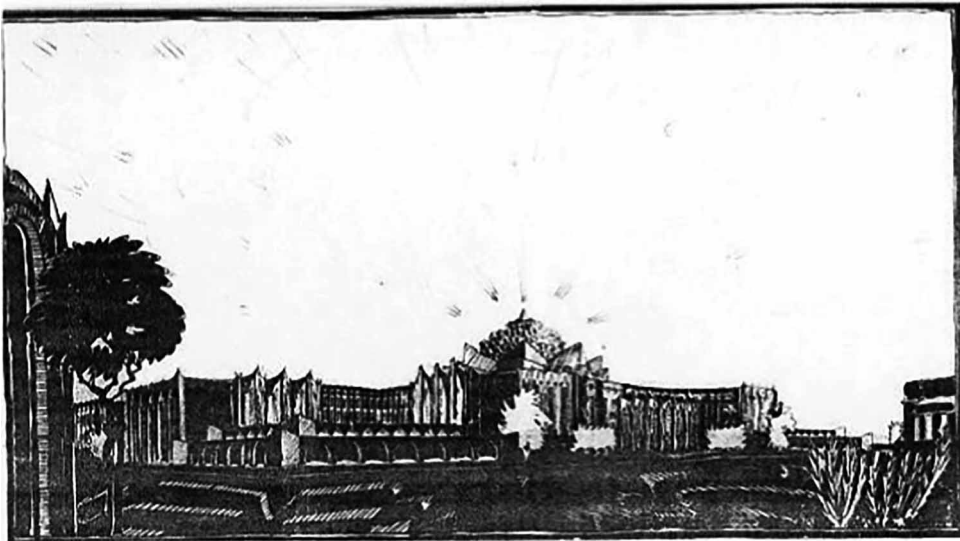


Figure 10. Hans Scharoun, perspective study of the Museum of Hygiene. AdK, Berlin, Hans-Scharoun-Archiv, Sign. Sch-1228-BI. 28–13.

and windows are not in evidence. The drawings are, therefore, intended to convey an impression of architecture rather than real buildings. The pastel colours give a sense of peace whilst the curving, gyrating lines give a sense of movement. The watercolours are pure expressions of architectural fantasy.

All of the visionary paintings and drawings are very different from anything Scharoun produced before or during the First World War yet it is possible to see them as more developed manifestations of his pre-war ideas. Years later, Scharoun asserted that his designs for the Crystal Chain were 'instead of creative implementation, creative invention'.³⁰ This, Scharoun believed, relates to 'diversity of imagination'. In other words, he was committed to formal experimentation and against formulaic design of

any kind after the war as much as he was before it. The inner introspection Scharoun advocated as a seventeen-year-old when he wrote 'the independent architect must not be governed by sensations, but by reflection' was a strong argument for freedom in design, but at that point he did not have the experience to create with the exuberance or skill he put to work in the 1920s.³¹ The work Scharoun did during the war years may have been uninteresting aesthetically but it gave him invaluable experience in many aspects of the architectural profession from client relationships to site management to finances. The highly restrictive design formulae he was forced to use during the war probably made imagination and creativity more precious in the war's aftermath: Scharoun's emphatic rejection of

any formula and embrace of free creativity makes even more sense in the context of the uninspired military architecture he spent four years designing.

Scharoun's constructed work from the early 1920s is far more practical than his competition entries or utopian designs, yet similar concerns are subtly apparent in the projects. Those he executed between 1918 and 1925 were all in or around Insterburg, East Prussia. Insterburg was isolated after the First World War when it was only accessible by a narrow land corridor that penetrated territory given to the Poles as part of the Versailles Treaty settlement. In Insterburg Scharoun designed and built a medium-scale housing project, *Bunte-Reihe* [Coloured Row], several private and manor houses, and some small-scale mixed-use buildings.³² His work from the period has been called 'unremarkable'.³³ In truth, the projects are largely straightforward, pragmatic and uninspired, but here and there are hints of the genius Scharoun would later become. The buildings are also quite different from his military projects. They are simple, rectangular blocks, with pitched tile roofs, eyebrow windows and coloured stucco façades. They were designed to be cheap and fast to construct, and to appeal to local taste.

The only hint of the plastic form-making with which Scharoun was experimenting in his un-built work appears in several undulating window and door treatments and bending building wings. Some of the eyebrow and punched windows are triangular, an odd formal choice that hints at design freedom, but overall the forms are conventional. Scharoun lifts the party walls above the roof to make an ornamental element out of a construction requirement. On the side of the walls he has made a four-pointed

star in bas-relief—a motif that recalls some of his Crystal Chain drawings. The only suggestion of Scharoun's other immediate post-war work is the name, *Bunte-Reihe*, which the development took from the coloured stucco façades, doors and windows that, unfortunately, were not preserved. The use of colour alone suggests a reaction against his wartime designs, if a muted and reserved reaction. The constrained budget in Insterburg, coupled with conservative Silesian taste, probably prohibited more daring formal experiments.³⁴

In 1925, Scharoun developed his post-war ideas in a rare and detailed text for his inaugural speech at the Breslau Academy of Fine and Applied Art. In the speech he referred to the architect's task in relation to the imagination: 'The creator intuitively forms by following an impulse, that not only reflects his personal temperament but also the times that he serves... the law that the architect serves and follows is likely only comprehensible metaphysically a priori.'³⁵ The creative process is inborn and mysterious but driven by introspection rather than external rules or formulae. By claiming that the creative impulse was 'only comprehensible metaphysically a priori' Scharoun was arguing that creativity cannot be taught, analysed or fully understood. It is not rational or scientific. The claim of rationality made for Functionalism is therefore wrong-headed.

In the same speech, Scharoun described the importance of considering light and the human being in architecture, 'two factors that do not only bring to life the space but, especially in the dynamic perspective, are important for the formation of the space'.³⁶ Light is key to visual perception since it reveals the scope and limits of space to

the eye. The human being is the agent that experiences the space. Scharoun did not develop these two lines of thinking in his speech beyond a cursory mention, choosing instead to discuss theatrical design, which he believed shared many qualities with architecture. Scharoun identified three possible approaches to stage design: 'Naturalism, Realism, and Idealism'. He defined Naturalism as the 'attempt ... to replicate nature on the stage in as accurate a manner as possible'; Realism is similar to Naturalism except that it 'stylises' nature; while Idealism 'does not come originally from nature but from the achieved impression ...'.³⁷ Through the stimulation of the viewer's fantasy, theatre conveys meaning. Scharoun lamented the abandonment of Idealism in theatre because it involved a turn away from 'emotion' and illusion, and therefore the magic of theatre. Scharoun argued that the same is true for architecture: it must stimulate the imagination in order to create feeling and to be effective. By implication, Scharoun was arguing for emotional content and fantasy in architectural design, an argument advanced by inter-war Expressionism.

In the Breslau speech, Scharoun also developed his ideas about the sensory response to architectural design. He alluded to the importance of sensory effects on architecture of quality. The first line of the speech is 'Everything that we make visible will be understood by the eyes'.³⁸ Scharoun continued to develop a critique of the visual. He explained that it was the understanding of the way the eye perceives space that led Renaissance artists to develop perspective drawing. Perspective captures the image of three-dimensions in two dimensions but it is illusionistic and therefore dangerous.

'What was once a weapon in the hands of artists slowly became fetters.'³⁹ Over-dependence on two-dimensional images, in Scharoun's opinion, led architects to deviate from consideration of three dimensions in design. In spite of the visual and experiential nature of architectural space, architectural practice had been reduced from three-dimensional space to *Schaubild* [diagram or image], which made architecture 'picture painting' rather than spatial design. Scharoun was not arguing for abandoning the engagement with the visual but for a more sophisticated use of visual perception to inform design. If the sequential visual experience lies at the heart of the development of the plan then it will necessarily be complex.

Concepts like 'experience' are vague when they are not defined. Although Scharoun does not attempt to define the term in his own essays among his collected papers, he had an essay that dates to sometime before 1945 by Dr Claussen that does address the question of experience in architecture. In *Reine Architektur* ['Pure or Pristine Architecture'], Claussen outlines a very particular understanding of architectural space.⁴⁰ Claussen emphasises the experiential nature of space, which, he asserts, is not material and not perceptible through sight. 'As Kant says: It [space] is the transcendental possibility to know our sensuality a priori'.⁴¹ Spatial boundaries are visible and often sensible to human touch but people only experience space by perceiving its limits through motion over time. Such perception is measured. The units of measure, in turn, are what bridge the gap between human movement in abstract space and architecture. Claussen's theories of spatial com-

prehension were certainly influenced by Einstein's 1905 Theory of Special Relativity, especially the notion that space and time should be considered together and in relation to one another. Claussen's assertions are also very similar to those made by Le Corbusier in 1923–1924 when he articulated the qualities of the architectural promenade. Following such a formulation, the architect would consider the sensory qualities of space through time; that is, he would design space by imagining how the visitor experienced the sequential order of spaces. After the Second World War, architects such as Juhani Pallasmaa and Sverre Fehn codified the approach under the rubric of phenomenology.

The single most evident change in Scharoun's belief system after the war seems to be his anti-technology position. Scharoun constantly excoriates machines, technology and mechanisation, a clear reaction against war machines and their destructive potential. In a 1921 speech he stated that 'The gears of the spirit must be brought to intensive work, so that booming technology in its victory lap, but also in its terrible mechanisation and the loss of intellectual power [it creates] does not crush the spiritual structure of contemporary Europe.'⁴² In 1925 Scharoun admonished an audience at the Breslau Academy of Fine and Applied Art: 'The rapid development of technology and the mechanisation of labour processes placed in the position of the universal machine, man, the special machine of steel...' which Scharoun believed had permanently altered architecture and human creativity by opening a schism between the spirit and matter. Technology here is malevolent for two reasons: it can destroy the physical body and it can kill the mind and spirit.

Because Scharoun saw spirit as the essence of architecture, technology was as much a threat to architecture as to the human being: 'Methodological seeing and the method of intellectual specialisation [because of the war] brought a lighter coping with work; but this led to the shattering and thereby the ruin of the natural universality of the creative will.'⁴³

Scharoun blamed technology and the systematic thinking learnt from the logic of the machine, especially the war machine, for a general loss of imagination. The dependence on the machine, with its rational and functional imperatives, is deadly. It stifles the imagination. He also censured mechanisation for its part in causing the separation of the arts, which in his view, had weakened all of them: 'Today there lies behind us in such technical thinking on the one hand, and technical processes on the other hand... instead of unity and combination, a shattering of the relationship between the arts...'⁴⁴ The desire to reunify the arts under the aegis of architectural practice was a cornerstone of inter-war avant-garde rhetoric. The *Arbeitsrat für Kunst*, *Novembergruppe*, Crystal Chain members and others made calls for a return to what was seen as a more integrated mediaeval model.

Scharoun's appraisal of the dangers of the machine and technology stand in stark contrast with wartime and inter-war valorisations of the soldier-warrior and the virtues of military prowess expressed by Ernst Jünger, for instance, and the pro-machine, pro-technology attitude adopted by Gropius and the Bauhaus after 1923. But Scharoun's views were not anachronistic. Other contemporaries, like the distinguished architect Hans Poelzig, also held vehement anti-technology views. Poelzig was

far more outspoken about the potential dangers inherent in technology and over dependence on it.⁴⁵

Together with his critique of the machine and technology went one of pure Rationalism and Functionalism. Both of these approaches are deficient in Scharoun's mind because they are formulaic, extrinsic and ignore human needs. Still, his disdain for the systematic side of Functionalism did not prevent Scharoun from using aspects of the method where he saw fit. Thus, he often used the rational spatial planning and open floor layout favoured by functionalists, stucco, large steel and glass windows, and inside/outside relationships. His plans for the Stuttgart *Weissenhofsiedlung* house and the Breslau *Ledigenheim* both share such an approach, as do numerous competition designs he executed in the 1920s. In each case, the layout is highly pragmatic and sensible. At the same time, Scharoun retained an inventive freedom in his work that allows him to depart from functionalist imperatives. Thus, he worked with curvilinear forms, dynamic elevation composition and complex volumes, all elements that pure functionalists rejected. The *Weissenhof* house has a curved section; the *Ledigenheim* has a curved wing, curving projected awning and curved walls extending into the landscape. Single circular windows punctuate the façades. Not only is each façade design unique but also the scale and shape of windows varies on each façade. The composition is less rational and structured than dynamic and visually enervating. In comparison with elevations he drew before and during the war, the ones he produced in the 1920s are far more free compositionally and varied but similarly dynamic.

Rationalism and Functionalism are also deficient in Scharoun's mind because they lack a connection to the human spirit; they are cold, calculating ways of dealing with the physical world rather than warm, emotional and considerate. Functionalism, or *Neue Sachlichkeit*, was to be avoided because it was formulaic and extrinsic. 'Why must everything be straight?', he asked Adolf Behne,⁴⁶ 'I believe that every line, surface, and form comes from the necessity of inner essence.' In other words, every aspect of architecture derives from the essence of the design challenge, the programmatic imperative and the client. Since every client, programme and site is different, every solution should be as well. *Neue Sachlichkeit* was also related to the machine, another reason Scharoun did not like it: 'The creator forms intuitively from an impulse, that not only reflects his individual temperament, but also the times ...'⁴⁷ Scharoun searched for the essential in every design problem—for the 'emotional/psychological' aspect, what he called 'the will to essence'. Scharoun recognised quite clearly how he was positioning himself. In 1921 he had asserted that there were two kinds of architect: 'the Rationalist and the Romantic'.⁴⁸ Without acknowledging which type of architect he was, Scharoun's attitude towards *Neue Sachlichkeit* made it apparent where his sympathies lay. It is the rational human mind that makes war machines; the intuitive mind makes art.

Scharoun only once attempted to develop a mass-production technique for design. Even here, he could not resist including some elements not inherently suited for efficient machine production. The proposal was for a transportable wooden house. The prototype was exhibited at the 1927 *Garten- und Gewerbeausstellung, GuGaLi*, in Liegnitz. Scharoun's

objective was to create an inexpensive, ideal home for the middle-class client who was employed in some trade. Rather than begin with a room count, Scharoun began with the question: what would such a client need in terms of space? He decided that flexibility was key because each client would have different needs. The system consisted of prefabricated wooden panels assembled in pre-constructed room units: living room, sleeping room, work room and so on. The system was therefore expandable and variable so that it could grow and change to meet a family's altering circumstances.⁴⁹ The changeability of Scharoun's system also meant that it could easily be deployed on different building sites.⁵⁰

Scharoun chose to work with wooden construction because it permitted the rearrangement and reattachment of sections more easily than other construction systems. He was enthusiastic about the potential for the owner to participate in the design of his home, both in the spatial arrangement and furnishing. The two pieces Scharoun included that could be deemed less rational are the terrace and sunbath; both rooms have half-circular footprints. Although they too could be prefabricated, because of their plan footprints, material would be wasted when they were made and they were slightly trickier to attach to the other parts of the house. Scharoun was emphatic about his goal for the design: to use standardisation in order to achieve the 'widest possible use of the machine for simultaneous control of technical purpose and achievement of economical conditions with the simultaneous consideration of the individual desires of the house user'. Scharoun did not like the machine better than he did immediately after the war but had realised that it might have

potential for good if utilised properly. Still he insisted on subordinating the technological possibilities to the 'individual desires' of the user.

For him, war machines are terrifying because they seem to take over and control man, robbing him of his humanity, rendering him ineffectual or worse, helpless. After the war, Scharoun repeatedly underlined his desire to design in a way that would allow men independence from objects; more specifically, Scharoun wanted 'sovereignty' for man over the material world.⁵¹ In his 1928 explanation of a single-family-home proposal he wrote: 'Strived for: Clarity and also Fulfillment. Conciseness and also richness in spatial relationships and relationships to the surroundings. Practical treatment of the necessary objects and organisation and lively treatment of the spiritual and emotional.'⁵² The statement reveals Scharoun's priorities: emotional fulfillment is a principal aim of architecture. It is necessary and inseparable from clear, thoughtful planning. Objects are also necessary but like rational organisation, they are secondary to spiritual and emotional satisfaction. The material world should serve man, not enslave him. The rigid, colourless and unimaginative planning of the POW camps is the antithesis of human-centered architecture or architecture of fulfillment.

Scharoun's architecture is not the result of outwardly imposed formulae but of inner contemplation and a response to the specific circumstances of the problem at hand. He calls this approach 'Organic Design'. For Scharoun, 'organic' does not mean related to, or derived from, nature nor does it mean solely what Louis Sullivan intended, 'the parts related to the whole', but rather it refers to Goethe's quip, *Jeder neue Gegenstand, wohl beschaut, schliesst ein*

neues Organ in uns auf ('Every new object, well examined, creates a new organ [of perception] in us'). 'Organ' comes from the Greek *organon*, which means 'organ', 'implement' or 'tool', and is related to 'intrinsic'. In other words, architecture must act as an integral part of human existence. Note the subtle difference between Scharoun's interpretation of 'organ' and Functionalism. As Heinrich Lauterbach writes, Scharoun 'does not rationalise, although his things do not dispense with rationale, he does not mechanise or organise. He creates an order ...'.⁵³ The order Scharoun invents for each project has an inner logic akin to natural logic that is not geometric or imposed from the outside. It is the opposite of the mathematically imposed order man uses to build machines and to fight wars.

Scharoun was most explicit about the consequences of the First World War for architecture in Germany in an article he wrote about the *Weissenhofsiedlung* in 1927 for *Bau und Wohnung* [Building and Flat]. In the piece, Scharoun described the war as a break that interrupted the natural course of architectural development and that altered the ways in which architects designed. Instead of the 'earlier, customary, methods [that were] regulated through life, since the war a sort of compulsory [set of] methods were introduced that certainly were not beneficial to the further development of building'.⁵⁴ Scharoun underlined the ways in which a response to economic realities and the adoption of design formulas through Functionalism altered design thinking. One significant change in the way architects think, according to Scharoun, was in 'city blocks' as opposed to building floor plans. This is problematic because good architecture

needs both volumetric, urban planning as well as human and spatial planning.

Scharoun also discussed the way in which a lack of financial resources available directly after the war hampered constructed experiments in new materials and building techniques, something that otherwise would have occurred. But in his view, the greatest damage done by the war was the 'elimination of forward thinking architects' from building commissions.⁵⁵ Scharoun wrote: '[The architect] is pushed away from practical collaboration and exhausts himself with theories.'⁵⁶ Scharoun was worried because he felt that those architects, who were most creative, most engaged with the art of design, had been pushed aside. Thus, although Germany had many serious challenges that architects ought to have addressed in an imaginative way in the immediate aftermath of the war, like a 'new attitude to the family, to servants, to the sovereignty of men over objects, to the emergence of changes in community life', German architects were restricted to the most mundane solutions, if they could engage at all. Scharoun seems to suggest that the forays into visionary architecture were a form of theory with little or no real effect on practice. He also underlined the inseparable connection that should exist between life's challenges and art.

Scharoun wrote: 'Art is not only a decorative—and thereby perhaps superfluous—byproduct of life, but the meaningful signification of man's life, the form making result ... a people that is not in the position to form its life's results in art, ceases to live'.⁵⁷ Scharoun not only emphasised art and architecture's importance to the quality of life but also their place as *the* affirmation of life. According to

this view, the rigid systems he was forced to apply in the design of POW camps during the war reflected an empty, even dead, approach since there was no art, no creativity in the work. Scharoun's post-war production can therefore be read as pure expression of the spirit and the antithesis of the rigid military architecture he designed during the war. The work responds to Scharoun's wartime experience but also develops his pre-war interests and aesthetics. The work presents an aesthetic alternative to military design but also to Functionalism and universal design formulae; and it responds to the tragedy and destruction of war by positing an uplifting role for architecture in contemporary society. Most Scharoun scholars emphasise his status as an outsider who practised an alternative modernism: understanding the role his war experience played helps advance the scholarship on Scharoun and explain both his artistic development and his unique creative voice.

Notes and references

1. Hans Scharoun, *Die gläserne Kette*, Lecture at Sender Freies, Berlin, 14th March, 1964 (Scharoun Archive, Akademie der Künste [hereafter AdK]).
2. Peter Chametzky, *Objects as History in Twentieth-Century German Art: Beckmann to Beuys* (Berkeley, University of California Press, 2010). Chametzky argues that art is representative.
3. *Hans Scharoun: Bauten, Entwürfe, Texte*, Peter Pfankuch, ed. (Berlin, Gebr. Mann, 1975) and *Hans Scharoun. Ausstellung der Akademie der Künste 5 März—30 April, 1957*, Peter Pfankuch, ed. (Berlin, AdK, 1967).
4. See J. Christoph Bürkle, *Hans Scharoun* (Zurich, Artemis, 1993) for a typical example. Bürkle argues that Scharoun's work develops from Expressionism into Organicism. Although the influences of both approaches are undoubtedly in the work, it is far too reductionist a reading.
5. Peter Blundell Jones, *Hans Scharoun* (London, Phaidon, 1995), p. 18. Blundell Jones describes Scharoun in terms similar to those used to describe the Finnish architect, Alvar Aalto.
6. *Ibid.*, p. 23. The 1995 book is totally new, but it is a reappraisal of Scharoun: in 1978 Blundell Jones published a far more modest book, *Hans Scharoun: A Monograph* (London, Gordon Fraser, 1978).
7. Max Taut, 1965, *Die Novembergruppe* (Berlin, Max Taut Archive, AdK).
8. Bruno Taut, 'Kriegs-Ehrung', *Kunstgewerbeblatt* (1915), p. 174.
9. Karl Scheffler, *Kunst und Künstler* (1915), p. 2.
10. Walter Gropius, Report to the Deutsche Werkbund, 30th June, 1919 (Deutsche Werkbund Archive 11270).
11. Jeremy Black, *The Great War and the Making of the Modern World* (London, Continuum, 2011), p. 7.
12. *Ibid.*, p. 253.
13. Modris Ecksteins, *Rites of Spring: The Birth of the Modern World* (New York, Houghton Mifflin, 1989).
14. Kenneth Silver, *Esprit de Corps: the Art of the Parisian Avant-Garde and the First World War 1914–1925* (Princeton, Princeton University Press, 1989); Michael White, *Generation Dada: The Berlin Avantgarde and the First World War* (New Haven, Yale University Press, 2013).
15. *Hans Scharoun: Bauten, Entwürfe, Texte, op. cit.*, 1975, p. 11.
16. Hans Scharoun, Lecture in Bremen 6th January, 1967 (Nachlass Scharoun, AdK Berlin; reprinted in Pfankuch, 1975, *op. cit.*, p. 10).
17. Nachlass Scharoun, AdK, Dokumente vor 1945, Mappe 2.2 and material reprinted in Pfankuch, *op. cit.*, 1975, pp. 8–12.
18. Reprinted in Pfankuch, *op. cit.*, 1975, p. 8.
19. See Eberhard Syring, Jörg Kirschenmann, *Hans Scharoun 1893–1972: Aussenseiter der Moderne*

- (Cologne, Taschen, 2007) and Ulrich Conrads, *Zeit des Labyrinthes: beobachten, nachdenken, feststellen* (Basel, Birkhaeuser, 2007), for discussions of Scharoun's position within the German avant-garde.
20. Hans Scharoun, reprinted in Pfankuch, *op. cit.*, 1975, p. 11.
 21. Nachlass Scharoun, AdK, Dokumente vor 1945, Mappe 2.3.
 22. *Ibid.*
 23. *Ibid.*
 24. 'Organisation des Hauptmann Kruchen!', Nachlass Scharoun, AdK, Dokumente vor 1945, Mappe 3.3, 1.
 25. H. Scharoun, 'Wiederaufbau Ostpreussen', Nachlass Scharoun, AdK, Dokumente vor 1945, Mappe 3.2, 1.
 26. *Ibid.*, 3.
 27. *Ibid.*
 28. H. Scharoun, '1920', AdK, Mappe 23 (unpublished).
 29. H. Scharoun, 'Gedanken zum Wettbewerb zur Erlangung von Plänen für die Bebauung der Wiese in Gelsenkirche', 1920, Scharoun Archive, AdK; reprinted in Pfankuch, *op. cit.*, 1975, p. 26.
 30. H. Scharoun, 'Die gläserne Kette', Vortrag im Sender Freies Berlin, 14th March, 1964; AdK Nachlass Scharoun.
 31. H. Scharoun, 'Vortrag in Bremen', 6th January, 1967; AdK Nachlass Scharoun, reprinted in Pfankuch, *Hans Scharoun, op. cit.*, 1975, p. 10.
 32. 'Bunte-Reihe—Scharoun in Ostpreussen', *Baunetzwoche*, #180 (2nd July, 2010).
 33. *Ibid.*
 34. The conservative taste of Silesians was the subject of many inter-war essays by Breslau-based artists and architects such as Hans Poelzig and Adolf Rading. See the Poelzig essays at the Germanisches Nationalmuseum, Nurnberg and the Rading letters in the Rading Archives, AdK Berlin.
 35. H. Scharoun, 'Inaugural Lecture at the State Academy of Fine and Applied Art, Breslau', 1925, Nachlass Scharoun, AdK; reprinted in Pfankuch, *op. cit.*, 1975, p. 50.
 36. *Ibid.*, p. 53.
 37. *Ibid.*
 38. *Ibid.*, p. 48.
 39. *Ibid.*
 40. Dr Claussen, 'Reine Architektur', Scharoun Archive, AdK. The manuscript has no date but it is among Scharoun's papers from the First World War.
 41. *Ibid.*, p. 2.
 42. H. Scharoun, 'Vortrag in Königsberg', 1921, (lecture); reprinted in Pfankuch, *op. cit.*, 1975, p. 20.
 43. H. Scharoun, 'Inaugural Lecture', *op. cit.*, p. 48.
 44. H. Scharoun, Lecture in Königsberg; reprinted in Pfankuch, *op. cit.*, 1975, p. 20.
 45. See, for example, Letter to Bruno Taut, dated Dec. 11, 1918, GN/ABK I.C. Poelzig wrote: 'Ich würde auch völlig fortlassen, weil es ganz falsch verstanden werden kann, "Die Kunst beginnt erst nach dem Technischen..."' in his objection to Taut's emphasis on technology in the Arbeitsrat für Kunst manifesto. He returns to the same subject at length in a second letter dated Jan. 23, 1919.
 46. H. Scharoun, Letter to Adolf Behne dated 11 June, 1923, reprinted in Pfankuch, *op. cit.*, 1975, p. 38.
 47. H. Scharoun, 'Inaugural Lecture', *op. cit.*
 48. H. Scharoun, 'Post am Bahnhof Bremen', 1921, reprinted in Pfankuch, *op. cit.*, 1975, p. 29.
 49. H. Scharoun, Erläuterungsbericht Transportables Holzhaus auf der GuGaLi, 1927, reprinted in Pfankuch, *op. cit.*, 1975, p. 62.
 50. *Ibid.*
 51. *Bau und Wohnung*, 1927, in Pfankuch, *op. cit.*, 1975, p. 70.
 52. H. Scharoun, 'Einfamilienhaus 1928, Erläuterungsbericht zum Wettbewerbsentwurf', Scharoun Archive, AdK, reprinted in Pfankuch, *op. cit.*, 1975, p. 75.

53. Heinrich Lauterbach, *Hans Scharoun: Ausstellung in der AdK 5 March—30 April, 1967* (Berlin, AdK, 1967), p. 8.
54. H. Scharoun, *Bau und Wohnung*, *op. cit.*, p. 69.
55. *Ibid.*, p. 70.
56. *Ibid.*
57. Cited in H. Lauterbach, *op. cit.*, p. 11.

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