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TESSENOW IN HELLERAU: THE MATERIALISATION OF SPACE



Gerald Adler
February 2004

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KENT INSTITUTE
OF ART & DESIGN

TESSENOW IN HELLERAU: THE MATERIALISATION OF SPACE
by Gerald Adler

Submitted to the Research Office of the Kent Institute of Art and Design on 27 February, 2004, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in the field of History of Architecture.

ABSTRACT

Germany's first Garden City was founded at Hellerau in 1908; it represented different aspects of the Reform movement, and was a remarkable coincidence of progressive manufacturing (Karl Schmidt's *Deutsche Werkstätten* furniture factory), housing and urban design (masterplanned by Richard Riemerschmid with significant contributions from Hermann Muthesius and Heinrich Tessenow) and cultural innovation (the *Festspielhaus*, promoted by the patron Wolf Dohrn who commissioned Tessenow) where the Swiss musical pedagogue Emile Jaques-Dalcroze established his school of eurhythmy.

Tessenow's work, in the form of executed buildings, drawings, and writings, forms an architectural corpus which concludes many nineteenth-century concerns and lays the foundations for much of the technical and aesthetic agenda of the *Neues Bauen* of the 1920s and beyond. His nineteenth-century inheritance is emphasised by considering his work as a series of dialectical pairings representing the fundamental 'spirit' and 'matter' discourse of that era. The focus on 'space' and 'matter' of the late 1800s becomes the theoretical engine of the analysis of Tessenow's work: in terms of 'light' (the 'light box' of the *Festspielhaus*) and 'fabric' (the aesthetics of flatness aided by Tessenow's patented wall construction); 'the grid', where his work is related to contemporaneous concerns of Behrens and Lauweriks, and 'the everyday', which concludes with the parallel of his 'ordinary' designs with Muthesius's encouragement of 'the type'.

Tessenow's architecture is interpreted as a critical development of Gottfried Semper's 'Four Elements', and it is here that the overly simplistic dialectic of 'spirit' and 'matter' is found wanting, particulary as concerns the Semperian 'hearth' element. The thesis concludes by charting Tessenow's changing critical reception throughout the twentieth century against its key architectural staging posts, and suggests that the lesson we might learn from him is to adopt a Humanist outlook incorporating an ethos both materialist and 'spiritual' in outlook.

Thesis Supervisor: Frederic F. Schwartz; initially Iain Boyd Whyte

Archaischer Torso Apollos

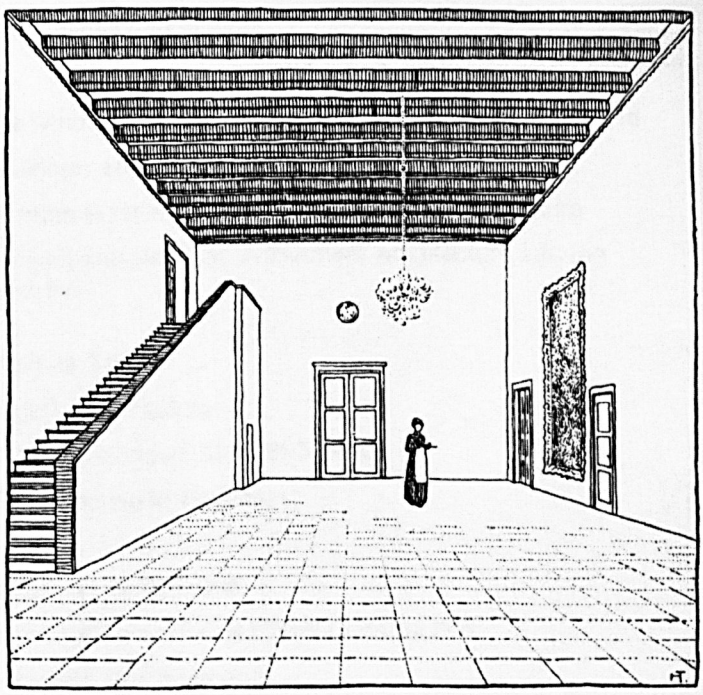
Wir kannten nicht sein unerhörtes Haupt,
darin die Augenäpfel reiften. Aber
sein Torso glüht noch wie ein Kandelaber,
in dem sein Schauen, nur zurückgeschraubt,

sich hält und glänzt. Sonst könnte nicht der Bug
der Brust dich blenden, und im leisen Drehen
der Lenden könnte nicht ein Lächeln gehen
zu jener Mitte, die die Zeugung trug.

Sonst stünde dieser Stein entstellt und kurz
unter der Schultern durchsichtigem Sturz
und flimmerte nicht so wie Raubtierfelle;

und bräche nicht aus allen seinen Rändern
aus wie ein Stern: denn da ist keine Stelle,
die dich nicht sieht. Du mußt dein Leben ändern.

Rainer Maria Rilke, *Neue Gedichte* (Frankfurt/Main: Insel Verlag, 1907)



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ACKNOWLEDGMENTS

I owe a debt of gratitude to Malcolm Higgs, former head of the Canterbury School of Architecture, for encouraging me to begin this study in the first place. I am grateful to the RIBA and the Leverhulme Trust for their research award to me in 1997 which enabled me to begin my research.

At KIAD Canterbury I am grateful to Charles Neale for his careful reading of my draft text, and for his helpful criticism. Brian Wood and Anna-Marie Caggiano have been particularly supportive in the final production stages of the thesis. The Library, under the stewardship of Kathleen Godfrey and with the particular assistance of Nick Ross, has been unstinting in its support. I appreciate the assistance of the Kent Institute of Art and Design in order to research this subject.

In Berlin, Fabian Zimmermann and Theo Böll have been kind enough to give up their time to assist me. Catharina Kunze has offered invaluable linguistic advice, and has been particularly helpful in deciphering many of the original archival manuscripts. Otto Kindt in Hamburg provided a direct link for me back to the later years of the Weimar Republic. I am grateful to Valentin Hammerschmidt, professor at the *Fachhochschule* Dresden, for his enthusiasm and assistance.

Richard Beacham at Warwick has been most helpful in enlightening me as to the significance of Appia and Dalcroze. The libraries of the RIBA, the Goethe Institute, London Metropolitan University and Birkbeck College, as well as the British Library, have been a second home to me. In Berlin the archive of the *Kunstbibliothek*, and in Nuremberg that of the *Germanisches Nationalmuseum*, have provided me with much material, and I am grateful to Theo Böll and to Klaus Pese for their kind assistance. Vladimir Raitz in London undertook a careful reading of the final draft, and pointed out infelicities of expression.

This thesis would have never have materialised without the expert guidance of my supervisors, originally Iain Boyd Whyte, and latterly Frederic J. Schwartz. Their expertise, nous and enthusiam were crucial in guiding me at all stages of the research, and in getting me to complete.

This thesis represents a good few years of my life, in an endeavour that has been intellectually challenging, architecturally rewarding, as well as immensely time-consuming. So finally to Lucy, Hannah and Rebecca I owe a massive thank-you for your patience, forbearance and support.

Gerald Adler

Canterbury
February 2004

CHAPTER ONE

(i) INTRODUCTION

Virginia Woolf said that "in or about December, 1910, human character changed".[1] In the first decade of the twentieth century, commentators were not content merely to observe change, they positively invited it to occur. The German-language poet Rainer Maria Rilke provides one of the clearest and most articulate voices for change in his 1907 poem 'Archaic Torso of Apollo':

> We never knew his legendary head
> nor saw the eyes set there like apples ripening.
> But the bright torso, as a lamp turned low
> still shines, still sees. For how else could the hard
>
> contour of his breast so blind you? How could
> a smile start in the turning thighs and settle
> on the parts which made his progeny?
> This marble otherwise would stand defaced
>
> beneath the shoulders and their lucid fall;
> and would not take the light
> like panther-skin; and would not radiate
>
> and would not break from all its surfaces
> as does a star. There is no part of him
> that does not see you. You must change your life.[2]

The poem talks of the epiphany achieved on seeing a great work of art. It acts as a rallying call for us to shake off the confines of ingrained behaviour; as such it is perfectly attuned to its audience's predisposition to the ideas and strivings of the various reform movements (*Reformbewegungen*) active in Europe in the early years of the twentieth century. The poem takes on added depths of meaning when we consider the image of antique stone forms becoming luminescent, and translate this, in architectural terms, into a reinvigorated classicism which, with the admixture of electricity, manages to become a beacon of light.[3] As we shall see, Rilke, sitting in the auditorium of Heinrich Tessenow's Festival Hall in the Garden City of Hellerau, just outside Dresden, in 1913, was privileged to experience just such a 'glowing formalism' with all his senses, as a space presaging change in the architectural world.[4]

This thesis posits that the architect Heinrich Tessenow made an outstanding contribution to the development of architecture in Germany in the twentieth century. His contribution was one consistent with the key themes of the nineteenth century, whose son he was. He is, though, a typical figure of the early twentieth century in two respects: the extent to which he was an auto-didact,[5] and his broad engagement with the wider public through writings and drawings. (The quality of his drawings alone would ensure his place in architectural history.) His lack of formal education is compensated by his extensive craft training; yet because of this his writings lack engagement with the architectural discourse of his day. One searches Tessenow's writings in vain for any reference to his contemporaries. Names such as Schmarsow, Riegl, Behrens, Fischer *et al.* are all absent from his writings. One of his assistants, Otto Kindt, in conversation with the author, has attested to his refusal to be drawn into personalities: Tessenow was the very opposite of a name-dropper.[6] While this may be refreshing from our vantage point, it nonetheless puts an increased onus on the historian to interpret his relationship to the established theory and practice of the day. After the summary of the thesis we shall therefore pause to consider the various media which Tessenow enlisted in order to communicate his architecture.

1. SUMMARY

The first half of Chapter One sets out the scope and the methodology adopted in this thesis. The primary sources referred to as evidence substantiating the thesis are the various works of Heinrich Tessenow: his executed buildings, his writings, and his drawings. The idiosyncracies of his writing and drawing styles are highlighted, and their relationship to those of his contemporaries is mentioned. We continue in the second half, 'Tessenow and Hellerau', to locate the architect within the main locus: the Garden City of Hellerau, Dresden. This paints a broad picture of various strains of the Reform Movement as it impinged on the design of the Garden City, and introduces the key figures who played the major roles in establishing Hellerau: the patrons Karl Schmidt and Wolf Dohrn, and the architects Hermann Muthesius, Richard Riemerschmid, and Heinrich Tessenow. The millenarian aspirations of the protagonists are highlighted, and, on the sidelines, the

future Le Corbusier pays a fleeting visit. This section, unlike the rest of the thesis, is written in the first person. It offers a necessarily subjective account of the author's first encounter with Tessenow's work and with Hellerau, and was written at the outset of the research before its precise parameters had been defined.[7] It is therefore naïve, but not falsely so, expressing the author's enthusiastic assertions whose task the main body of the thesis, written impersonally, is to test and substantiate. It is the starting point of a journey whose culmination you now have in front of you.

Chapter Two, '*Geist und Materie*', sets the dualistic tone at the core of the study. It characterises nineteenth-century German architecture as a dichotomy of space and material, emblematic of Hegelian 'spirit' and 'matter'. The contribution of the main architects and theorists early in the century, such as Schinkel, Hübsch, and Bötticher, is related, and the three key texts of the 1890s, of Hildebrand, Schmarsow and Lipps, are exemplified. The varieties of architecture designed in the Wilhelmine period are examined. Gottfried Semper's seminal thought is analysed for its influence on turn-of-the-century architectural development, while his 'Four Elements' are given a new interpretation. This develops a critical reading of Reyner Banham's book *The Architecture of the Well-tempered Environment.*

Chapter Three, 'Light and Fabric', begins by exploring the various ways Tessenow worked with the theme of light in his designs. A detailed presentation of his cooperation with the lighting engineer von Salzmann, the stage-set designer Appia, as well as with the eurhythmics teacher Jaques-Dalcroze, ends by considering Hildebrand's theory of relief sculpture in the light of Worringer's ideas in his book *Abstraction and Empathy.* In the second part we consider the materialist side of Tessenow's architectural duality. The notion of architectural flatness introduced at the end of the previous section is developed, and the reading of Semper's 'hearth' element is fleshed out in respect of Tessenow's considerations of environmental design.

Chapter Four, 'The Grid and The Everyday', completes the dualistic survey of Tessenow's work with a consideration of his use of grids, representing idealised 'spirit', and concludes with an interpretation of his place within the Werkbund discourse of the 'everyday'. This relates his architectural expression to Wilhelmine concerns of, *inter alia*, domesticity, banality, *Heimat*, and finally the 1914 debate between van de Velde and Muthesius concerning

the competing values of 'type', representing 'design', and the 'artistic' individual.

Chapter Five, 'The Historiography of Tessenow', charts the architect's reception and changing fortunes as the twentieth century progresses. In doing so it inevitably offers a commentary on architectural historiography *per se*. The Epilogue offers a hopeful interpretation of Tessenow, and prepares the ground for a neo-Humanist re-evaluation of his contribution to architecture. The touchstones include Robin Evans's scepticism regarding the selective myopia of architectural fashion, and Richard Rorty's pragmatism as both a challenge to, and embracing of, aspects of Continental philosophy.

2. TESSENOW AND REPRESENTATION

The methodology of this thesis involves studying all the 'media' employed by Tessenow in communicating his architecture: his realised buildings, his writings, and his drawings. As such, we are made keenly aware of the *mediated* nature of his work, communicated through the agencies of text, photography, and drawings. All three are, in effect, *doubly* mediated, as they require the agency of a publisher to be brought into the public realm. Understood thus, the methodology of the thesis fits into the popular scheme of a post-modern, post-structuralist history, where the subject matter is intimately bound up with the medium of communication itself.[8]

Studies in architectural history are bound to use images; what is an innovation in recent history writing is the understanding both of the fallibility of such images as a repository of 'historical truth', as well as the demotion of the image as mere objective illustration. The historian Peter Burke, in his short but compelling book *Eyewitnessing*, has written:

> Traditionally, historians have referred to their documents as 'sources', as if they were filling their buckets from the stream of Truth, their stories becoming increasingly pure as they move closer to the origins. The metaphor is a vivid one but it is also misleading, in the sense of implying the possibility of an account of the past which is uncontaminated by intermediaries. It is of course impossible to study the past without the assistance of a whole chain of intermediaries, including not only earlier historians but also the archivists who arranged the documents, the scribes who wrote them and the witnesses whose words were recorded. As the Dutch historian Gustaaf Renier (1892-1962) suggested half a century ago, it might be useful to replace the idea of sources with that of 'traces' of the

> past in the present. The term 'traces' refers to manuscripts, printed books, buildings, furniture, the landscape (as modified by human exploitation), as well as to many different kinds of image: paintings, statues, engravings, photographs.[9]

The traces of Tessenow's architecture exist in his writings, his drawings, and in photographs. They exist, too, in our experience of the buildings today, as the art historian Paul Frankl wrote, "a trace of the vanished life remains behind in a building to the extent that the purpose is incarnated in the form of a space".[10] This author has spent much time experiencing the buildings in question at first hand, as well as speaking to people with direct knowledge of Tessenow himself, in order to present as direct and 'unmediated' a response as possible to his work. In this, he concurs with the late Robin Evans, who believed that

> a work of architecture is more than the sum of its representations. Is this to glorify the architectural object, putting it in a position unattainable by photographs, drawings and writings? No, because pictures and words are always less than what they refer to. Referential art is, by its very nature, reduced from its referents. Thus to say that a building is more than its pictures is not to say that it is more *art-like* than its pictures. It does suggest that it is more difficult to make a building art-like than a picture because the perceptions of the building are *more* in themselves but *less* manageable, less capable of full orchestration.[11]

The rise of the representation, the privileging of image over object (the immaterial over the material) is one outcome of the sway post-structuralist thought has had on architectural history in recent years. (Images *do* have material presence, although they have become progressively dematerialised with the advent of electronic forms of media.) As Evans has written, "[t]he new prejudice is obtained by overturning an old one: if speech is now judged to be neither prior to nor more authentic than writing (as previously supposed), then privilege drawing instead. Such reversals of fortune have practical consequences. In the case of architecture it fortifies an already ensconced Platonism, whereby ideas lose vitality as they put on weight."[12]

Tessenow's orthogonal drawings conform to the standard trio of plan, section and elevation of his day. Although Auguste Choisy (1841-1904) began to draw in isometric, a projection which had to await the aftermath of the First World War for its avid take-up by the architectural profession, Evans was

> unable to find any modern architect or critic expressing serious opposition to architectural projection as evolved in tandem with classical architecture.[13] The set of drawings comprising plan, elevation, and section were not identified as part of the problem and so continued as working desiderata of the profession. On the other hand, as we have already seen, modern painters attacked perspective vociferously, dubbed it a mere convention, removed evidence of it from their work, and claimed that vision itself was not perspectival. For them the dominant means of representation was an issue, for modern architects apparently not.[14]

Tessenow's architectural drawings never succumb to the 'soullessness' of the decentred planimetric, as favoured by avant-garde modernists of the 1920s such as Oud and Hilberseimer.[15] His representations are always carefully considered with regard to his ultimate audience. Technical drawings, for Tessenow, have one particular audience (see his disquisition on carpentry, '*Zimmermanns-arbeiten*'), photographs of the dematerialised Dalcroze Institute performance space another. For Tessenow, neither text, drawings (technical and presentation), nor photographs had precedence over the other. Buildings were both technical artefacts, as well as artistic creations. This is in marked contrast to the situation which prevails at the start of the twenty-first century, where the emphasis of building assembly over construction has tended to "a bifurcation of design into uninhibited expression and laborious technicality."[16] According to Robin Evans, "[e]veryone knows that art is more than technique; but art must involve technique as more than an obedient instrument of intention, otherwise the accomplishments of art will not transcend intentions either, in which case there would be little point in venturing further than intentions."[17]

By the late Wilhelmine era Tessenow had achieved fame not only because of his buildings at Hellerau, but also because of his exquisite drawings which had been published in the technical and popular press. Perhaps the most influential critic of the day was Karl Scheffler, who, in his essay of 1917 'Architectural Drawings' ('*Architekturzeichnungen*'), praised Tessenow's drawing style not just for its inherent grace, but also for its implicit echoes of his architecture of reticence:

> Viewing Tessenow's architectural drawings one becomes aware to what extent our architects have lost the capability of communicating forms of architecture through compelling drawings, how they have lost the art of drawing altogether. I am not able to name a single architect who is able to draw his designs and plans so plainly, and at the same time so artistically. From this one should not conclude that Tessenow is exceptionally gifted

> when it comes to drawing; he simply draws so much better, more clearly, more sensitively, more artistically than others, because he builds more clearly and sensitively. Both the art of building and the art of expressing architectural ideas through drawings belong together and have a reciprocal effect on each other.[18]

Scheffler's description of Tessenow's drawing style is so apposite that it is worth reproducing his essay in full (see Appendix F). Scheffler draws attention to Tessenow's reduction of drawing elements to just two: dots and dashes. This puritanical palette succeeds in communicating an astonishingly wide range of architectural facts: material, scale, rhythm, construction, etc:

> In a remarkable manner this art of drawing, which is so alien to the T-square, is master of the secret of expressing materials with nothing at all. Tessenow works only with dots and dashes. However, with these means he knows how to render plastered and masonry surfaces, brickwork or timber, fabric and metal. He only needs his playful draughting-pen to suggest trees and lawns, and always gives extracts of them. His drawings are sensitive, verging on the idyllic, but are never sentimental; they are full of atmosphere, but are also so matter-of-fact that one could build from them.[19]

That Tessenow does so without falling into the trap of *l'art pour l'art*, of valuing the representation over the executed building, is a remarkable accomplishment. This is not to say that the drawings are not beautiful artefacts, or that they lack a discernible style: they remain clearly identifiable as bearing Tessenow's signature: "The economy of these works is singular; their modesty indicates great artistic self-confidence. The drawings are full of tenderness, but never weak; they are curt, but exhaustive withal; they are spatially conceived, yet they never strive for naturalistic illusions. With thrifty black and white suggestions air, light and colour are indicated."[20] Tessenow's representations nonetheless differ from the drawing style of other progressive architects such as Olbrich, Wagner, Behrens *et al.*, who favoured full-bodied Beaux-Arts orJugendstil renderings (cartoon-like in Olbrich's case). Possibly by virtue of their ubiquity, these drawings tend towards a stylisation of architectural effects, one which emphasises decorative detail over the architectural whole.[21]

Tessenow's drawings do not fall into the trap of attempting to keep up with the fashions of architectural renderings; in fact, there is very little discernible development in his drawing style at all, so that a drawing of 1905 is no different in kind from one of, say, 1935. In a sense Tessenow was slightly

behind the times. His drawing style, composed of Scheffler's 'dots and dashes', may be viewed as an architectural version of pointillism; Olbrich's busier drawings, on the other hand, have a relationship with early expressionist painting which succeeded pointillism. Yet the end result, as described by Scheffler, has an intimate and necessary relationship with Tessenow's conception of architectural surface and space.

It was a superficial gloss of Scheffler's to characterise Tessenow's drawings exclusively as comprised solely of 'dots and dashes'. Many do conform to this description; equally, many are straightforward exercises in straight-line drawing with obvious recourse to T-square and set-square. His earliest extant drawings are executed in this manner; these are interspersed with much more 'free' drawings, such as 'Study of a Village Church' (1903), whose luxurious sweeping roofs have a line density approaching that of an etching. **(Fig. 1.1)** In the same year, but executed in a free but hard-line manner in order to accentuate the scheme's monumentality, is his 'Bismarck Tower'. **(Fig. 1.2)** The ashlar masonry construction of cyclopean dimensions is forcefully depicted, and the pair of dwarfed figures emphasises the staircase's epic scale. It is, incidentally, in 1903 that Tessenow's monogram of interlinked initials makes its first appearance on drawings. Drawing types range from basic plans, sections and elevations, to perspectives and isometrics. An early instance of the latter is to be found in his 'Conjoined Single-Family Houses, Neu-Dölau near Halle/Saale' of 1905. **(Fig. 1.3)** This has an almost photographic realism in its depiction of both building and garden materials, and shadows.

Tessenow's drawings of room interiors have the quality of giving the viewer the immediate senstaion of being in the space. A relatively early example, 'Living Room' (1908), combines simple bold outline of window frames, chair, table and painting with a close-patterned wall and ceiling paper design. **(Fig. 1.4)** Intriguingly, the junctions of walls, and walls and ceilings, are merely suggested by the perspectival disjuncture of surface pattern: here, no 'line' at all is used to denote the change of plane. This drawing, like so many others of Tessenow, manages to convey the inhabitation of spaces without recourse to the inclusion of figures (which he rarely employed). Instead, the 'trace' of human presence is felt: in this case, the open casement, the child's doll precariously lying on the edge of the table, next to the pair of scissors and the cotton-reel. The economy of expression in this

drawing, the paring-down of line in order to convey the quintessence of a scene, is shot through the whole of Tessenow's architectural production. His drawings manage to be charming without the cloying detail of, say, his Swedish contemporary Carl Larsson, whose illustration 'Mama's and the little girls' room' of 1897 depicts a *Biedermeier*-esque bedroom not dissimilar to Tessenow's designs of the early 1900s. **(Fig. 1.5)** Nonetheless, the inclusion of the girls themselves leads to a strong narrative being read into the drawing which colours the space too emphatically for it to qualify as a 'design' drawing.[22]

If there is something terse and pared-down about Tessenow's drawings, then similar adjectives could be applied to his writings. Walter Jessen, writing in the *9H* magazine special number 'On Rigour' which dealt at length with Tessenow, has said of his laconic writing style: "Now we have become accustomed to a new typography. The modern graphic layout forces the maximum intellectual content onto the smallest possible area. It leads to an all too rapid devouring of a flood of information. As a result there is the danger of putting a book down too easily with a sense of dissatisfaction. For this reason, a word of advice and a plea: read the individual sections slowly and with intervals. Only in this way will you do justice to Tessenow. Only then will you grasp the poetry of his descriptions, and only then will you sense his occasional secret smile and uncover the philosophy behind his words."[23]

Karl Scheffler commented on Tessenow's reticence when he wrote that his love of life "turns the silent architect, whom the age prefers to ignore, into a teacher and educator of his nation, without his seeking ambition and influence."[24] His words of 1917 end this introductory section. Having had a foretaste of this 'silent architect', in particular of his means of representation, we will now in the following section acquaint ourselves with Hellerau, whose ideal was to remain with Tessenow for the rest of his life.

(ii) TESSENOW AND HELLERAU

1. CHILIASTIC SPACE

One late November day, a few years after the fall of the Berlin Wall, I was taken on a trip around Dresden to see some of the architectural sights. Until then, Dresden for me had been a Baroque city, the city of Pöppelmann's Zwinger and of Semper's Opera House, as well as the shattered city of the final months of the Second World War. What I was taken to see changed my view of Dresden. We drove a few miles north out of the centre and arrived at Hellerau, Germany's first garden city, preserved as if in dusty aspic from the ravages of the Weimar Republic, the Nazi interregnum and finally the years of the SED's grip over East Germany.[25] Here was Richard Riemerschmid's furniture factory, looking like a derelict Bavarian farmyard, and up the hill the gaunt face of Heinrich Tessenow's *Festspielhaus*, still in use as a barracks by the retreating Red Army, with its red star in place high up in the gable which had replaced the original black and white yin-yang symbol decades earlier. **(Fig. 1.6)**

The uniqueness of the place impressed itself on me, and the obvious disparities of style of its architecture impelled me to undertake this study of its origins and its significance for the course of architectural history. The conjunction of theory and practice, the convergence of people driven by engagement with the world, on the one hand, and reflection on the world, on the other, forced me to consider the nature of architectural discourse *per se*, in particular its rôle in defining the parameters of architectural practice.

Architectural debate at both the theoretical and practical levels has frequently been conducted with the protagonists split between the camps of the traditionalists and the iconoclasts, with the former group building on historic precedent, and the latter rejecting it. When an ensuing change in architectural taste seems to occur in parallel with similar developments in society at large, we say that nothing short of a paradigm shift is taking place in the entire culture of the society in question. Such were the claims made of the nascent modernism in Western Europe by its later apologists such as Sigfried Giedion and Nikolaus Pevsner. One hundred years ago, at the turn of the twentieth century, the debate was arguably conducted most intensively in Germany for a variety of historical reasons.

In Germany, at the turn of the century, it was apparent that advances in social, artistic, scientific and technical life were occuring at a pace that the more optimistic of observers could not fail to call utopian. As far as architecture is concerned, it was the young avant-garde of architect-artists who needed the fact of a new building type on which to project their dreams. Such a building type was finally provided by Bruno Taut in the form of the *Stadtkrone*, an idea which would spawn a variety of practical and visionary projects in the following decades. [26] **(Fig. 1.7)** (The *Stadtkrone*, it must be pointed out, was not a utopia *ex nihilo*, but was very much the product of a critique of capitalism, industry and technology born of the horrors of the First World War.) But the utopian and necessarily vague notion of the *Stadtkrone*, with its connotations of hopeful optimism, would be balanced by the perennial archetype of the dwelling. It is the combination of the two poles of social and architectural ambition which would characterise the ensuing struggles in the twentieth century, leading to the Rationalists' dualism of fabric and object, as expressed so elegantly by Aldo Rossi in the 1960s.[27]

Of course, this polarity of fabric and object, this play of the unique and the ubiquitous, has long been present in urban developments with the one-off monumental building juxtaposed with the much more numerous forms of housing. It is instructive to examine entirely new urban developments in order to gauge the balance between these two poles at any particular time in history. At the start of the twentieth century it is to the new 'urban' form of the Garden City that we need to look.[28] Here we will find the play between centre and periphery characterised by the monumental type of the *Stadtkrone* together with the more generalised forms of housing.

Although by the end of the nineteenth century numerous garden suburbs and residential areas funded by philanthropic industrialists had been founded in Germany, it took the establishment of *Gartenstadt* Hellerau in 1908 to qualify as the country's first proper garden city. Hellerau, though founded by an enlightened factory-owner, does not rely exclusively on the one form of manufacture for its *raison d'être*. Its housing is offered to sections of a wider community than merely that of the local factory's employees. In addition to the existence of the relatively autonomous spheres of both housing and employment it is the third factor, that of a strong local cultural function, which gives Hellerau its claim to be a holistic and organic attempt at a Garden City.[29]

Almost one hundred years ago the German architect Paul Mebes edited a book with the title *Um 1800*, a book which sought to identify a golden age of German culture at the turn of the nineteenth century.[30] Here the classical qualities of simplicity and refinement which would lead to the homeliness of the *Biedermeier* in the 1830s were fêted. The stress was on the domestic, and one particular house was to stand for the typical *Ur-Haus*: Goethe's Summerhouse in Weimar. This seminal building was regarded as being rooted in Germanic *Kultur*. In the early decades of the twentieth century it began to lose its neutrality and grew to be emblematic of a new self-conscious tradition which found itself pitted against a nascent modernity, a battle which would seek to polemicize values of *Kultur* against those of *Zivilisation*.[31] These were the terms which represented the ideals of, on the one hand, community and on the other, society, expressed by Ferdinand Tönnies in his book *Community and Society* (*Gemeinschaft und Gesellschaft*) of 1887.[32] These conflicting ideals would come to a head in the latter years of the Weimar Republic with, in particular, the design of the Weissenhof *Siedlung* in Stuttgart in 1927, together with its 'counter-project', the *Kochenhofsiedlung*. Here, the solid Germanic houses of a Schmitthenner would be contrasted with the flat-roofed 'alien' forms - reminiscent of a Jerusalem suburb, according to its detractors - of the houses of Mies van der Rohe, Le Corbusier, Oud *et al.*[33] But let us remain firmly within the confines of the first decade of the new century, before the great rift in values that was to occur in the wake of the First World War. In this innocent period culture and community were still regarded unambiguously as positive attributes, with the novel form of the Garden City their architectural embodiment.[34]

The status of Hellerau near Dresden as Germany's first - and most comprehensive - example of a Garden City was due entirely to the meeting of two remarkably driven Dresdeners in 1906. Karl Schmidt was an ambitious industrialist, and owner of a small but flourishing furniture factory in Dresden. His philanthropy extended to his concern for the welfare of his workforce, in terms of their material well-being and their spiritual and cultural growth.[35] He was to become one of the founding members of the *Deutscher Werkbund*, and represents the pragmatic aspect of Hellerau concerned with material progress. Schmidt's factory was located in cramped premises in Dresden; expansion of the enterprise gave rise to the planning of a new purpose-built factory for the re-named *Deutsche Werkstätten* on virgin land in the woods

and heathland in the vicinity of the *Dresdner Heide*, some six kilometres to the north of the city centre.

If Schmidt represented the *nouveau riche* enterprising German, then Wolf Dohrn symbolised his counterpart, the culturally progressive man of inherited wealth. Dohrn was the son of the distinguished biologist Anton Dohrn, who had founded the *Stazione Zoologica* in Naples. Wolf's boyhood was spent in Naples, but at the age of eleven he moved to Germany for his secondary education, culminating in his university career with a doctoral dissertation on Goethe's *Werther* in 1906. At this period in his life Dohrn came under the sway of Friedrich Naumann, one of the leading figures of political and cultural liberalism in Wilhelmine Germany. Dohrn's inherited wealth enabled him to devote himself to Naumann's cause, and he became in effect his secretary and was instrumental in publicising his views, resulting in Naumann's success in becoming the parliamentary member for Heilbronn in 1907.

Some years earlier Naumann had founded the weekly political, literary and artistic journal *Die Hilfe*, through which he had made the acquaintance of Schmidt. During the years 1906 and 1907 Naumann was the catalyst acting upon Schmidt, the practical man of action, and Muthesius, the rising architect with civil-servant credentials recently returned from surveying England's pre-eminence in the field of design. The result was the founding of the *Deutscher Werkbund* in 1907, with Dohrn as Secretary (1907-1910), using Schmidt's *Deutsche Werkstätten* premises as the association's head office.

The patronage of Gartenstadt Hellerau having been established, it now became important to appoint the architects who were to work on the masterplan and design the housing and individually commisioned buildings. Richard Riemerschmid of Munich emerged as obvious choice for the post of masterplanner. He was both a renowned architect and designer sympathetic to the modernising Arts and Crafts ethos which the future *Werkbund* would espouse, and was moreover linked to Karl Schmidt both personally (they were to become brothers-in-law) as well as professionally through the *Werkstätten* enterprises in Munich and Dresden. Riemerschmid was directly commisioned by Schmidt to design the factory buildings of the *Deutsche Werkstätten*, and he was in addition the architect of the first terraced houses of Hellerau located in the street named *Am Grünen Zipfel*. **(Fig. 1.8)** Riemerschmid's work at Hellerau has all the romantic elements associated with the southern German Arts and Crafts style, ranging from its sinuous, 'organic' site planning, through

to its picturesque massing and quaint details. His rôle as masterplanner, as well as his subsequent important position on the Garden City's influential *Bau- und Kunstkommission* (Building and Art Commission), ensured that his views regarding the appropriateness of development in Hellerau would prevail.

Hermann Muthesius is the second of the three main architectural protagonists associated with the design of Hellerau. His seven year visit to England around the turn of the century, culminating in the widely read book *Das englische Haus*, provides the vital link with English theory and practice in both garden city design and overall architectural stylistic development.[36] Both his terraced and one-off commissioned houses represent Hellerau's most English buildings in terms of architectural language.[37] **(Fig. 1.9)**

Heinrich Tessenow completes the trio of architects primarily responsible for the development of Hellerau. He represents the youthful challenge to the received style of Anglo-German Arts and Crafts architecture as practised by Muthesius and Riemerschmid. **(Fig. 1.10)** Tessenow's background was similar to that of Karl Schmidt's: his solid craft-training and largely autodidactic design education helped cement their mutual understanding, once they had been introduced by Martin Dülfer in 1906. Dülfer was the Munich architect in whose office the young Tessenow had worked during the years 1900 to 1902, at the same time as attending lectures in architecture at the *Technische Hochschule*. After 1902 Tessenow left Munich in order to teach in Mecklenburg and Lower Saxony, and finally to practice in Trier. The West German experience of designing modest terraced houses for workers, together with developing new construction methods for timber-framed buildings and working as an author and publicist, would prepare him for the various challenges that Hellerau would bring him a few years hence. When Dülfer was called to the Chair in Architecture at the *Technische Universität* in Dresden in 1906, he brought Tessenow with him as his Assistant. An introduction to Schmidt soon followed, which brought with it the first commision for terraced houses in Hellerau. **(Fig. 1.11)**

Tessenow's position in the architectural circle associated with Hellerau is a difficult one to categorise. Although his social background and obvious practicality drew him close to Karl Schmidt, his ascetic architectural language and reticent, but thoughtful insights drew him into the circle of Wolf Dohrn, and it was the latter who urged the *Bau-und Kunstkommission* to choose Tessenow as the architect of the *Festspielhaus*.[38] The *Bau-und*

Kunstkommission was the committee charged with overseeing the architectural quality of all proposed buildings in Hellerau. Its members were the architects Theodor Fischer, Hermann Muthesius, Fritz Schumacher, Richard Riemerschmid, as well as the painter, Otto Gußmann and the sculptor, Adolf von Hildebrandt.[39] Its aesthetic remit stood in contrast to the practical concerns of the so-called 'Commission of Seven (*Siebener-Kommission*) which was charged with looking after the wishes and needs of the future residents of the Garden City.[40]

Let us now return to the dichotomy posited earlier between the values of culture and civilisation. We might conclude that while the overall planning of the garden city and the design of many of the individual buildings in Hellerau shared the values of community and (local) culture, the more universal attributes of civilisation are represented by the work of Tessenow. Communal and local Schmidt as opposed to universal Dohrn? Arts and Crafts Riemerschmid and Muthesius versus the proto-modernist Tessenow? This distinction is a crucial one in the subsequent historiography of architecture in the twentieth century, where 'universal' attributes (representing the abstract qualities of 'society') have been privileged over local 'cultural' ones.

On the face of it, Tessenow's classicising tendencies would have tended to place him squarely in the 'universal' camp represented by the worldly Dohrn family, for whom he became a young protégé. In this sense his work, similar to that of Behrens, stood for transnational quailities of European civilisation: the architectural culture which they represented was one rooted in the academic tradition transmitted through the schools of architecture in Berlin, Munich and Vienna. Tessenow's architecture has all the hallmarks of planning, composition and elevational design which may be traced back to these schools, and, as a Mecklenburger, to the 'local' Berlin *Schinkelschule*, as well as to the various classical streams of post-von Klenze Munich. The complication with Tessenow, and what distinguished him from Behrens, with whom he generally concurred stylistically, lay in his craft background. It is this which predisposed him to the concerns of the Reform movement generally, as well as to the tendencies of 'free' planning and of '*sachlich*' architecture.

Closer inspection of both his built work and his writings argues against a simplistic categorisation of Tessenow into either of the two camps of *Zivilisation*, on the one hand, or *Kultur*, on the other. Indeed Tessenow's work

for Jewish philanthropic organisations during his Hellerau years leading up to the outbreak of the First World War underscores the difficulties of assigning crude positions with respect to a posited dichotomy between culture and civilisation.[41] The record of both his buildings and his writings suggests rather a middle way between the two extremes, a view which ultimately achieves a reconciliation of these two poles.

Wolf Dohrn had imagined that the *Festspielhaus* would represent the ideal community of reform in Hellerau; as such it was a phenomenon represented most famously by Bruno Taut who, under the very different conditions of the First World War, would produce his images of the *Stadtkrone*. The utopian image of Taut's *Stadtkrone* would remain to inspire future generations of architects in a diversity of manifestations. The interesting thing to observe in the context of this study is the way in which the ideal of community became concretised in the form of different kinds of places of assembly during the first decade of the twentieth century. Theodor Fischer's 1906 manifesto *Was ich bauen möchte* (What I would like to build) provided the blueprint for the *Volkshaus*, a new building type which quickly became established in Wilhelmine Germany as new forms of communal associations came into being.[42] This new communal building, housing a wide variety of associations across the political spectrum, achieved a critical presence in German cities in a period during which church building, for instance, was on the wane.

From the point of view of architectural programme, the *Volkshaus* is interesting as it seems to be a form in search of content; indeed exactly what constituted public assembly was frequently not well defined. Tessenow's *Festspielhaus* became, in effect, the *Volkshaus* of the garden city of Hellerau, anticipating Taut's vision of the *Stadtkrone* in many respects. Indeed, Marco de Michelis has drawn particular attention to the influence Fischer's text had on the various protagonists of the *Festspielhaus*, citing Karl Schmidt's recommendation of it to Riemerschmid, Wolf Dohrn's endorsement of a "[h]ouse for lectures and celebration, for devotion [*Andacht*] and joy", and Joseph A. Lux's expectations of a "Renaissance of a culture imbued with [the spirit of] popular celebrations and customs".[43]

The appearance of the *Volkshaus* on the German urban scene in the Wilhelmine era coincided with the first stirrings of an upheaval in theatrical life. Theatrical and architectural space have been closely interrelated

throughout history, and the general reformist spirit acting in both spheres led to a fruitful invention of new forms and functions in these years. The most productive and meaningful meeting of the reformist spirits in architecture and theatre found expression in Tessenow's *Festspielhaus* (Festival Theatre) in the garden city of Hellerau near Dresden. **(Fig. 1.12)**

The *Festspielhaus* was built to house Emile Jaques-Dalcroze's Institute for Rhythmic Education. The promise of a new building was the means by which Wolf Dohrn managed to persuade the avant-garde music and dance pedagogue to relocate his School from Geneva to Dresden.[44] The title *Festspielhaus* (strictly, the Dalcroze Institute) denotes the artistic and spiritual importance Dohrn wished to ascribe to this building. Not only was it to function as a private, some would say elitist, educational establishment, it would also serve as a place for cultural events for the general population of Hellerau. The scheme as built comprises a great hall for performance circa 32 metres long by 16 metres wide by 12 metres high, flanked on both its sides by a symmetrical arrangement of rehearsal spaces, the first of which also functions as lobby space to the ground floor of the auditorium. These two spaces are lit by laylights below rooflights which interrupt the deep square plan of the building. The entrance lobby is a transitional space located between the entrance portico and the body of the auditorium. On entering it the visitor is deflected either to the left or right into either of the (handed) main staircases. These lead up to a balcony space at the rear of the auditorium. **(Fig. 1.13)**

So far, so conventional (at least in terms of the general plan arrangement: the extremely spartan aesthetic of its stripped classicism is another matter). It is only on entering the auditorium that the true architectural novelty of the interior is revealed. We are in a space whose wall and ceiling planes are composed of a shimmering, evenly distributed white light. Concealed behind and above a skin of white canvas are thousands of lightbulbs, connected to dimmable switchgear. Moreover the audience finds itself in a single space uniting both performer and viewer. What Tessenow provided (together with his lighting designer von Salzmann and Jaques-Dalcroze's scenographer Adolphe Appia) was the world's first authentic 'white box', an integrated space which would both accommodate and inspire the development of drama in the West.[45] **(Fig. 1.14)**

The first innovation, the bringing together of audience and performers in a single space, sought to return to a pre-eighteenth century conception of drama which had more in common with the ancient Greek stage than post-Renaissance court theatres, from which the ubiquitous proscenium type was derived. But Tessenow's act of unification went beyond merely removing the proscenium opening separating stage from auditorium. His space was a harmonious volume, defined by continuous and unobstructed planes of material. This harmony of space (in terms of its dimensions) and planes (continuity of material) went hand in hand with the second great innovation, the rejection of painted scenery from the stage. In Hellerau a performance would be experienced by seeing and hearing the actors moving in relation to simple, harmonious three-dimensional solids, whose forms would be revealed by the changing intensity of light.[46]

These innovations were important for the development of drama, but they were equally crucial for the progress of Tessenow's maturing architectural language. Tessenow was still a young architect when the *Festspielhaus* was completed in 1912; hitherto his work had been almost exclusively domestic. He had the humility and intelligence to learn from his client and collaborators, and in so doing enriched his own approach to architecture. The technical innovation of von Salzmann's patented lighting system and, perhaps more crucially for the development of Tessenow's formal and proportional systems, the beguiling pencil drawings of abstract rhythmic spaces by Appia were incorporated symbiotically into the Tessenow 'system' of architecture.[47]

Tessenow produced three different scheme proposals for the Dalcroze Institute before the final one was accepted by the *Bau- und Kunstkommission* in 1911. It is a chequered history of personal animosities played out against the wider context of polarised aesthetic positions. Marco de Michelis recounts the story as far as it may be pieced together; he acknowledges the gaps in the archival record which prevent the full story from coming to light.[48] We know that Tessenow had been resident in Dresden for over a year before he was commisioned to design the Dalcroze Institute. He had moved from Trier on 18 March 1909 in order to take up his post of assistant to Martin Dülfer at the *Technische Hochschule*, Dresden. Karl Schmidt had already written to Tessenow early in 1909, while he was still in Trier, in order to propose that he collaborate with the design of Hellerau; the promise of work in exactly his field of expertise, housing, together with the opportunity to work once again with

Dülfer, persuaded him to move with his young family to Dresden. These initial months in Dresden were of great significance for Tessenow: his book *Der Wohnhausbau* was published in Munich by Callwey, while in August he patented his so-called *Tessenow-Wand*, commonly known as the *Patentwand*. This event rekindled the interest of Karl Schmidt who believed he had found a kindred spirit in this 'holy carpenter' (*'heiliger Schreiner'*), as he was later to be apostrophised by Julius Posener.

By the end of 1909 Tessenow had already designed three housing schemes for Hellerau, none of them executed.[49] It is not known exactly how and when his name first emerged as architect for the Dalcroze Institute; as late as April 1910 Dalcroze had written to Adolphe Appia suggesting Behrens, "the electrician", as putative architect.[50] However, after this no further mention is made of Behrens in connection with Hellerau, and by July 1910, coterminous with his move from Dresden to live in Hellerau, Tessenow appears to have been confirmed as architect-in-waiting, at least by Appia, Dalcroze and Alexander von Salzmann, the troika representing the artistic endeavour of the Institute, and, most importantly, by Wolf Dohrn, Dalcroze's patron and paymaster of the project.

From hereon the opposition to Tessenow's appointment swiftly gathered pace amongst the Hellerau elite. It crystallised into three main areas of criticism, first, mistrust of Dalcroze and his 'Method', second, aversion to the ascetic architecture of Tessenow, and third, the belief of Riemerschmid that he, as master-planner of Hellerau and as more experienced architect, was the rightful architect of the most prestigious cultural edifice of the Garden City.

Karl Schmidt, in particular, the 'practical' man amongst the founders of Hellerau, was anxious lest Dalcroze's ideas were unsuccessful in their realisation, and hence damage the reputation of the whole project. Riemerschmid shared Schmidt's scepticism, but whether this was out of his familial ties with the local Dresdener (he and Schmidt were brothers-in-law) or out of genuine doubts about the Dalcroze pedagogic 'Method' is hard to discern. Riemerschmid sounded out Friedrich Klose, the Munich General Music Director, for his estimation of Dalcroze's merits (see Appendix G: Correspondence). A week later the response came; Klose tried to allay Riemerschmid's misgivings about Dalcroze, but to no avail. Four days later Riemerschmid wrote to Dohrn, this time raising concerns about the vacillations in Dalcroze's programme, claiming it veered from favouring a

deep stage to a shallow one. Meanwhile Schmidt withdrew from the *Festspielhaus* project. Dohrn had attempted to placate Riemerschmid and address his concerns: he had written a memorandum stating his views on the design of the *Festspielhaus*. (This *Denkschrift* is no longer extant, but is mentioned in the exchange of letters.)

Tessenow's first scheme design for the Dalcroze Institute was submitted for approval to the *Bau- und Kunstkommission* in 1910 (it is unknown when precisely). Naturally it was rejected. The combination of its strongly classicising characteristics, so at odds with the studied informality of Riemerschmid's urban plan and building designs, and its central location at the market square, ensured its demise. A site further away from the centre was re-allocated to Tessenow in order to come up with an alternative proposal. This scheme, too, despite its having been shorn of its portico, was rejected. The third, final scheme was ultimately acceptable, with the design fully established by early 1911, although its outlines had been settled as early as August 1910. Dalcroze had written to Appia, informing him that after the interminable "battles between Schmidt and Dohrn, between Riemerschmid and Tessenow, between Salzmann and Riemerschmid [...], peace had finally broken out in Hellerau. Tessenow's scheme was accepted, but not on THE hill, but on ANOTHER. By this means Schmidt at least gets his *Volkshaus*, and what is more in his desired location and in the style of Riemerschmid. We shall be elsewhere, but who cares? The important thing is that the building corresponds to our vision, through and through."[51] Why this scheme was ultimately successful, particularly since Tessenow had reverted to the prominent portico entrance front of the initial proposal, is unknown. Perhaps the opponents were weary of the battle, or Dohrn, who had accepted to shoulder the lion's share of the construction costs, had simply wielded his not inconsiderable influence. The foundation stone was laid on 22 April 1911, and the building was ready to host the first *Festspiele* in June 1912.

2. DOMESTICITY AND MONUMENTALITY, TECHNOLOGY AND EURHYTHMY

An important and fascinating element of Tessenow's work is to be found in his selection of the appropriate level of domesticity or monumentality inherent in a building design. There is a tension between these two poles of architectural mode which finds expression in all of Tessenow's works. Housing, which began to be recognised as a legitimate subject of architectural design in the nineteenth century, tended to lose its domestic nature both in terms of programme with the burgeoning socialist housing schemes of the twentieth century as well as in terms of expression with the anti-domestic dicta of the International Style. Tessenow's approach to housing charts a middle way between the over-zealous large-scale works of modernism and the cosy complacency of tradition, be they architect-designed or developer-led.

Works with a clearly social programme, on the other hand, eschew the simple monumentality of form characterised by both progressives and traditionalists alike when faced with the commission for a communal building. While Tessenow clearly enjoys the celebration of scale in major internal spaces, when it comes to their external expression he is much more circumspect. In the *Festspielhaus*, for example, the volume of the combined auditorium and performance space is embedded within successive layers of domestic-scaled spaces and forms. **(Fig. 1.15)** Similarly in his Berlin-Mitte *Schwimmbad* (swimming baths) Tessenow hides the grandly-scaled swimming pool hall behind a domestic *Lochfassade*, embedding it deeply within its urban tenement block.[52]

Tessenow has been regarded as a traditionalist architect of the twentieth century largely because of his relationship with technology. His architecture does not have the overt expression of technical innovation that one finds with his near-contemporaries such as Gropius and Le Corbusier. This is not to say that Tessenow was uninterested in technical advances. On the contrary, his built projects abound in novel means of solving architectural problems which were developed either by himself or in collaboration with others. The point is that unlike the avowed modernists, he chose to conceal such innovations behind a certain received convention of technical expression. In this he had much in common with Adolf Loos.

For Tessenow, the interior, private realm is the locus of technical innovation; in this he accords with his contemporaries Heidegger and Rilke in distrusting overt, public gestures of technology. The Dalcroze Institute is a case in point, where Tessenow's collaboration with the engineer von Salzmann resulted in the design of its performance space equipped with the remarkable light-wall and ceiling system whose illumination could be centrally controlled. **(Fig. 1.16)** Again, with a purely domestic agenda Tessenow, developed his *Patentwand* which simplified and speeded up the construction of housing in Hellerau, his aim being to make the benefits of the Garden City movement affordable for the workers of the *Deutsche Werkstätten* factory.[53] (See Chapter Three, 'Tessenow and Fabric', for a discussion of the *Patentwand.*)

The meeting of minds of Tessenow and Jaques-Dalcroze signified far more than a felicitous conjunction of architect and client; it led to the articulation, in the respective fields of architecture, dance and music, of the 'spirit' of eurhythmy. It is in this sense that the arrival in Hellerau of the young Swiss architect Charles-Edouard Jeanneret, albeit a footnote in Tessenow's involvement with the Garden City, has a significance for the future course of architectural modernism, in particular its relationship between material means and spiritual ends. The introduction of Charles-Edouard Jeanneret to Heinrich Tessenow in Hellerau in 1910 offers crucial insights into the subsequent developments of architecture in the twentieth century. The future Le Corbusier would carry the memory of these meetings with him in his future professional life. The fascination which Corbusier inspires lies in his synthesis of Classical and Modernist tendencies. A model for such a synthesis can be found in the Wlihelmine work of Tessenow; Corbusier transmits his architectural theory more authentically into the future than Tessenow's 'pupil' Speer ever does in the 1930s and 1940s.[54]

Jeanneret's two visits to Hellerau in 1910, the original aim of which was to visit his brother Albert, who was studying music under Emile Jaques-Dalcroze, enabled him to gain a good understanding of Tessenow's intentions concerning the design of the *Festspielhaus.*[55] Indeed the offer of employment made to him by Tessenow ensured that the young Corbusier had a good knowledge of the project, both the two proposals rejected by the *Kunstkomission* and the final realised scheme.[56] The project bears all the

hallmarks of the *collective*, a sociological idea which in his projects of the 1920s and in his buildings of the 1930s and '40s would take on an architectural significance. Tessenow's proposal, with its central hall building and peripheral aedicule-like dwellings for the tutors, clearly evokes a monastic order. This explicit image of a collective life, apart from the connotations of *Lebensreform* which were so manifestly in the air in Wilhelmine Germany, must have struck an overt architectural chord with the young Corbusier. The memory of the monastery at Ema, near Florence, is recalled in the repetitive cell-like forms of the Dance School **(Fig. 1.17)** in both the second (rejected) project with its attached aedicules and the final executed scheme with the houses pulled out to the periphery; and the striking similarity between Corbusier's sketches for a corner solution to a row of terraced houses **(Fig. 1.18)** and Tessenow's Hellerau housing **(Fig. 1.19)** offers compelling evidence for the effect the meeting with the German architect had on the young Swiss. Tessenow's 'cut-out' at the ends of the *Am Schänkenberg* housing are reminiscent of similar compositional moves by Mies; in particular the Riehl House, Neubabelsberg, (1907) One of the hallmarks of Le Corbusier's work in the 1920s was this same 'carving out' of the block evident in his designs for houses in the *Weissenhof Siedlung* (1927).

Corbusier, for all his posturing, remained an architect true to his bourgeois upbringing. This is seen most emphatically in his housing projects, where a clear distinction is maintained between the freestanding (or occasionally double) villas for a bourgeois clientele and the row-houses or *immeubles* of the working-class. The ability to imbue both genres with a consistent architectural language is a lesson learnt from Hellerau, in particular from Tessenow's experiments with the freestanding villa and the terraced house.

It is arguably the use of applied decoration which most markedly separates the young Jeanneret from the older Le Corbusier. On his return to the Jura following his visits to Germany and the East, his built commisions show radical differences compared with the earlier juvenile essays in La Chaux de Fonds. The La Scala cinema and Villa Schwob are suddenly stripped-down compositions virtually devoid of applied decoration. They are the works of an aspiring and confident young architect just returned from seeing 'advanced ' architecture in Berlin, Dresden and Vienna. In particular, the influence of Tessenow, Behrens and Loos can be detected in the rigourous asceticism of these transitional works.

Finally, it is the architectural use of proportioning systems which provides the link from Hellerau to the Jura and finally to the Jeannerets' studio in the Rue de Sèvres in the Paris of the 1920s. Where Tessenow writes obliquely about such systems, Le Corbusier with his *tracés régulateurs* is much more explicit. A study of the drawings of the *Festspielhaus* can leave one in no doubt as to Tessenow's use of such systems in his work of composition, implicit though it is. What is noteworthy is the fact that while Corbusier's use of regulating lines is purely architectural in both precedent and practice, in Tessenow's case it was inevitably bound up with the prevailing reformist cultural forms of music, dance and theatre. What Corbusier did was to abstract the lessons of harmonic proportion, freeing it from other cultural connotations.

With the turn of the century the mathematical abstraction of rhythm becomes more and more the leitmotif underlying millenarian aspirations. Furthermore it is seen as the common manifestation of diverse cultural forms, the *sine qua non* linking music, dance, painting and architecture. Architecture, in particular, after the apparent whimsy of art nouveau, sought out the underlying rationale that different systems of proportion have to offer. This wish to return to a foundation of geometry is of course perennial and ubiquitous in architectural history: the interest in our case is its coincidence with the other arts and the strong presence of an overarching notion of rhythm which unites the architectural and terpsichorean arts in Hellerau.

The catalyst for this unique and fruitful conjunction of forces was the meeting of minds of the various protagonists behind the *Festspielhaus* project. The choreographer, Emile Jaques-Dalcroze, his lighting designer, Alexander von Salzmann, the scenographer, Adolphe Appia and Heinrich Tessenow, the young aspiring architect from the Prussian provinces were all united, by Karl Schmidt and Wolf Dohrn, in the ambition to create a *Gesamtkunstwerk*. There is a clear link between the rhythmic exercises promoted by Jaques-Dalcroze in his pedagogy, the evocative rhythmic sequences of light and shade in Appia's drawings **(Fig. 1.20)** and the underlying ratio of spatial progression implicit in Tessenow's plan for the *Festspielhaus.*

It would take the propagandising mind of Le Corbusier, some fifteen years on, to formulate an explicit modernist architecture based on *tracés régulateurs,* and later still, with his invention of the *Modulor*, to produce a

standard universal measure for the generation of harmonic spaces. However, the conflation of spatial rhythm with a social logic of space would have to wait for its clearest, most holistic expression until the 1960s and the advent of such theorists and practitioners as Dom van der Laan and the Italian Rationalists. The irony here is that the architectural and social model chosen, as with Corbusier's *Ema* and, arguably, Tessenow's *Festspielhaus*, is that of the hermetic monastery. **(Fig. 1.21)** The precedent of the closed order once again becomes a powerful impetus to a burgeoning architectural idea.

3. HELLERAU AND TESSENOW: ECLIPSE AND REBIRTH

The outbreak of the First World War in 1914 brought the initial cultural flowering of Hellerau to an abrupt end. Jaques-Dalcroze, Swiss national and pacifist, immediately resigned his post at the Institute for Rhythmical Education and this, together with his patron Wolf Dohrn's sudden death in a skiing accident earlier in the year, led to its artistic decline. The Institute, albeit without its charismatic founder, continued to function until 1925 when it transferred its activities to Schloss Laxenburg near Vienna. In 1920 A.S. Neill (the future founder of Summerhill) arrived in Hellerau as a teacher, and stayed for five years before returning to Britain to found his own school.

The postwar Weimar years saw a considerable expansion of Hellerau's housing stock, where the active participation of the *Deutsche Werkstätten* factory was significant in furthering the production of timber-framed and clad houses.[57] The full extent of Hellerau's fall from being an epicentre of European civilisation is shown in its rush to declare itself *Judenrein.*[58] In 1937 the site was taken over by the local police and substantial demolitions and alterations were made to the fabric of the buildings. As a final degradation the great hall was stripped of its diaphanous fabric and converted into a sports hall. With the Soviet advance on Germany early in 1945 the *Festspielhaus* was requisitioned by the Red Army and used as a barracks.

Apart from these degradations to the *Festspielhaus*, Hellerau survived the Second World War virtually intact, with the Allied bombing raids of February 1945 failing to target the Garden City. More than forty years of GDR control left Hellerau in a state of suspended animation. The *Festspielhaus*, being a Red Army barracks, was out of bounds, and the command economy had no

plans to expand the garden city into one of the socialist housing estates, augmented by blocks of flats in *Plattenbau* construction, which mushroomed all over central and outer Dresden.[59] The *Deutsche Werkstätten* under state ownership provided the only tangible link with Hellerau's creative past with its production of the best-quality East German mass-produced furniture.

The abrupt political change brought about by the *Wende* of 1989 reopened Hellerau to a wide cultural and architectural scrutiny.[60] The newly constituted *Land Sachsen* (with Dresden as its capital) has been highly supportive of Hellerau's attempts to live up to its heritage. During the summer months theatrical performances take place in the shell of the Dalcroze Institute, while the furniture factory has found a new lease of life as a successful private enterprise. A painstaking restoration of the building has begun, and a competition launched to find a suitable use for the great hall within.[61] What is most encouraging is the appearance of new housing in the Garden City, designed with modern standards of sustainability in mind. Hellerau is once again a living organism, and has rediscovered the dynamics of dwelling, working and cultural production.

Finally, how are we to assess the work of Tessenow in Hellerau today? How are we to appraise his contribution compared with that of Riemerschmid, Muthesius and others? In terms of architectural aesthetics, Tessenow's stock has clearly risen in recent years.[62] His stringent formalism and constructional invention find favour with rationalists and 'materialists' alike. And yet, nice questions about architectural language aside, all these architects had the common aim of making the Garden City a reality in Germany. Muthesius's house designs represent a clear translation of English Arts and Crafts principles of design; Riemerschmid as masterplanner and as architect of the market-place and the furniture factory embedded manufacture in the heart of the community, and sought a common architectural language for industry, trade and housing; Tessenow, both in his writings and through his commissions for single family houses, row housing and the most significant public building in Hellerau, the Dalcroze Institute, sought the same basic aims of communal integration as Riemerschmid.

At present we are once again reassessing how we might make communities work. The catch-all term *sustainable* argues for communally-scaled developments in tune with Heinrich Tessenow's ideas. It is clear now that an architect's design skills and scrutiny extend to the totality of land

under development in order to supply human needs and to meet their aspirations.[63]

NOTES TO CHAPTER ONE

[1] Quoted in Matthew Jefferies, *Imperial Culture in Germany, 1871-1918* (Basingstoke: Palgrave Macmillan, 2003), p.229. Virginia Woolf is reputed to have spoken these words on visiting the UK's first post-Impressionist exhibition in 1910, 'Manet and the Post-Impressionists', arranged by her friend Roger Fry.

[2] Translation by Stephen Cohn. Published in *Rilke Neue Gedichte: New Poems* (introduction by John Bayley), (Manchester: Carcanet, 1992). Originally published in Rainer Maria Rilke, *Neue Gedichte* (Frankfurt/Main: Insel Verlag, 1907). German text:

> Wir kannten nicht sein unerhörtes Haupt,
> darin die Augenäpfel reiften. Aber
> sein Torso glüht noch wie ein Kandelaber,
> in dem sein Schauen, nur zurückgeschraubt,
>
> sich hält und glänzt. Sonst könnte nicht der Bug
> der Brust dich blenden, und im leisen Drehen
> der Lenden könnte nicht ein Lächeln gehen
> zu jener Mitte, die die Zeugung trug.
>
> Sonst stünde dieser Stein entstellt und kurz
> unter der Schultern durchsichtigem Sturz
> und flimmerte nicht so wie Raubtierfelle;
>
> und bräche nicht aus allen seinen Rändern
> aus wie ein Stern: denn da ist keine Stelle,
> die dich nicht sieht. Du mußt dein Leben ändern.

[3] As Lawrence Ryan has said of the poem, "The statue now emanates a radiance that does not derive from the figure's own gaze, but is suffused throughout its torso – just as in a gaslight the flame can be turned down so low that the source of its burning can no longer be distinguished and the surrounding shell is uniformally illuminated...The entire torso projects an energy that transcends its form, causing it to shine like a star whose pulsations affirm the figure's compelling power over the beholder." Erika A. Metzger and Michael M. Metzger (eds), *A Companion to the Works of Rainer Maria Rilke* (Rochester, New York: Camden House, 2001), pp.142-143.

[4] The written accounts of Rilke's life attest to his presence in the *Festspielhaus* on various occasions:

> 5. OKTOBER 1913: Lou A.-S. notiert im Tagebuch: "Mit Rainer und Sidie Nádherný per Auto nach Hellerau zur Aufführung der Premiere von Claudels "L'annonce faite à Marie" in der Übersetzung von Jacob Hegner.
> 16. OKTOBER 1913: Wieder in Dresden, bemüht sich R., zusammen mit Lou A.-S. und Ellen Delp, in Hellerau rhythmische Vorführungen von Jaques Dalcroze zu sehen. (Ingeborg Schnack, *Rainer Maria Rilke: Chronik seines Lebens und seines Werkes* [Frankfurt/Main: Insel, 1990], vol.1, 1875-1920, p.443).

[5] One thinks of Tessenow's contemporaries lacking formal training, such as Le Corbusier, Mies van der Rohe, and Adolf Loos.

[6] Conversation held in December 2002 at the (Tessenow-inspired) house, Hamburg, of the architect Otto Kindt, editor of Tessenow's writings in the Vieweg edition. Present at this meeting, in addition to Kindt and the author, were the architect's wife, Frau von Bülow, and Theodor Böll, archivist at the *Kunstbibliothek*, Berlin, and curator of the *Tessenow-Nachlaß* in its possession.

[7] A version of this section was submitted to the RIBA/Leverhulme Trust as a condition of their research award to the author in 1997.

[8] One thinks of books such as Beatriz Colomina's *Privacy and Publicity*, or Mark Wigley's *White Walls, Designer Dresses.* See also Christine M. Boyer, *Cybercities* (New York, Princeton Architectural Press, 1995) for a discusion of the new medialisation of architecture wrought by computer technology.

[9] Peter Burke, *Eyewitnessing: The Use of Images as Historical Evidence* (London: Reaktion, 2001), p.13. Burke refers to Renier's *History, its Purpose and Method* (London, 1950). The practice of placing images central to a historical narrative has also become a hallmark of the new wave of popular historians. Simon Schama, for instance, in his book *Dead Certainties*, unpicks the various representations of the death of General Wolfe at Quebec. In doing so his aim is to popularise history by returning to an old-fashioned narrative prose, which engages the contemporary reader by empathising with the characters. This distinctive narrative style, replete with atmospheric images, with its undercurrent of fiction, has also crossed over into the prose style of contemporary novelists. The work of W.G. Sebald, for instance, is poised between historical narrative, journalism, and fiction. When reading his *Austerlitz* or *The Emigrants*, for instance, one is uncertain as to the genre of literature to which they pertain.

[10] Quoted in Adrian Forty, *Words and Buildings* (London: Thames and Hudson, 2000), p.183 from Paul Frankl, *Principles of Architectural History* p.160.

[11] Robin Evans, *The Projective Cast: Architecture and its Three Geometries* (Cambridge, Mass: MIT, 1995), p.xxi.

[12] Ibid. p.86. Evans also points out: "So it would seem that on this one characteristic of perspective geometry – the convergence of lines into a point – two tyrannies of Western thought are balanced: social determinism and mind/body dualism." Ibid. p.125.

[13] Choisy combined cut-away isometric projections with part-plans. This enabled him to demonstrate the relationship of plan type and three-dimensional form in an exercise which was the logical development of the French School of structural-rationalism. See Auguste Choisy, *Histoire de l'Architecture* (Paris: Gauthier-Villars, 1899).

[14] Evans, *The Projective Cast*, p.119. Evans also talks about the natural accord of drawing board techniques of drafting with rectangular building forms:

> A plan, which can be any shape, may tend to be rectangular for a host of reasons, but the internal logic of parallel projection will push it that way too. Five minutes at a drawing board will convince anyone unfamiliar with the technique that this is the way things have to be set out. The instruments at your disposal will lead you to produce frontal pictures of the several sides of boxes as soon as you have gained the slightest idea of what you are doing. It is easiest to deal with the three types of drawing if they are perpendicular to each other, and it is easiest to align the principal surfaces of an object with the surfaces on which it is drawn; in consequence, a building will be a box in a box of pictures. So planar, rectangular form is economical too, within the confines of the technique. (Ibid. pp.118–119.)

[15] Detlef Mertins has written:

> In striking contrast to the sureness and fullness of Hilberseimer's prose, his architectural projects reveal a profound unease, seemingly about the very forms advanced in his writings. Where he alluded in the latter to strong founding forms, his cubic elemental houses, such as the Blumenthal House in Berlin, seemed so

brittle and empty – so thoroughly devoid of Le Corbusier's plasticity, sensuality, and emotions – that they undercut the founding gesture of the pure form. Instead of substance firmly anchored to the ground, the tautly stretched enclosure of the Blumenthal House is staked tenuously on the surface of existence. The size and proportion of the windows, like the size and proportion of the rooms, appear stingy, minimal, and utilitarian, their locations often pushed uncomfortably close to the edges, their blankness marking the equally blank surfaces of the walls with a palpable tension. Drawings for unrealized projects convey similar qualities, or a similar absence of qualities. Schematic line drawings using dramatic perspective angles emphasize architectonic outlines rather than material properties. Highly contrasting shadows and blackened window openings make the volumes seem haunted and abandoned.

Radical in the self-alienation of their abstraction, extreme in their rationalist denial of empathy, Hilberseimer's projects are depleted of the kind of psychic investment or subjective interiority commonly associated with dwellings. Instead, following Dada's merciless critique of the hankering for soulful expression (characteristic of Expressionism's staging of bourgeois subjectivity), Hilberseimer's schematization brought the dwelling into line with the reduction of individuality in mass society, considered valid under industrial collectivism as well as under bourgeois capitalism. But where capitalism sought to compensate for the alienation of labor and the resultant reification of objects in the exchange economy by reapplying the signs of individuality, tradition. And myth, these designs by Hilberseimer reject the projection of such "fullnesses" and instead demand that the empty surface be confronted in its stark reality, cut off as it is from the meaning-context of its making and maker, its capacity for surfacing-into-meaning undercut by the system of commodification. (Detlef Mertins, 'Open Contours and Other Autonomies', in Rodolfo Machado and Rodolphe el-Khoury (eds), *Monolithic Architecture* [Munich: Prestel, 1995], pp.46-47.)

[16] Ibid. pp.92-93. The passage from which this quotation is taken:

[e]ven when the new borrows its structure from what exists, the increasingly complicated object defies technical description by architects who do not have the training to define the connections between freely oriented components so that they can be assembled together. With this task handed over to technicians, engineers, and consultants, there is a bifurcation of design into uninhibited expression and laborious technicality. At the same time it is harder to say where the art lies: in the immediacy of the first expression which is made easier, or in the subsequent description and materialization which is made considerably more difficult. The fiasco of the Sydney Opera House is rerun hundreds of times on a smaller scale.

[17] Ibid. p.145.

[18] Karl Scheffler, 'Architekturzeichnungen: Grundsätzliche Bemerkungen anläßlich der Arbeiten Heinrich Tessenows', in Carl Georg Heise and Johannes Langner (eds), *Karl Scheffler: Eine Auswahl seiner Essays aus Kunst und Leben 1905-1950* (Hamburg: Hauswedell & Co., 1969), p.87. German text:

Bei der Betrachtung von Tessenows Architekturzeichnungen kommt es einem zum Bewußtsein, wie sehr die Fähigkeit, Architekturen zeichnerisch reizvoll zur Anschauung zu bringen, wie sehr die Kunst des Zeichnens überhaupt unseren Baukünstlern abhanden gekommen ist. Ich wüßte keinen Baumeister von Ruf zu nennen, dei heute imstande wäre, seine Entwürfe und Pläne so sachlich und zugleich so persönlich künstlerisch zu zeichnen wie Tessenow. Daraus ist nicht der Schluß zu ziehen, Tessenow wäre für die zeichnerische Darstellung ausnahmsweise begabt; er zeichnet vielmehr besser, klarer, empfindungsvoller, künstlerischer als andere, weil er klarer und empfindungsvoller baut. Beides, die

Kunst des Bauens und die Kunst, architektonische Vorstellungen zeichnerisch auszudrücken, gehört zusammen und steht in Wechselwirkung.

[19] Ibid. p.90. German text:

In einer bewundernswürdigen Weise beherrscht diese Zeichenkunst, die das Lineal überhaupt nicht kennt, das Geheimnis, mit einem Nichts die Materialwirkungen hervorzubringen. Tessenow arbeitet nur mit Strichen und Punkten. Damit aber weiß er in überzeugender Weise Putzflächen und Mauersteinflächen, Ziegel oder Holz, Stoff und Metall zu veranschaulichen. Er deutet nur mit spielender Feder Bäume und Rasenflächen an und gibt doch immer Extrakte. Seine Zeichnungen sind empfindungsvoll bis zum Idyllischen, aber nie sentimental, sie sind stimmungsvoll, aber auch so sachlich, daß man danach bauen könnte.

[20] Ibid. p.90. German text: "Die Ökonomie dieser Arbeiten ist etwas einziges; die Bescheidenheit darin weist auf großes künstlerisches Selbstgefühl. Die Zeichnungen sind voller Zartheiten, aber nie schwach, sie sind knapp, aber dabei erschöpfend, sie sind ganz räumlich gedacht, doch erstreben sie niemals eine naturalistische Illusion. Mit sparsamen Schwarzweißandeutungen sind Luft, Licht und Farbe gegeben."

[21] Winfried Nerdinger (with Florian Zimmermann) highlights the phenomenon in their book on architectural drawing *Die Architekturzeichnung*. Winfried Nerdinger with Florian Zimmermann (eds), *Die Architekturzeichnung: Vom barocken Idealplan zur Axonometrie* (Munich: Prestel, 1986).

[22] See Kerstin Wickman, 'Homes', in Claes Caldenby, Jöran Lindvall and Wilfried Wang (eds), *Twentieth-Century Architecture: Sweden* (Munich/New York: Prestel, 1998), vol. 4.

[23] *9H* (London, 1989), no 8.

[24] Scheffler, 'Architekturzeichnungen', p.91. German text: "[Tessenows Lebenslust] macht aus dem stillen Baumeister, von dem die Zeit noch nicht viel wissen will, einen Lehrer und Erzieher seiner Nation, auch ohne daß er ehrgeizig Einfluß und Wirkung sucht."

[25] The *Sozialistische Einheitspartei Deutschlands* : the East German ruling party led by Erich Honecker at the time of the *Wende* in 1989.

[26] Iain Boyd Whyte's *Bruno Taut and the Architecture of Activism* (Cambridge: Cambridge University Press, 1982) provides a good introduction to Taut's utopian *Stadtkrone* concept, where the people (*Volk*) are organically reunited with its culture's spirit (*Geist*) in a concentrically arranged city. Row-housing based on Taut's realised schemes for the Falkenberg *Siedlung* (and very similar to the terraced types devised by Muthesius, Riemerschmid and Tessenow for Hellerau) form its periphery, while at its centre are the great communal facilities of public assembly. Surmounting these, at the epicentre of the whole enterprise, rises the towering form of the *Kristallhaus* itself, an emblematic representation of *Geist* . This is presented as an architectural form which provides a focus for the entire community, having a similar relationship to the lives of the common people as, say, that of the Gothic cathedral in medieval Europe or the south-west Asian temple complex. The illustrations in *Stadtkrone*, eventually published in 1916, make clear these allusions.

[27] Aldo Rossi, *The Architecture of the City* (London: Oppositions, 1982).

[28] The theoretical background and practical outcome of the Garden City movement comprise a story familiar to the English reader. Ebenezer Howard's 1902 book *Garden*

Cities of Tomorrow , building on the precedents of nineteenth century philanthropic factory housing schemes, brought the garden city idea to a wide public. The first version of the book was actually published four years earlier with the title *Tomorrow: a Peaceful Path to Real Reform*, and it is this version with which the Prussian cultural attaché in London, Hermann Muthesius, would have been familiar. This much more overtly political title, with its revolutionary overtones, or more accurately its means of avoiding revolution, would have impressed itself on Muthesius and his political masters in the foreign ministry in Berlin. It is, of course, an uncanny prefiguring of the final line in Le Corbusier's *Vers une Architecture* (Paris: Editions Crès, 1923): "Architecture ou révolution. On peut éviter la révolution."

[29] Although there are a number of nineteenth-century examples of philanthropic factory towns providing housing and employment, as well as a lesser number of artists' colonies, Hellerau is a rarity in offering the trio of home, work and cultural facilities.

[30] Paul Mebes, *Um 1800: Architektur und Handwerk im letzten Jahrhundert ihrer traditionellen Entwicklung* (Munich: Bruckmann, 1908).

[31] Shortly after the publication of Mebes's book there appeared Friedrich Ostendorf's *Sechs Bücher vom Bauen* (1913); 2nd edition (Berlin, 1919). Ostendorf's neo-classicism represented a sober response to the prevailing plethora of styles. See also Martin Steinmann's essay 'Hans Schmidt: zur Frage des Sozialistischen Realismus', Martin Steinmann, *Forme forte: Ecrits/Schriften 1972-2002* (Basel: Birkhäuser, 2003.

[32] Ferdinand Tönnies, *Gemeinschaft und Gesellschaft* (Leipzig: Fues's Verlag, 1887).

[33] Wolfgang Voigt's essay 'Vom Ur-Haus zum Typ: Paul Schmitthenner's 'deutsches Wohnhaus' und seine Vorbilder', in *Moderne Architektur in Deutschland 1900-1950: Reform und Tradition* (Stuttgart: Hatje, 1992) deals engagingly with the historical lineage of the idea of Goethe's garden house. The received convention that the pitched roofed, symmetrically-composed house was *Ur-Deutsch*, if not the *Ur*-House itself, was challenged by Amadée Ozenfant, who in 1932 praised Erich Mendelsohn's own house located in the leafy street named *am Rupenhorn*, Berlin as being "the house of a 1930s Goethe."

[34] Innocence: Philip Larkin's view as expressed in his poem 'MCMIV' (in *The Whitsun Weddings* (London: Faber, 1971) gives the popular image of the Golden Age of pre-Great War England which has clear resonances with much of Garden City imagery. In Russia Boris Pasternak in his 1932 novella of the pre-war period *The Last Summer* (London: Peter Owen, 1959), would describe the summer of 1914 as "that last summer when life still appeared to pay heed to individuals, and when it was easier and more natural to love than to hate." The 'innocence' of the Garden City movement, or perhaps more accurately, its naivety, reflects this sense of political innocence on the eve of the First World War. Fine art, on the other hand, received the jolt of Cubism in 1910. While avant-garde painters might have been breaking rules in the years immediately preceeding the First World War, architecture as an art form that much slower in gestation could only hint at future change.

[35] See *Appendix F : Correspondence* for a letter of Schmidt's to Riemerschmid inviting him to go beyond the mere utilitarian programme of the Hellerau furmiture factory in order to make provision for the wider needs of the workers.

[36] Hermann Muthesius, *Das englische Haus* (Berlin: Ernst Wasmuth, 1904-1905), 3 vols

[37] Muthesius's housing in Hellerau in all its formats shows a clear debt to the English Arts and Crafts models which he had documented ten years earlier. The large single-family houses built in the street named *Am Gräbchen* with their hipped roofs and bay

window projections show an English love of idiosyncratic variety far removed from the repetitive types of Tessenow's more disciplined villas. His adjacent row housing with its steeply-pitched gabled front elevations have an accent on the individual dwelling missing from both the Riemerschmid and Tessenow terraces.

[38] Tessenow's writings are always simply phrased and seem never to touch on the word architecture itself: this apparent circumvention of the conventional vocabulary of design, and the decision to root the discourse in a wider cultural context, recalls the aphoristic and often wry tone of Adolf Loos. For instance, in his (undated) essay '*Unsere Wohnung*' (Our Home) he writes:

> Our home is connected with the world by countless threads, and has an immediate relationship with the greatest variety of worlds, both close at hand and far away. For instance, the wood of our floorboards or of our furniture: where did the trees grow which provided the timber, and by what means did it get transported to us? Who were the people who felled the trees and sawed the timber? Who lay the foundations of our home, who made the roof and covered it and who made the tiles? Where does the lime for our walls come from, the glass for our windows? Who wove the curtains, who grew the flax from which they are made? Who made the key for our door, how did it get to us, where is the mine in which its iron lay for many thousands of years; where will it all end? (Heinrich Tessenow, *Geschriebenes: Gedanken eines Baumeisters* [Braunschweig: Vieweg, 1982], ed. Otto Kindt, p.14.)

This can be read as both a compassionate hymn to all those involved in the process of construction, and as an early call for a sustainable approach to building. It also recalls Gottfried Semper's 'Four Elements'. German text:

> Unsere Wohnung ist wie durch unendlich viele Fäden mit aller Welt verbunden, hat zu den verschiedensartigsten nahen und fernsten Welten unmittelbare Beziehungen. Zum Beispiel das Holz unserer Fußbodenbretter oder auch unserer Möbel: Wo wuchsen die Bäume, von denen das ist und auf welchen Wegen kam es zu uns her? Wer waren die Menschen, die es fällten und bearbeiteten? Wer mauerte das Fundament unserer Wohnung, wer zimmerte ihr Dach und wer deckte es und wer machte die Ziegel? Woher ist der Kalk unserer Wände, das Glas unserer Fenster? Wer webte die Gardinen, wo wuchs der Hanf, aus dem sie sind? Wer arbeitete den Schlüssel unserer Tür, wie kam er zu uns, wo ist das Bergwerk, in dem sein Eisen viele tausend Jahre ruhte; wo wird er einmal enden?

[39] De Michelis, *Heinrich Tessenow*, p.16.

[40] Ibid. p.16. The dichotomy between technical and aesthetic juries persists to this day in Germany, when architectural competition entries are assessed by both a technical panel in addition to a 'design' jury.

[41] Between the years 1910 and 1913 Tessenow executed three commissions for the Simons Foundation, a Jewish charitable trust, in Lower Saxony. Of these, the design of the Teachers' Training College near Peine in 1911 is remarkable for its reprise of certain key themes to be found in the Festspielhaus Hellerau such as the axial loggia and gable element, and the courtyard planning in addition to the obvious similarity in the external wall to roof proportions. I am indebted to Theodor Böll, archivist at the *Kunstbibliothek* Berlin, for kindly supplying me with the following background information on Tessenow's connections with the *Simons'sche Stiftung*:

> Tessenow und die Simons'sche Stiftung, die sich ja die Förderung der jüdischen Integration in Landwirtschaft, Gartenbau und Handwerk durch entsprechende Qualifikationsmaßnahmen für Berufe, die Juden zuvor nicht zugänglich waren, zur Aufgabe gemacht hatte. Die Verbindung zu Tessenow kam wohl über Wolf Dohrn

zustande, dessen Bruder Boguslav den landwirtschaftlichen Besitz der Familie verwaltete. Es war das Landgut Hökendorf mit dem Gutshaus, das Tessenow auch für Boguslav Dohrn umgebaut hat und in dessen Auftrag er den Entwurf für eine Familiengrabstätte auf dem Gutsgelände geliefert hat. Boguslav Dohrn war ein versierter Landwirt, der neueste technische Errungenschaften nutzbringend einzusetzen suchte. So entwickelte er gemeinsam mit dem aus Schlesien stammenden Maschineningenieur Georg Wendeler einen der ersten Traktoren für den landwirtschaftlichen Betrieb mit Dieselmotor. Die Wendeler-Dohrn-Traktoren wurden schließlich integriert in die Firma HANOMAG (Hannoversche Maschinenbau-Aktiengesellschaft) und Basis für deren über viele Jahrzehnte sehr erfolgreiches Landmaschinengeschäft. So war es naheliegend für die Simons'sche Stiftung, jemanden wie Boguslav Dohrn für den Stiftungsbeirat zu gewinnen. Bei der Frage nach einem geeigneten Architekten ist man wohl auch seinem Rat gefolgt. Offenbar hat Tessenow nicht nur Wolf, sondern auch dessen Brüder mit seiner Haltung und seinem Einfühlungsvermögen für sich gewinnen können.

[42] Romana Schneider, 'Volkshausgedanke und Volkshausarchitektur' in *Moderne Architektur in Deutschland: 1900-1950* (Stuttgart: Hatje, 1992).

[43] De Michelis, *Heinrich Tessenow*, p.18.

[44] See Gernot Giertz, *Kultus ohne Götter: Emile Jaques-Dalcroze und Adolphe Appia. Der Versuch Einer Theaterreform auf der Grundlage der Rhythmischen Gymnastik* (Munich: Komissionsverlag J.Kitzinger, 1975).

[45] The 'white box' continues to have great allure in theatre. One thinks of Peter Brook's seminal production of *A Midsummer Night's Dream* at Stratford-upon-Avon, 1970, with its minimalist white stage set. See Peter Brook, *The Empty Space* (Harmondsworth: Penguin, 1972).

[46] One is reminded of Corbusier's dictum: 'Architecture is the masterly, correct and magnificent play of masses brought together in light' in Le Corbusier, (translated by Frederick Etchells), *Towards a New Architecture* (London: John Rodker, 1927).

[47] Appia found a kindred spirit in Edward Gordon Craig, the leading theatre designer and director. Craig (the son, incidentally, of the actress Ellen Terry and the Arts and Crafts architect E.W.Godwin) eschewed naturalistic scenery and even the received notion of the actor. Martin Esslin in 'Modern Theatre 1890-1920' in *The Oxford Illustrated History of the Theatre* (Oxford: Oxford University Press, 1992) quotes him as follows: "when he interprets the plays of the dramatist by means of his actors, his scene-painters and his other craftsmen, then he is a craftsman; when he will have mastered the uses of actions, words, line colour and rhythm, then he may become an artist. Then we shall no longer need the assistance of the playwright- for our art will then be self-reliant."

[48] See de Michelis, *Heinrich Tessenow*, pp. 23-28.

[49] Ibid. pp.200-201.

[50] Ibid. p.22.

[51] Ibid. p.28. German text: "[nach den Endlosen] Kämpfen zwischen Schmidt und Dohrn, zwischen Riemerschmid und Tessenow, zwischen Salzmann und Riemerschmid [...], endlich Ruhe in Hellerau eingekehrt ist. Der Plan Tessenows wurde angenommen, aber nicht auf DEM Hügel, sondern auf einem ANDEREN. Auf diese Art und Weise bekommt Schmidt nun wenigstens sein Volkshaus, und zwar an dem von ihm gewünschten Ort und im Stil Riemerschmids. Wir selbst werden

woanders sein, aber darauf pfeife ich. Wichtig ist, daß das Gebäude unseren Vorstellungen entspricht, und zwar durch und durch."

[52] *Lochfassade* (façade of holes) : a means of designating the kind of elevation commonly employed by Rationalist architects typified by repetitive punched rectangular openings.

[53] Nonetheless the rents were too high to attract sufficient numbers of factory workers to Hellerau. Wenzel Holek, a Bohemian carpenter employed by the *Deutsche Werkstätten*, criticises the Garden City's rental policy in his autobiography *Vom Handarbeiter zum Jugenderzieher: Lebensgang eines deutsch-tschechischen Handarbeiters* (Jena: Diederichs, 1921).

[54] Le Corbusier was not the only great figure of twentieth-century architecture to have been influenced by Heinrich Tessenow. Franz Schulze's *Mies van der Rohe: A Critical Biography* (Chicago: University of Chicago Press, 1985) tells how the young Ludwig Mies courted Ada Bruhn in Hellerau, while she attended the Dalcroze Institute (and shared a house with the renowned choreographer Mary Wigman). She had just broken off her engagement to Heinrich Wölfflin, the art historian. She and Mies were married in April 1913. During this period Mies would have had first-hand experience of the construction of the *Festspielhaus*, as well as its first year of operation.
For the relationship of Speer and Tessenow see Chapter Five, 'The Historiography of Tessenow'.

[55] A clear account of the Jeanneret brothers' involvement with Hellerau, as well as the Dalcroze Method, is to be found in Peter Bienz, *Le Corbusier und die Musik* (Braunschweig: Vieweg, 1999).

[56] We read in Le Corbusier's notebooks charting his visits to Germany, during which time (1910 and 1912) he visited his brother Albert studying music with Jaques-Dalcroze at Hellerau:

> Qu'est-ce qu'une mise en scène à l'Opéra ou au Théâtre? Von Salzmann me disait, à Dresde: "La mise en scène actuelle, l'opéra et le théâtre actuels eux-mêmes agonisent. Ils sont finis, morts; ils sont laids, monstrueux, insupportables, c'est un enfantillage qui ne peut subsister."
> Je lui répondis: "Bravo!" Car c'était là, exprimée, ma pensée depuis longtemps née et formée, affermie à chaque nouveau spectacle auquel j'assistais. Salzmann disait aussi: Le rythme Jacques Dalcroze va tout renverser". Il est de fait que la salle de spectacle que Tessenow, Jacques et Salzmann projettent pour Hellerau marquera 1 point capital ds l'évolution artistique de l'époque. (Le Corbusier [Ch.-E. Jeanneret], *Les voyages d'Allemagne: Carnets* [Milan: Electa and Paris: Fondation Le Corbusier, 1994], p.113.)

[57] One is reminded here of the traditionalists' response to *Weissenhof*- the *Holzsiedlung am Kochenhof*, Stuttgart (timber housing estate) by Paul Schmitthenner *et al.*

[58] The Nazi term given to an area which was free of its Jewish population.

[59] '*Plattenbau*' is the name given to the East German concrete prefabricated building system; examples of Plattenbau buildings may be found all over Dresden and the former East Germany.

[60] Literally, the 'turning': from the closed society of the GDR to the open society of West Germany.

[61] Fabian Zimmermann of Atelier 4d Architects Berlin has been painstaking in his restoration work on the *Festspielhaus*.

[62] Almost the whole issue no 8 of 9H magazine (London, 1989) was devoted to Tessenow, including a long essay by the Italian rationalist architect Giorgio Grassi.

[63] See *Appendix F* for Steen Eiler Rasmussen's speech on accepting the *Heinrich-Tessenow-Medaille* in 1973 for a lucid expression of just such sentiments prefiguring our current concerns for the natural environment and ecological sustainability.

CHAPTER TWO: *Geist und Materie*

(i) The Nineteenth-Century German Idealist Background

1. TESSENOW AND IDEALISM

> The works of the early German romantic thinkers – Herder, Fichte, Schelling, Friedrich Schlegel, and their followers, are not easy to read. The treatises of Schelling, for instance – vastly admired in their day – are like a dark wood into which I do not, here at least, propose to venture – *vestigia terrent*, too many eager inquirers have entered it never to return.[1]

Isaiah Berlin's words of warning contained in his essay 'German Romanticism in Petersburg and Moscow' have to be interpreted as those of a *faux-naîf*. He did not fear to venture into the *Urwald* of Hegelian metaphysics; indeed it was necessary to do so, in order to delineate the ancestry of Russian Romanticism. Here, however, we shall skirt the wood, pausing to dwell on German Idealism only insofar as it aids our understanding of nineteenth-century architectural developments.

Chapter One located Hellerau as a crucial centre of social, industrial and artistic innovation in Wilhelmine Germany. Its chiliastic endeavours would be tragically cut short by the events of 1914: the untimely death of Wolf Dohrn at the age of thirty-five and the anti-war sentiments of Emile Jaques-Dalcroze, who was never to return to Hellerau from his native Switzerland following the outbreak of hostilities. Tessenow's work in Hellerau during the three or four years immediately prior to the war was groundbreaking: in those years he developed a body of work of a maturity beyond his years; work which concerned itself with both the idea of the type, namely the repeated house unit, and with the unique commission, as manifested by the Dalcroze Institute. Tessenow was intimately concerned with both the practice of building and the idea of architecture; his writings, contemporaneous with his built *oeuvre* at Hellerau, testify to his engagement with theoretical debate and with reaching a broad, culturally aware public.

This chapter aims to situate Tessenow within the stream of German Idealist thought. It will show how the twin poles of architectural endeavour, the built and the imagined project, together with writings of both a practical and speculative

nature, may be encompassed within its ambit. In particular it will speculate on the contrasting architectural elements of space and tectonics which were balanced so nicely in Tessenow's production; it will posit them as polarities which relate to the nineteenth-century tradition of opposing *Geist* (spirit) and *Materie* (matter). The terms are those of Idealist philosophy; in particular they are Hegel's. Yet in Hegel's metaphysics spirit and matter are not equal players: dualism is abjured. *Geist* in its various guises is the animating spirit of the world, and it serves to animate the world of architecture until well into mid-century. As Mitchell Schwarzer shows, it is at this point that the material world begins to assert itself, beginning magisterially with Gottfried Semper and culminating at end of century with Realism in its various manifestations.[2]

The early twentieth century in Germany had been exposed to 'materialist' culture for a generation; it re-examined what an Idealist architecture might be in the light of the facts of materialism. Behrens, Gropius and Tessenow were all engaged in this enterprise. But what of Hegel himself? Here he is writing in his *Aesthetics*:

> In fine art, style is indeed likewise still harsh at the start, but it is already softened more beautifully into severity. This severe style is that higher abstraction of beauty which clings to what is important and expresses and presents it in its chief outlines, but still despises charm and grace, grants domination to the topic alone, and above all does not devote much industry and elaboration to accessories. Thus the severe style still limits itself to reproducing what is present and available. In other words, while on the one hand, in content it rests, in respect of ideas and presentation, on the given, e.g. on the present sacrosanct religious tradition, on the other hand, for external form it allows complete liberty to the topic and not to its own invention.[3]

Hegel's "higher abstraction of beauty" matches precisely the visual and spatial experience of Tessenow's work in the Wilhelmine years immediately prior to the First World War. Let us take the example of the Dalcroze Institute in Hellerau. The classically inspired massing of the principal parts of the building have been stripped of their antique embellishments which a similar building of the *Gründerzeit* would certainly have retained. Such an example of stripped Classicism of the early twentieth-century is clearly "severe" in its projection of fundamental geometric relationships, an example of "higher abstraction of beauty" in that it takes the simple symmetric composition and presents it in its

rarefied state, and "grants domination to the topic alone", in other words it thematises essential geometry and spatial relationships to the exclusion of other architectural concerns. Its single-mindedness is fundamentally opposed to the scenography of, say, Riemerschmid's re-enactment of a Bavarian farm estate for Karl Schmidt's *Deutsche Werkstätten* factory a few hundred metres to the south.

By the end of the nineteenth century Idealism in architecture took a new turn as it sought to confront the materialist architecture of capitalist development characterised at the time as Realism. Idealist architecture in its quest for authenticity, purity, *Geist,* in a sense, was represented in the pluralism of the Reform movement's initiatives. Realist architecture, on the other hand, sought a more practical engagement with the facts of economic life and construction culture. To epitomise the two polarities, one might cite Peter Behrens's almost ascetic purism against Otto Wagner's pragmatic espousal of the world of commerce and innovative technology. This is not to maintain that Behrens was in any sense 'other-worldly' in contrast to Wagner's urbanity. His over-arching design role for the AEG in Berlin should dispel any such notion. What is suggested is that the Viennese architect was more interested in thematising materials *qua* components of building assembly, as opposed to Behrens's privileging of form over detail. Wagner's *Stadtbahn* pavilions on the Karlsplatz, Vienna, for instance, present the alabaster cladding panels as clearly and separately articulated components of that delicate building's assembly; the equally carefully considered tectonic elements of Behrens's AEG Turbine Hall, Berlin, tend, on the other hand, to appear subservient to the total idea of the building. It is a question of a difference of emphasis on the part of the two architects, with Wagner veering towards a Semperian materialism, and Behrens towards a more Idealist *Weltanschauung.* Both the 'Ideal' and the 'Real' are the twin children of nineteenth-century architectural discourse which we shall now consider.

The architect practising around 1900 had a world-view fundamentally transformed by the rapid and manifold developments of the nineteenth century. The material changes wrought during the nineteenth century, in particular the late industrialisation experienced by Germany, as well as the establishment of the unified German state in 1871, have to be set against the developments in

intellectual life. Here the German contribution to Western thought was immense; it is as if the lack of a national centre for Germany encouraged its thinkers to concentrate on universal and often other-wordly musings.

During the first decades of the nineteenth century the universalism of the Enlightenment gave way to the cultural relativism of Romanticism and post-Kantian Idealism. The key figure was the philosopher Hegel, whose career spanned from the end of the Enlightenment until the heyday of German Romanticism. He gave rise to two notions which would have lasting influences on architecture. Firstly, the idea of *Zeitgeist* (spirit of the age) which influenced the development of architectural history throughout the nineteenth century; and secondly his dialectic of *Geist* (spirit or mind) and *Materie* (the perceived or phenomenological world, the real world 'out there'), which could be said to stand as a metaphor for two parallel developments in architectural development, namely space as spirit, and built form as matter. This dualism is a useful construct that allows us to understand the often conflicting claims of late nineteenth and early twentieth-century architecture. The dichotomy of spirit and matter is elaborated in respect of Tessenow's work in the next two chapters. It is so crucial a philosophical concept that it underlies the subtitle for this study as a whole: *the materialisation of space.*

The thirty years spanning the nineteenth-century *fin de siècle* witnessed the crucial playing-out of the themes of Idealism and Realism in German architecture. It was also the generation of the coming of age of the German state, where a newly unified Germany progressed from its self-conscious beginnings of the *Gründerzeit* into the strident assuredness of the immediate pre-war years. The era of *Wilhelminismus*, roughly 1885–1914, denotes a period of opposites of ostentation and simplicity, of wealth and poverty, out of which would issue great artistic and social movements.[4] Wilhelmine architects and patrons developed new building types such as the department store, underground station and the factory for mass industrial production, and imbued them with new aesthetic sensibilities.[5] One example of such a new building type will serve to illustrate: Alfred Messel's *Wertheim* department store on Leipziger Platz, Berlin. **(Fig. 2.1)** Here, a radical Gothicised tectonic was employed in order to articulate the elevation of the framed construction, while the central atrium delivers natural light into the heart of the sales floors. The architectural innovation of an architect such

as Messel (as well as the borrowing of the innovative building type of the department store from Paris) belongs as much to the Wilhelmine inheritance as some of the more ponderous and bureaucratic efforts of his contemporaries.

Bismarck's *Gründerzeit* 'laid the foundations for a well-organised bureaucracy, which found its extravagant expression in representative projects such as the Moabit Criminal Court, Berlin (1902-1906) by Rudolph Mönnich and Carl Vohl.[6] **(Fig. 2.2)** Such buildings managed to translate to Berlin something of the self-confident swagger and extravagant volumes of public space of Garnier's Paris Opera (1861-1875). Julius Posener's selection of illustrations to his study of Wilhelmine Berlin shows a complexity of interlocking forms and interpenetrating spaces in the grand entrance stair hall which rudely interrupts the Beaux-Arts *parti* of the plan arrangement, while at the same time skilfully interweaving circulation routes through its positioning of half-landings.[7] **(Fig. 2.3)**

As a reaction to these overt displays of tectonic abundance is the converse tendency towards simplification, in Posener's terminology *Vereinfachung*, which sees an architectural virtue in reducing expression to a formal minimum, while still keeping within received stylistic boundaries. Simplification of plan, of geometrical arrangement, and above all of surface treatment are all features of architectural expression explored by Tessenow in his writings and projects of the first decade of the twentieth century. Karl Scheffler (1869-1951), the architectural critic of the late Wilhelmine period who was the great apologist for incipient modernism (a role assumed by the critic Adolf Behne (1885-1948) in the 1920s), said of Tessenow's work:

> If one tries to characterise Tessenow's architectural style as a whole, one may speak of a rural classicism, a Hellenic strictness born of North German peasantry. The grouping of buildings of the Dalcroze School has something of the ideal farm estate about it. It is an imposing festival area, a wordly cloister and also an expansive agricultural estate arrangement. The single-family houses refer back to the classical bourgeoisie around the year 1800, back to our last living tradition. A certain ascetic self-denial [*Selbstkasteien*] comes to the surface in these buildings as well as in the terraced houses; the frugality of form is often taken to the extremes of an *idée fixe*. For this reason in the presence of Tessenow's buildings in Hellerau one cannot help also being interested in the development of this style of architecture.[8]

This characterisation of the Dalcroze Institute as an *ideal* estate contrasts positively with the neighbouring estate 'farm-yard' in Hellerau, that of

Riemerchmid's *Deutsche Werkstätten* factory ensemble, which appears as an essay in *Gemütlichkeit* (coziness) transposed directly from the architect's native Bavaria without the intervening architectural transformation required to turn crude quotation into critical innovation. **(Fig. 2.4)** In this intriguing passage from Scheffler's praise for Tessenow in his *Die Architektur der Großstadt* published in 1913 several other themes emerge which have already been alluded to: the implicit reference to Mebes's book *Um 1800*, which identifies the *Biedermeier* period as Germany's last authentic stylistic period, the quasi-mystical and religious characterisation of Tessenow's *Selbstkasteien* (self-flagellation or ascetic self-denial), and the sense that architecture needed to purge itself of all extraneous form and detail in order to enter into the promised land of a new style whose precise contours were still to be determined.

Wilhelmine Germany emerged into the twentieth century as a newly forged state, free, in many respects, from the trappings of historical tradition that beset Britain and France. In this sense it resembled the expanses of the USA, and its new capital Berlin could be likened to Chicago in the American mid-west, a frontier town of brimming possibilities and unbridled ambition. Its architectural innovations should be studied not merely for their prescience in predicting future post-war developments of the Weimar Republic, but as Posener writes, as ends in themselves:

> Without wishing to belittle the achievements of the 1920s – which realised architecture of an unprecedented nature – I must confess that my studies have led me to conclude that it was the years prior to 1918 which were decisive. In actual fact this does not merely concern 'prehistory', by which I mean the [Hans Poelzig chemical] factory in Luban, the founding of the *Deutscher Werkbund*, the Greater Berlin projects of 1910 – I could go on. This period has its own particular hue and its own special value. Its achievements are the result of an attitude which was no longer feasible after 1918.[9]

Tessenow practised and taught in the capital from the 1920s, but it was in Dresden where he first attracted considerable attention as a rising young architect. Dresden, as capital of the Kingdom of Saxony, mirrored the growth experienced by Berlin, albeit on a smaller scale. In 1876 the railways were either taken over by Saxony, or run by it, while the Education Act of 1873 regulated primary education and instituted compulsory secondary education. All of these

improvements necessitated major building works which the office of *Stadtbaurat* (City Architect) could fulfil either directly, or by commissioning other leading architects.[10] Its growth, its maintenance of relative autonomy with respect to a central 'German' authority, and the values it placed on cultural and material developments were all mirrored in other cities and were spurred on by an evanescent *Bildungsbürgertum* (educated bourgeoisie). Before focussing on architectural developments in any one place, however, we need to understand the overall picture of the nineteenth century in order to locate Tessenow, who had already encompassed one-third of his life by the year 1900.

2. CURRENTS IN NINETEENTH-CENTURY GERMAN ARCHITECTURE

Karl Friedrich Schinkel (1781-1841) was the giant of German architecture in the early nineteenth century, dominating the profession in Prussia. Schinkel, in contrast to an equally proficient and profuse practitioner such as the Bavarian Leo von Klenze (1784-1864), exhibited decidedly romantic traits in his architecture; he represents the prime motivator of architectural pluralism in nineteenth-century Prussia who, with his considered, *critical* understanding of architectural style, will have a decisive influence on the young Tessenow at the start of the twentieth century. His 1830 design for the Friedrich Werder church in Berlin exhibited two stylistic alternatives, one in Roman and the other in Gothic Revival style.[11] In his book on the architecture of Wilhelmine Berlin Julius Posener wrote:

> Schinkel's architecture, characterised as Romantic Classicism, already seems to belong to another time. Napoleon had been and gone. The pathos of the revolution is romantically transfigured in Schinkel's 'hellenic' architecture, but it nonetheless retains its utopian character. Furthermore, in this sense Schinkel's architecture is the architecture of the 'as–if', the architecture of a Spree–Athens, also of a Spree–Paris or London; regardless of its stylistic manifestations it is a *new* architecture, an architecture beyond - or from our standpoint, this side of - tradition. Tradition had been demolished. One may say that Schinkel repaced tradition with architecture; for him the architectonic is a concept which is superior to all styles.[12]

Posener's point here is not that Schinkel was operating like a wilful eclectic, rather that his overarching concerns were with the tectonic basis of a building rather than its superficial stylistic expression. Schinkel's drawings were, then, not simply artist's impressions of the visual aesthetics of the two schemes, but careful studies which reveal the constructional reality underlying both conceptions, such that the 'Gothic' scheme has external buttresses, whilst in the Roman version the square-plan column and the external wall fuse together and work as one integrated structure, rendering the external wall smooth and unencumbered by structural expression. It is a far cry from the crude caricatures of Renaissance-derived forms that Pugin presents in his 1836 book, *Contrasts.*[13]

The final sentence of this quotation could equally well apply to Tessenow; his three versions of the Dalcroze Institute in Hellerau were adapted in terms of their location; the *Bau- und Kunstkomission* (Building and Art Commission) headed by Riemerschmid could not countenance such a - in its eyes - stark and 'Prussian' architecture in the midst of its transposed southern German Arts and Crafts townscape, and insisted that Tessenow relocate his project ever further from the town centre; with each adaptation there is a concomitant change in architectural expression which reveals a rethinking and revalidation of constructional techniques in each case. In other words Tessenow, like Schinkel before him, was not merely providing architectural scenery, but instead combined tectonic (i.e. materialist) and spiritual ideas without recourse to cosy homespun imagery. He was working allegorically, certainly, while relating and combining the 'myths' of German domesticity and Hellenic civic pride in a synthetic manner. Tessenow inherited the exhaustive and protracted outcomes of the architectural debates earlier in the century concerning style, or more accurately, concerning the relation of extrinsic appearance to intrinsic form. It is to these debates that we now turn, beginning with Goethe, the great polymath who, at the turn of the nineteenth century, presided over German letters. His classical training and erudition was balanced by a passion for scientific enquiry, his love of the Latinate south kept in check by his reputation as Germany's greatest poet. Finally, his sense of duty (he functioned as a glorified civil servant at Weimar) prompted him to action and not mere passive reflection.

Goethe's famous hymn of praise dedicated to the cathedral at Strasbourg was an important turning point, marking out a Romantic sensibility in architecture

as opposed to the prevailing idealism of the Enlightenment, with its lionising of classical Greek models of beauty. In this great Gothic building it is Herder's idea of a national *Geist*, the *Volksgeist*, which animates the restless search for the architectural style appropriate to the emerging German state. The debate was of course not confined to the German lands; yet it was here, where the very idea of nationhood was at stake, that the debate was conducted most vigorously, with the ideas translated immediately into practice.[14] Heinrich Hübsch was the architect who, in the 1830s, crystallised architectural debate until mid-century in terms of a dualist pairing relating artistic notions of appearance to intrinsic plan forms, volumetric composition and construction techniques.

The debate about the architectural style appropriate to both the age and the place, i.e. one that is apt for both *Zeitgeist* and *Volksgeist* (spirit of the people), involved the use of two essential terms, *Kernform* and *Kunstform*. *Kernform* (core form) refers to the essential shape of a building which is a direct expression of its structural system. *Kunstform* (artistic form), on the other hand, is the artistic embellishment of the *Kernform* in order to make the building understandable as a coherent communicator of meaning.[15] This formulation is in itself problematic, as it is shot through with the modernist assumption that *Kernform* is the key determinant of architectural form, and that *Kunstform* is ultimately dispensable. Here lies the fascination with the debate one hundred and fifty years after the event, in that it contains the seeds of the modernist obsession with materialism (where structural form equates to 'matter' and artistic form to 'spirit'). Indeed, a contemporary critic of the thesis propounded in Hübsch's widely read treatise on the problem, *In welchem Style sollen wir bauen?*, Rudolf Wiegmann, hit the nail on the head in identifying Hübsch's materialistic bent: "The whole treatise," he exclaimed, "seems to be pervaded by the notion that matter dominates mind."[16]

The notion of the distinction between *Kernform* and *Kunstform* underlay the debate of the 1830s and '40s. The Munich architect Eduard Metzger, for instance, believed that "[s]cientific knowledge alone will lead to a thorough understanding of the essence of construction [...] Once a building has been declared constructionally correct, it is essentially perfect."[17] Wolfgang Hermann notes that Metzger's editor needed to preface these highly materialistic views with a caveat upholding the primacy of art in determining architectural form: "While [the author] credits technical construction with directly influencing the

configuration of a building, it should not be overlooked that architecture as an art form is not just a simple reproduction of the material world but is at the same time an art subjected to the loftier influence of the freely creative genius."[18]

Hübsch argued against the Vitruvian assumption that the details of classical architecture are a petrified form of an earlier timber construction. This *xylomania*, as it is termed, sought to justify the continuation of the use of antique forms by virtue of the fact that they were originally derived from archaic timber construction. The Neo-Classicism sweeping Europe and North America at the turn of the nineteenth century was a sign of the hold archaeology had on the development of architecture during the Enlightenment. Hübsch and others sought to counter the strict adherence of architectural form to archaeological reconstructions. He sought, in other words, to question the significance of the most widely diffused image of the late eighteenth century, the frontispiece to the Abbé (Marc-Antoine) Laugier's *Essai sur l'Architecture*, second edition, (Paris, 1755).[19] **(Fig. 2.5)**

Hübsch maintained that architecture, as a rational enterprise, would find its expression in the scientifically verifiable art of construction. Construction, being a craft form, was judged to be a value-free activity and hence completely neutral on the vexed question of which style to build in. A rational form of construction would inevitably lead to an appropriate form of architecture. All the proponents of the various stylistic directions would base at least part of their argument on the *constructional* superiority of Greek, Romanesque or Gothic architecture. It is here that we detect material considerations informing the ideal in nineteenth-century architecture.

The materialistic basis to Hübsch's thesis (that building material determined architectural style), and the argumentation of the various protagonists, was rarely extended to the logical conclusion that a new material would give rise to a new expression.[20] Perhaps the creative reaction to the possibilities of a new material had to wait for the work of a Labrouste or a Viollet-le-Duc in France, and even in the cases of these architects the new expression would largely be in the interiors of buildings.[21] However, working with the palette of conventional materials Hübsch managed to put his thesis to the test of construction. In the 1830s and early '40s he designed and built a number of projects crucial to the underpinning of his answer to the question posed in his book *In welchem Style sollen wir*

bauen? (In which Style should we Build?). For Hübsch the answer to the question was the *Rundbogenstil* ('round arch', or Romanesque, style). We must bear in mind that Hübsch's was just one solution to the style question. The confusion, at least in the public's mind, as to the 'correct' appearance of the nineteenth century lies in the fact that the different answers to the question resulted in strikingly different designs of the same building type.

It is useful to give a representative example of a building designed according to the three main stylistic varieties available:

(a) *Rundbogenstil*: Friedrich von Gärtner, *Staatsbibliothek* Munich (1831-1842), **(Fig. 2.6)**

(b) Greek Revival: Leo von Klenze, *Walhalla*, near Regensburg (1830-1842), **(Fig. 2.7)** and

(c) Gothic Revival: Daniel Joseph Ohlmüller, *Maria-Hilfskirche*, Munich (1831-1839).[22] **(Fig. 2.8)**

These three significant public buildings, exactly contemporaneous with the initial reception of the Hübsch polemic, represent the practical expressions of the stylistic debate in Germany. All three examples are from Bavaria, although they arte emblematic of stylistic plurality across the whole of Germany. Hübsch's preference for the *Rundbogenstil* was based on his reading of the tectonic basis of each of the rival styles, and his conclusion that the Romanesque-Byzantine (another term for *Rundbogenstil*) offered the supplest means of adaptation and architectural development for contemporary society.

How did Hübsch deploy the *Rundbogenstil*? Here are three quite different essays in the style which show his sensitivity in adapting the elements of the Romanesque style to the requirements of programme:

(a) *Polytechnische Hochschule*, Karlsruhe (1833-1835), **(Fig. 2.9)**

(b) St Cyriacus, Bulach (1834-1837), **(Fig. 2.10)** and

(c) *Trinkhalle*, Baden-Baden (1837-1840).[23] **(Fig. 2.11)**

The *Trinkhalle*, for example, shows great ingenuity in combining the quintessentially Greek form of the stoa, which forms the loggia of the building, with a series of flattened arches. (Depending on one's point of (historical) view, Hübsch may be regarded as either a great reinterpreter of architectural history, seeking to develop architectural form, or as a great wrecker of the stylistic consensus of classicism; according to David Watkin and Tilman Mellinghoff, he had "effectively brought to an end the classical ideals which had been upheld since the time of Winckelmann."[24] The latter view of architectural history led to the twentieth-century stylistic revivals of Edwin Lutyens, Reginald Blomfield, German Bestelmeyer and Paul Ludwig Troost, the former to the experimentation of Behrens, Gropius, Tessenow *et al.*

The *Rundbogenstil* may be viewed as being a compromise between the extremes of, on the one hand, the Greek Revival style, and on the other hand, the Gothic Revival. It was a pragmatic choice since its round-arched window heads could easily form a smooth facade to a building organised around flat floor construction. In other words it managed to combine the horizontality of the classical Greek temple with the tectonic exigencies of pierced masonry wall construction. Of course, this compromise of eschewing the spatial nature of the *Rundbogen* and its propensity for three-dimensional development to form vaults would tend to the development of standard-height cellular volumes. The suppression of vaulted construction complemented the building types of office, library and so on, types not specifically requiring the spatial elaboration peculiar to the vault. This was because such spatial programmes favoured large floor plates, with flat ceilings to facilitate the incorporation of room divisions. Here, the *Rundbogenstil* anticipated the effects on layout and, to a lesser extent, elevational design, which the later deployment of the steel frame would bring to architecture.[25]

Hübsch's materialistic argumentation led to his espousal of the *Rundbogenstil* as the one most appropriate for central European usage for a number of reasons. It offered the opportunity for a middle way, a compromise between the die-hard Hellenicists and the Gothic Revivalists. Hübsch's readiness to seek an 'aesthetic compromise' has a resonance with Tessenow's own

measured response to the Arts and Crafts mythic idyll of Riemerschmid on the one hand and the stripped classicism of Behrens on the other in the first decade of the twentieth century.

Germany occupied the middle ground in Europe on a number of different counts. Geographically, it functioned clearly as the continent's crossroads; in terms of religious affiliation it was poised between the Protestant north and Catholic south; linguistically between the Slav east and Romance languages of the south and west. Germany's central position in Europe, hemmed in by Russia and the Slav nations to the east, France and Britain to the West, and Austria and Italy with their accumulations of inherited material and artistic wealth to the south, has given it a heightened sense of 'the middle'. Its bourgeoisie, the *Mittelstand*, had a clear idea of its own self-worth; during the nineteenth century it was content with its lot, indeed it raised its sense of innate cultural value in its elevation of domestic-scaled arts which, with their Schubert songs and Schumann sonatas, performed in the home, reached their high point in the 1830s.[26] In the domestic arena of furniture and house design, the period from 1800 until 1848 is characterised as *Biedermeier*, a modest, informal classicism which *mediates* between the high art of the aristocracy and the peasant aesthetic of the cottage.[27] It is precisely this quality of mediation that Heinrich Tessenow would come to espouse in the early 1900s. Tessenow, the 'holy carpenter' (*'heiliger Schreiner'*) of Julius Posener's characterisation, contains within this epithet the dual connotations of both spirit and matter; he is someone who is able to engage on both the elevated plane of art, and the prosaic level of the vernacular, in the same breath.[28]

The 'middling' nature of *Biedermeier*, with the risk of smugness, certainly, but also its emphasis on home comforts, had largely run its course by mid-century. The stylistic battles which ensued, and later still the superheroic demands of art in thrall to a Nietzschean will to power, were inimical to the quiet art of *Biedermeier*. In an age of new building types, grand scale, and a celebration of national values over communal ones, the forces of *Biedermeier* seemed spent. At the end of the century, though, its very simplicity became attractive for several reasons. First, its unadorned classical or vernacular roots sidestepped any debates about the aptness of any particular style; second, its simplicity of form and relative paucity of decoration became a model of decorum for devotees of

the various *Lebensreform* movements; and third, although derived from vernacular traditions, its expression in the various German cities had homogenised its forms to make it a recognisably German national domestic style.

The *Biedermeier* house was, then, ideally placed to represent both the land in the middle (to paraphrase Tessenow) as well as the middle class. These were sufficient reasons, then, for the Berlin architect Paul Mebes to wax lyrical about its charms in his 1900 book *Um 1800*.[29] The welding of the simple and domestic forms inherent in *Biedermeier* expression to projects with a chiliastic content, such as Tessenow's *Festspielhaus* at Hellerau or the *Lehrerbildungsanstalt* (Teachers' Training Institute) at Peine, near Hanover, is one of the more remarkable aspects of the idealistic appropriation of these architectural forms.[30] **(Fig. 2.12)** It is an instance, yet again, of architects working within the context of the philosophical discussions around the pairing of *Geist und Materie*, of the meeting of the idealist project with *gut bürgerlich* notions of comfort and propriety.

A key aspect of Idealism, at least as developed by Hegel, was that history itself had an inner dynamic: history was a force in the world, and not simply an objective chronicle on which events were written. It is this idea of historical dialectic which was to propel architectural history to the extent that it became the motor of architectural development throughout the nineteenth century.

Two powerful ideas appeared to converge at mid-century: the empirical materialist concept of evolutionary development in the natural world, and the idea of history itself being driven by a spirit or *Geist*. The biological concept of evolution was credited to Darwin; Hegel developed, through dialectical reasoning, the concept of a governing *Geist*. Hegel's thought was the bridge between the idealism of the close of the eighteenth century and the romanticism of the nineteenth century. In it there are to be found two central ideas which would have a profound influence on the course of architecture in the nineteenth century: firstly, the idea of *Geist* as an overarching determinant of existence, and secondly, the idea of history itself as a necessary condition of existence. *Geist*, or spirit, would gain increasing momentum during the course of the nineteenth century as the guiding light for architectural development. It was the notion underlying the famous debate in the German language during the Romantic era

stimulated by the publication in 1828 of Hübsch's book *In which Style should we Build?* (*In welchem Style sollen wir bauen?*). History likewise became the central discipline in the codification of culture. In the hands of Hegel's compatriot Leopold Ranke (1795-1886) it claimed the status of a rational discipline, as opposed to the antiquarian pursuit of its English-language practitioners, and indeed its principles of orderly development began to be applied to all the sciences, the most notable of which was biology with its notions of Darwinian evolution of life forms.[31]

The educated German public had a keen demand for idealist *Weltanschauungen* (world views) connecting disparate areas of human knowledge. They craved theories that would provide the rationale of an animating spirit working on the material world, theories which would explain both works of man as well as the workings of the natural world. Barry Bergdoll has written that "[I]n 1828, as Schinkel's museum was nearing completion, educated Berliners flocked to Hegel's lectures on aesthetics and to Alexander von Humboldt's stirring account of the earth's surface and its plant life, lectures later published as *Cosmos: A Sketch of the Physical Description of the Universe* (1844), one of the most widely read books of the century."[32] Events such as these would prepare the ground for subsequent empirical accounts of cultural development, most notably those of Gottfried Semper, to which we will return later in this chapter.

The widespread popularity of essentialist theories paved the way for a common philosophical underpinning of the arts and the sciences. Indeed the German term *Geisteswissenschaften* equates the status of knowledge in the arts and humanities with that of the natural sciences. (The Victorian gentleman, or his German equivalent, would be as happy searching for fossils as he would be reading Keats or Goethe.) Essentialism as an overarching set of beliefs allowed someone such as D'Arcy Thomson with his book *On Growth and Form* (eventually published in 1917) to have an influence not just on the observation of natural history, but on the design of new forms.[33]

The Enlightenment can be seen to be informed by two principal concerns: to search for rational origins, and to establish rational argument based on facts. Rousseau, with his delight in man's primitive state, might represent the first concern, Hume the second. The two ways of advancing an argument or line of

reasoning are different. The first is broadly deductive, and involves a conclusion drawn from a set of general premises, whereas the second is inductive and proceeds from empirical evidence from the outset. The difference in methodological approach would lead to startling results for the architecture of the Enlightenment; it would take the tensions inherent in the Romantic movement to tease out these contradictions. In laying bare the problematic of romanticism, the various architectural practitioners and thinkers could be criticised for exacerbating the cultural confusion of the eclectic nineteenth century; Sigfried Giedion, for instance, took the Hegelian stance and viewed the nineteenth century's aesthetic dilemmas as a necessary working-out of the dialectic in order to arrive in the promised land of twentieth-century modernism; Julius Posener, as has already been mentioned, took a more measured view (while still valuing the visionary goal of modernism) and found much to commend in the staging posts of nineteenth-century aesthetics.[34]

The search for architectural authenticity goes back to the Abbé Laugier and his positing a mythical *Primitive Hut* as the origin of self-conscious design.[35] It is mythic, idealised, 'unreal', and of course could not be verified by any credible evidence. Conceptually, it stands in complete contradiction to the knowledge of antiquity unearthed by the new science of archaeology, which began in earnest in the Enlightenment period. There was an intense rivalry between architects, and between French and British ones in particular, to be the first on the archaeological scene and to publish their findings in folios accompanied by handsome engraved plates. Not infrequently the findings of the latter would call into question the beliefs of the former. The 'shock of the old', once the polychromatic architecture of Hellenic temples was understood, would run counter to the received understanding of the 'white classicism' of a Winckelmann.[36] *Materie* (matter) would trounce *Geist* (spirit), as it were.[37] (In other words, the verifiably objective facts of the material world preceded any possible interpretation of the world.) The twin poles of Idealism would play themselves out within architectural design in the nineteenth century; architects such as Tessenow would discover ways of dealing with both matter and spirit so that matter is rendered ethereal and spirit comes down to earth. This is not just windy rhetoric: his drawings, say of the interior spaces of the Dalcroze Institute, describe the bounding surfaces accurately, while at the same time capturing their

elusive spatial quality. Based so closely on Adolphe Appia's haunting proportional and shadow studies, they suggest both the accuracy of archaeological survey drawings and the ephemeral nature of spaces derived from an understanding of the body's movement through them.

The 'verifiable facts' of archaeology had the tendency to focus architects on the objective facts at their disposal. We have seen how the new practice of archaeology introduced hard material facts into the practice of neo-classicism. It had two effects: it made architectural form more realistic in terms of classical precedent and, particularly through the use of applied colour, it rendered buildings as both tactile and visual objects which needed to engage all the senses and not merely the mind. The practice of technology would have an even greater influence on architectural form. The two architects who are particularly credited with the development of the tectonic in Germany were Karl Friedrich Schinkel (1781-1841) and Karl Bötticher (1806-1889).

We have already examined Schinkel through the lens of Romanticism; his artistic intellect, though, is one ranging wide, transcending any stylistic categories that would constrain him to adopt one in preference to any other. We have seen how his alternative renderings of the Friedrich Werder church go further than mere stylistic fine-tuning. **(Fig. 2.13)** Every line of the drawings is alive to the underlying structural principle of either the Gothic or Roman precedent.

Schinkel fed his imagination and his technical competence by undertaking extensive travels, and keeping well-annotated sketchbooks. His visit to England, ostensibly to study English museology in connection with the projected *Altes Museum* **(Fig. 2.14)** in Berlin (a visit sponsored by the Prussian authorities), ended up with his travelling north to Manchester and being enthralled by the industrial vernacular of the buildings and structures of the English Industrial Revolution.[38] From the Manchester warehouses Schinkel learned to value simple, unadorned architectural form, *tectonic* in its direct presentation of the construction methods employed; seeing the industrialised North of England brought him into contact with a direct architectonic use of plain brickwork.[39] Indeed the combination of the flat, relatively featureless landscape of Manchester and the espousal of its local building material, the stock brick, must have put him in mind of Berlin, and encouraged him to develop an overtly tectonic architecture attuned to its location on his return.

His opportunity came in 1830 when, having been appointed Prussian *Geheimer Oberbaudirektor* (Privy Building Surveyor), he received the commission for the *Allgemeine Bauschule* (General Building School; known as the *Bauakademie* after 1848). **(Fig. 2.15)** As Watkin and Mellinghoff have written:

> It was the nerve-centre of the Prussian architectural machine since it contained not only the school of architecture on the first floor but the offices of the Ober-Bau-Deputation on the floor above, and even Schinkel's private flat where he lived with his family from 1836 until his death in 1841....The Bauakademie also represented the fusion of Greek and Gothic which had interested Schinkel at the start of his career: it is Gothic in its system of piers and buttresses, Greek in its horizontality and its decorative scheme. With its library and its model collection, it was an instructive celebration of the historical significance of architecture and of the constructional and decorative possibilities of brick and terracotta.[40]

Thus a newly invigorated tectonic architecture was conceived and realised in Berlin, one which gave equal emphasis to both terms in the epithet *Spree-Athen* (Athens-on-the- [River] Spree) .

At the time of his death Schinkel's great unfinished project was his *Architektonisches Lehrbuch* (Architectonic Textbook); its place as textbook for the School of Architecture would be taken by Karl Bötticher's great three-volume study *Die Tektonik der Hellenen* (The Tectonics of the Greeks) published between 1843 and 1852. Bötticher, according to Frampton, "respectively assimilated the representational to the Greek and the ontological to the Gothic."[41] In other words, he ascribed *Kernform* to Gothic construction and *Kunstform* to the Greek ideal; his illustration for doing so could be found on the Spree in the form of Schinkel's *Bauakademie.*[42] We shall examine Bötticher's concept of the tectonic further in the final section of this chapter.[43]

It would be an over-simplification to characterise the *Geist und Materie* debate of the nineteenth century purely in terms of German Idealism and in its development of the work of Hegel. In fact, an empirically based materialist philosophy briefly asserted itself at mid-century, at precisely the point where disillusion with the Romantic ideal began to set in. This was contemporary with the political setbacks experienced by German (and European) liberalism in the aftermath of the failed revolutions of 1848. Although empiricism has tended to become associated inextricably with Anglo-Saxon thought, there is nonetheless a

small but significant German variety mediating between pure Hegelian *Geist* and the new version of spirit as expressed by Nietzsche in the 1870s and 1880s. Two thinkers in particular represent this strand: Johann Friedrich Herbart (1776-1841) and Gustav Fechner (1801-1887).[44]

Herbart's importance lies in separating form from what he terms the secondary ideas (*Vorstellungen*) of content. Fechner developed Herbart's empirical approach, arguing against "all previous aesthetic theorizing *von oben* (from above, from universals to particulars) and proposed to establish a new aesthetics *von unten* (from below) on the basis of empirical evidence."[45] In other words, he makes a plea for the use of inductive reasoning based on empirical evidence. This bears some resemblance to the advances made in archaeology based on a logical rationale as opposed to the amateur antiquarianism which it replaced, which has already been alluded to.

The new empirical evidence available to architects at mid-century was that of the new materials brought to the marketplace following the Industrial Revolution. Empiricism, be it in the form of new mass-produced materials and components recently available, or in the form of the hard scientific evidence thrown up in the name of *Psychophysik*, would become the motor of much of the architectural innovation of the latter half of the century. Needless to say, technical innovation was frequently employed on new building types.

Britain and France led the way at this stage; it was not until much later in the century that Germany and the USA would challenge their technical superiority in constructional innovation. In London the prime example was the Crystal Palace (1851) by Joseph Paxton; **(Fig. 2.16)** in Paris Henri Labrouste's *Bibliotheque Ste Geneviève* (1843–1850). **(Fig. 2.17)** Germany, which underwent its Industrial Revolution a good half-century after Great Britain's, accepted its fruits in terms of technological innovation in building structures in a 'ready–digested' condition. Its architects felt little urge to vie with their engineering colleagues in pursuing a rivalry of 'aesthetic' architecture and 'rational' construction. As an example of this phenomenon Julius Posener has commented on the great Berlin railway termini built around the Wilhelmine period, a time when Great Britain had abandoned its tradition of erecting grandly scaled train sheds of a generation earlier.[46] The point is that Germany persisted in a show of technical prowess long after Great Britain had absorbed technology within the design mainstream. In many ways the

architecture of Tessenow, Behrens, and even the *young* Mies represented an advanced German acceptance of the English abandonment of tectonic fetishisation of the architectural object, a maturity which integrates technology within a broader design ambition.

Innovation in Germany would take place in the Wilhelmine era, particularly in the years immediately prior to outbreak of the First World War; it concerned, at most, the overt expression of new technology or daring structural form and experimental environmental design *within* buildings. Hermann Muthesius's Silk Factory **(Fig. 2.18)** at Nowawes, Potsdam (1912-1913), and Martin Elsäßer's Market Hall (1913) at Stuttgart **(Fig. 2.19)** are two good examples. However, in neither building is there a convincing relationship of external elevation to interior space. The point here is that the innovations of each building's major internal space are not carried over into the external image, the elevation, of each respective building. Tessenow himself, in a less overtly spectacular display of new technology (at least on the outside: the inner auditorium space of the Dalcroze Institute is extraordinarily bold) was keen to develop his practice from a technical point of view while making a name for himself as a form-giver and space-maker. This explains his persistence in doggedly taking out patents on his innovative construction techniques. One is reminded of the young Le Corbusier-to-be, busily engaged in the reinforced concrete and ferro-cement business during and immediately following the First World War. For both Jeanneret and Tessenow the pursuit of patented forms of construction is partly displacement activity, to compensate for the paucity of actual commissions, on the other hand it represents a canny positioning in the market, proving the point that although young and full of design ideas, these under-employed architects are nonetheless fully-engaged with the processes of construction and with the exigencies of the economy of building. When the general economy improves, and they have further matured as designers, they would be ideally placed to pick up prime commissions.

There is one interesting parallel with practice in Great Britain during the Wilhelmine period: the dichotomy of 'shed' volume and principal elevation of St Pancras Station, London. The London example shows the train shed designed by the engineer, William Barlow (1812-1902), and the Midland Grand Hotel (1868-1874) by George Gilbert Scott (1811-1878), which 'hides' the station from

the main road in front. **(Fig. 2.20)** This may be contrasted with Behrens's Turbine Hall (1909) for the AEG in Berlin. **(Fig. 2.21)** It would not be too fanciful to claim that this represents a Venturi-esque 'decorated shed' *avant la lettre*: Heinrich Tessenow's 'dialectic' of front and enclosure which we shall encounter at the Dalcroze Institute, Hellerau (and later at the *Berlin-Mitte* Swimming Pool of 1927) repeats the pattern.[47] **(Fig. 2.22)** (Robert Venturi was the American architect who, with his seminal books *Complexity and Contradiction in Architecture* (1966) and *Learning from Las Vegas* (1972),[48] theorised particular aspects of literary post-modernism and applied them to architecture. In *Learning from Las Vegas* he differentiates between two sharply divergent attitudes to modern symbolic form in buildings, apostrophised by him as 'ducks' and 'decorated sheds'. The former type of building has a three-dimensional form directly mimetic of its connotative image. An instance would be a frankfurter stall shaped like a giant sausage. 'Decorated sheds', on the other hand, have the symbolic image 'flattened' and reduced to a two-dimensional graphic device which is emblazoned on a screen in front of a pragmatic shed housing the functional requirements of the building.)

If the philosophy of German Idealism had remained static throughout the nineteenth century, if Hegel's dialectic had retained its spell over the German intelligentsia without any significant development, then the task of architecture might have been clear-cut. Building, of all cultural activities, is the most conservative and resistant to change because of its inherent cost and duration. As a general principle, philosophical ideas require the 'filter' of practitioners, or at least of theorists and critics sympathetic to the demands of practice, before being adopted as common currency in the artistic or design community. Such a process is characteristic of the philosophy of 'Will'. This imposes itself into the world of art and architecture via the concept of 'artistic volition' (*Kunstwollen*) coined by the art historian Alois Riegl (1858-1905).[49]

The philosopher in question was a near contemporary of Hegel's, the philosopher Arthur Schopenhauer (1788-1860). If Hegel's unifying notion was *Geist*, or spirit, then for Schopenhauer it was *Wille*, or will. This is a category that had a direct influence on developing aesthetic theories of the late nineteenth century, as we shall see in the next sections.[50] The concept of 'will', for Schopenhauer, is more than just the mind's control over our bodily actions; it is

the essence of all natural forces and objects. Christopher Janaway has written about Schopenhauer's insistence on innermost essence in terms that relate directly to the architectural notion of *Kernform* (core form):

> Only the will is thing in itself...It is that of which all representation, all object, is the phenomenon, the visibility, the objectivity. It is the innermost essence, the kernel, of every particular thing and also of the whole. It appears in every blindly acting force of nature, and also in the deliberate conduct of man, and the great difference between the two concerns only the degree of the manifestation, not the inner nature of what is manifested.[51]

It is the core notion of the world as 'will' which, of all Schopenhauer's ideas, had the greatest bearing on cultural criticism in the latter decades of the nineteenth century. Schopenhauer himself, it must be said, had a fairly utilitarian, if not simplistic, notion relating architecture's 'will to form' to considerations of the material propensities of a building's tectonics. Stone as a building material is ideal since it best represents the striving of all materials to fall to ground. The compliance with the laws of gravity leads, by extension, to the choice of openings in the stonework to be arcuated. Here, the Schopenhauerian 'will to form' supports the choice of the *Rundbogenstil* (Romanesque Style) in the 'Battle of the Styles'.

The importance of building materials for Schopenhauer would have put him in the Hübsch camp in the style debate (Schopenhauer is not known to have expressed himself on the matter). For Schopenhauer, a building's primary purpose is practical (to afford shelter); Christopher Janaway has glossed Schopenhauer's observations on architecture as follows:

> Architecture is the art form that deals with the lowest ideas concerning the behaviour of solid matter: gravity, cohesion, rigidity, and hardness. [T]he real core of architecture as an art is the conflict between gravity and rigidity. All the parts of a fine building should be relevant to making this conflict manifest to the observer, and should appear necessary rather than arbitrary; merely decorative elements belong to sculpture, and not to architecture as such. Also, it matters what materials a building is made from. An edifice which turned out to be of wood or pumice-stone would be a kind of sham, because materials less substantial than stone are not suited to bring out the Ideas of gravity and rigidity. We must be able to grasp in our perception the striving of the blocks towards the earth, and the counter-striving of the rigid elements which prevent then from falling. All else is irrelevant - mere beauty of shape is not a peculiarly architectural feature.[52]

Schopenhauer is mentioned here not so much for his direct influence on architectural debates - it was slight - but rather for his introduction of the idea of the innate will residing in any creation. On the face of it his philosophy would suggest a common purpose to the *Kernform* and *Kunstform*, such that their respective 'wills to form' coincide. While it would be unwise to ascribe to him any proto-functionalist tendencies in retrospect, his reduction of architecture to the two objectively verifiable factors of the Vitruvian triumvirate, *firmitas* (firmness) and *commoditas* (commodity), makes him an interesting father figure for developments in early twentieth-century architecture.

What makes Schopenhauer a particularly interesting figure is his couching of his aesthetics in terms that strike the modern Western reader as mystical and inscrutable. Schopenhauer's fascination with Eastern philosophy compelled him to elevate artists to the level of mystics, able to comprehend the world without undergoing the arduous analysis necessary for lesser mortals. In this, the artist is a superman in the (later) Nietzschean sense insofar as he is able intuitively to unlock the willed form lying innate in an artwork yet to be created. This blend of ineffable mystery coupled with a frank materialistic explanation of the world anticipates much of the avant-garde art world of the decade leading up to the First World War. For the former component we need look no further than the pages of 'Fidus', the *nom de plume* of the artist Hugo Höppener (1868–1948).[53] Fidus was the artist most associated with the Wilhelmine *Reformbewegung*. He wholeheartedly espoused the aims of the Garden City movement: it was his drawing indicating the 'third way' of land reform as opposed to, on the one hand, capitalism, and the other, communism, which formed the masthead to the journal of the land reform movement, '*Deutsche Volksstimme*'. **(Fig. 2.23)** Fidus is a representative of the conservative right-wing of the Garden City movement (he joined the NSDAP in 1932); in this he shared the extreme nationalist views of Theodor Fritsch (1852-1933), author of *The Town of the Future* (*Die Stadt der Zukunft*, 1896), one of the key texts of urban reform around the turn of the century.[54] Diethart Kerbs's book on Fidus is highly recommended by Julius Posener for giving a convincing answer to the question of the provenance of Tessenow's teaching and practice:

> Easier to answer than the question, as to where Tessenow's teaching and practice lead, is their derivation, and how they relate to each other. We mentioned Morris. The English Arts and Crafts movement is *one* source; and the 'Guild of Handicraft' of 1882, which, with Robert Ashbee, moved in 1902 from London to the provincial town of Chipping Campden in order to to pursue handicrafts and horticulture, represents another road to Tessenow. In the final decade of the last century life reform [*Lebensreform*] advanced on a broad front in Germany, especially in Germany: reform clothing, vegetarianism, nudism, return to the land, communal settlements, ramblers [*Wandervögel*]. These reformers also believed, as did Tessenow, that the evils of exploitative industry in the modern period could basically be removed by 'self reform'. Also, redemption through beauty, preached by van de Velde, belongs in this category. All these aspirations are anti-materialistic and anti-Marxist, and it is the German reform movement in particular which will have such a fatal proclivity towards ideas of Nordic racial superiority. Tessenow clearly has nothing to do with this urge.[55]

Talk of 'Nordic superiority' leads us on inevitably to the German philosopher of the nineteenth century whose impact on numerous aspects of twentieth-century political and cultural development has been manifold: Nietzsche. If *Kunstwollen* was the legacy of Schopenhauer, we must invent a cognate term, '*Kraftwollen*', to express Nietzsche's immediate effect on the arts at the turn of the century.[56] Friedrich Nietzsche (1844-1900) was the towering figure of German letters in the latter third of the nineteenth century. Part of his appeal lay in his being a non-technical writer (despite his earlier career as a philologist): his writings had literary merit over and above their content, and his ideas thematise a closeness to, and not a distance from, life. His early support for Richard Wagner (1813-1883) and his operatic form as *Gesamtkunstwerk* (total work of art) characterised his elevation of art as a redemptive force of immense life-affirming power. In *The Birth of Tragedy* (1872) Nietzsche posited two complementary aesthetic principles drawn from his knowledge of classical mythology, the Apollonian and Dionysian. This represented a curious development of the Hegelian spirit and matter dialectic, where the wild spirit of Dionysius elevates the pragmatic and phenomenological ordering principle of Apollo, raising it to a higher order of consciousness.[57]

It is not surprising, then, that Nietzsche's thought should have had such a powerful influence on architecture. As Rolf Bothe has said: "Architecture was for Nietzsche the aesthetic objectivization of the will to power."[58] The most self-conscious architectural parallel of Nietzschean artistic striving were manifested in

the various war memorials erected in the Wilhelmine years. Bruno Schmitz (1858-1916) emerged as the master of the genre: the *Kyffhäuser-Denkmal*, 1896, **(Fig. 2.24)** the *Kaiserdenkmal am Deutschen Eck*, 1897 **(Fig. 2.25)** and most effusively the *Völkerschlacht-Denkmal* (completed in 1913) in Leipzig. **(Fig. 2.26)** These structures, romantically located in the countryside, or just outside Leipzig at the site of Prussia's routing of Napoleon in 1813, continued the monumental expression of mythic history begun by von Klenze with his *Valhalla* in 1830; they are also, by virtue of their sheer sculptural weight, the epitome of *Wilhelminismus* in the popular imagination. Lacking all subtlety, they are brute manifestations of power.

Tessenow was not immune to the turn of the century craze for monumental expression of national spirit. In a remarkable study for a Bismarck tower of 1903 we see the naked power of masonry in all its *terribilità*: the scale of the random but vaguely-coursed stonework increased by the careful placing of small and narrow window openings, the great flight of steps on the axial approach to the tower (which Marco de Michelis reminds us will recur as a theme in Tessenow's first project for the Dalcroze Institute in Hellerau in 1910).[59] The contemporary critic Markward Winter commented:

> How simple and yet full of force in this respect is the sleek design of a Bismarck Tower which, bereft of ornament or decoration, finds its best embellishment in the naturalism of its material. The Villa by the lake, through its broad aspect a charmingly perceived massing, takes the idea of ashlar masonry to its logical conclusion; the powerful red roofs, the dark window-openings and the white of the chimneys: all of these, together with the green of the foliage, temper the tendency to drab monotony of the grey wall planes. Here the appropriate balance (*die rechte Grenze*) is suggested and ensured.
>
> The noble effect of the large external surfaces does not lie in their regularity: the painstakingly smoothed surface of the stone recedes in most cases behind the raw quality which is proper in itself (*Rauheit, die rechten Grenzen*). A soft, warm and friendly tone is exuded by the raw surface which breathes splendour and power.
> This is exactly what we feel in the presence of a natural cliff-face, the pithy power (*kernige Kraft*) and the sharp effect of shadows of the jagged line. The more we appreciate this in our masonry buildings, either on its own, or in association with smoother surfaces, the more monumental such buildings appear and the more charming too, the more we make use of the old forms of bonding. This charm is increased even more by the use of differently coloured materials, be they natural stone or in conjunction with brickwork.[60]

The simple monumentalism of Tessenow's *Bismarckturm* was carried over into domestic projects, with the *kernige Kraft* (pithy power) of the natural stone dispersed into the architectural forms of the house itself by means of a careful deployment of materials, colour and scales. Winter went on to praise the ruggedness of Tessenow's use of stone by quoting Ruskin from an uncharacteristic passage lauding the High Renaissance Palazzo Pitti in Florence.[61]

From early on in his career Tessenow paid careful attention to the qualities of "naturally expressive masonry" as can be seen in his (unexecuted) projects of 1903, 'House by a Lake' **(Fig. 2.27)** and 'Study for a House in the Mountains'. **(Fig. 2.28)** In the last example, in particular, the random stonework of the massive gable wall is shown to be contiguous with the stone-flagged courtyard from which the house rises.[62] (This is a nice example contradicting Tessenow's saying of 1916, "The workshop is more important than the studio", and suggests that Tessenow had worked out much of his aesthetic programme 'on the drawing-board'.)[63] In other words, Tessenow avails himself of a tectonic, or material, 'will to power', which is as direct, and appropriately deployed, as his spatial and formal endeavours. In this, *Geist* and *Materie* are both equally well served by Tessenow's architecture. In addition, Tessenow managed to bring the aesthetic scheme of the monumental tower to bear on the domestic character of the simple house. This was not to monumentalise the house; rather it *ennobled* the domestic arena and rendered it heroic in Nietzsche's terms. Elements of monumental form and materiality were of course to the fore in the design for the Dalcroze Institute in Hellerau: it was this very expression of *Kraftwollen*, this striving for Nietzsche's superhuman transcendence, in so public a place as the Garden City's cultural forum, which Richard Riemerschmid, in particular, could not stomach.

3. IDEALISM AND REALISM: WILHELMINE ARCHITECTURE INTO THE TWENTIETH CENTURY.

We have examined the tendency of Wilhelmine architecture towards an expression of a Nietzschean will to power, with the *Völkerschlacht-Denkmal* being perhaps the clearest example. Buildings commissioned by the state would necessarily tend to express power and prestige; at the same time private buildings would share many of the ponderous trappings of this official architecture. An examination of these buildings' internal spatial arrangements reveals a subtler game being played out, a 'grand game' to appropriate the term of the English architect Edwin Lutyens (1869-1944) for contemporary uses of the classical language, based on a Baroque spatial sensitivity. Wilhelmine architecture was not all bombast and swagger; we have Julius Posener to thank for his exhaustive study of *Wilhelminismus*, at least as it was played out in Berlin.

This section will examine the tremendous spurt of growth in Wilhelmine architecture, particularly that sponsored by the state or its agent, the city. It will contrast the sheer wealth of commissions with the neo-Baroque spirit pervading much of the work of architects working in the public and private sectors. The choice of architect to fulfill the role of *Stadtbaurat* (City Architect) was crucial in determining the architectural culture of the cities. This is relevant to our study of Tessenow for two reasons. First, the expansion of the scope of architecture, in particular, the specifically self-conscious architect-designed housing for the working class, gave new opportunities to 'self-made' men such as Tessenow who would not have access to the conventional building commissions in the gift of a clientele outside his social background. Second, the scale of public buildings in the recently unified German state, and self-confident cities, lent itself to the self-aggrandizement of the resurgent Wilhelmine Baroque revival. Tessenow's own essays in the field of large public commissions, such as the Dalcroze Institute, have to be seen in this context.

The Wilhelmine era witnessed a great sense of civic pride on the part of German cities. The newly constituted Reich brought together the rival kingdoms, principalities and free cities of Germany and united them under the Kaiser while maintaining their local traditions. The cities' material well-being, as well as their self-image, was promoted by the office of *Stadtbaurat* (city architect) whose task

was to regulate development within city limits. The role of the *Stadtbaurat* was not merely bureaucratic and negative in his regulatory capacity; he had a dominant and creative role in designing the major civic commissions in the gift of the city: its schools, hospitals, town halls, asylums and so on. The *Stadtbaurat* was necessarily a man with an already established practice; his official function as *Beamter* (civil servant) precluded too obvious a show of progressive leanings. However, the sheer extent of his workload, allied to the fact that many of the building types involved required quite radical rethinking, tends to equate official design with Wilhelmine architecture *tout court*. Within individual cities the work of the *Stadtbaurat* becomes the benchmark of acceptability by which to judge the designs of more radical men working with enlightened patrons. Two cities are instructive for us: Berlin and Dresden. We will begin with the metropolis, returning to Dresden later in the chapter.

Ludwig Hoffmann (1852-1932) was Berlin's *Stadtbaurat* (City Architect) from 1896 until 1924. His period of office covered the height of Wilhelmine power, the war years and their aftermath of revolution leading to the founding of the Weimar republic. Hospitals, schools, asylums, old people's homes, town halls: all these civic commissions came to Hoffmann, who interpreted them in an eclectic manner: neo-Baroque for the *Stadthaus* (1900-1914), **(Fig. 2.29)** Florentine Renaissance for the *Baerwaldstraße* Baths (1897-1901), Hanseatic brick Gothic for the *Märkisches Museum* (1898-1908), **(Fig. 2.30)** even English Jacobean for the Insane Asylum, Buch (1900-1906). **(Fig. 2.31)** Perhaps the most extraordinary work is the design for the Tegel Gasworks (1906) executed in a fairy-tale concoction of Gothic brickwork with a forest of chimneys and battlemented parapets reminiscent of medieval San Gimignano. **(Fig. 2.32)** Hoffmann had the breadth of work and architectural range of his Prussian predecessor Schinkel, yet, unlike Schinkel, who was not able actually to visit Greece and to see the antiquities at first hand, Hoffmann undertook many visits and filled his sketchbooks with forms that, once home in Berlin, he would manipulate and combine in an inventive but rigorous way.

In this way he would develop a highly personal, mannerist version of the Renaissance. Hoffmann's exhaustive work represents Wilhelmine architecture at its best: an extremely well-organised machine for producing an eclectic range of buildings perfectly adaptable to their various contexts. Posener talks of the

"[Wilhelmine] love of big organisations and their representation; in the final analysis this entails the representation of power."[64]

This pure expression of power describes with precision one's feelings on standing in front of any of Bruno Schmitz's works, from the grandiose *Völkerschlacht-Denkmal* in Leipzig to the *Papierhaus*, Dessauerstraße, Berlin (1906), where the use of an implied giant column order, with lightly facetted windows in between, renders monumental an otherwise modest office building.[65] **(Fig. 2.33)** It is precisely these Wilhelmine qualities of mastering raw architectural material and recombining its elements to express a new work which Hoffmann's contemporaries working in the private sphere were able to accomplish.

But it is not the comparison of Hoffmann's civic architecture with Schmitz's bombastic work which is pertinent here. Rather it is to Alfred Messel (1853-1909) that we must look for a more reflective contrast with the official architecture in Berlin. Messel was the German architect who took the new building type of the department store and rendered it in a uniquely 'architectonic' manner. As Karl-Heinz Hüter has commented, "Not only did he design the first two stories as 'shop windows', as was usual with department stores: every floor had this treatment. The facade was formed of pilasters stretching full height up to the roof, between which were located lightly recessed glass planes, with barely any vertical interruptions in the spandrels".[66] In other words, Messel was attempting to imbue commercial architecture, in particular, the new building type of the department store, with qualities of 'official' architecture in order to raise its status. These aspects were, first, monumentalism, in which large-scale buildings transcend the urban block format of their locations, and second, reference to the trappings of 'academic' architecture (the Gothic revival, in the case of Messel's *Wertheim* store.)

The strength of Wilhelmine architecture lies in its espousal of a programmed series of buildings, responding in a serious, scholarly way to architectural history combined with its counterpart, the activities of a small, disparate group of architects each driven by the need to found his design philosophy on an architectural truth. In short, *Materie* balanced by *Geist*. Posener, citing the great Wilhelmine art critic Karl Scheffler (1869-1951), categorises both Hoffmann and Messel as representing two sides of the Wilhelmine coin. Hoffmann, he writes,

> is the great synthesiser of the two friends. He unites the apirations of the age; he orders, groups, and organises. In his art there is nothing of Messel's nervousness, he lacks his quick temper. Hoffman is calmer and also more resistant. In Messel's buildings there is a trace of dramatic tension, while Hoffmann's buildings have rather the effect of logical statements. Behind Messel's built pathos are hidden things psychological, whereas Hoffmann's pathos is impersonal. Messel was a programme; Hoffmann has a programme. And yet both men are, from the point of view of artistic intentions, very much related...Hoffmann is, all things considered, one of the freeest and most experienced building officials whom we have at the present time. Amongst the officials he ranks as modern, amongst the moderns, as official. To that extent he represents the spirit of the new Berlin pretty well.[67]

Tessenow moved from provincial Trier to the decidedly more stately Dresden in 1909, and we now shift our attention from Berlin to the Saxon capital. It is here that Tessenow would be offered the chance to prove his architecture in its execution on a large scale and scope. The comparison is appropriate (even though Berlin became the capital of the new Reich united by Prussia, whereas Dresden continued as the capital city of the Kingdom of Saxony): both cities boasted of a lively architectural scene. In place of Hoffmann as Berlin City Architect, Dresden could offer Hans Erlwein. (See Chapter Four 'The Aedicular' for a discussion of Erlwein's work as Dresden's *Stadtbaurat*.[68])

Wilhelmine Germany represented a cultural flowering which was comprehensive in its scope. Experimentation and novel approaches were pursued in literature, painting and architcture. Indeed, if we understand culture as having a remit wider than just that of 'the arts', then the Wilhelmine period, with its various Reform movements (*Lebensreformbewegungen*), has to be viewed as equally invigorating a period as the Weimar years (1919-1933). Paradoxically it also signified endings: the end of a royal line, certainly, with Wilhelm himself abdicating in 1918 and fleeing to Holland, and the end of the period of stylistic revivals in architecture.

Neo-Baroque may be regarded as the last of the revived styles to sweep Europe in the post-Renaissance consensus. In its massive, frequently ponderous volumes it had an obvious relationship to empathy theory with both its corporeal associations and its figurative sculpture. What concerns us here is its relationship to Schmarsow's conception of architectural space (to be developed later in this

chapter) which will develop as the twentieth century progresses into the conventions of modernist space as described most famously by Sigfried Giedion in *Space, Time and Architecture*. What emerged, post-Schmarsow, was the idea of Baroque spatiality.

Although not published until 1914, Paul Frankl's *Principles of Architectural History* began to detect in the architecture of baroque churches a certain 'blurring' of distinct spatial entities. According to Frankl, the Baroque architect had a tendency to begin with an overall space and then to subdivide it, whereas previous works of the earlier Renaissance added discrete spaces together. This organic wholeness made space a malleable material in the hands of the Baroque architect; it was then but a short step to talk of space 'flowing'.[69]

In Wilhelmine Berlin, for instance, the *Land- und Amtsgericht* (District Court) (1896-1905) by Otto Schmalz (1861-1906) has a deformed Beaux-Arts *parti* whose public stair-halls patently palpitate in their exuberant swellings. **(Fig. 2.34)** This is a remarkable contrast with the otherwise sober suite of rooms forming the bulk of the accommodation. Similarly, the elevational expression of these nodal swellings, to use corporeal and medical terminology, has all the swagger of the Spanish baroque and stands out against the flanking facade of an almost *Biedermeier* sobriety. The rise of the neo-Baroque in late Wilhelmine architecture, in particular its implications for spatial design, will be discussed in greater detail in the following section of this chapter, 'Spirit as Space'.

The neo-Baroque has a second relevance for architecture around 1900 apart from its spatiality: scenography. Here, the picturesque, external features of a building are considered paramount in forming pleasing urban settings for modern life. (This scenographic approach to urban design would find its main proponent in the Viennese architect and town-planner Camillo Sitte (1843-1903), whose book *Der Städtebau nach seinen künstlerischen Grundsätzen* (City Planning according to its Artistic Principles) was published in 1909.) The kind of buildings championed by Paul Mebes (1872-1938) in his book *Um 1800* are the everyday late baroque town and country houses with few architectural pretensions. As simple dwelling houses they lack the complex 'spatiality' of the building type favoured by Paul Frankl, the Catholic church, in his *Principles of Architectural History*.[70]

The Viennese essayist Hermann Bahr (1863-1934) wrote the following polemic against the historicist eclecticism of the Vienna *Ringstraße*, the avenue encircling the historic centre of Vienna:

> One is no longer deceived, one knows that the façade means nothing any more. This must be our first demand when we think of a modern architecture: that one once more builds a house from the inside to the outside and that the façade becomes once again a pure expression of the house...The *Ringstraße* house is a swindle, it is unnatural and is counter to the sense of building. The *Biedermeier* house is true, its form is commensurate with its content, its very 'house-ness' conforms to bourgeois needs.[71]

Bahr's criticism of *Ringstraße* eclecticism and praise of *Biedermeier* simplicity goes much deeper than superficial appearance; the phrases "building the house from inside to outside" and "the facade becoming a pure expression of the house [layout]" are, with hindsight, proto-modernist. They are words which could be used unhesitatingly about Tessenow's work in Hellerau a mere three or four years later in respect of his housing. Posener, for example, finds reason to praise Tessenow's natural and functional facade designs over the more expressive and 'forced' elevations of Bruno Taut (1880-1938) in his *Akazienhof* terraced housing at Falkenberg:

> One need only look at the differences inherent in the two-storey terraced houses of the *Akazienhof* for an example: Tessenow would not have made the window over the entrance, the box-room window, round; he would not have placed a white frame around the windows on the ground floor, and in this manner distinguished them from those on the upper floor; on no account would he have differentiated the ground floor from the first floor as Taut had done; and we can safely assume that he would not have expressed the vertical composition in entrance niches and walls standing proud, which serve to articulate Taut's terrace of houses, in which paint is used to unite each mirror-image pair of houses. The impression we have is of *one* house, whose centre portion is recessed.[72]

These are nice distinctions, but important ones nonetheless inherent to the critical re-evaluation which seeks to restore to Tessenow his important role in breaking ranks with the ubiquitous *Wilhelminismus* around him.[73] Wilhelmine pomp and swagger could be found all over late Wilhelmine Germany; Tessenow's distinctive contribution which he shares with architects such as

Behrens and Gropius was to find an architectural expression beyond both the excesses of Neo-Baroque and the parochialism of Richard Riemerschmid.

Similar examples given above of 'official' Wilhelmine architecture as practised by the city architects of Berlin and Dresden may be found all over Germany. The strength of the cities, the extent to which they wielded devolved power in matters parochial, drove regionalist design to a far greater extent than in Germany's neighbours of centralist France, Austria-Hungary and Russia. Of course there was a strain between the desire to be 'German' as opposed to Prussian, Swabian, Bavarian and so on and the continuing pride of the kingdoms and principalities subsumed by the Reich. While the *Stadtbaurat* system tended towards greater national uniformity (what is Saxon about Dresden's Rathaus, *niedersächsisch* about Hannover's?) there was a good deal of regional autonomy practised, particularly in pursuit of private commissions.

Tessenow recognised the novelty of the endeavour of Hellerau. In the attempt to make Germany's first Garden City an organic whole, encompassing work, habitation and cultural expression, the old traditions could not simply be translated from one pre-existing context into the new one. This was where he differed from Riemerschmid's understanding of architectural development. Bruno Taut, writing some thirty years later, also recognised this: "What we must seek out is the synthesis of old tradition and modern civilisation."[74] This is cited by Kristiana Hartmann, the historian of the German Garden City movement, who goes on to differentiate Taut's use of tradition (and implicitly Tessenow's as well: the chapter in her book *Deutsche Gartenstadtbewegung* deals with the Falkenberg *Siedlung* masterplanned by Taut with some individual house designs by Tessenow) from that of others of more conservative views:

> The tradition, [is] understood here not in terms of [Paul] Schultze-Naumburg's slavish manner, nor in terms of [Theodor] Fischer's southern German vernacular, but rather in the search for solid principles and in the creative transformation of traditional forms for altered contemporary living conditions.[75]

The crucial word *sachlich* epitomises Taut's use of tradition, as opposed to Schultze-Naumburg's more literal interpretations, and became a key term in architectural discourse by the early 1900s.

Sachlich began to be used as an adjective to describe artefacts and buildings of unadorned practicality in design in the 1890s; according to Harry Mallgrave, it was Richard Streiter who first coined the term *Sachlichkeit*.[76] There is no adequate English equivalent, although 'objective', 'functional' and 'practical' all approach its nuanced meanings.[77] (Its 'second coming' was in the 1920s when *Neue Sachlichkeit* ('New Objectivity') was used to describe a range of modern artistic endeavours.) In architectural terms, it comprised stripped elevations, and a related set of 'stripped spaces'. These might be characterised as spatial components of grand sequences stripped of their neo-Baroque curlicues: a return to a Schinkel-like purity, minus the trappings of 'correct' historicist detail, be it classical or Gothic. An apt pairing exhibiting such characteristics might be the *Amtsgericht*, Berlin with Tessenow's *Festspielhaus*, Hellerau. Contemporary critics began to perceive the new sensibility, as Hartmann reports:

> In 1907 Joseph August Lux described the workers' houses of Riemerschmid which formed part of the planning phase of Hellerau using the adjectives 'objective' (*sachlich*) and 'fit for purpose' (*zweckmäßig*). He emphasised that they were subject to the "new artistic design principles". By 1910 he had changed his mind: "While the motor car, the bicycle, the electric trams speed by in front of the house, we can no longer play the historic *Biedermeier* games on the inside."[78]

Wilhelmine architects were clearly moulding space as a material in its own right; they were conscious of its architectural pedigree and its relation to German idealistic thought of the earlier nineteenth century and were aware of its corporeal connotations. The development of their thinking about 'space' as an architectural entity in its own right now needs to be delineated in greater detail in the second section of this chapter.

We have so far considered architectural developments throughout the nineteenth century somewhat in isolation; it goes without saying that the changes in society undergone by Germany since the Enlightenment had profound effects on architecture. Two changes concern us immediately: new forms of patronage and of publicity. Both are concerned with a revaluation of architecture's public. Friedrich Naumann, one of the forces behind the founding of the *Werkbund*, recognised how crucial an impact Germany's social upheavals would have on

the design professions when he wrote in 1897: "*What kind of policy is therefore demanded?* A policy of power externally and reform internally."[79]

Naumann's view of the two-fold nature of German policy in the Wilhelmine era talks of resolving the dualities inherent within it. This is the thread running through this study, represented at its most abstract and general level by *Geist* as opposed to *Materie*; by historicist models as opposed to tectonic pragmatism at the level of architectural theory; and finally by architecture's reaching out to its new audience, be it to the mass public of consumers or trade-unionists, or to the smaller, self-chosen groupings of the various reformist movements. Kathleen James-Chakraborty has talked of architecture's new audience in the following terms:

> Between 1910 and 1940 German architects of various political stripes and the individuals and institutions that hired them sought to ameliorate the country's dangerous social divisions by creating gathering places for a mass public. Following the lead of those who had transformed German theater in the early years of the century, and inspired as well by prominent late nineteenth-century aestheticians and sociologists, they believed that the shared experience of such spaces could help restore what they nostalgically recalled as a premodern sense of community. Spaces that brought people together physically would also, it was hoped, promote the development of a unified society, the creation of which eluded German politicians throughout this period.[80]

The shared community of spaces, in the form of Speer's and Troost's gathering-spaces for national socialist rituals, served to unite a select German society for the twelve years from 1933 to 1945. What was missing from these years, and what would have to be painstakingly rebuilt, at least in West Germany after the war, were the spaces designed for the coalition of private interest groups, what in the Wilhelmine years were known as belonging to the *Lebensreform* movement, which would contribute so much to the creation of a free and open society.[81]

(ii) SPIRIT AS SPACE

1. HEGEL'S ARCHITECTURE

Nineteenth-century architectural theory could be said to have 'invented' the category of space in its description of architecture; by the same token the theme of construction was reborn as Tectonics. German architectural theory specialised in developing these new terminologies and categories so that by the close of the century they had become the twin poles which would map out the territory of incipient modernism. Of course there have been critics of the developing emphases on space and tectonics in architectural aesthetics towards the end of the nineteenth century. Roger Scruton in his book *The Aesthetics of Architecture* has offered a defence of pre-modern aesthetics where the very concepts of 'space' and '*Kunstgeschichte*' (art history) are questioned.[82] Scruton's view of aesthetics seems to reach back to, and stop with, Kant; his aversion to Hegelian 'historicism' and post-Hegelian developments derives from the critique made by Karl Popper in his book *The Poverty of Historicism* (1957). This is a theme to be taken up in some detail in the final chapter, where the historiography of Tessenow is discussed.

From the mass of critical and theoretical (and often prolix) writings two key periods can be identified. Firstly the 1830s and 1840s, where the main concerns were with deciding on the appropriate style of architecture, as exemplified by Heinrich Hübsch's *In what Style should we Build?*[83] The Hegelian spirit invoked here is that of the *Zeitgeist* or Spirit of the Age. This is intertwined with the related concept of *Volksgeist* which, with its nationalistic overtones, owes more to Herder's heady version of Romanticism than to Hegel's dialectical and supranational approach to historical development. National characteristics of architectural development would loom large in the debates over the authenticity of origins; these would focus largely on the question of tectonics which, being intrinsically connected with the building arts, have a necessarily more down-to-earth and materialistic bent than the more *geistig* (spiritual) debates over space.

Some fifty years later, towards the end of the century, the search was on to redefine the 'spirit' in architecture. The debate had now moved beyond its

nationalist and antiquarian historical worldview, and onwards to defining an ontology of architecture.[84] But what was the authentic being of architecture deemed to be? There were two candidates, one related to pure spirit, the other to base materialism: space and tectonics. Let us begin with space.

The art historian Heinrich Wölfflin (1864-1945) offers an intriguing link between a resurgent interest in the Baroque and an increased concern for space *per se* in late nineteenth-century Germany. His second book, *Renaissance and Baroque* (1888), develops the link between an incipient empathy theory and architecture as the art of corporeal mass.[85] According to Harry Mallgrave and Eleftherios Ikonomou, Wölfflin accepted Schopenhauer's 'Will to Form', but rejected its negative aspects,

> specifically, the view that architecture can only represent the lowest grades of the will's objectivity, the rigidity of stone, and the downward pull of gravity. What makes this criticism problematic is that in wanting to invert the downward thrust in Schopenhauer's column (in wanting to see the column as an upward striving), Wölfflin must borrow a feature of Schopenhauer's philosophy – the will – to support his psychological explanation.[86]

Wölfflin was keen to make use of the newly-fashionable *Psychophysik* propounded by Herbart and Fechner; here he conflated it with Schopenhauer's will to form and made a hybrid of the two seemingly disparate methods. The column, for Schopenhauer, wants to rise up and not merely be a dumb bearer of applied load. In his doctoral dissertation *Prolegomena to a Psychology of Architecture* (*Prolegomena zu einer Psychologie der Architektur*, 1886) Wölfflin mediated between Bötticher's tectonic emphasis and the debate in the following decade that would open up space *per se* as an architectural motif.[87] Although he concentrated his attention on architectural form, and not space, in lending form anthropomorphic qualities and in imbuing it with a will to transcend its leaden materiality, he prepares the ground for the paradigm shift in architectural thinking that would occur within a decade.

According to Cornelis van de Ven, Wölfflin's article of faith is that "the object of architecture is *corporeal form*, and only for one reason: man himself has a corporeal body."[88] The development of modernism in the twentieth century is, however, one that moves progressively from the subjectivity of empathy to ever

greater abstraction. This process is one initiated by Worringer's *Abstraction and Empathy* (1908). The point is that space, as an architectural 'object' in its own right, undergoes a shift in perception from being an emanation of corporeal form (and hence intimately connected with the Baroque Revival) to being a mental, 'abstract', concept.

Space is regarded as an architectural category in its own right by the Viennese architect Hans Auer in his article '*Die Entwicklung des Raumes in der Baukunst*' ('Development of Space in Architecture', 1883)[89]: "Space, to use [Auer's] biological analogy, is the soul of a building: that spiritual essence enclosed and filled out by the forms, the body of the building."[90] According to Mitchell Schwarzer:

> Auer echoed what had been evident throughout the earlier discourse on tectonics: that architecture has two connected yet contrasting souls. As Auer described the age-old paradox, the first "soul" rests firmly on the ground and is ordered by practical needs, while the second lies in the heavenly regions where the task is to serve pure beauty. Auer's metaphors of the practical ground and beautiful heavens poignantly expressed his transferral of the age-old dualism to the new pursuit of space.[91]

The limitation of Auer's viewpoint is his constant wavering between seeing architectural primacy first in terms of form, and then in terms of space. It is as if, faced with a black and white figure-ground plan, he is constantly vacillating between reading the black forms as figure *and* as ground simultaneously. Colin Rowe and Fred Koetter have explained the flickering of the *Gestalt* diagram succintly. They explain how, when observing the famous black vase – or is it a pair of faces in profile? – only one of the two images may be seen at any time. They then transpose this effect to the view of a town plan, and explain how Le Corbusier's urbanism represented a *Gestalt* reversal of the traditional city's constitution. In the pre-modern city, the figure of white urban space emerged from the dense black ground of the everyday buildings of the urban scene. Le Corbusier reversed this pattern, so that the (black) figures of object buildings stand forlorn in a sea of poorly differentiated (white) urban space.[92] Much the same process of vacillation, on the conceptual rather than perceptual level, is going on with Auer's form/space dualism.

Auer was very much caught up in the debates of the 1880s concerning the use of iron in buildings, and this dominated much of his thinking, diverting it from contemplating architectural space *per se*. He did not, for instance, argue that the innovation of framed construction arising out of the structural uses of iron would lead inexorably to new shapes of architectural space. We have to wait another ten years, until 1893 to be precise, for the appearance of the three essays that theorise space in a manner uncontaminated, as it were, by other architectural considerations. From then on space, as a distinct category of architectural taxonomy, began to be asserted, particularly in Wilhelmine Germany. It is the subject of the following section.

2. SPACE THEORISED: THE 1893 TEXTS

In the 1890s space began to be theorised by three writers from different disciplines. The congruities represented by their views, published in the same year (1893), guaranteed the central importance their writings were to have in ensuing critical debates on architecture. More than that, though, the shifting of ground from form to space would propose a major realignment of architectural thought, both in terms of practice (though this would inevitably lag behind somewhat) and in terms of a reassessment of eras of architectural history. The three protagonists were the sculptor Adolf Hildebrand (1847-1921), the architectural and art theorist August Schmarsow (1853-1936) and the philosopher Theodor Lipps (1851-1914). From the writings of all three emerges the modern architectural sense of the word space.

The first of the texts we encounter is Hildebrand's 'The Problem of Form in the Fine Arts' (*'Das Problem der Form in der bildenden Kunst'*, 1893). Adolf Hildebrand was a leading sculptor in Wilhelmine Germany. The originality of his theoretical writings resides in their exploration of the optimum sculptural form; he ends up by promoting the idea of flat 'relief' sculpture, which is closely related to his differentiation between 'seeing' and 'scanning'. His ideas concerning the flatness of architectural planes were taken up by numerous architects in the first decade of the twentieth century, although Hildebrand himself did not pursue their

relevance for architectural form. The impact these ideas had on Tessenow will be discussed in Chapter Three, 'Seeing and Scanning: Abstraction Empathised'.

Hildebrand's immediate significance lay in his unequivocal statement that 'form' and 'space' are two mutually related terms necessary in the description of architecture:

> By a spatial continuum we mean space as three-dimensional extension and as a three-dimensional mobility or kinaesthetic activity of our imagination. Its most essential attribute is continuity. Let us therefore imagine the spatial continuum as a body of water in which we can submerge containers and thus define individual volumes as specifically formed individual bodies without losing the conception of the whole as one continuous body of water.[93]

The use of the image of water as the material filling the spatial continuum will clearly allow for subsequent readings of 'flowing space' to be made. Interestingly, Wolf Dohrn, Tessenow's patron during the early Hellerau years, would have been familiar with Hildebrand's artistic work as a result of the sculptor's collaboration with the painter Hans von Marees (1837-1887) for a commission won in competition for the frescoes of the German Zoological Station in Naples in 1873. Dohrn's father Anton (1840-1909) set up the Station, and the young Wolf lived there until his eleventh birthday when, in 1889, he was sent to Germany in order to continue his education.

The ground-breaking nature of Hildebrand's conception of space has recently been commented on by Adrian Forty:

> His stress upon space as the prerequisite for understanding form was certainly original, as was his manner of describing it...Hildebrand suggested no fewer than three of the ideas about space that were to be of so much significance in the 1920s: that space itself was the subject matter of art, that it was a continuum, and that it was animated from within. After this astonishing passage, Semper's idea of space as enclosure is left far behind, looking decidedly leaden.[94]

To the contemporary reader this is perhaps not quite so astonishing as Forty would have us think; from the 1890s perspective, however, Hildebrand has indeed come a long way from the rather measured and neutral concept of space as defined by the philosopher Immanuel Kant (1724-1824), who wrote that

" 'Space' is not an empirical concept which has been derived from outer experiences...Space does not represent any property of things in themselves, nor does it represent them in their relation to one another."[95] For Hildebrand, space is no longer the 'blank canvas' on which architects paint their designs, rather it is the stuff of design itself. Let us take the points one at a time.

First, *space itself is the subject matter of art.* In other words, art is not located within space, but *is* space itself. Space has changed from being the receptacle or frame of architectural form, and has become form itself. Second, *space is a continuum.* Space does not exist in discrete amounts but *flows* (to use twentieth-century terminology). In this it bears a resemblance to architectural material form, which is of necessity continuous (loads require continuity of form from roof ridge to foundation in order to transmit load). Third, *space is animated from within.* The formation of architectural space is here rendered analogous to a biological organism or a physical structure. (One is reminded of Siegfried Ebeling's dictum that 'space is a membrane' published in his book of the same title in 1926. This would find its practical manifestation in Buckminster Fuller's geodesic structures of the 1950s and '60s.)[96] This is a clear example of the animating spirit of *Kunstwollen* acting to shape space. Adolphe Appia, the Swiss scenographer who collaborated on the design of the Dalcroze Institute in Hellerau, and who went on to design the ground-breaking sets for Jaques-Dalcroze's productions up until the outbreak of war in 1914, wrote:

> Although in the spoken drama the actor may not find the equivalent of the art to which eurhythmics has introduced him, he will discover a common and essential element! Space. The discipline of the rhythm will make him particularly sensitive to the dimensions of space, which correspond to the infinite variations of musical sequences.[97]

Hildebrand was indebted to Conrad Fiedler's notion of *Sichtbarkeit* (visibility) which, according to Mallgrave and Ikonomou, is first developed in his *Über die Beurteilung von Werken der bildenden Kunst* (On judging works of visual art, 1876).[98] Fiedler, say Mallgrave and Ikonomou, returned to "Kant's two modes of experience by which we come to terms with reality: perceptual and conceptual cognition. The bias toward conceptual thought has been so ingrained into Western consciousness, Fiedler argued, that it has now become difficult for anyone, most of all for the artist, to develop the perceptual faculty of visual

experience."[99] Van de Ven remarks in his book *Space in Architecture* that "Hildebrand separates actual form ('*Daseinsform*') which is the physical reality, from the perceptual form ('*Wirkungsform*') which depends upon the variable factors [...] of the beholder. [...] Science is only interested in the first, the arts and its derivation, aesthetics, in the second kind of form."[100] This is a similar kind of dualism that we find in Karl Bötticher's distinction of *Kernform* and *Kunstform*.

The importance of Fiedler's *Sichtbarkeit*, then, was to refocus visual aesthetics on the actual experience of viewing, as opposed to an idealised concept (idea in the Platonic sense) of it. This prepared the ground for the sculptor Hildebrand to propose a subjective reading of space, one that moreover began to be 'felt' by the body in motion. For Hildebrand, space was not something 'out there', an objective reality to be observed by a disinterested (and static) viewer; rather it was like the negative of material form, and was experienced by the both the static and the moving eye. The term *kinaesthetic* refers to the movement of the eye; Hildebrand was not here defining spatial perception as that experienced by the whole body in movement – he was still too much the sculptor to adopt this position – but he was acutely aware of the difference between pictorial and three-dimensional space, albeit from a sculptor's perspective.

The second of the 1893 texts is August Schmarsow's 'The Essence of Architectural Creation' ('*Das Wesen der architektonischen Schöpfung*', 1893). Working independently of Hildebrand, Schmarsow took Hildebrand's kinaesthetic and sculptural sense of space and rendered it architectural, in the modern, dynamic meaning of the word. Space for Schmarsow was akin to an aura emanating from the human body in motion. In this, he expanded the scope of Hildebrand's kinaesthetic visual sense, of the pair of eyes in motion (but within a stationary head), to the experience of the body itself in motion. In this way spatial form was intuited by the body experiencing its own movement through space, coupled with the scanning of the surfaces bounding that space by means of the eyes' binocular vision.

Space was what unified architecture of all eras and uses. Schmarsow's task was to give a scientific explanation of our intuitive, 'phenomenological' sense of space: "From the troglodyte's cave to the Arab's tent; from the long processional avenue of the Egyptian pilgrimage temple to the Greek god's glorious column-

borne roof; from the Caribbean hut to the German Reichstag building - we can say in the most general terms that they are all without exception spatial constructs (*Raumgebilde*)."[101] (Here Schmarsow was making reference to the recently completed *Reichstag* building **(Fig. 2.35)** in Berlin (1884-1894) designed by the architect Paul Wallot (1841-1912), as well as to the writings of Gottfried Semper. Semper's writings will be considered in the following section *Matter as Built Form* as they tend to support a mooted anthropology of construction than to spatial considerations *per se*.)

Schmarsow wrote about the means by which the human body perceives space; in this passage from 'The Essence of Architectural Creation', he recalled Herbart's 'psychological aesthetics':

> Psychologically, the intuited form of three-dimensional space arises through the experiences of our sense of sight, whether or not assisted by other physiological factors. All our visual perceptions and ideas are arranged, are ordered, and unfold in accordance with this intuited form; and this fact is the mother lode of the art whose origin and essence we seek.
> The intuited form of space, which surrounds us wherever we may be and which we then always erect around ourselves and consider more necessary than the form of our own body, consists of the residues of sensory experience to which the muscular sensations of our body, the sensitivity of our skin, and the structure of our body all contribute. As soon as we have learned to experience ourselves and ourselves alone as the center of this space, whose coordinates intersect in us, we have found the precious kernel, the initial capital investment so to speak, on which architectural creation is based – even if for the moment it seems no more impressive than a lucky penny. Once the ever-active imagination takes hold of this germ and develops it according to the laws of the directional axes inherent in even the smallest nucleus of every spatial idea, the grain of mustard seed grows into a tree and an entire world surrounds us. Our sense of space (*Raumgefühl*) and spatial imagination (*Raumphantasie*) press toward spatial creation (*Raumgestaltung*); they seek their satisfaction in art. We call this art architecture; in plain words, it is the creatress of space (*Raumgestalterin*).[102]

This is an extraordinary passage, one which anticipates the critical vocabulary, and continuing relevance, of such twentieth-century writers as Adolf Behne (1885-1948) and Sigfried Giedion (1888-1968). The passage continues by Schmarsow describing how human beings' natural propensity for organisation leads us to demarcate space and to arrange it; our *Raumphantasie* is fed by our knowledge of given spaces from nature; caves, valleys, rock fissures etc. However, it would be mistaken to understand Schmarsow as an advocate of a

crude and simplistic anthropomorphism, or that constructed space merely copies 'natural' space. He is instead to be understood as operating within the German Idealist tradition in advocating a phenomenology of space. According to Forty, Schmarsow goes on to suggest "that the 'spatial construct' is a property of the mind, and not to be confused with the actual geometric space present in buildings; this point, later developed by the philosopher Martin Heidegger, largely passed architects by."[103]

His system develops the innate human understanding of the axes which define spatial extension; Schmarsow's important point here is that the horizontal dominates the vertical, such that

> [t]he principal concern is always the spatial enclosure of the subject, that is, the enclosure or walling in along the sides – not the roofing from above or even the designation and development of the vertical. For a long time this enclosing, this harbouring, this walling may have taken place under the open skies. Spatial constructs of this kind, such as the Greek hypaethral temple and the Egyptian pilgrimage temple, are no less a part of architecture than our own four walls, which we still regard as the epitome of enclosure.[104]

Having established the *Ur*-enclosure, Schmarsow then goes on to develop a kinetic theory of space, where an interior is to be experienced and conceived dynamically, with the human observer in motion within the space:

> The linguistic terms that we use for space, such as "extension," "expanse," and "direction," suggest continuous activity on our part as we transfer our own feeling of movement directly to the static spatial form. We cannot express its relation to ourselves in any way other than by imagining that we are in motion, measuring the length, width, and depth, or by attributing to the static lines, surfaces, and volumes the movement that our eyes and our kinaesthetic sensations suggest to us, even though we survey the dimensions while standing still. The spatial construct is a human creation and cannot confront the creative or appreciative subject as if it were a cold, crystallized form.[105]

So, for Schmarsow, architectural space is dynamic, in the sense that it depends upon human agents who either move through it, have the potential to move through it, or whose eyes 'move' through space. (Here, as we have already stated, Schmarsow added the kinetic sense to the kinaesthetic already developed by Hildebrand.) But importantly it is a distinctly *human* construct and cannot be reduced to a mere mathematical schema. This is supported by

Schmarsow's statement that "[s]pace must be filled with a life of its own if it is to satisfy us and make us happy."[106] Such a space "filled with a life of its own" is prescient of Paul Frankl's "trace of vanished life" which is for him a key sign of 'purposive intention' in his definition of architectural space.[107]

Schmarsow concretises our kinetic awareness of moving through spaces by developing axial systems of planning buildings. In this way, the use of axes in planning a building, albeit a mathematical exercise, is nonetheless related to our self-knowledge of our bodies:

> It is an act of free aesthetic contemplation when, with the aid of our imagination, we transport ourselves from the exterior that we see before us into the center of the interior space; when, by inquiring into its axial system, we strive to open up a remote organism to the analogous feeling within ourselves. As long as we are unable to carry out this redoubling of our consciousness and are unable to complement the outside vantage point with an interior view, the building remains for us a mere crystallization – like a rocky outcrop that rises before us – whether we view it frontally or from the other side, or even from above.[108]

This is an eloquent description of the power of a plan, and its relationship to human awareness. For Schmarsow, like Hildebrand, space was something tangible, the 'material' of architecture. The third in our trilogy of 1893 texts sought to stress its 'pure' aesthetic qualities.

The final text we shall consider here is Theodor Lipps's 'Spatial Aesthetics and Geometric-Optical Illusions', (*'Raumästhetik und Geometrisch-Optische Täuschungen'*, 1893). According to Forty, Lipps

> argued that there were two ways of seeing, optical, which was concerned with matter and aesthetic, which was concerned with what was left after matter was removed. For Lipps, space was this dematerialised object: as he put it, "Since forceful or vital space is the single object of arts of abstract space creation, nothing can prevent us from eliminating the material carrier. So it is possible that in the art of abstract representation of space, the spatial form can exist purely, 'unmaterialised'."[109]

Lipps's ideas are less overtly architectural than either Hildebrand's or Schmarsow's; they represent a version of a vitalist philosophical *Weltanschauung* promoted by Henri Bergson (1859-1941) and Wilhelm Dilthey (1833-1911). This seems to prefigure the biological analogies of organic

architects such as Hugo Häring (1882-1958) in the 1920s. Yet Lipps's apparent eschewing of the enclosed aspect of space is what makes him so precisely interesting to us, in that his investigations into 'pure' space, unencumbered as it were by considerations of its means of enclosure and definition, allow him to focus on the animus governing space generation, whatever that may be. Forty notes that it was Lipps (amongst Schmarsow and Hildebrand) who had the greatest short-term effect, particularly on the architects of the *Jugendstil*, and that he was the only German-language theorist to be directly referred to by Geoffrey Scott in *The Architecture of Humanism*, the book which introduced to an English readership some of the advanced Continental ideas in architectural theory.[110]

Cornelis van de Ven summarised Lipps in the following terms: "[Lipps's theory of space] holds that the shape of the object is its mass: the form is what remains if we eliminate mass: an abstract spatial structure."[111] Van de Ven clearly credits Lipps with bequeathing to modernism the notion of space as an abstraction. Citing Lipps's claim that "[s]ince the forceful or vital space is the single object of the arts of abstract space creation, nothing can prevent us from eliminating the material carrier. So it is possible that in the art of abstract representation of space, the spatial form can exist purely, not materialized."[112] For him, it is unsurprising that Lipps, who focussed on "spatiality [as] a way of reading matter alone," should have been taken up by the most 'unspatial' architects, those of the *Jugendstil.* Their preoccupations with reducing the architectural surface to its linear components are an indication of their privileging the *dematerialisation* of surface, rather than the *formation* of space. Tessenow's aversion to *Jugendstil* is partly due to his reluctance to favour surface at the expense of space. For him, to use the subtitle of this study, his aim was to materialise space. A good comparison to exemplify this would be Tessenow's tendency to blur the junctions of planes, to render them indistinct, as opposed to Josef Hoffmann's sharp delineation of each plane's boundary.

3. FROM FEELING TO *EINFÜHLUNG*

In the 1880s a number of German-speaking writers gave new legitimacy to the Baroque as a style which distinguished itself from the Renaissance because of its daring spatiality and dynamic sense of movement. Studies such as Cornelius Gurlitt's *Geschichte des Barockstils in Italien* (History of the Baroque Style in Italy, 1887) and Wölfflin's *Renaissance und Barock* (1888) gave theoretical underpinnings to the Baroque Revival (what the British would endearingly term the *Wrenaissance*).[113] The previous section of this chapter dealt with the neo-baroque leanings of Wilhelmine architects ("Wilhelmine bombast and baroque spatiality"); now we will turn our attention to the theoretical underpinnings of this practice.

Albert Ilg's *Die Zukunft des Barockstils* (The Future of the Baroque Style) (1888) specifically links France to Austria (and conveniently sidelines Prussia and the recently emerged German Empire to the north): "The Austrian essence is the bodily Baroque façade; lively, fresh, and always laughing, never boring, full of caprice and good aspects, a complete nest of surprises."[114] This amounts to a sort of architectural Merry Widow. The salient fact is that the Baroque was 'rediscovered' at the same time as 'space' was given its new emphasis in Central Europe. Ilg's writings have been largely forgotten, possibly since his favouring of the Baroque was for reasons other than its spatial qualities. It corresponds to his notion of an Austrian *Volksgeist* and is replete with an anthropomorphism which has a superficiality at odds with Schmarsow's psychological depths of the corporeal. In the writings of, say, Paul Frankl, on the other hand, the Baroque would be valorised specifically for its spatiality, and his use of terminology such as interpenetration, for instance, would become ingrained in the discourse of modernism in the twentieth century.[115] In the English-speaking world it was Geoffrey Scott's *The Architecture of Humanism* (1914) that played a prominent role in disseminating continental European ideas of empathy, in addition to a renewed interest in the spatial possibilities of the Italian Renaissance and Baroque.

The drift from feeling to *Einfühlung* (empathy) mirrors the move from the early Romanticism of the beginning of the century to the eclecticism, some would call it cynicism, of the later decades. Aesthetics, both practical and philosophical,

assumes a more scientific nature; although the aesthetic object is still very much seen through the subjective experience of the viewer, it is nonetheless a subjectivity laid open to the probings of the university professor.[116] The term *Einfühlung* was itself a neologism of the 1870s coined by Robert Vischer as one of many similar derivations from the verb *fühlen* (to feel) which litter his doctoral dissertation *Über das optische Formgefühl* (*On the optical sense of form*) published in 1873.[117] It is normally translated as *empathy*.

The rise of *Einfühlung* as developed by Vischer owes a debt to Karl Albert Scherner's *Das Leben des Traums* (The Life of the Dream) of 1861. This book talks about the symbolism of dreams, and suggests the idea of *projection* – of wish fulfilment and erotic longing which would become Freudian staples in the twentieth century. Indeed Freud's *Die Traumdeutung* (The Interpretation of Dreams) some forty years later depends upon the earlier work on the psychology of projection. The oneiric spatial motif would find a renaissance in the twentieth century in the works of Gaston Bachelard (1884-1962).[118]

Of course, the one key architect not hitherto mentioned in this account of 'Spirit as Space' is Gottfried Semper, despite his claim that architecture's initial impulse was to enclose space. His writings will figure in the following section 'Matter as Built Form'. The reason for locating Semper here is that he equivocates on the primacy of space-making within architecture; in his writings he devotes many more column inches to the means by which space is enclosed and rendered visible. We now turn to the tectonic as the material expression of built form in order to complete the discussion of *Geist und Materie* in the nineteenth century.[119]

(iii) MATTER AS BUILT FORM

1. UNIVERSAL TECTONICS, NATIONAL CONSTRUCTION

> It is the architect's task to produce a form with a healthy core in a healthy shell, or with a healthy soul in a healthy body.[120]

Thus wrote the critic Karl Henrici in his essay *Von Innen nach Außen oder von Außen nach Innen?* (From Interior to Exterior or from Exterior to Interior?, 1903). In this architectural version of the Latin tag *mens sana in corpore sano* (a healthy mind in a healthy body), the turn of the century functionalist equation linking external form with internal workings is neatly encapsulated. In this version, both sides of the equation are given equal weight: by extension, the 'soul' of a building is equated with its 'spirit', its body with matter. And, in the sense of the platonic theory of forms, the specific, material form decays, whilst its 'idea' persists in time and space.

This apparent equation is not all it seems. In his book *Otto Wagner, Adolf Loos, and the Road to Modern Architecture*, Werner Oechslin has commented on the dichotomy of 'hull' and 'kernel':

> The Grimms' dictionary catalogues every conceivable image used to describe the concept of the hull and the kernel: "To get to the heart [Kern] of the matter" is only one of many expressions that indicate clearly the degree to which the kernel enjoys a moral advantage over the hull. Accordingly, "(Kernel) Used as an image for the essential content, primary matter, etc., as opposed to Shell or (Hull), which merely serves the kernel and shell bespeak the relationship between the essence and the appearance, between the primary and secondary matters or contents, between the essential content to the inessential cladding." .....
>
> The hull suffered most in the –one-sided – redefinition of good and evil in the literal terms of the kernel-and-shell metaphor. The result was an ascendant critique of stylistically based architecture. The hull was rephrased pejoratively as "stylistic hull" (*Stilhülse*). [121]

Construction, then, the art of giving material form to architecture, has an ancillary role in architecture in that it serves the governing animus of a design. In order to rectify this imbalance, construction was dignified with the name 'tectonics' which in turn, as we have seen with Bötticher, was sanctified by its associations with

classical Greek design. Tectonics would be given universality by basing itself on the objective truths of the physical sciences. If the forms of the classical orders could be explained by deriving them from the petrified details of pragmatic timber construction, then tectonics could rise above wilful questions of style. What was at stake, in fact, was the changing ontology of architecture.

The notion that rational construction was an aim that had autonomy from the vagaries of national style was given impetus by the setting up of specialist education in engineering. This was established in Paris as early as 1747 with the *Ecole des Ponts et Chaussées*, followed by Berlin (1770) and Vienna (1815).[122] Mitchell Schwarzer saw in the foundation of these centres of technical education a precursor of the objectivity of architectural education of the late nineteenth century: "Distinct from the art academies, the technical institutes envisioned architecture embracing science. They foresaw modern identity through objectivity, not subjectivity."[123] However, figures from the 'art academies', such as Schinkel and Bötticher, would also argue that their views were of as objective in nature as any of those from the civil or structural engineers.

In his survey of nineteenth-century German architectural theory, Schwarzer argues that Bötticher privileges spatial enclosure as the initial architectural act: "Architecture first begins, wrote Bötticher, with the necessity to cover and enclose space. Consequently, what it takes to carry the roof is the principle animating all subsequent architectural acts."[124]

Clearly, though, the focus of Bötticher's interest lies in the second architectural act: to give space a meaningful enclosure. Here, his *Die Tektonik der Hellenen* (1844 and 1852) sets out the case for a fusion of the Hellenic and German styles; as we have seen, Heinrich Hübsch argues for the adoption and adaptation of the *Rundbogenstil* as being uniquely appropriate to suit the national characteristics of Germany. This national approach will be the subject of the following section. What is intesting to note at this juncture is the universalist thrust of Bötticher's argument, particularly when his 1846 essay *The Principles of the Hellenic and German Way of Building* (published on the occasion of that year's *Schinkelfest*) is considered. Here, as Frampton points out, the new mooted style is facilitated by the constructional possibilities brought about by the advent of commercially produced iron. The new constructional material would

inevitably lead to a new tectonic art, despite the attempts of some of its protagonists, most notably Viollet-le-Duc, to ally it to the Gothic Revival cause.[125]

Schwarzer points out Bötticher's recourse to biological analogy in the description of a building as an organism (see Collins's *Changing Ideals in Modern Architecture* and Scott's *The Architecture of Humanism* – especially the chapter on the 'biological fallacy'). Bötticher distinguishes elements of buildings as being either *Werkform* or *Kunstform*. Changes in *Werkform* depend upon technological advances and economic imperatives, in other words, materialist criteria; whereas the *Kunstform* is the aesthetic bearer of meaning. In Schwarzer's terms: "[T]he Kunstform can thus be regarded as the etherealization of physical exploits."[126]

The dependance of *Kunstform* on *Werkform* could be rephrased as the subjugation of ornament to structure. Sigismund Wolff in his *Beiträge zur Ästhetik der Baukunst* (Contribution to an Aesthetic of Architecture, 1865) repeats the motto that resounds to Pugin's thoughts on the subject, namely, that "ornamentation emerges from within, from the essence of the members of the building."[127] This argues for a rational relationship of hull to core, informed solely by scientific considerations of statics and construction. The truth is that technology is never neutral, and operates within a cultural field. The increasingly national tone of the debate concerning tectonics, coloured by the romanticism prevalent in architectural circles around mid-century, leads to a consideration of a Herderesque regionalism: the geography of architecture, to paraphrase Pevsner.[128] Schwarzer has shown that "[t]he writings of the 1830s and 1840s vividly proclaimed a classical-medieval dualism along the lines of national spirituality."[129]

In considering national construction, as we shall now do, *Geist* and *Materie* undergo an inversion of assigned roles such that spirit, understood as the national animus or *Volksgeist* of a country, is represented by the outward material expression of a building, its construction and ornamentation, and materiality becomes associated with its planning and composition.

The debate in the years leading up to the 1848 revolutions focussed on the 'correct' historicist style to be followed. *Geist* was understood as the national

spirit, in contrast to the spirit of space (whose qualities were assumed to be universal) fifty years later. According to Schwarzer,

> Schinkel's immersion in the Middle Ages, Greece, and Prussia may be viewed as an attempt to transcend style. Like the Berlin art historians, his projects are proof of his belief in the possibility of creating modernity through a great historical synthesis ...
> History, in Schinkel's eyes, divided the useful from the useless, the beautiful from the ugly. Unlike Hegel, who was convinced that the ideas and forms from different historical epochs were separate from each other, Schinkel saw the possibility of modernity as a grand synthesis of the best ideas of the past: the mixed legacy of both classical and medieval Europe.[130]

Schinkel presents us with the image of an unproblematic practitioner who, as Schwarzer claims, envisages modernity as a 'grand synthesis' of the legacy of both classicism and medieval architecture. We have already seen how, with his alternative schemes for the Friedrich Werder church of 1830, he was able to function as a reflective eclectic; with his *Bauakademie*, a new departure is seen as he eschews the privileging of the front in order to design a building whose four elevations are treated alike in terms both of material (local brick) and form (trabeation). Here he breaks with the tradition exemplified in the building for the *Altes Museum*, where the main facade comprises a stone stoa of heroic proportions while the side and rear elevations are rendered in humble brickwork.

Amongst the practitioner-theorists it was Heinrich Hübsch who advocated the *Rundbogenstil* and advanced a critical reworking of its principle features to suit specific programmatic and site requirements. We have seen examples of his approach in respect of three building types of the 1830s: the school (*Polytechnische Hochschule*, Karlsruhe), the church (St Cyriacus, Bulach), and the spa (*Trinkhalle*, Baden-Baden). Thus begins the short but distinguished history of the re-use of the Romanesque in Western architecture that would last until well into the twentieth century. One thinks of the work of Dankmar Adler (1844-1900) and Louis Sullivan (1856-1924), Henry Hobson Richardson (1836-1886), and McKim, Mead and White in North America,[131] as well as Lars Sonck (1870-1956) in Finland. The last example is instructive, as the 'universal' attributes of the Romanesque were chosen to express the peculiarly local aspirations of an incipient nation-state (Finland not yet having freed itself from the Russian Empire). The epithet 'National Romanticism' could just as well be

used to name the unorchestrated German national strivings of the 1840s to 1870s.

Valentin Hammerschmidt has dealt with the specific regional flowerings of architectural production in the wake of the 'Which Style?' debate of the 1830s. He wrote that " [t]he Romanesque style of the Rhineland, of Hübsch, Lassaulx and others, sought to distance itself from Antiquity and veered towards the Middle Ages, towards the Romanesque, while Hannover's brick Neo-Gothic derived from [Friedrich von] Gärtner's Munich School."[132] The architecture of the West European tradition sandwiched between the fall of the Roman Empire and the emerging consensus of the Renaissance - medieval architecture, in short - was sufficiently pliable and receptive to local 'tuning' since it lacked the imperial authority of the former and the imprimatur of the printed book of the latter. In a sense Romanesque architecture, lacking the central authority based on the political and military authority of the preceeding Roman Empire, or the subsequent universalising tendencies of the architecture of the late Renaissance through to the Enlightenment period (based on the dissemination of architectural culture to a literate clientele) was bound to take on regional nuances. This is reflected in the expression of the *Rundbogenstil* in the German lands. Of course, there were universalising characteristics of the Romanesque; we see this in ecclesaiatical architecture sponsored by the different monastic orders. These knew no natural borders.

The decades of the 1840s, '50s and '60s witnessed a 'scientific' eclecticism, with measured drawings assuming a central role in the teaching of construction to architecture students, and the rise of pattern books disseminating 'correct' stylistic practice, particularly in the case of the Gothic Revival.[133] The Romantic associations of the Gothic Revival at mid-century were clear to see: "The term 'Middle Ages' was associated with the Christian church, but also with the unity of the empire (*Reich*), as well as with the notion of middle-class probity, which, according to the political situation, received concrete expression ranging from Romantic patriotic-nationalist, to Ultra-montanist gentry-clerical, as well as to the anti-capitalist utopia of the English reform movement."[134]

The spirituality of the Neo-Gothic is expressed in terms which reclaim for it the spiritual high ground, and has echoes of Puginistic moralising. Hammerschmidt here provides a gloss on the debate at mid-century concerning

the tensions between the proponents of the Romanesque, on the one hand, and the Gothic on the other. He maintains that "Romanesque is outmoded, immature so to speak, compared with Gothic, whose "triumph over the loadbearing mass of matter" represents a spiritualisation of matter and, moreover (because of its smaller cross-sectional area), is cheaper."[135] The *Volksgeist* aspects of Romanesque were praised by the architect K. E. O. Fritsch in his 1890 essay *Über Stil-Betrachtungen* (Observations on Style). According to Hammerschmidt, "Fritsch saw in the Romanesque the best basis for a further development of architecture since it was a style of mass rather than one of frame, and hence possessed no canonic rules and was therefore capable of being developed; since it could best assert the material effects of stone (which material alone was capable of giving rise to style); and since its quiet monumentality united antique and Germanic sentiments (but not their forms!)."[136]

Clearly the foregoing discussion leads one to conclude that there was no consensus regarding the form of 'national construction' to be adopted in Germany. Architects would split their stylistic allegiance along party lines or, if they were sufficiently skilful or wilful (depending on one's point of view) according to the pragmatic representational requirements of the building in question. This led to a taxonomy of building types, each of which had its appropriate stylistic 'dressing'.

The clearest example of this attitude (at least on the part of city authorities responsible for commissioning or approving building designs) is the *Ringstrasse* in Vienna, where the 'Hellenic' Parliament (1874-1883), **(Fig. 2.36)** by Theophil Hansen (1813-1891) vies with Gottfried Semper's Italianate Art History and Natural History museums (1872-1881), **(Fig. 2.37)** and *Burgtheater* (1872-1886),[137] **(Fig. 2.38)** the Gothic *Votivkirche* (1856-1882), **(Fig. 2.39)** by Heinrich von Ferstel (1828-1883) with the late medieval Town Hall (1878-1882), **(Fig. 2.40)** by Friedrich von Schmidt (1825-1891). The last addition to this architectural circus, erected on *Georg-Coch-Platz* just off the Ring, was the Post Office Savings Bank (1904-1906), **(Fig. 2.41)** designed by Otto Wagner (1841-1918). It leads the discussion into new theoretical realms inaugurated by Semper's profilic writings.

2. SEMPER'S FOUR ELEMENTS

At mid-century a ground-breaking study burst upon the German architectural world: Gottfried Semper's *Die vier Elemente der Baukunst* (The Four Elements of Architecture, 1851). Semper, the Romantic who had allied his cause with that of the failed revolution of 1848 (and for his pains had been exiled from Germany) had become a successful architect of the nineteenth century, producing a succession of well-wrought public buildings in Germany, Switzerland and Austria. Stylistically, they epitomised the Renaissance revival; while in terms of their composition they achieved a lively, articulated massing which one could describe as a kind of *architecture parlante* revisited.[138]

His buildings are solid, well-designed examples catering to the bourgeoisie of the German cities; his writings are another matter. They represent a significant shift away from the - by then - stale arguments of the various style protagonists and onto a plane appropriating a different cultural territory, namely that of anthropology, from that employed by his peers. The full implications of his thought have still not been digested into contemporary discourse. The current lauding of the Viennese architect Adolf Loos (1870-1933), who appropriated Semper's ideas regarding architectural enclosure in his essay *Das prinzip der bekleidung*[139] (The Principle of Cladding, 1898) have tended to obscure other aspects of his theory. More significantly, it is the very *Victorian* nature of Semper's built *oeuvre*, and the fact that it is hard to discern a clear relationship between his theory and practice, which has made him an unsympathetic figure for the instant gratification craved by today's architecture public.

Semper's theory is an advance on Bötticher's duality/dichotomy of artistic shell and intrinsic constructional form. In his *Tektonik der Hellenen*, Bötticher distinguishes *Kunstform* from *Kernform*; Semper, without denying this dichotomy, develops his system from a completely different premise than his predecessor's mooted archaeology. Semper's innovation was to refer to anthropological rites and rituals rather than to historical models in order to posit a theory of architectural production that could be applied universally. In a sense Semper was acting like a true son of the nineteenth century in founding his theoretical work on the techniques of one of the new *Geisteswissenschaften* of the universities.

In his *Four Elements of Architecture* Semper talks of the earthwork, the framework/roof, the enclosure, and the hearth. For Semper there are two fundamental forms of construction: the tectonic, represented by the framework/ roof, and the stereotomic, the earthwork. Building originates with clearing a site, and then levelling it. This is the earthwork. Then a framework of timbers can be made which defines the space of the inhabited enclosure. Frampton relates this to the distinction made in the German language between the two different kinds of wall, *Wand* and *Mauer*, the first a tectonic construction of timber framework, the second a solid masonry structure.[140]

Recent interpretations of Semper's theory have tended to place his musings on technique above aesthetic considerations of style. In his book on the origins of functionalism in architecture Sebastian Müller observed that "[t]he relationship between idea and material is always defined by Semper technically, and not aesthetically."[141] For Semper the decision to deploy a particular material is based on objective, technical criteria (even if these have been coloured by atavistic associations of long-redundant uses). Müller continues:

> This led Semper to his thesis that was to have such far-reaching ramifications for functionalist aesthetics in the twentieth century, namely, "that the fundamentals of style in the technical arts are identical with those which govern architecture". Semper's feat consisted of, on the one hand, removing the distinction between architecture and the other applied arts (where both hand-crafted and industrial production are subsumed by the term "technical arts"); on the other hand his achievement consisted of removing the nineteenth-century distinction between architecture and engineering which arose due to the continuing aestheticisation of architecture and its gradual technical bias: the renewed unity of architecture was achieved by bringing it under the umbrella of technology.[142]

Semper's procedure in determining style is essentially metaphorical; it concerns the copying of forms made from one material to another. In this way, the appearance of, say, a woven textile hanging is transferred to a panel of decorative polychromatic brickwork.[143] It goes without saying that the elements of architecture identified by Semper have always existed; it is only that at different historical periods they have been ascribed more or less important roles in the schematisation of buildings. For the Abbé Laugier, Primitivism is the laying bare of the tectonic elements of a building; the primitive hut is reduced to its structural (frame) members. Loos, on the other hand, favours cladding as the essential

element. These two extremes may be related conceptually (but not chronologically) to Semper's 'Four Elements'.

Of course, Semper in his design work was a great synthesist, refusing to privilege any one of the four elements. Look at his Opera House (*Semperoper*) in Dresden.[144] **(Fig. 2.42)** This masterful composition, with its clear separation of the functioning 'parts' of the theatre boldly delineated, speaks of late nineteenth-century eclecticism, and not of his conceptual quadruplex.

In considering Semper's 'Four Elements' one is tempted to try to relate them to Bötticher's duality of *Kernform* and *Kunstform*. Some of the terms, after all, fit naturally into the designation 'core' or 'art' form. How is the duality of Bötticher's system (suggestive of the Hegelian *Geist* and *Materie* dialectic) to be related to the more complex Semperian model of architectural origins?

Semper	**Bötticher**
Earthwork	Kernform
Framework/ roof	Kernform
Enclosure	Kunstform
Hearth	?

The hearth doesn't 'fit'; there is no obvious corresponding term in Bötticher's dual system for it. While the hearth has been taken to imply the spatial focus of the house, its material connotation is one of the transfiguration (by baking) of the ground beneath the house. But what is the role of the hearth in the house? It is threefold: (i) to provide space-heating; (ii) to prepare food; and (iii) to induce a draught in order to aid ventilation.

Yet none of these aspects of environmental design, as we would term it today, or mechanical engineering, 'figure' in the accounts of nineteenth-century historians. Indeed environmental innovations come surreptitiously in the course of the ensuing decades. One thinks of Reyner Banham's account of the heating system in the Royal Victoria Hospital, Belfast (1903), **(Fig. 2.43)** or the ingeniously integrated ventilation system of the Reform Club, London (1838-1841).[145] Whereas the mid-nineteenth century witnessed any number of innovative structures which began to find their advocates in architectural design (Henri Labrouste comes to mind, with his brilliant tectonic expression of exposed

roof structures in the Parisian *Bibliothèques Nationale* and *Ste Geneviève*), we have to wait until the turn of the century for the bold incorporation of heating elements in an interior design (Otto Wagner's *Postsparkassenamt* banking hall) or, of course, Heinrich Tessenow's uniformly lit and dimmable *Festspielhaus* auditorium, together with its integral heating system achieved by creating ducts within the massive brickwork walls.

4. MATERIALIST CULTURE: MASSE, MACHT, UND MATERIE

So far in this section the discussion of *Materie* (matter) has been based around its strict interpretation as the stuff of buildings: construction. From today's vantage point, however, the nineteenth century is regarded as the era of the blossoming of materialist culture *tout court*. It is characterised by the materialist political economy of Karl Marx, as well as by the machinations of countless speculators, industrialists and politicians who would all fuel the acquisitive and entrepreneurial economies of Westen societies. To Elias Canetti's *Masse und Macht* one might reasonably add the third alliterative attribute *Materie* in order to round off his psychological conspectus of Western society.[146]

It is no accident that the great materialist tracts of economics and philosophy arose in nineteenth-century Germany; equally it should not come as a surprise to find the arguments for architectural materialism emanting from Germany. Peter Hall, in his book *Cities and Civilisation*, which relates cultural and technical innovation to the rise of great cities, observes that

> [I]n Germany, therefore, there was little doubt as to the identity of the innovative milieu. For the first time [in this story,] it was being deliberately created by state action, in the heart of state power. Germany in its medieval and early modern past had contained innovative milieux in the spheres of commerce and of culture, in free cities such as Hamburg and Rostock, Nuremburg and Wittenberg, Bonn and Eisenach. But, in the newly evolving model, all these paled into insignificance beside the power nexus of the Prussian state.[147]

Germany had an advantage relative to the 'old Europe' of Great Britain and France in terms of its industrialisation. Having come late to the Industrial Revolution, its progress would seem all the more startling. However, as Hall

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points out, this advantage would be multiplied by combining its newly found entrepreneurial spirit allied to the militaristic stirrings of the centralised Prussian state.

There was one area of industrial innovation in which Germany led the field, and that was electrical engineering. Berlin established itself as the centre of this industry, based around the two competitors Siemens (originally *Siemens und Halske*) and the AEG (*Allgemeine Elektricitäts Gesellschaft*). Both firms were to play significant roles as patrons of architecture and design in the early twentieth century.[148] It is ironic that materialist and consumerist culture in the late nineteenth and twentieth centuries should be powered by so weightless and apparently absent a force as electricity: pure *Geist*, or, as Mies van der Rohe might have phrased it, *beinahe nichts* (hardly anything at all).

Electricity would also power the new media as well empower the working and lower middle classes in order to engage with the developing media of film and radio. Electricity would also help to enlarge the scope of architecture, encompassing both new building types and new patrons and end-users within its remit. This is the subject of Kathleen James-Chakraborty's book *German Architecture for a Mass Audience.*[149]

However important electricity was for the subsequent industrial pre-eminence of Germany, it was the development of its railways which spurred on mid-nineteenth-century growth. Locomotive power returns us conveniently to Dresden in order to pick up the *Geist und Materie* discourse with respect to its relevance to the architecture of Tessenow. In the attic of the *Hochschule der Technik und Wirtschaft*,[150] across the square from the *Hauptbahnhof* (main railway station) in Dresden, there used to be a giant model railway, used by the School's engineering department as a tool to teach transportation design. The square is called *Friedrich-List-Platz*, and is named after the economist who spurred on the growth of the German railway network.[151] The development of railway technology, with the admixture of electromotive power, would lead to the advent of trams in the latter decades of the nineteenth century. Let us board tram no 8 at the *Hauptbahnhof*, and ride for forty minutes to the north, alighting at *Post* Hellerau.

Is there any justification for relying so heavily on Hegel as the philosophical progenitor of architecture's late nineteenth-century debates around *Geist* and *Materie*, which are here rendered analogously as space and tectonics? Mitchell Schwarzer, scholar of nineteenth-century German architectural theory, seems to think so, and we concur with him. In his comprehensive survey of German architectural theory in the nineteenth century he posits the centrality of Hegel's thought which underlies the ensuing debates throughout the century:

> During the nineteenth century, realism and idealism sounded a discordant harmony within the literature on architecture. As a matter of fact, some of the initial steps toward realist theories of architecture occurred in the buildings of Hübsch and Schinkel during the 1820s, the period of Hegel's greatest influence. After Hegel's death in 1831, these steps accelerated, becoming part of the immense reaction throughout Germanic culture to his philosophy of absolute idealism. What is less obvious is that the realist, empiricist, or materialistic theories of Bötticher, Semper, Wagner, and others borrowed a great deal from Hegel's philosophy and its antecedents in German aesthetics. Taking part in a theoretical debate dating back to post-Wölffian philosophy on the aesthetics of the eighteenth century, nineteenth-century architectural theorists were preoccupied with coordinating the realms of sensual experience and mental reason as well as those of art and thought. Like philosophers, they were concerned with the modern problem of dissolving reason and its ideals into the reflection and production of natural reality.[152]

The nineteenth-century discourse of *Geist und Materie* has set the scene for us; we now need to alight from our tram into the early twentieth century, and into the reality of Tessenow's built environment.

NOTES TO CHAPTER TWO

[1] Isaiah Berlin, *Russian Thinkers* (London: The Hogarth Press, 1978), p.136.

[2] Mitchell Schwarzer, *German Architectural Theory and the Search for Modern Identity* (Cambridge: Cambridge University Press, 1995).

[3] G.W.F.Hegel, *Hegel's Aesthetics: Lectures on Fine Art* (Oxford: Clarendon Press, 1975), introduction and translation by T.M.Knox, vol.2, pp. 616-617.

[4] Wilhelminismus is named after Wilhelm II, German Kaiser from 1888 until his abdication in 1918. Matthew Jefferies, author of *Politics and Culture in Wilhelmine Germany*, finds it to have a vague meaning; nonetheless "its seductive appeal is obvious; a single word that stands for operatic gesture and sentimental yearning; for pomp and pathos; for 'romantic modernity' and 'nervous idealism; even for the peculiarly adjective-laden language of Wilhelm's bombastic speeches, so enthusiastically emulated by Heinrich Mann's Diederich Hessling and other *Untertanen*." Matthew Jefferies, *Imperial Culture in Germany, 1871–1918* (Basingstoke: Palgrave Macmillan, 2003), p.183. According to Julius Posener, Wilhelmine architecture is "the architecture of bragging, the architecture which best relates to the essence of the Kaiser and which corresponds to the 'Germany first!' frame of mind, which does not actually come from Wilhelm; rather it is he who is defined by this motto and is at base nothing more than its representative." German text: "die Architektur des Auftrumpfens, die Architektur, dei dem Wesen des Kaisers am meisten entgegenkommt und die der Stimmung 'Deutschland in der Welt voran' entspricht, die nicht eigentlich von Wilhelm stammt; vielmehr ist er selbst durch sie bestimmt und im Grunde nicht mehr als ihr Repräsentant." Julius Posener, *Berlin auf dem Wege zu einer neuen Architektur: Das Zeitalter Wilhelms II* (Munich: Prestel, 1979), p.81.

[5] See Karl-Heinz Hüter, *Architektur in Berlin: 1900–1933* (Dresden: Verlag der Kunst, 1988).

[6] *'Gründerzeit'*, literally, 'the age of the founders [of the second German Empire]'. For two years from 1871 there was an economic boom in the wake of a liberalized stock-market; Matthew Jefferies comments on the perjorative associations that the term *'Gründerzeit'* would have on late nineteenth century German writers, coupling financial swindles with artistic and cultural ones. Jefferies quotes the cultural historian Egon Friedell (1878-1938) who railed against "whitewashed tin masquerad[ing] as marble, papier maché as rosewood, plaster as shimmering alabaster, glass as exquisite onyx." Jefferies, *Imperial Culture in Germany*, p.89.

[7] Posener, *Berlin*, pp.82-87.

[8] Karl Scheffler, *Die Architektur der Großstadt* (Berlin, Bruno Cassirer, 1913), pp.166-173 cited in Posener, *Berlin*, p.588. German text:

> Sucht man Tessenows Architekturstil im ganzen zu charakterisieren, so kann man von einer ländlichen Klassizität sprechen, von einer aus norddeutscher Bäuerlichkeit geboren hellenischen Strenge. Die Gebäudegruppe der Dalcrozeschenschule hat manches von einem idealen Gutshof: sie ist ein feierlicher Festspielbezirk, ein weltlicher Klosterhof und auch eine weitläufige Gutshofanlage. Die Einfamilien-häuser weisen mittelbar zurück auf die klassizistische Bürgerlichkeit um 1800, auf unsre letzten lebendigen Tradition. Eine gewisse Selbstkasteien kommt in diesen Bauten und ebenso in den Reihenhausanlagen zum Vorschein; die Frugalität der Form ist oft bis zur fixen Idee hinaufgetrieben. Man interessiert sich darum vor den

Bauten Tessenows in Hellerau unwillkürlich auch für die Entwicklung dieses Baustils.

[9] Posener, *Berlin*, p.8. German text:

> Ohne die Leistung der zwanziger Jahre verkleinern zu wollen – sie hat eine Architektur ohne Präzedens verwirklicht -, muss ich doch gestehen, dass im Laufe der Arbeit zusehends zu der Auffassung gelangt bin, daß die Jahre vor 1918 die entscheidenden gewesen sind. In der Tat handelt es sich hier *nicht* lediglich um Vorgeschichte: die Zeit, welche die Fabrik in Luban, die Gründung des Deutschen Werkbundes, die Groß-Berlin-Projekte von 1910 gezeitigt hat – ich könnte fortfahren - : Diese Zeit hat ihre eigene Farbe und ihren eigenen Wert. Ihre Leistungen sind das Ergebnis einer Haltung, die nach 1918 nicht mehr möglich war.

[10] See Otto Kaemel, *Sächsische Geschichte* (Dresden: Hellerau-Verlag, 1997), pp.141-145.

[11] This has been noted by critics as diverse as Roger Scruton and Kenneth Frampton.

[12] Posener, *Berlin*, p.7. German text:

> Schinkels Architektur – man hat sie als romantischen Klassizismus bezeichnet – gehört bereits einer anderen Zeit an. Napoleon war gekommen und gegangen. Das Pathos der Revolution wird in Schinkels 'hellenischer' Architektur romantisch verklärt; aber seine Architektur hat den utopischen Charakter nicht verloren. Auch Schinkels Architektur ist in diesem Sinne eine Architektur des Als - ob, die Architektur eines Spree - Athen, auch eines Spree - Paris oder – London, ist in allen ihren stilistischen Verkleidungen eine *neue* Architektur, eine Architektur jenseits – oder von uns gesehen diesseits – der Tradition. Die Tradition war abgerissen. Man kann sagen, daß Schinkel die Tradition durch die Architektur ersetzt habe; denn das Architektonische ist bei ihm ein allen Stilen übergeordneter Begriff geworden.

[13] Augustus W. N. Pugin, *Contrasts* (Leicester: Leicester University Press, 1973), originally published in 1836.

[14] Friedrich von Schlegel, *Grundzüge der gotischen Baukunst* Sämtliche Werke (Vienna, 1823), in *Sämtliche Werke* (collected works) praising Cologne and Strasbourg cathedrals, Johann Wolfgang von Goethe, *Von deutscher Baukunst*, (1772).

[15] There is a baffling vocabulary of the various kinds of 'form' that have either been appropriated or neologised by successive writers of architectural history and theory. Later in this chapter the subtle differences between the various 'forms' are elaborated. For our immediate purposes it will be useful to equate Hübsch's *Kernform* with Böttticher's *Werkform*.

[16] Cited in Wolfgang Hermann, (intr. and trans.), *In What Style should we build?: The German Debate on Architectural Style* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1992), p.5.

[17] Cited in ibid. p.8 from Eduard Metzger, 'Untersuchungen im Gebiete der Architectur', *Münchner Jahrbücher für bildende Kunst* (1838), vol.1, pp.42-74; ibid. vol.2 (1839), pp.117-52 and ibid. p.44.

[18] Hermann, *In What Style should we build?*, p.8.

[19] Hermann discusses xylomania, in particular the row between Hübsch and Aloys Ludwig Hirt, in the footnotes to his introduction to *In what Style should we Build?* Hirt was a strong believer in the timber origins of classical architecture. Hermann also, helpfully, gives the etymology of the term, which is derived from the Greek word *ξυλον*, meaning timber.

[20] Hermann makes the point in his introduction to *In What Style Should We Build?:* "Metzger came close to it [drawing the obvious conclusion] when, in reference to the mania of wanting to create something new, he wrote that it was ridiculous to talk of new architectural styles "as long as there is no new material to oust the existing style." Eduard Metzger, 'Über die Einwirkung natürlicher und struktiver Gesetze auf Formgestaltung des Bauwerkes', *Allgemeine Bauzeitung* (1837), vol.2, nos 21-26, p.189.

[21] Hermann points out that "Germany's first major [...] iron and glass public building, completed a few years before [1846] Gärtner's Trinkhalle (1834-1838) at Bad Kissingen". Hermann, *In What Style Should We Build?* p.43.

[22] These three examples, as well as the following three of Hübsch's designs in the *Rundbogenstil*, are all to be found in Hermann, *In What Style Should We Build?*

[23] Hermann discusses the design for the *Trinkhalle* in the light of – *inter alia* – the contemporary interest amongst architects for archaeological finds, in particular those which lent support to authentic colour in construction: "With its [the *Trinkhalle*'s] open display of the various materials used-light granite for the columns and cornice, reddish brickwork for the vaulting, and terra-cotta tiles to face the walls – the polychromatic *Trinkhalle* was Hübsch's most effective protest against the undiluted whiteness of the Neoclassical buildings of the recent past. The same critical reaction had led architects interested in archaeology to discover traces of color on Greek marble temples." Hermann, *In What Style Should We Build?* p.22.

[24] David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal* (London: Thames and Hudson, 1987), p.177.

[25] Valentin Hammerschmidt has commented on the frequently problematic correspondence of vaulted construction with buildings of repetitive storey heights. German text: "Die Formen der Gotik schienen den Erfordernissen der Statik am besten und sparsamsten zu entsprechen, so daß auch ein Teil rationalistischer Argumentation die Gotikbewunderung durchsetzte (die freilich für die Praxis wenig bestimmend war: gerade die Höhe der Spitzbogen kollidierte mit den Anforderungen der Geschoßbauweise)." Valentin Hammerschmidt, *Anspruch und Ausdruck in der Architektur des späten Historismus in Deutschland (1860–1914)* (Frankfurt/Main: Peter Lang, 1985), p.56.

[26] One must be careful with bandying about terms such as bourgeoisie and middle-class; they are not exactly synonymous in English, and the German terms of *Bürgertum* and *Mittelstand* do not make precise translations. See Jefferies, *Imperial Culture in Germany*, pp.29-30 for a clarification of the various terms, as well as for an explanation of the additional terms *Besitzbürgertum* and *Bildungsbürgertum.*

[27] "Biedermeier. Central-European style of architecture, decorative arts, painting, and interior design from *c.*1815 to *c.* 1860, especially in Berlin, Vienna, and Munich. The name derives from the fictional (1854) character, Wieland Gottlieb Biedermaier, a comfortable, middle-class figure of fun, *Bieder* meaning virtuous, and Maier being a common German surname, like Jones. The style was robustly comfortable, decently

proportioned, essentially Neoclassical, with Empire and Regency touches." James Stevens Curl, *A Dictionary of Architecture* (Oxford: Oxford University Press, 1999), p.74.

[28] See Posener, *Berlin*, p.550. "As a student I used to call him [Tessenow] the holy carpenter." German text: "Als Student nannte ich ihn [Tessenow] den heiligen Schreiner."

[29] Paul Mebes (ed.), *Um 1800: Architektur und Handwerk im letzten Jahrhundert ihrer traditionellen Entwicklung* (Munich: Bruckmann, 1908); cited by Wolfgang Voigt in 'Vom Ur-Haus zum Typ. Paul Schmitthenners 'deutsches Wohnhaus' und seine Vorbilder', in Vittorio Magnago Lampugnani and Romana Schneider, *Reform und Tradition: Moderne Architektur in Deutschland 1900-1950* (Stuttgart: Hatje, 1992).

[30] The *Lehrerbildungsanstalt* at Peine, or *Simon'sches Seminar für Gartenbau und Handfertigkeit* was a project instigated by a Jewish philanthropic organisation based in Hannover to attract young Jewish men from their traditional sources of employment and 'return' them to the land. It sought to integrate German Jews with their Christian neighbours, and was not Zionist in intent but reformist and nationalist in the Naumann sense. The Simon family was acquainted with the Dohrns, and having seen Tessenow's work at Hellerau and been recommended him by Wolf, decided to entrust the commission to him. The result was the achievement of an ideal agricultural community with striking similarities to the form of the dance community enacted at Hellerau. See Chapter One, note no 41.

[31] For a criticism of Hegelian 'historicism' in architectural history, particularly as it applies to the history of architectural modernism, see David Watkin, *Morality in Architecture* (Oxford: Clarendon Press, 1977).

[32] Barry Bergdoll, *European Architecture: 1750-1890* (Oxford: Oxford University Press, 2000).

[33] D'Arcy Thompson, abridged and edited by J.T.Bonner, *On Growth and Form* (Cambridge: Cambridge University Press, 1961).

[34] Sigfried Giedion, *Space, Time and Architecture* (London: Oxford University Press, 1941).

[35] Marc-Antoine (Abbé) Laugier, *Essai sur l'Architecture* (Paris, 1755). Joseph Rykwert, *On Adam's House in Paradise* (New York: Museum of Modern Art, 1972) traces the idea of the primitive hut in architectural history.

[36] Johann Joachim Winckelmann (1717-1768): archaeologist and art historian.

[37] "Now, what I want is, Facts. Teach nothing but Facts. Facts alone are wanted in life...Stick to Facts, sir!" are the opening sentences of Charles Dickens's 1854 novel *Hard Times*, which describes the dislocations that accompanied the Industrial Revolution. Measurable, calculable, and definable facts, according to Dickens's protagonist Mr. Gradgrind, are the basis allowing everyone to master the new life as a better life. Volker M. Welter, *Biopolis: Patrick Geddes and the City of Life* (Cambridge, Mass: MIT, 2002), p.7.

[38] Prussia, like the German Reich its successor, was very keen to learn from the best available expertise. Schinkel's visit to England prefigures that of Muthesius at the end of the nineteenth century, the outcome of which was the highly influential book *Das englische Haus*. This had the effect of exporting aspects of the English Arts and Craft

style to central Europe, in particular the free and 'functional' planning of the English country house.

[39] It is interesting to speculate that, had Schinkel spent most of his time in London, he might have been swayed by the stuccoed terraces of John Nash (1752-1835) or of Lewis (1799-1883) and Thomas (1788-1855) Cubitt.

[40] Watkin and Mellinghoff, *German Architecture and the Classical Ideal*, pp.111-112.

[41] Kenneth Frampton, *Studies in tectonic culture: the poetics of construction in nineteenth- and twentieth-century architecture* (Chicago: Illinois Institute of Technology and London: Graham Foundation for Advanced Studies in the fine Arts, 1995), (ed. John Cava), p.82.

[42] Hammerschmidt, *Anspruch und Ausdruck*, pp. 65-66, cites the architect Schwatlo. German text: "die Antike sei das Vorbild des Architekten, die Gotik aber das Urbild des Ingenieursmäßigen."

[43] Frampton gives the year 1830 as the first architectural mention of the term tectonic in German in Karl Otfried Müller, *Handbuch der Archäologie der Kunst* (1830). Tectonic was defined as the dry jointing of framing components in construction. Frampton, *Tectonic Culture*, p.4.

[44] Accounts of German empiricism from the period are patchy. James Sheehan, *German History 1770-1866* (Oxford, 1989), makes no mention of Herbart at all; Karl Ameriks (ed.), *The Cambridge Companion to German Idealism* (Cambridge: Cambridge University Press, 2000) has no entry whatsoever on either Herbart or Fechner. One is indebted to Mallgrave's and Ikonomou's introduction to *Empathy, Form and Space* for dealing adequately with the pivotal importance of what Fechner termed *psychophysics* and in making the necessary connections between early romantic aesthetic theory and the empathetic turn in the latter part of the nineteenth century.

[45] Harry F. Mallgrave and Eleftherios Ikonomou, *Empathy, Form and Space. Problems in German Aesthetics 1873-1893* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1994), p.14. Ikonomou and Mallgrave here reveal Herbart and Fechner to be the grandfathers of materialist aesthetics of the psychological kind, presaging thinkers such as Arnheim in the twentieth century. Their scepticism of aesthetics rooted in idealist philosophy is clearly demonstrated. To cite Mallgrave and Ikonomou again: "Herbart's list of secondary ideas comprised all ethical, emotional, intellectual, and sentimental "intrusions" into the act of aesthetic perception. Perhaps foremost among them – in response to idealist aesthetics – was the spectre of "content", which Herbart regarded as altogether extraneous to aesthetic viewing. The meaning of a work of art is superfluous because each work consists, in essence, of a set of unique relations of form, composed by the artist with craft and intention. "What did the artists of old who invented the possible forms of the fugue wish to express? Or the still older artists whose hard work created the various column orders? They expressed nothing. Their thoughts never ventured beyond the particular essence of each art. Those, however, who devote themselves to meanings betray their fear of the essence of art and show their preference for outward appearance." Johann Friedrich Herbart, (ed. G.Hartenstein), *Kurze Encyclopaedie der Philosophie* (Hamburg: Leopold Voss, 1884), originally published 1831.
The tonic Herbart prescribed for those so inclined to search for meaning and sentimentality in art was a "long bath". Johann Friedrich Herbart, (ed. G.Hartenstein), *Allgemeine praktische Philosophie* (Hamburg: Leopold Voss, 1890), originally published 1808.

[48] See Posener, *Berlin*, pp.482–507, 'Stahl und Beton', ('Steel and Concrete').

[47] See Robert Venturi, *Complexity and Contradiction in Architecture* (New York: Museum of Modern Art, 1966).

[48] Robert Venturi, Denise Scott Brown, Steven Izenour, *Learning from Las Vegas* (Cambridge, Mass: MIT, 1972).

[49] Alois Riegl, *Stilfragen* (1893), trans. E.Kain, *Problems of Style*, (Princeton: Princeton University Press, 1992).

[50] See Simon Critchley's eminently readable *Continental Philosophy: a very short introduction* (Oxford: Oxford University Press, 2001) for a concise summary of what has become known as continental philosophy. He writes: "How do we overcome the pernicious dualisms of the Kantian system? What is required is some higher, unifying principle that would be immune to these criticisms. It is with this question that Fichte and German idealism begins. Fichte located this unifying principle in the activity of the subject. THe dualism of theory and practice is unified in the self-reflection of the subject, its consciousness of freedom. This was the view that Fichte explored in the celebrated *The Doctrine of Science* (1794). For the young Schelling, on the contrary, the unifying principle was the notion of force or life, expressed in his early philosophy of nature. For Hegel, it was the notion of Spirit, for Arthur Schopenhauer it was the notion of the Will, for Nietzsche it was Power, for Marx it was Praxis, for Freud it was the Unconscious, for Heidegger it was Being. This list could be extended. The point here is that the problematic of Continental Philosophy arose out of these criticisms of Kant and must be understood in this context." Ibid. p.31.

[51] *The World as Will and Representation*, vol.1, p.110, as cited by Janaway in Scruton, Singer, Janaway and Tanner, *German Philosophers* (Oxford: Oxford University Press, 1997).

[52] Roger Scruton, Peter Singer, Christopher Janaway and Michael Tanner, *German Philosophers: Kant, Hegel, Schopenhauer, and Nietzsche* (Oxford: Oxford University Press, 1997), pp.291-292.

[53] See Diethart Kerbs, *Fidus 1868–1948: Zur ästhetischen Praxis bürgerlicher Fluchtbewegungen* (Munich: Rogner & Bernhard, 1972). This book is highly recommended by Julius Posener as giving a convincing answer to the question of the provenance of Tessenow's teaching and practice.

[54] To exemplify Fritsch's extreme views, his other contemporaneous publications are *Der antisemitische Katechismus* (1887), *Bodenwucher und Börse* (1894), and *Handbuch der Judenfrage* (1907).

[55] German text:

> Leichter zu beantworten als die Frage, wohin Tessenows Lehre und seine Praxis führen, ist die, woher sie stammen und in welchem Zusammenhang sie gehören. Wir haben Morris erwähnt. Die englische Handwerksbewegung ist *eine* Quelle; und die 'Guild of Handicraft' von 1882, welche 1902 mit Robert Ashbee von London in das Landstädtchen Chipping Campden zog, um dort Handwerk und Gartenbau zu betreiben, ist auf dem Wege zu Tessenow. Im letzten Jahrzehnt des vorigen Jahrhunderts aber rückte auch in Deutschland, besonders in Deutschland, die Lebensreform auf breiter Front vor: Reformkleidung, Vegetarismus, Nacktkultur,

Rückkehr aufs Land, genossenschaftliche Siedlung, Wandervogel. Auch diese Reformisten glaubten, wie Tessenow, im Grunde die Übel dieser neuen Zeit der ausbeutenden Industrie durch 'Selbstreform' beseitigen zu können. Auch die Erlösung durch Schönheit, die van de Velde predigte, gehört in diesen Zusammenhang. Alle diese Bestrebungen sind anti-materialistisch, anti-marxistisch, und es ist dieser deutschen Reformbewegung ein fataler Hang zur 'Aufartung' der nordischen Rasse eigen. Mit diesem Treiben hat Tessenow selbstverständlich nichts zu tun. (Posener, *Berlin*, p.578).

[56] *Kraftwollen* is the author's own term which attempts to sum up the tendency for architects under the spell of Nietzsche to respond to his work with heroic structures.

[57] Rudolph Makreel writes:

> Nietzsche conceives the Apollonian and Dionysian as two complementary aesthetic principles. The former is based on the impulse to relive one's experience in terms of a dreamlike vision and the latter on the impulse to seek rhythmic release from experience through intoxication. The Apollonian impulse is generally civilising and is governed by the principle of individuation, which embodies the will to preserve and give a fixed form to things. The Dionysian impulse, in contrast, is more basic, even barbaric, without being debasing. In fact, the Dionysian incites us to the greatest exaltation of all our symbolic faculties: "The entire symbolism of the body is called into play," activating not just speech but the rhythmic movement of dance. Whereas the symbolism of speech can be used to delineate the world into distinct phenomenal objects, the symbolism of Dionysian music expresses the fundamental will that binds us collectively in a manner reminiscent of Schopenhauer. According to Nietzsche, the Dionysian is the source of insights into the overall nature of things that, while basic and necessary, would destroy us if not counterbalanced by the Apollonian illusion of order. (Rudolf A. Makkreel, *Friedrich Nietzsche: The Value of Life* in Richard Popkin (ed.), *The Pimlico History of Western Philosophy* [London: Pimlico, 1999], p.560).

Makkreel's allusion to dance will find its echo in Tessenow's working of rhythmic movement into his design for the *Festspielhaus* Hellerau (1910-1912).

[58] Alexandre Kostka and Irving Wohlfarth (eds), foreword by Rolf Bothe, *Nietzsche and "An Architecture of Our Minds"* (Los Angeles, CA: The Getty Research Institute for the History of Art and the Humanities, 1999), p.ix.

[59] Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart: Deutsche Verlags-Anstalt, 1991), p.158.

[60] M. Winter, 'Wandfläche und Baustein', *Deutsche Bauhütte* VII (1903), no 11, p.72. Cited in de Michelis, *Heinrich Tessenow*, p.158. German text:

> Wie einfach und doch voller Wucht zeigt sich in dieser Beziehung der schlichte Entwurf eines Bismarckturms, der ohne Ornament, ohne Zierordnung in der Natürlichkeit seines Materials, seinen besten Schmuck hat. Das Landhaus am See, eine in seiner lagerhaften Breite reizvoll empfundene Baumasse führt den Gedanken des Bruchstein-Mauerwerk konsequent durch; die kräftigen roten Dachflächen, die dunkeln Fensteröffnungen und das Weiß der Schornsteine antwortet mit der grünen Laubfarbe auf die zur trüben Monotonie hinneigenden grauen Mauerflächen. Hier ist die rechte Grenze angedeutet und berücksichtigt. Die edle Wirkung der grossen Aussenfläche liegt nicht in der Gleichmäßigkeit: die peinlich geglättete Fläche des Steins wird in den meisten Fällen hinter der Rauheit,

die die rechten Grenzen hält, zurückstehen. Der weiche, warme Ton, das Sympatische ist bei der rauhen Fläche, die im Steine Pracht und Macht atmet. Das ist's ja, was beim natürlichen Fels uns so anmutet, kernige Kraft und die scharfe Schattenwirkung der zerrissenen Linienführung. Je mehr wir diese bei unseren Werksteinbauten, entweder allein, oder im Wechsel mit glatteren Flächen verwerten, um so monumentaler werden solche Bauwerke erscheinen und um so reizvoller, je mehr wir der alten Verbandtechnik uns wieder zuwenden. Dieser Reiz lässt sich noch erhöhen durch den Wechsel verschiedenfarbigen Materials, sei es im Werkstein unter sich, sei es in Verbindung mit Ziegelsteinen.

[61] Ibid.

If" said the same truth–to–materials advocate Ruskin, "the nobility of such masonry construction were to be more widely perceived and recognised, so we would not be so quick to forego its worth through superficial smoothness and sharply defined joints. The sums so thoughtlessly expended on such work demand to be put to better use. It must surely be a coddled eye which would prefer to see the Pitti Palace polished smooth.

German text:

Wäre" sagte der selbe Materialwahrheitverkündiger Ruskin, "die Vornehmheit solches natürlichen und ausgesprochenen Mauerwerks allgemeiner empfunden und anerkannt, so würden wir nicht so oft seiner Würde verlustig gehen durch Oberflächenglätten und scharfe Fugenbearbeitung. Die Summen, die unterschiedslos für solche Arbeit angewendet werden, verdienen bessere Aufgaben. Verzärtelt muß das Auge dessen sein, der den Palazzo Pitti gern poliert sehen möchte.

[62] See de Michelis, *Heinrich Tessenow*, pp.161-162.

[63] Heinrich Tessenow, *Hausbau und dergleichen* (Braunschweig: Vieweg, 1953), reprint with an introduction by Julius Posener, p.11. German text: "Die Werkstatt ist wichtiger als das Atelier".

[64] Posener, *Berlin*, p.118. German text: "[Wilhelminische] Liebe zur großen Organisation und ihrer Darstellung; also letzten Endes einer Darstellung der Macht."

[65] See ibid. p.102.

[66] Karl-Heinz Hüter, *Architektur in Berlin: 1900-1933* (Dresden: Verlag der Kunst, 1988), licensed edition (Stuttgart: Kohlhammer, 1988), p.24. German text: "Er bildete nicht nur, wie bei Geschäftshäusern üblich, die beiden unteren, sondern alle Geschosse als "Schaufenster" aus. Die Fassade bestand so aus bis zum Dach reichenden Wandpfeilern und den zurückgesetzten, in Brüstungsbereichen leicht unterbrochenen Glasflächen."

[67] Ibid. p.118 citing Scheffler, *Die Architektur der Großstadt*, pp.149-151. German text:

Er [Hoffman] ist von den beiden Freunden [Hoffman und Messel] der Resumist. Er faßt Bestrebungen der Zeit zusammen; er ist ein Ordner, ein Gruppierer, ein Organisator. In seiner Kunst ist nichts von der Nervosität Messels, es ist nicht dessen schnelles Herz darin. Hoffmann ist ruhiger und darum auch widerstandsfähiger. In Messels Bauten ist leise eine dramatische Spannung, wogegen Hoffmanns Bauten mehr wie logische Konstatierungen wirken. Hinter

Messels Baupathos sind psychologisch interessante Dinge verborgen, Hoffmanns Pathos aber ist unpersönlich. Messel war ein Programm, Hoffmann hat ein Programm. Und doch sind beide sich, den Kunstabsichten nach, sehr verwandt...Hoffmann ist, alles in allem, einer der freiesten und erfahrensten Baubeamten, die wir zur Zeit haben. Unter den Offiziellen gilt er als modern, unter den Modernen als offiziell. Insofern repräsentiert er nicht übel den Geist des neuen Berlin.

[68] See Günter Göbel, *Hans Erlwein: Der Dresdner Stadtbaurat* (Dresden: Hellerau-Verlag, 1996) and Volker Helas (ed.), *Hans Erlwein: Stadtbaurat in Dresden 1905-1914*, exh. cat., (Dresden: Kulturamt, 1997).

[69] For instance, in his section on 'Spatial Form', Frankl says of Michelangelo's staircase for the Laurentian Library, Florence, "We can then understand fully that what confronts us here is a spatial revolution." Paul Frankl, *Principles of Architectural History: The Four Phases of Architectural Style, 1420-1900* , translated and edited by James F. O'Gorman, (Cambridge, Mass: MIT, 1968), originally published as *Die Entwicklunsphasen der neueren Baukunst*, (1914), p.81.

[70] See note no 33 to Chapter One for a discussion of Wolfgang Voigt's essay 'Vom Ur-Haus zum Typ. Paul Schmitthenners 'deutsches Wohnhaus' und seine Vorbilder', see note no 71 below for full bibliographic details.

[71] Hermann Bahr, *Secession* (Vienna: Wiener Verlag, 1900), p.40 cited by Wolfgang Voigt in 'Vom Ur-Haus zum Typ. Paul Schmitthenners 'deutsches Wohnhaus' und seine Vorbilder', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900-1950: Reform und Tradition* (Stuttgart: Hatje, 1992), p.245. German text: "Man läßt sich nicht mehr betrügen, man weiß, daß die Fassade nichts mehr zu bedeuten hat. Dies muß unsere erste Forderung sein, wenn wir an eine moderne Architektur denken: daß man das Haus wieder von innen nach außen bauen und daß die Fassade wieder ein reiner Ausdruck der Wohnung werden soll...Das 'Ringstraßenhaus' ist ein Schwindel, es ist unnatürlich, es verleugnet den Sinn des Bauens. Das Haus der Biedermeierzeit ist wahr, es hat die Form, die seinem Inhalt zukommt, es ist das 'Haus an sich' der bürgerlichen Bedürfnisse."

[72] Posener, *Berlin*, pp. 553-554. Posener's fine distinctions drawn between the architectural treatment of similar elements by Tessenow and Taut becomes much more marked when he turns his gaze on Riemerschmid's and Muthesius's work in Hellerau. German text:

Man beachte jedoch die Unterschiede, indem man etwa die zweigeschossige Reihenhäuser am Akazienhof als Beispiel nimmt: Tessenow hätte das Fenster über dem Eingang, das Kammerfenster, nicht rund gemacht; er hätte die Fenster im Erdgeschoß nicht mit einem weißen Rahmen umzogen und die auf diese Weise vor denen des Obergeschosses ausgezeichnet; er hätte überhaupt das Erdgeschoß nicht in der Weise vom Obergeschoß differenziert, wie Taut das tut; und ebenso darf man annehmen, daß er nicht die vertikale Gliederung in Eingangsnischen und vorspringende Zimmerwand angewandt haben würde, welche die ganze Hausreihe Tauts in vor- und zurückliegende Teile gliedert; wobei die Farbe jedesmal zwei der spiegelbildlich einander zugeordneten Reihenhäuser zusammenfaßt: Sie wirken dadurch wie *ein* Haus, dessen Mitte zurückgesetzt ist.

[73] We shall return to this theme, the re-evaluation of Tessenow, in the final chapter in which we examine his historiography.

[74] Bruno Taut from a speech made on the occasion of an exhibition opening in Istanbul, 4 June 1938 (Taut Archive: Akademie der Künste, Berlin). Cited by Hartmann in *Deutsche Gartenstadtbewegung*. German text: "Was wir suchen müssen, ist die Synthese zwischen der alten Tradition und der modernen Zivilisation."

[75] Ibid. p.123. German text: "Die traditionelle Überlieferung aber nicht in Schultze-Naumburgs sklavischer Manier – auch nicht in der bodenständig-süddeutschen Fischer'schen Art verstanden, sondern im Suchen nach den gewachsenen Prinzipien und in schöpferischer Umsetzung der traditionellen Formen für die veränderten zeitgemäßen Lebensbedingungen." The author went on to note her disapproval of the continuing tendency to adopt an uncritical attitude towards the use of regional motifs in architectural design. German text: "Diese zentrale architektonische Problematik wird auch heute noch übersehen. Nur allzuoft wird die Umwelt mit anonymen sinnentleerten "Modernismen" oder mit kleinbürgerlichen heimatstiligen Zitaten verbaut." Ibid. p.123.

[76] Harry F. Mallgrave, 'From Realism to Sachlichkeit: The Polemics of Architectural Modernity in the 1890s', in Harry F. Mallgrave (ed.), *Otto Wagner: Reflections on the Raiment of Modernity* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1993).

[77] Hermann Muthesius, *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and its Present Condition* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1994), edited by Harry F.Mallgrave and with an introduction by Stanford Anderson. The introduction contains a clear discussion of the context of the term *sachlich* in turn-of-the-century aesthetics.

[78] Ibid. p.83. German text:

> Joseph August Lux beschrieb 1907 in der Planungsphase von Hellerau die von Riemerschmid geplanten Arbeiterhäuser mit den Adjektiva "sachlich" und "zweckmäßig". Er betonte sie wären den "neuen künstlerischen Gestaltungsgrundsätzen" unterworfen. 1910 hatte er seine Meinung geändert: "Während vor dem Hause das Automobil, das Fahrrad, die elektrische Bahnen vorbeirasen, können wir im Innern des Hauses...nicht den historischen Biedermeier spielen."

Hartmann cites Joseph A.Lux, *Die Kunst im eigenen Heim, Ratgeber für die Ausstattung der Mietwohnung* (Leipzig, 1900), p.11.

[79] Friedrich Naumann, 'National-sozialer Katechismus', *Die Hilfe* (1897), nos 1-3, 5-7, 10 and cited by Posener, *Berlin*, p.59. German text:

> *Was für eine Politik muß sie demnach fordern?*
> Eine Politik der Macht nach aussen und der Reform nach innen.

[80] Kathleen James-Chakraborty, *German Architecture for a Mass Audience* (London: Routledge, 2000), p.2.

[81] See Rüdiger vom Bruch, *Gelehrtenpolitik im wilhelminischen Deutschland, 1890-1914* (Husum: Matthiesen, 1980).

[82] Roger Scruton, *The Aesthetics of Architecture* (London: Methuen, 1979). See also David Watkin, *Morality and Architecture* (Oxford: Oxford University Press, 1977) for an attack on the very idea of a Hegelian-inspired art history, which, he maintains, was an

import from Weimar Germany in the guise of the Warburg Institute. To do Watkin justice, he traces the genealogy of 'moral' art history back to the nineteenth century, where Pugin and Ruskin are its key British exponents.

[83] Heinrich Hübsch, *In welchem Style sollen wir bauen?* (Karlsruhe, 1828).

[84] See Gevork Hartoonian, *Ontology of Construction* (Cambridge: Cambridge University Press, 1994) for a phenomenolgical reading of the place of construction in Western architectural history. Loos, Wright and Mies van der Rohe are his main foci, and his subtitle, *On Nihilism of Technology in Theories of Modern Architecture*, alludes to his pitting the 'poetics of space' (to appropriate Bachelard) against the technics of construction. Space wins: "cultural demythication marks a nihilistic discourse on construction. Here the word "nihilism" signifies the distance of civilisation from the realm of the sacred, as manifested in every act of cultural production. It is a historical process of desecration through which "all that is solid melts into air." Ibid. p.9.

[85] See Cornelis van de Ven, *Space in Architecture: the evolution of a new idea in the theory and history of the modern movements* (Assen/Amsterdam: Van Gorcum, 1978), pp.94-98.

[86] Mallgrave and Ikonomou, *Empathy, Form and Space*, p.44.

[87] " Physical forms possess a character only because we ourselves possess a body." [Wölfflin cited by Mallgrave and Ikonomou *Empathy, Form and Space* p.151] Here Wölfflin "assumes anthropomorphic aesthetics" [Ibid. p.42]. His analytical method is based to a large extent on his viewing architecture as one of the *Geisteswissenschaften*, a term newly-coined by Wilhelm Dilthey (1833-1911). Dilthey occupied Hegel's chair in philosophy (inheriting it from R.H.Lotze) at Berlin 1882 until his death in 1911.

[88] Van de Ven, *Space in Architecture*, p.94.

[89] *Allgemeine Bauzeitung* (1883), no 48, p.66.

[90] Schwarzer, *German Architectural Theory*, p.193.

[91] Ibid. pp.192-193.

[92] See Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass: MIT, 1978).

[93] Cited by Forty, *Words and Buildings*, from pp. 238-239 Mallgrave and Ikonomou, *Empathy, Form and Space*. The passage continues:

> If we now set for ourselves the task of making visible the appearance of this natural space as a whole, then we first have to imagine it three-dimensionally as a void filled in part by the individual volumes of objects and in part by the air. The void exists not as something externally limited but rather as something internally animated. Just as the boundary or form of an object indicates its volume, it is also possible to compose objects in such a way that they evoke the idea of a volume of air bounded by them. The boundary of an object is, strictly speaking, also the boundary of the body of air surrounding it.

[94] Forty, *Words and Buildings*, pp.259-260.

[95] Ibid. p. 258. Forty cites Kant, *Critique of Pure Reason* (1781), trans. N.Kemp Smith (London: Macmillan, 1929), p.68 and p.71.

[96] Siegfried Ebeling, *Der Raum als Membran* (Dessau: Dünnhaupt, 1926). Ebeling's saying was a simpler restatement of Horatio Greenough's contention that "[I]instead of forcing the functions of every sort of building into one general form, and adopting an outward shape without reference to the inner distribution, let us begin from the heart and work outwards." Quoted in Peter Collins, *Changing Ideals in Modern Architecture: 1750-1950* (London: Faber and Faber, 1965), p.160. One reads Ebeling's book and imagines he had sat in the 'light box' of Tessenow's *Festspielhaus*: "Das natürliche Licht ist mit dem künstlichen Licht (durch Stromlieferung oder Stromeigenerzeugung) der Haus"maschine" zu einer so innigen Einheit der Anlage zu verschmelzen, daß seine Güte sich automatisch reguliert (Vermeidung des Zwielichts, Dämmer- und Graulichts an trüben Tagen, besonders in der Subarktis)." Ibid. p.36. However, of the allegorical nature of the exterior of the *Festspielhaus* he surely would have dissaproved: "Wir sollen ihr [der Architektur] keinen Ewigskeitstempel aufdrücken. Monumentalität und Repräsentation durch Massenwirkung, Massenkuppelung, sollen ihr fern liegen. Der Stil sei in unserem Leib verkörpert und in dem, wie wir den Leib ins Geistige steigern. Das Wesentliche ist der Mensch: Das Ding (und zu ihm gehört alles, was mit der Architektur zusammenhängt) ist jedem gegenüber untergeordnet." Ibid. p.21.

[97] Walther Volbach and Richard Bleacham, *Adolphe Appia: Essays, Scenarios and Designs* (Ann Arbor: UMI Research Press, 1989), p.136.

[98] Mallgrave and Ikonomou, *Empathy, Form and Space*, p.30.

[99] Ibid. p.30.

[100] Van de Ven, *Space in Architecture*, p.87.

[101] Mallgrave and Ikonomou, *Empathy, Form and Space*, p.286.

[102] Ibid. pp.286-287.

[103] Forty, *Words and Buildings*, p.261.

[104] Mallgrave and Ikonomou, *Empathy, Form and Space*, p.289. One is reminded here of Tessenow's essay 'Mittelalter und Nachmittelalter oder Das Vertikale und das Horizontale', in Heinrich Tessenow, *Geschriebenes: Gedanken eines Baumeisters*, (Braunschweig: Vieweg, 1982), ed. Otto Kindt .

[105] Ibid. p.291.

[106] Ibid. p.291.

[107] See note no 10 to Chapter One.

[108] Mallgrave and Ikonomou, *Empathy, Form and Space*, p.293.

[109] Forty, *Words and Buildings*, p.261.

[110] Geoffrey Scott, *The Architecture of Humanism* (London: Constable, 1914).

[111] Van de Ven, *Space in Architecture*, p.81.

[112] Ibid. p.81, citing Lipps, *Raumästhetik*, p.318 (translation by van de Ven).

[113] Cornelius Gurlitt (1850-1938): leading Dresden art historian and defender of the Baroque style. Heinrich Wölfflin (1864-1945): Swiss art historian whose doctoral thesis *Prolegomena zu einer Psychologie der Architektur* (1886) moved aesthetics deeper into the realms of psychological investigation.

[114] Schwarzer, *German Architectural Theory*, p.80.

[115] Paul Frankl, (James F.O'Gorman trans. and ed.) *Principles of Architectural History* (Cambridge, Mass: MIT, 1968).

[116] See, for instance, the recent probings of Andrew Bowie, *Aesthetics and Subjectivity: from Kant to Nietzsche* (Manchester: Manchester University Press, 1990). Here, the essential subjectivity of modern philosophy is related to the aesthetic response: "The turn of philosophy to subjectivity accompanies the complex and contradictory changes wrought by 'modernity': the rise of capitalist individuality, the growing success of scientific method in controlling nature, the decline of traditional, theologically legitimated authorities, and the gradual emergence, together with aesthetics as a branch of philosophy, of aesthetic 'autonomy', the idea that works of art have a status which cannot be attributed to any other natural object or human product." Ibid. p.2.

Bowie goes on to relate nineteenth-century aesthetic subjectivity to the materialist turn experienced in the wake of belief in a divinely ordered world: "The importance attributed to art near the end of the eighteenth century has its roots in the decline of theology and the disintegration of theologically legitimated social orders: 'All that is solid melts into air', as Marx put it in the *Communist Manifesto*. The loss of a nature whose meaning is inherent within it and whose structure is divinely guaranteed leads to a search for other sources of meaning and coherence. The idea that nature can be *per se* beautiful, rather than being merely an expression of the deity, and the idea that human beings can create aesthetic products whose interrelating parts are meaningful in ways which natural science cannot explain, become major philosophical issues." Ibid. p.3.

[117] The profusion of German neologisms derived from the root of the one verb is the chief instance of the nuances embedded within German rendering it immune to easy translation into most other languages. Depending on one's temperament or point of view, it is a source of the poetic depths of the language, or of its complicity with obfuscating authors. Heidegger is, of course, the arch-neologician.

[118] See, in particular, Gaston Bachelard, *La Poétique de l'Espace* (Paris: Presses Universitaires de France, 1957).

[119] From now on we shall use tectonic to refer to the non-technical (and non-Semperian) idea of building. The following section will unpack the various connotations which the term acquired during the course of the century.

[120] Henrici p.191 cited by Schwarzer, *German Architectural Theory*, p.207. German text: "Des Architekten Aufgabe ist es, Gebilde zu erzeugen mit gesundem Kern in gesunder Schale oder mit gesunder Seele in gesundem Körper." In his earlier essay 'Über die Wahrheit in der Architektur' (Truth in Architecture) (1901-02) he sees an equivalence between spatial design and tectonics.

[121] Werner Oechslin, *Otto Wagner, Adolf Loos, and the Road to Modern Architecture* (Cambridge: Cambridge University Press. 2002), p.86.

[122] For architectural education in Germany see introduction by Rosemarie Haag Bletter to Adolf Behne, *The Modern Functional Building* (Santa Monica, California: The Getty Research Institute for the History of Art and the Humanities, 1996), pp.15-18.

[123] Schwarzer, *German Architectural Theory*, p.101.

[124] Ibid. p.183.

[125] Kenneth Frampton, 'Bötticher, Semper and the Tectonic: Core Form and Art Form', in Andrew Ballantyne (ed.), *What is Architecture?* (London: Routledge, 2002), footnote to p.139.

[126] Schwarzer, *German Architectural Theory*, p.184.

[127] Ibid. p.185.

[128] See Gerald Adler, 'The Geography of Architecture' in *Canterbury School of Architecture Review* (Canterbury: Canterbury School of Architecture, 1994), no 2.

[129] Schwarzer, *German Architectural Theory*, p.53.

[130] Ibid. p.64.

[131] Charles McKim (1847-1933); William Mead (1846-1928); Stanford White (1853-1906).

[132] Valentin Hammerschmidt, *Anspruch und Ausdruck in der Architektur des späten Historismus in Deutschland (1860-1914)* (Frankfurt/Main: Peter Lang, 1985), p.51. German text: "Der Rundbogenstil des Rheinlands, von Hübsch, Lassaulx und anderen, wollte sich hingegen deutlich von der Antikenrezeption absetzen und führte konsequenterweise zum Mittelalter, zur Romanik, während aus der Münchener Schule Gärtners die Hannoveraner Backstein-Neugotik entstand."

[133] See ibid. pp. 54-55 for a discussion of the development of the Gothic Revival in the middle of the nineteenth century. He makes the interesting observation that the Gothic Revival did not split along the strict denominational lines as it had in England, to a great degree, and in France, to a lesser extent.

[134] Ibid. pp.56-57. German text: "Der Begriff des Mittelalters assoziierte christlich-kirchliches, aber auch Reichseinheit, sowie Bürgerlichkeit und Biederkeit–Assoziationen, die je nach politischer Situation unterschiedlich konkretisiert wurden: vom Patriotisch-Nationalen der Romantik zum Ständisch-Klerikalen des Ultramontanismus wie auch zur antikapitalistischen Utopie der englischen Reformbewegung."

[135] Ibid. p.63. German text: "[...] die Romanik sei rückständig, sozusagen unfertig, gegenüber der Gotik, die den "Triumph über die lastende Masse der Materie", eine Vergeistigung des "Stofflichen" darstelle und überdies (wegen der geringeren Querschnitte) billiger sei...". This economic aspect of the preference for the Gothic is reiterated by others. German text: "Die gotische Kunst weiß mit der Hälfte des Materials und also in gewissem Sinne auch der Arbeit auszukommen, um denselben Zweck zu erreichen wie andere Bauweise", fand er [Wilhelm Lutz transcript of a 1868 speech in the *Deutsche Bauzeitung*]. Aus diesem ökonomischen Grunde triumphiere der gotische Geist über die tote Materie, und aus diesem Geiste solle der neue Stil entstehen." Ibid. p.64.

[136] Ibid. p.92. German text: "Sah Fritsch in der Romanik die beste Grundlage für eine Weiterentwicklung der Baukunst: weil sie als Massenstil – im Gegensatz zum Gerüststil – keinen festen Kanon besitze und daher entwicklungsfähig sei, weil sie die Materialwirkung des Steins – der allein stilbildend sei – am besten zur Geltung bringe, und weil ihre ruhige Monumentalität antikes und germanisches Gefühl (nicht die Formen!) vereinigten."

[137] The *Burgtheater* was designed jointly with Carl von Hasenauer.

[138] The term *'architecture parlante'*, according to Barry Bergdoll, was first coined by the architect Léon Vaudoyer in the 1830s in the pages of the journal "Le Magasin pittoresque". It has been extensively used since then to denote an architecture expressive of its purpose, such as, for instance, the clear delineation of the volumes of stage, auditorium and foyers evident in the massing of Gottfried Semper's (second) Opera House, Dresden (1871-1878). Barry Bergdoll, *Léon Vaudoyer: Historicism in the Age of Industry* (Cambridge, Mass: MIT & the Architectural History Foundation, 1994), p.109.

[139] The essay was first published in the *Neue Freie Presse* 4 September 1898. It is one of the many essays by Loos to be published in the 1920s. See Adolf Loos, *Ins Leere Gesprochen* (Paris: Georges Crès, 1921). Republished by Georg Prachner in Vienna 1987. The use of lower case at the start of nouns is a typical Loosian reform. It did not catch on.

[140] The question arises as to the nature, according to Semper, of a timber frame wall which is rendered to resemble a masonry wall, as is the case with the application of mathematical tiles in Georgian England in the attempt to modernise such buildings. Frampton notes that coursed and bonded brick and stonework resembles weaving (Frampton, *Tectonic Culture*, p.6).

[141] Sebastian Müller, *Kunst und Industrie: Ideologie und Organisation des Funktionalismus in der Architektur* (Munich: Carl Hanser, 1974), p.25. German text: "Der Zusammenhang von Idee und Stoff ist für Semper immer technisch und nicht ästhetisch definiert."

[142] Ibid. p.25. German text:

> Das führte Semper zu der für die funktionalistische Ästhetik des 20. Jahrhunderts folgenreiche These, "daß die Grundgesetze des Stiles in den technischen Künsten identisch sind mit denjenigen, die in der Architektur walten". Die Leistung Sempers ist es zum einen, die Differenzierung zwischen Architektur und den anderen angewandten Künsten sowohl handwerklicher als auch maschineller Herstellung also im Begriff der "technischen Künste" aufgehoben zu haben; zum anderen besteht die Leistung darin, die Differenzierung zwischen Architektur und Ingenieurleistung, die mit der fortschreitenden Ästhetisierung des Architekturbegriffs einerseits und der fortschreitenden Technisierung andererseits im 19. Jahrhundert praktisch wurde, aufgehoben und erneut einheitlich, und zwar unter dem Begriff der Technik, gefaßt zu haben.

[143] The critic Martin Pawley has purloined Semper's theory of *Stoffwechsel* and has reinterpreted it as 'technology transfer'. In this way, say, the technology of glazing using neoprene gasket seals is transferred from the automotive to the building industry. See Martin Pawley, *Theory and Design in the Second Machine Age* (Oxford: Blackwell, 1990), pp.140-161, ('Technology Transfer in Architecture').

[144] That is, the second, extant one designed by Semper *père* under the supervision of his son Manfred. The first Opera House burnt down in 1869.

[145] See Chapter Three, 'Warm Fabric'.

[146] Elias Canetti, *Masse und Macht* (Hamburg: Claasen, 1960). The title is translated as 'Crowds and Power'; however, it might also, though inelegantly, be rendered as "mass and power".

[147] Peter Hall, *Cities in Civilisation* (London: Weidenfeld and Nicholson, 1998), p.395.

[148] Siemens would commission the great late 1920s *Siedlung* of Siemensstadt in Berlin, with contributions from, *inter alia*, Mies van der Rohe, Scharoun and Häring. The AEG would famously commission Behrens to design its *Turbinenfabrik* and other buildings before the First World War.

[149] See Section (i) of this chapter p.78.

[150] Now the *Fachhochschule HTW Dresden.*

[151] See Hermann Glaser, *Industriekultur und Alltagsleben: Vom Biedermeier zur Postmoderne* (Frankfurt/Main: Fischer, 1994). German text:

> Was wir zur Zeit in Deutschland an Eisenbahnen besitzen, ist gut als Spielzeug für die Städte und um dem deutschen Publikum einen Begriff von der Sache zu geben; der eigentliche Nutzen dieses Transportmittels aber, sein Einfluß auf die Agrikultur, die Industrie, den Bergbau, auf den innern und äußern Handel kann in großartiger Weise erst hervortreten, wenn der Osten mit dem Westen, der Norden mit dem Süden Deutschlands durch wenigstens vier Nationallinien verbunden sein wird. Allein die wichtigste Seite eines allgemeinen Eisenbahnsystems ist für uns Deutsche nicht die finanzielle, nicht einmal die nationalökonomische, sondern die politische. Für keine andere Nation ist es von so unschätzbarem Wert als Mittel, den Nationalgeist zu wecken und zu nähren und die Verteidigungskräfte der Nation zu stärken. (Ibid. pp.16-17 citing Friedrich List, *Das deutsche Eisenbahnsystem II*, (1841) in E.von Beckerath (ed.) *Schriften,Reden, Briefe* Vol. 3, p.331).

[152] Schwarzer, *German Architectural Theory*, p.169.

CHAPTER THREE: Light and Fabric

In this chapter the two themes of Tessenow's relationship with light and fabric are explored. As such, it continues the nineteenth-century dialectic established in the previous chapter, with light standing for 'spirit', and fabric for 'matter'.

(i) TESSENOW AND LIGHT

The first section, 'Spectacle and Performance', takes Tessenow's *Festspielhaus* as an exemplar of both of a new kind of place of assembly, a *Volkshaus*, to use Romana Schneider's characterisation, as well as an experiment in theatrical design and production. It functioned as the Garden City's *Stadtkrone*, albeit one displaced to the margins of Hellerau, as well as a cultural centre for eurhythmy which briefly assumed international significance. The next section, 'Deep Plan', examines the planning of Tessenow's buildings in terms of the polarities of deep and thin plan types. Tessenow's urban ideas are examined here. Finally, 'Light Architecture' deals with the effect the new lighting technology had on architectural design. It seeks to couple technical advances with a new sensibility of simplicity and flatness sponsored by Worringer's notion of abstraction.

1.SPECTACLE AND PERFORMANCE

Theatre in the City

Theatres have much more 'presence' in Western European cities than is the case in Britain. This is no reflection on the importance the performing arts have in continental Europe vis-à-vis Britain; the theatre in the German-speaking lands owes its heightened urban presence to its courtly origins.[1] They tend to be 'object' buildings, in the sense indicated by Colin Rowe and Fred Koetter in their book *Collage City*, [2] and serve to heighten the civic sense of public space in the centre of cities.[3]

Tessenow's Dalcroze Institute in Hellerau would eventually conform to this tradition.[4] Despite its peripheral location on the edge of the Garden City (which was a result of Riemerschmid's refusal to countenance an example of such 'rational' architecture in the heart of his beloved Hellerau), it nonetheless stands as an isolated construction and looms over the surrounding *Schüler- und Lehrerwohnhäuser* (Pupils' and Teachers' Houses) to the south. Its location may be compared to that of Behrens's (unexecuted) theatre in Darmstadt with regard to its neighbours.[5] **(Fig. 3.1)** Valentin Hammerschmidt, in his book on German architecture during the period 1860-1914, states that only theatre buildings dedicated to the lesser arts of light entertainment seemed to merit full integration into the surrounding urban tissue.[6]

But the location of the *Festspielhaus*, regardless of its central or peripheral position in Hellerau, is hardly urban. There is a sense of its patrons' wishing to find a *tabula rasa* and to make a fresh start: in this the Dalcroze Institute has much in common with Richard Wagner's Bayreuth Festival Theatre; but it also shares the desire of the Reform movement which generally favoured out of the way locations for its grandest projects. Karl Osthaus's founding of the Folkwang museum at Hagen comes to mind, as does the artists' colony at Worpswede.[7] Germany, let us remember, is an agglomeration of provinces, and in a sense the various Reform movements' decentralizing urges were already partially satisfied by the constitution of the country; in a Wilhelminian age of Prussian authoritarianism, perhaps the obvious location for any new Reform project (and certainly the easiest in an operational sense) would be in any of the cities with an already established ducal or royal tradition of artistic patronage. Dresden, as capital of Saxony, offered one such location, as did Darmstadt, home to the Dukes of Hesse.

Architectural Staging, Staging Architecture

Behrens was involved in staging festivities at the Darmstadt Artists' Colony in conjunction with the 1901 exhibition 'Ein Dokument deutscher Kunst'. **(Fig. 3.2)** Behrens's (unexecuted) project for a theatre (1900) combines audience and players together in a single (circular plan) volume.[8] Not only was there to be a unity of form bringing together audience and actor, there was also a purity of

colour – white – in order not to distract from the actions and expressions of the players.[9] The immediacy of the action on stage, and the fact that all involved - actors and audience – are participants in the dramatic act, are underscored by the spatial relationships within the unified theatre auditorium.[10] Similarly, at the Dalcroze Institute, one can no longer speak of the auditorium, the stage, and backstage as sharply differentiated spaces; instead they merge into one space of dramatic participation. The guiding spirit of Jaques-Dalcroze was crucial here; one has to remember that it was first and foremost a school, and eurhythmy focused on individual and group exercises, rather than rehearsals for public performance.[11]

Apart from Behrens's theatre projects, it is worth mentioning just one other proposal, namely Martin Dülfer's for the civic theatre in Freiburg (1909). **(Fig.3.3)** Dülfer was the Munich architect for whom Tessenow worked from 1899 until the autumn of 1901, and again for one year 1909/1910 when he functioned as his assistant at the *Technische Hochschule* in Dresden. Dülfer's project is characterised by a series of gable forms aligned along the longitudinal axis of the theatre, beginning with that of the 'temple front' of the entrance porch, progressing via the gabled roof of the auditorium, and culminating in the pitched roof form of the fly-tower. It is all in all a rather inchoate scheme, certainly when compared with his pupil Tessenow's more assured *Festspielhaus*, Hellerau, of the following year. Dülfer piles on effect after effect, such as the series of axially-aligned gable forms culminating in the (overscaled) entrance portico, and the exedra roof form located above the entrance foyer. The Tessenow scheme that most overtly picks up these themes of Dülfer's is the second (rejected) project of 1910.

When the young Tessenow was commissioned to design the Dalcroze Institute, it was a leap of faith on the part of his patron Wolf Dohrn. Tessenow's work hitherto had been purely domestic (with the exception of the projected *Bismarckturm* (Bismarck Tower) of 1903, which anyway had no interior space to speak of); his writings dealt almost exclusively with matters pertaining to the design and construction of houses. It was surely the conjunction of Appia, von Salzmann and Jaques-Dalcroze, brought together under the patronage of Dohrn, which impelled Tessenow to 'forego' his interior design imperatives and allow a neutral space shaped by the manipulation of artificial light to come about. The

urge to make such a radical break came initially from Appia; von Salzmann provided the technical skills in order to realise it.[12] According to Appia:

> Tessenow understood in a really ingenious manner *that the architecture of this building had to be effaced* before the life that you would want to create within. He understood that the style of this institute resides in the absolute tranquility and elegant restraint of each line and of each surface, because these lines and these surfaces need to respond to the requirements of life and especially of the [bodily] movements which it is required to limit and to envelop. In fact, from that point of view, one could not have done better, and I find that Tessenow's intuitions are absolutely astonishing for just that.[13]

Formative light had been used before; what was striking was the idea of the diffusion of light in space. Here, the source of the light had to remain mysterious: at Hellerau it seemed to emanate from within the structure itself.[14] It was as if the effect of Behrens's mystical crystal, which functioned as the main prop during the opening of the Darmstadt festivities of 1901, were inverted.[15] At Hellerau, the light is an inward emanation.

White Box, Light Box

Neutral light is, of course, what von Salzmann would develop with his 'white box' performance space within the *Festspielhaus*. Neutrality, together with the freedom from extraneous, distracting applied decoration which it implied, was the intended outcome of Jaques-Dalcroze. For Appia, this hard-won freedom meant the production of a *Gesamtkunstwerk*, not in the Wagnerian sense of an overpowering rivalry of music, drama, interior décor and so on, but a pared-down, purified and unified concept, with the individual arts ceding their autonomies in the pursuit of a multi-sensory whole.[16]

Formative light was conceived by Appia almost in terms of music.[17] In 1901 Appia found himself in Paris, having returned from Bayreuth disappointed at not having been able to persuade the Wagner Festival Theatre powers-that-be of the merits of his ideas of staging. (Richard Beacham recounts Appia's bruising audiences with the formidable figure of Cosima Wagner.[18]) He was, however, able to pursue his experiments with both neutral and formative lighting in the private theatre of the Countess René de Béarn. Together with the lighting designer, Mario Fortuny, he developed techniques of indirect lighting through

reflection using a semi-spherical 'artificial sky'. At Hellerau, he modified the 'Fortuny System' in order to fit the much tighter space between constructional box and light-walls. The result was a kind of backlit cyclorama, extending flat and parallel to the walls and ceiling. The critical reception was ecstatic, with figures such as George Bernard Shaw revelling in the effects, and marvelling at the technology which produced them.[19]

Fortuny had developed his system of stage lighting around 1902; according to Richard and Helen Leacroft, his system "obtained the effects of daylight by projecting white light onto bands of coloured silk, which acted as reflectors diffusing light over the whole scene".[20] Fortuny's next development was to extend the partial illumination of a flat screen-like surface into the lighting of a half-dome, in order to enclose the performing space: "The effect of unlimited sky was obtained by the use of a half-dome, originally made of silk but later constructed of plaster. The use of such a half-dome made it possible to remove the sky borders and the side wings, as it could completely enclose the sight-lines from the audience."[21] In its fixed position, of course, the sky dome impeded the actors' entrance to the stage; Fortuny's final development of his system was to create a mobile sky dome. The dome, supported on its scaffolding framework, could be moved on tracks into the desired position on stage during scene changes. Appia's innovation, which appears to be unique in theatre history, was, having abolished the proscenium opening with its distinction between performance and audience, to make the entire auditorium a sky space.[22]

Fortuny's 'sky-dome' would develop in two totally different ways: the cyclorama is its direct descendant and remains to this day an important part of the stage's architecture; **(Fig. 3.4)** on the other hand, in Appia's hands the concept of the sky-dome became expanded to become the architectural back-drop of the entire theatrical space. This was realised once, and to the author's knowledge once only, with Tessenow's Great Hall of the Dalcroze Institute.[23] The extraordinary achievement at Hellerau was that the surfaces of the auditorium volume should be net emitters of light rather than merely reflecting surfaces of light emanating from sources located within the space. This is brought home by a review of one of the 1912 festival performances:

> I never saw a room so exclusively boxed-in and therefore almost naked. In itself it's nothing; it is merely a protective envelope warding off anything which might disturb, distract or mislead. And, above all, (...) it is a dispenser of light. (...) [24]

The dimmable 'light-box' of the *Festspielhaus* would be 'played' from a central control console (which unfortunately no longer survives). This electric light organ was related to earlier efforts to orchestrate complex stage lighting. For instance, the French stage designer Frédéric Kastner devised a 'pyrophone' (gas organ) in order to 'play' gaslight on stage.[25] These stage lighting experiments were continued in Paris by a Russian émigré, Baranoff-Rossiné, with his piano-opto-phonique (1909). Initially a manual device, by 1923 he had managed to mechanise its workings.[26] The design of the light organ, then, was driven by a number of concerns, some literary (Baudelaire) others relating to symbolist theatre (Maeterlinck comes to mind), others from theosophy, linking colour, music, and light in a mystical way.[27]

Scriabin, influenced by Hélène Blavatsky (co-founder of theosophy) and Rudolf Steiner himself, viewed music as just one component of a holistic *Gesamtkunstwerk*, and in January 1911 he created a light-piano for *Prometheus*, a choreal symphonic poem premiered in Moscow. He stipulated "a white room, with a high dome, without any architectonic adjunct."[28] Tessenow, with von Salzmann's lighting strategy at Hellerau, abolished the domed form of the ceiling in order to produce an illuminated interior of stunning simplicity.[29]

Adolphe Appia describes the 'light-cage' of the *Festspielhaus* auditorium in the following terms: "2 parallel white sheets, one close by the inner brick wall of the auditorium to act as light reflector (or ceiling); the other 1m approx. apart to serve as diffuser. 47 circuits linking light-bulbs at regular spacings. The light bulbs were positioned mid-way between the two white sheets."[30] This description of Appia's accompanies a sketch by von Salzmann showing how the wall lighting grids were composed of vertical studs suspended from a horizontal boom.[31] The lamps hung down, connected by L-shaped brackets to the studs. The ceiling was divided into moveable panels, each surrounded by a grey band. These could be lowered (presumably hinged along one side) in order to allow spotlights to shine through onto the 'stage'). This supplied the 'active' light, as opposed to the diffuse light from the hidden bulbs.[32] Appia went on to describe the effect of the

light in terms both material and spiritual: "The [newspaper] articles of the age speak of an infinity of nuances: the visitors have never known before a materialisation so 'material' of light, nor such an 'immaterial' materialisation. Salzmann's diffuse light literally fills the space, materially *and* spiritually."[33]

While the cyclorama would assume an important place in the technology of scenography, the white box of Appia's and Tessenow's collaboration would remain a theme relatively unexplored in the history of architecture. However, it would feed back into architectural design in significant ways during the twentieth century. We will return to this theme in the following section, 'Light Architecture'.[34]

A brief sketch of the development of theatre architecture is appropriate at this stage. The specific local developments of German theatre, based on (pre-Wilhelmine) ducal patronage, had a large influence. There were two significant exemplars from the Wilhelmine period: the court theatre of Duke George II of Saxe-Meiningen, developed in the 1870s and 1880s, and the *Künstlertheater*, Munich, designed by Georg Fuchs (1868-1949) and Max Littmann (1862-1931) in 1907-1908. **(Fig. 3.5)** At Saxe-Meiningen, restrictions on space led to the development of a shallow acting space, with a 'relief stage' of actors appearing to stand out against a back-lit panorama. This necessitated the drive towards ever more perfect, smooth screens to function as cycloramas. At Munich, Littman and Fuchs simplified the arrangement of Wagner's Bayreuth **(Fig. 3.6)** and produced a simple long box-like space containing audience and acting space.[35] An arrangement which would be echoed at Hellerau was the provision of side foyers, entered via door openings down the length of the auditorium; the presence of these openings tended to play down the protrusion of the proscenium arch portals.

Another similarity to the *Festspielhaus* auditorium was an orchestra pit which, when floored over, would be flush with the stage, and could therefore provide an extended acting apron, or thrust stage. As at Hellerau, the design of staging for performances was closely related to the architecture of the auditorium 'box'. Richard and Helen Leacroft described the provision as follows:

> The scenery was built solidly with three-dimensional modelling, and the whole was normally painted in monochrome, effects of light, shade, and colour being obtained solely by the use of diffused and direct lighting, mainly

> thrown from above to simulate natural lighting. To avoid what was considered to be the unfavourable effect of footlights, Schwabe tunnel lights with shutters were housed in a space built into the proscenium soffit, but a section of indirect footlights still had to be included to counteract the shadows resulting from overhead lighting.[36]

We shall return to the Munich *Künstlertheater* in the section 'Light Architecture', in which we shall consider the theoretical ramifications of the design of the *Festspielhaus* auditorium.

Tessenow was a novice when it came to theatre design; in fact, he had not executed any project for a major place of assembly to date, and so it was natural that he should look to appropriate precedents in order to guide him. The Munich example, through his association with Dülfer, would naturally have suggested itself. The architectural novelty of Tessenow's at Hellerau was to produce a major internal volume whose form would be totally unpredictable from one's knowledge of the exterior. Furthermore, the 'form' of the space can barely be spoken of, since one's perception of it varies so markedly depending on the quality of the lighting.[37] Richard Beacham has described the use of light as an operative element in dramatic production as follows:

> Light could now express the emotional nuance of the music with great subtlety and variation while being operated centrally from a newly devised 'light organ', a calibrated and extremely sensitive lighting console, operated by a single person. Light could, in effect, represent the music visually in space, and thus complement the physical embodiment of the music expressed through the eurhythmic gestures and movements of the performing students ... Appia thus undertook at Hellerau to use light to achieve two of his major objectives: first, to emphasise the living and expressive quality of the *human body* in rhythmic movement in space; and, second, to break down the *barriers* which, traditionally, had governed and restricted the spectators' perception of the work of art in performance.[38]

The final effect was a *Gesamtkunstwerk*, but stripped down and abstracted to its essential, 'primitive' elements. As Paul Claudel (1868-1955), the French poet, dramatist and diplomat, commented: "It is a union of music, the plastic sense, and light, the like of which I have never seen". He continued: "the painted canvases, the props, all the ridiculous encumbrance of the old theatre are swept away; everything is replaced by an architecture which gives the essential lines to the dramatic action and fixes the course and direction along which it develops."[39]

A kind of *Bildersturm* (iconoclasm) is underway within the *Festspielhaus*; externally, there are still the formal trappings of representation: the collonaded gable-front, and the enigmatic ying-yang symbol in the tympanum (although this is abstract,and a symbol appropriated from another culture). Tessenow's iconoclasm represents the architectural version of what Jaques-Dalcroze was striving for with his dance reform: "Dance must be completely reformed, and in this domain, as in so many others, it seems quite useless to try to improve what already exists. We must destroy from top to bottom the fallen art and form a new one on principles of beauty, purity, sincerity and harmony."[40]

Of course, Tessenow was no architectural Bazarov, nor yet a Sant'Elia with his lust for nihilistic destruction and the *tabula rasa* approach.[41] Nonetheless the iconoclastic urges of Tessenow at the *Festspielhaus* should be viewed against the pursuit of the relief stage at the Munich *Künstlertheater*, completed in 1908 (three years before the design of the Dalcroze Institute). In his review of the design of the theatre, Wilhelm Worringer referred, with his tongue firmly in his cheek, to the Munich public's catholic wariness of its abstracting tendencies.[42] He implied that a Catholic public's natural sympathy lay with an aesthetic of empathy, with all its Baroque spatiality and non-abstract tendencies. Tessenow, the dour Mecklenburger with impeccable Protestant credentials, was ideally placed to pick up the baton of incipient abstraction. This point will be pursued later in this chapter under the heading 'Light Architecture'.

The purifying actions of natural light find their corollary in the 'free' and unencumbered movements of the body. Karl Toepfer has demonstrated in his book *Empire and Ecstasy: Nudity and Movement in German Body Culture, 1910–1935,* the close associations nudism had with modernism, especially in Germany.[43] Adolf Loos, famously, would relate clothing of the body to cladding of a building, and, later, Martin Heidegger would continue to play on the etymological relationship of the two terms.[44]

The Body Boxed

In the grounds to the side of the Dalcroze Institute Tessenow had designed sunbathing areas. What was termed *Luft und Licht Therapie* (Air and Light Therapy) in the pre-war period was seen as a corrective to the pallid condition of the modern urbanite. Tessenow retained an unresolved relationship with light, and with the architectural notion of *revealing*, which equates nicely with Loos's idea of distinguishing the private interior of a building, which he designed for public consumption and representation, from its exterior. Interior space, epitomised by the great hall of the *Festspielhaus*, becomes dematerialised, changing its ethereal nature according to the wishes of the teacher or dramatic director. Externally, there is an image of permanence, of unchanging, stereotomic materiality, where light and the process of unveiling have purely corrective, therapeutic functions located in the hidden *Sonnenbäder* (sunbaths). **(Fig. 3.7)** However, architectural striptease has no place in Tessenow's method: there are proprieties to be observed by buildings in their relationships with public space.[45] Human nudity is facilitated, but in strictly controlled conditions and locations; in a similar manner there is a calculated and careful unveiling of space in a sequential and hierarchical manner.

The word *revealing* leads on to the cognate *veiling*, and to the modern sense of architectural layering, which received its theoretical pedigree with the publication of Rowe and Slutzky's essay on transparency.[46] In the *Festspielhaus* light, especially toplight, is always filtered into an internal space through the medium of linen, as in the case of the *Festspielhaus* auditorium, or by means of laylights, as can be seen in the side halls either side of the main auditorium. Tessenow would reinterpret this transparent membrane in the design of the *Ehrenhalle* of the Olympics Art Exhibition, Berlin (1936). **(Fig. 3.8)** Here, the ceiling takes on the appearance of a padded quilt of loosely draped linen, pinched by short, downstanding vertical bosses laid out on a rectangular grid.[47] This is one of the few projects which Tessenow carried out under the Nazi dictatorship; however, one may easily dissociate this work of Tessenow's from the spectacular use of artificial lighting employed to great architectural effect by Albert Speer in his designs for the staging of the Nazi party rallies, particularly that at Nuremberg in 1936. Tessenow's 'light architecture' is essentially one of

interiors; for him, a building's stereotomic mass is revealed, as Le Corbusier put it, in (natural) light. In this way a building designed by Tessenow does not suffer the 'unnatural' effects of a perverse sciagraphy induced by the surreal shadows of side- and uplighting, precesely the effects striven for by Speer in his stagings of party rallies for the NSDAP.

However, returning to the theme of veiled light, Beatriz Colomina makes the point, in her book *Publicity and Privacy*, that the domestic interiors of Adolf Loos are almost invariably fenestrated with veiled windows.[48] In contrast, say, to Le Corbusier, for whom the window was conceived as a dematerialised horizontal gash in an external wall for the purpose of framing a 'landscape' format view of the outside world, Loos's windows are more complicated (and more traditional) devices. From the point of view of the exterior, public, realm, they are there in order to articulate the outer surface of the house. Tessenow's windows, likewise, make a major contribution to the external ordering of his buildings' elevations, while giving primacy to a veiled source of light to the individual rooms within. For instance, the contemporaneous black-and-white photographs of the *Stadtbad Berlin-Mitte* swimming pool (1927-1930) reveal a milky light illuminating the interior spaces, giving a soft gradation towards areas in the depths of the rooms furthest away from the light source. **(Fig. 3.9)** They bear a strong resemblance to the shadow studies drawn by Adolphe Appia in the first decade of the century.[49] For the building user, their purpose (apart from the pragmatic one of admitting daylight) is to facilitate the gaze, the occasionally voyeuristic outlook where the protagonist has to be shielded from external scrutiny. In the case of Tessenow, these psychological imperatives elide with a cultural sensibility, which wants to avoid strong contrast, or glare, resulting from the unrestricted flow of natural light into an interior.[50]

The ambiguity of the relationship between 'naked' light and the naked body is commented on by Karl Toepfer, who wrote that *Nacktkultur* "projected an ambiguous political identity because it treated the body as a double sign: on the one hand, it presented nudity as a return to an eternal primeval; on the other hand, it regarded modern identity as an unprecedented condition of nakedness."[51] This ambiguity would render the powerful symbolic form of nudity capable of being appropriated by the political left and right in the Weimar years. It is an ambiguity underlying many of the cherished totems of incipient modernism,

and it is particulary poignant that Tessenow, the archetypal man of the *Mitte*, should have (unwittingly) incorporated both readings of the sign in his work at Hellerau. This is unsurprising, however, given the preponderance of *Körperkultur* (body culture) in the Reform movement generally; Fritz Neumeyer has provided the playful motto "*Frühsport statt Frühlicht*" (Early Sport instead of Early Light), apostrophising the modern architect as "*der boxende Ingenieur*" (the boxing engineer).[52] His point is that by the mid nineteen-twenties images of the active body had supplanted ones of a mystical emanation of light as leitmotifs of modernism. He illustrates this by reference to Le Corbusier's famous drawing showing a resident (of his proposed apartment block for Edmund Wanner, Geneva, 1928-1929) practising his boxing, or an almost identical one by the brothers Vesnin of the interior of a flat in their communal housing, Kusnetzk, 1930, where the living room seems to have been converted into a gymnasium. These images of active sportsmen supplanted those of a more passive nature, such as Fidus's '*Bade in Luft, Licht und Sonne*' ('Bathing in Air, Light and Sun'), 1901.

What was achieved at Hellerau by 1913 with the collaborative work of Jaques-Dalcroze, von Salzmann, and Appia, and 'choreographed' by Tessenow, would anticipate the later writings of Paul Scheerbart. This visionary's name is impossible to ignore in any discussion of the transforming effects of light on architecture in the early years of the century. He wrote that "an increase in the intensity of light is not what we need. It is already much too strong, and can no longer be tolerated by our eyes. Tempered light is what we need. Not 'More light!' but 'More coloured light!' must be the call."[53]

Scheerbart, in tempering Goethe's words commonly purported to have been uttered by the poet on his deathbed, makes the connection with Idealist thought nicely. The availability of electricity, the most 'immaterial' of energy sources, enabled Scheerbartian lighting effects to be achieved within buildings. Reyner Banham has related electric lighting to the new domesticity presided over by emancipated women: without it sweetness and light in the domestic interior could not have been achieved. Tessenow's lucid interiors, with all corners and surfaces depicted with equal clarity, depend upon electric light in order to banish soot and smuts from their clean surfaces.[54]

2. DEEP PLAN, THIN PLAN

Embedded Space

The preceeding section talks of light almost as if it were a superficial, 'decorative' phenomenon of architecture. It is not. Design decisions regarding planning, the disposition of building mass, and site orientation all have their effect, as do the technical means of solving structural, constructional, and environmental problems inherent in architectural design. Reyner Banham was that most perceptive and insightful historian of modernism who, in the late 1960s, sought to trace these all too often separate courses of development with respect to lighting, and to re-unite them within the discourse of architectural history. In doing so he compared the technical advances of commercial manufacturers with the 'artistic' endeavours of architects working from a purely 'design' perspective.[55]

> The use of electric lights could alter the appearance of forms and volumes in a way that no other environmental aid ever could. For instance, by concealing tubular strip lights (which existed from quite an early stage of the art) above projecting cornices, with their illumination thrown upward onto a vault above, it was possible to reverse the fall of light and shade across its curved surface, to invert normal visual expectations and make a nonsense of the ancient art of sciagraphy.[56]

So architects, after an initial period of delight in the novelty of the incandescent bulb, would slowly begin to use electric light and to design installations and luminaires appropriately. Banham cites Thomas Harris's installation of naked light bulbs dangling from their flexes in the arcading of the Great Hall of Stokesay Court, Hampshire in 1889, and closer to (Tessenow's) home there was the example of Otto Wagner's deployment of bare bulbs in the banking hall of the Viennese *Postsparkassenamt* of 1910. Tessenow was not interested in a simplistic display of technological advance for its own sake. For him, the commercial production of safe incandescent bulbs, and the development of circuitry incorporating resistors to enable dimming to take place, served purely functional and spatial aims. In his interiors, the glare of the naked bulb is always tempered by lampshades (as in the opal glass truncated cones designed for the ceiling of the foyer of the Dalcroze Institute), **(Fig. 3.10)** or incorporated *en*

masse behind the diffusing screen of the white linen of the auditorium walls and ceiling. It is interesting to compare the contemporaneous light-fitting designs of Tessenow with the similarly 'stripped down' ones of Behrens.[57]

The question for architects at the turn of the century was crucial: should they use the recently available technical tools to serve their presumed notion of artistic aims, or did they need to re-examine the scope of architecture in the light of the new technical possibilities? Here is Banham again, referring to Le Corbusier's predicament in the 1920s:

> How can a man trained to model forms by external light and its cast shadows, to define architecture in Le Corbusier's terms as 'forms assembled in light', turn his art inside out and model his shapes by light emerging from within, and without shadows, to define his art as 'the magnificent, cunning and masterly play of light assembled in forms'? [58]

Le Corbusier is shown here, in the well-known passage quoted by Banham, as in all his other writings, as playing the role of the accomplished self-propagandist. He unashamedly speaks one language to his lay audience, with his characterisation of the primacy of architectural form as its perennial and compelling attribute, while flicking through the fashionable trade literature for examples of 'cutting edge' equipment. [59] Le Corbusier manages to pull off, almost by sleight of hand, the trick of extolling perennial, Platonic forms in the same breath as promoting the latest technical equipment on the market. Tessenow is far too straightforward a man for this ploy. Instead he shows himself to have an uncomplicated attitude, espousing the qualities of the artisan over those of the industrial worker. Writing in 1909, he said, "Factory and machine production force the worker to undertake primarily mechanical labour, unconducive to human dignity [...]"[60] In other words, Tessenow seeks to link considerations of consumption with ones of production, and is alive to the moral imperatives of artisanal work. In this he echoes many of the sentiments expressed by Ruskin and Morris a generation earlier in England. (It goes without saying that Le Corbusier's views had changed considerably by the 1920s, when he was editing the magazine 'L'Esprit Nouveau' and writing his most celebrated book, *Vers une Architecture*. In 1909, exactly contemporaneous with Tessenow's extolling the virtues of craftsmanship, he, too, shared similar attitudes towards machine production and, indeed, was sent to Germany by his master L'Eplattenier in order

to study contemporary design and to report on the efforts of the *Deutscher Werkbund.*)

Banham contrasts the critical reception afforded to two buildings designed in the first decade of the twentieth century, namely, the Royal Victoria Hospital, Belfast, by Henman & Cooper (1903), and Frank Lloyd Wright's Larkin Building (1906), Buffalo, New York. Both buildings incorporate novel ventilating and heating systems; the effect of their environmental design solutions has, in both cases, a powerful effect on their forms. The tendency is towards compactly planned buildings, as he explains, that "[t]o get full advantage from the Plenum system, a much more compact plan would obviously be required, with as much as possible of the accommodation packed into a single structural volume (in order to avoid heat wastage from underground ducts between separated buildings)."[61]

Most interestingly, Banham notes that those tracts of the hospital not requiring such controlled environmental conditions, in particular the areas devoted to administration, revert to traditional pavilion planning reliant on natural cross ventilation associated with the 'thin plan'. He goes on to explain the twentieth century's critical ignorance of the Belfast building when compared to its Buffalo cousin. He concludes that it is the stylistically regressive facade treatment that has led to the Royal Victoria Hospital's obscurity in posterity.[62]

Where the traces of environmental design considerations do persist in drawings, they are frequently ignored. Banham cites the ventilating ducts of the life drawing studios of the Glasgow School of Art (1904) designed by Charles Rennie Mackintosh, which are clearly visible on the original plan drawings.[63] In other words, spatial concerns are given primacy by critics over other factors which either permit the shape and configuration of particular spaces, or which are actually more important in either the artistic conception or proper functioning of the scheme than 'space' itself. One is reminded of Roger Scruton's objection to the modernists' insistence on 'space' (*pace* Frankl) as opposed to other, earlier, architectural concerns.[64] Banham's criticism, however, is more interesting than Scruton's; on the one hand he persists in ascribing the aesthetic to matters compositional, while extending the notion of 'commodity' (in the Vitruvian sense) to include environmental comfort as a *sine qua non* of architectural success.[65] One could, in fact, ascribe to Tessenow and his design for the Dalcroze Institute

a European model of aesthetic renewal, tectonic rigour, and environmental experimentation equivalent to Wright's Larkin building (1904) in Buffalo, New York.[66] The facts would appear to support the assertion, even if (for Banham, at least) the exterior would be too representational and, through its stripped classical style, insufficiently related programmatically to the users' experimentation within.[67]

In the previous section, 'Spectacle and Performance', we sought to relate Tessenow's design of the *Festspielhaus* auditorium to Littmann's *Künstlertheater* in Munich; there is a sense that the memory of a tectonic frame in Munich (the coffered square-plan ceiling; the careful placing of each side foyer doorway portal within the column spacings) has been carried over into the Hellerau interior. The veiling of the surfaces with linen suppresses the tectonic grid, but does not efface it completely. For example, the ceiling material is arranged into rectangular panels suggestive of the Munich *Kassetendecke* (coffered) ceiling; pragmatically, the linen is stretched taut onto frames of limited size into order to counteract any sagging of the material, and to enable panels to be removed in order to shine spotlights (the source of Appia's 'formative' light) from a lighting grid above.

Uniting performance with audience space ideally means banishing the fire curtain, which traditionally drops from a position immediately in front of the proscenium arch. The slit-like opening in the ceiling would always be visible, and would disrupt the visual continuity of surface. Of course, the effect of Appia's and Dalcroze's staging was to disperse light (and hence heat) sources across the space; the ubiquity of light meant that heat could not be isolated through the simple expedient of a fire curtain in a fixed location. Tessenow's solution to this practical problem was to devise a ventilating system that would remove heat at source.

This was achieved by treating the interstitial spaces (i.e. the space between the 'light ceiling' and the roof, and the 'wallspace' (the space sandwiched between the two vertical hanging linen screens) as plenum chambers. Air heated by the lightbulbs would rise, aided by a powerful fan located in the north gable behind a roundel, and be expelled through dormer windows (the only available outlets) at either side of the pitched roof. This simple system, which provided five air changes per hour, was highly effective, and there is no record of any mishap

occuring during the use of the 'light box'. The dismantling of the lighting system, which must have been effected by the time the Dresden police took over the Institute buildings for use as a barracks and training centre in the 1930s, removed all traces of the installation.

A separate system was provided to vent the auditorium space itself: this was provided by the vertical ducts built into the brickwork of the long flanking walls of the auditorium. Inlets were provided at low-level grilles positioned just off the floor; exhaust was provided into the plenum of the roofspace (where the warm air of the auditorium mingled with that of the wall-plenum) from where it was vented through the dormer windows. **(Fig.3.11)**

Tessenow's achievement at Hellerau was to effect, within the interior of the *Festspielhaus* auditorium, the planar aesthetic of abstraction; this coincided perfectly with the appropriate setting for Appia's sets. He managed this through a skillful combination of his innate architectural sensibility of spare and *sachlich* (functional) design, allied with a judicious deployment of technical means where environmental design criteria of heat, light, and sound were mastered in the service of the over-arching aesthetic aim. Tessenow provides a classic instance of the design of a 'well-tempered environment' (*pace* Banham) working harmoniously with formal architectural considerations. On this account, his work at Hellerau deserves to be considered on a par with Wright's at Buffalo, or with Mackintosh's at Glasgow. One feels sure that Banham, had he travelled to Dresden, would have cited Tessenow as an architect alive to the demands of his environmental agenda.

City Space

Tessenow's architectural work at Hellerau was restricted to the design of individual buildings: he had to conform to the masterplan drawn up by Riemerschmid. His pre-war writings barely touch on matters of urban design, and it is only in 1925 that he begins drafting his essay 'On Streets and Squares' (*'Über Straßen und Plätze'*) where he maintains that street building is fundamentally different from house building: "The manner of constructing a street is in all important respects different from the way of building a house, for streets are fundamentally different from houses; and so it is one of the hardest tasks of

all form-making, to bring streets and houses together to form a convincing or harmonic whole."[68] In Tessenow's view, streets are the basic building blocks of the city, together with squares; however, he ascribes masculinity to streets, and femininity to squares:

> Streets distinguish themselves from squares as the masculine does from the womanly, and yet more so: There exists something akin to a living relationship between streets and masculinity as there is between squares and the womanly principle, so that every culture values streets more and builds more streets, the more it values masculinity, as on the other hand it builds more squares, the more it has an innate sense for primarily womanly qualities.[69]

The square is a figure at rest, and in this represents the feminine; the essence of the street is to be in motion, the masculine counterweight of dynamism in terms of urban form. Tessenow equates modern history, which for him, by implication, he understands as the post-Renaissance, Enlightenment era, as one bound up with notions of progress and incessant movement; in other words, as quintessentially masculine:

> Streets: the great unformed, always in-progress, always pushing forward and progressing, the unwavering (professional) forward-looking will, the career-making urge, and so on: in a word, deeply masculine. The more street-ish and important are our streets, the more masculine they are, both in the way they are managed and the way they are constructed, in terms of their individual make-up and form. The firm belief in streets or progress is a decidedly masculine belief. And since recent world history invests such extraordinary belief in progress, it has become increasingly a history of the masculine will, of masculine thought and work (especially a history of thought and work), of the muscular or external successes or failings or simply a history of masculinity. More and more it has denigrated or pushed everything womanly to one side, or it has more and more obliged women to desire to be like men, masculine in a single-minded, professional sense, or masculine in a cosmopolitan, restless sense, or masculine in the sense of being efficient and thorough.[70]

The tone of this passage is essentialist, but decidedly feminist, in that it regrets the imbalance between the sexes and the overweaning dominance of the masculine drive in the modern world. Tessenow does not spell out the urbanistic corollary of his thinking; however, it is not hard to imagine the opprobium with which he would have regarded Haussmann-esque street planning, and his favouring the techniques of Camillo Sitte. If this passage of 1925 reflects

Tessenow's leanings of fifteen years' earlier, it is easy to understand how well fitted he must have seemed on being offered the Hellerau commissions.[71]

Tessenow's eschewing of the qualities of the *Großstadt* and espousal of those of the medium-sized town were fully in accord with the actions of a man of the *Reformbewegung* (Reform movement) in the early 1900s. Similar to many of his like-minded contemporaries, he sought not so much to ameliorate the city, as to vacate it. Hellerau Garden City was the first concrete achievement in Germany in which an organic, holistic development was proposed; one where housing, employment, and spiritual purpose were integrated. Others would grapple with dealing with the 'evils' of the nineteenth-century inner city. The problems of the over-dense city described by Werner Hegemann in *Das steinerne Berlin* would be tackled theoretically by Hans Bernouilli *et al.*, and practically, on the ground in Berlin, by architects such as Paul Mebes and Paul Emmerich.[72] What is significant is that their means of tackling the problems of the inner city were essentially the same ones as those employed by their colleagues in the Garden City movement, namely, to de-densify the city, by breaking up the massive and oppressive large-scale blocks of which the nineteenth-century city was overwhelmingly composed.

Yet if Tessenow abandoned the metropolis, he nonetheless exported a significant aspect of its built fabric and incorporated it into his architectural imagination. This was the idea of the deep plan building. Such a building, when located in a city such as Berlin or Munich, would occupy an entire city block. It would have a presence that enabled it, by dint of its sheer mass, to signal its significance. In this way Tessenow polarised his idea of architecture into two contrasting types: thin plan 'ribbons', and deep plan 'blocks'. The thin plan type lent itself to housing, the deep plan to buildings of an institutional or representative nature.

Thin plan housing represents, essentially, a reprise of the English Arts and Crafts house type; it is also a continuation of the pattern of English urban terraced housing, in particular, that exemplified by 'by-Law' housing of the 1870s onwards. The deep plan type, on the other hand, represents the continuation of the European classical tradition of monumental, centrally planned civic buildings. The technical characteristics of thin and deep plan buildings have been alluded to in the previous sections. To put it in a nutshell, thin plan buildings have a

general requirement to be more attuned to site orientation and aspect; by this means they are less reliant on mechanical systems to achieve environmental control. Deep plan buildings are, on the other hand, relatively free from detailed considerations of orientation; the price they pay for this liberty is a far greater reliance on heating, lighting, and ventilation systems.

An interesting excursus on this theme notes that the English propensity for thin plan types extended to buildings of a civic or institutional nature. One thinks of Alfred Waterhouse's University College Hospital, Gower Street, London (1897-1906), where the multi-storey wards adopt a cruciform plan, set at 45° to the ground floor base block contiguous with the local street pattern. In a similar manner Charles Holden (1875-1960) designed the London Transport Headquarters building at 55 Broadway, London (1927-1929) with a similar offset cruciform-plan office block. This parti resurfaces in 1950s New York, with the design of Lever House by Gordon Bunshaft (1909-1990) of the firm Skidmore, Owings and Merrill. The base podium building becomes the device relating the scheme to the urban structure, while the tower springing from it liberates itself from the ground-plan context and 'packs in' the required accommodation. When such a parti is repeated many times, a new contextual relationship of towers is set up, starting from a datum of some twelve to fifteen metres above ground level.

The English model of civic and institutional buildings tends to equate them to housing types, so that each office worker or hospital patient has their own window on the world, as if he or she were living in their own house. Their continental equivalents feel more 'institutionalised', cogs in an anonymous but more powerful, unified and monumental entity. From the English side of the Channel this is regarded as a negative connotation; one could, however, equally well regard the civic nature of such buildings as their chief characteristic and argue that they tend to 'civilise' their occupants. What underlies this discussion are differing notions of individual freedom and social responsibility: in the 1960s' project of post-modernism they found their respective champions in the persons of Robert Venturi, whose Pop Mannerism represented the interests of Anglo-Saxon individual freedom, and Aldo Rossi, standing for the virtues of civic society.

Feminine Space

We have touched on the 'femininity' of Tessenow's architecture, particularly in respect of his use of materials, and in his depiction of them. What we will undertake here is the analysis of Tessenow's plans in the light of his writings on streets and squares highlighted above. In his essay 'Figures, Doors and Passages', the architect Robin Evans traces the history of the demise of *en suite* room planning and the concommitant rise in the corridor as independent means of circulation.[73] In another essay published the same year, 'Rookeries and Model Dwellings: English Housing Reform and the Moralities of Private Space', he develops this theme and ends with the architectural reform which was its upshot: the housing estate.[74]

The centralised house plans of Tessenow are discussed below ('Tessenow and Fabric') in terms of their construction methods and energy efficiency; in terms of degrees of privacy and conviviality they represent a happy medium between the extremes of the English Arts and Crafts separation of functions, and the *Biedermeier* ideal of the *Stube* or parlour, around which family life gravitates.[75] Tessenow's domestic programme, initially evidenced through a spate of unrealised projects in the first years of the new century, is very close to the theories of Alfred Lichtwark, Director of the Hamburg *Kunsthalle*. His book *Palastfenster und Flügeltür* (Palace Windows and Folding Doors, 1899) argued for an 'English' domestic layout, one which banishes the *enfilade* planning (hence the title) and establishes the convenient plan as more important than a palatial facade.[76]

The public spaces of the Dalcroze Institute, however, the sequences through which the visitors enter the building and walk through to find their way to their seats, are all accomplished without recourse to any corridor spaces. The internal planning is remarkably concise: from the public's point of view one is led to one's seat in the auditorium having walked a minimum distance. The walk itself, however, becomes one of the most effective *promenades architecturales* ever experienced. It is a subtle play of rhythmic space in three dimensions, achieved with a minimum of bombast and a virtual denial of architectural rhetoric.

Tessenow hides the internal spatial development within the *Festspielhaus* behind its dominating external mass. There is no doubting its monumental

aspect: from whatever angle or approach; its heaped-up form dominates the immediate environs. And yet its essentially flat site means that it fails to dominate Hellerau as a whole. Compare this with Tessenow's initial proposal for the Dalcroze Institute, **(Fig. 3.12)** which does indeed tower over its site (the so-called *Wohlfahrtsland*). The oblique approach in 1912 (from the east along the *Schulweg*, to the north of which Kurt Frick would later locate his *Volksschule*) also ensured that the bilaterally symmetrical form of the *Festspielhaus* would not generate an axial (north-south) line of approach. The rejection by the *Bau-und Kunstkommission* of Tessenow's first and second projects for the Dalcroze Institute succeeded in marginalising the final, realised scheme to the periphery of Hellerau. Moreover the site in question, being flat, lacks any drama in itself.

Tessenow's architectural language does not allow for domestic and monumental buildings to be essentially different in terms of architectural form. Thus the Pupils' and Teachers' houses (*Schüler- und Lehrerhäuser*) around the courtyard, and facing into the *Festspielhaus*, are aedicular versions of the main 'house' itself, although with the surrounding houses the gable roof form is visually suppressed behind the gable wall which continues as a plane between houses.[77] **(Fig. 3.13)** For Tessenow the community of houses is more important than their individual expression; the collective ideal inherent in the Dalcroze Institute is clearly expressed in two key spaces, the external courtyard to the south of the entrance gable and the internal performance space itself. Both spaces have a clear proportional relationship. The external space is conventional insofar as it is bounded by the repetitive gable and wall elements of the *Festspielhaus* and the Masters' houses. The performance space is bounded by the scaleless, inscrutable surface of the backlit cloth 'walls' and 'ceiling'. The interior, with its surfaces which cannot readily be identified as those a conventional interior space, clearly has a more monumental aspect than the entrance court itself.

Domestic and monumental spaces are also denoted by means of scale differences. In the *Festspielhaus* there is a curiously simple rhythm of scales (brought about essentially by varying ceiling heights) large: small: large: small which the visitor experiences by walking through the building from the entrance lobby into the performance room itself. Entrance Porch (large), entrance lobby (small); staircase (large), side lobby (small); performance space (large). This

consistent to-ing and fro-ing of scales disorients the visitor as to exactly what scale of space he or she will finally expect.

Tessenow's gendered view of space, as we have already pointed out, was that "[s]treets distinguish themselves from squares as the masculine does from the womanly". Transposing these observations about urban design to the scale of a building, how did he achieve good internal planning which both privileges the 'square' over the 'street', while still following Alfred Lichtwark's strictures arguing against *enfilade* planning? (Lichtwark, let us remind ourselves, was keen that continental Europe adopt 'English' planning principles of corridors connecting differently-functioning rooms, for reasons both of propriety (increased observation of privacy) and of economising on interruptions (by doors) in the peripheral walls of rooms.) In institutional buildings, of which the *Festspielhaus* is a prime example, public circulation is arranged by juxtaposing differently sized rectangular spaces, with a supporting network of ancillary corridors which do not, however, 'figure' because of their service nature. In private houses, the circulation is planned centrally and extremely economically, and the staircase volume ('*Treppenhalle*') is afforded special attention that enables it to be read as a 'square', with all its connotations of femininity.[78]

3. LIGHT ARCHITECTURE

The Artifice of Electric Light

Peter Hall has talked about the importance of the electrical and movie-making sectors in driving the economies of Berlin and Los Angeles in the 1920s and '30s.[79] Theatre reform in Germany in the years around the First World War is frequently cited as an important impetus to avant-garde architectural developments during the same period (and in the following section, 'Seeing and Scanning', the explicit relationship between architectural and theatrical reform will be explored, particularly in respect of their theoretical underpinnings); nonetheless the technical advances made in the field of electric lighting were largely achieved before the outbreak of the First World War. Even after the war historians have been wanting in claiming explicit links between the new

technologies and architectural design. Reyner Banham, writing about the 1920s, says that "in spite of the expanding technology of flood-, spot- and colour-lighting that the film-studios were demanding, and in spite of the increasing skill of designers and producers in using these technologies to create and manipulate virtual spaces and other illusions, there seems – as at the Bauhaus in the same years – to have been little cross-fertilisation."[80]

The inhumanity of the International Style's approach to interior lighting comes in for particular opprobrium from Banham, who, when discussing Richard Neutra's Lovell House library (1927), wrote: "This seems to be the first interior that any apologist has ever claimed for the International Style to be lit in so humane and intelligent a manner, but its contrast with admired contemporary European works (this was the year of Weissenhof with its bare bulbs and grim globes) is almost shocking."[81]

This was Banham writing about the architectural modernism of the 1920s in Western Europe. And yet, had it not been for the caesura effected by the First World War, the new lighting technologies would surely have been developed to a much greater extent in Europe than would otherwise have been the case. In this discussion concerning the 'fit' of technology to design, Tessenow is an important case in point in two respects: first, the humanity of the use of electrical lighting in architectural interiors, and second, the changes wrought in the conception and internal planning of buildings as a result of the development of an 'architecture of light'. Tessenow strove to humanise electric light by tempering its propensity to glare. Not for him the bare light bulbs which Otto Wagner was prepared to expose in his *Postsparkassenamt*, Vienna (1910). In Tessenow's hands artificial light is always muted and mediated by means of shades, while in the previous section 'Deep Plan, Thin Plan' the effect of natural light on these two plan types has been explored.

Werner Oechslin relates how the term *Lichtarchitektur* ('light-architecture') was coined by Joachim Teichmüller in an article for the journal *Licht und Lampe* in 1927.[82] Tessenow in Hellerau (and before him, Otto Wagner in Vienna) had achieved a *Licht-innen-architektur* (interior light architecture) some fifteen years' earlier.[83]

The Light of Utopia

Francesco Dal Co refers to Hermann Bahr's "defense of the primacy of the senses."[84] Light becomes an important motif in the "utopia of transparency emerging in architectural thought until its culmination in the "astral language" of *Glasarchitektur.*"[85] This explicit linkage of light with mysticism will have its culmination in the years immediately following the defeat of Germany in 1918 and the rise of the utopian schemes of expressionist architects. The drawings of Hermann Finsterlin, Hans Scharoun, and Bruno Taut come to mind in this connection. In a sense, the mystical treatment of light in the early years of the Weimar Republic was simply a reprise, albeit on a grander scale, of the way light was promoted by designers such as Behrens with his aforementioned crystal prop as centre piece of the Darmstadt *Fest* of 1900, as well as Bruno Taut and his 1914 Glass Pavilion at the Cologne Werkbund Exhibition.[86]

The point concerning Tessenow and light is that his depiction of light, particularly in his drawings of interiors, is 'realistic' and far removed from the utopian romanticising of his proto-expressionist peers. It is his actual use of light, as evidenced by the interiors of the *Festspielhaus*, which distinguishes him from his 'utopian' peers and from expressionist designers such as Hermann Finsterlin and Hans Scharoun, who would pick up the tradition of the temple building in the years immediately following the end of the First World War. But returning to our decade, the first of the twentieth century, Volker Welter has commented:

> One characteristic of fin-de-siècle Western cultures was their deep concern with religiosity and spirituality, which forms a remarkable contrast to the rationality dominating the economic and scientific progress of late nineteenth-century societies. Nietzsche's programmatic insight of the death of God did not result in the demise of religion. Rather, while traditional beliefs like Catholicism and Protestantism faced a steady crisis of legitimacy, other forms of religion and pseudo-religion, such as theosophy, anthroposophy, Buddhism, spiritualism, monism and Tolstoyan Christianity, continued to find supporters and followers, especially within the Europe-wide phenomenon of the life reform movement.[87]

Welter, in his book on Patrick Geddes, discusses the writings of the English architect W.R.Lethaby, in particular his book *Architecture, Mysticism and Myth.* Citing Lethaby, he writes, "we shall find that the intention of the temple (speaking of the temple idea, as we understand it) was to set up a local reduplication of the

temple not made with hands, the World Temple itself – a sort of model to scale."[88]

Tessenow's design for the *Festspielhaus* represented Hellerau's temple structure; as conceived by Karl Schmidt and by Tessenow it was to function as the Garden City's Idealist centre. This explains the extreme attention its design received from the *Bau-und Kunstkommission* (on which Tessenow's aesthetic 'rival' Richard Riemerschmid sat), and the progressive physical marginalisation of the project to the geographical edge of the Garden City. Its temple-like aspect is highlighted by the title of Gernot Giertz's doctoral dissertation, on Appia's and Jaques-Dalcroze's theatre reforms, *Kultus ohne Götter* (Cult without Gods). Just as the Dionysian impulse to engage in cult-ish activities persists long after the gods have been banished, in the wake of their *Götterdämmerung* (Twilight of the Gods, to appropriate the title of Richard Wagner's 1852 opera),[89] as it were, so too would the necessity continue to have ceremonial buildings in the image of the temple, or house of the gods. Welter comments on the steady trickle of 'temple' projects issuing from the pens of nineteenth-century architects; he refers to Cornelius Gurlitt's *Die deutsche Kunst des 19. Jahrhunderts* (German Art of the Nineteenth Century),[90] which includes a list of prominent 'temple' designs, and updates Gurlitt's list to include ones spanning the half-century from the 1870s until the 1920s.[91] Interestingly there is no entry for the year 1912; he might arguably have inserted Tessenow's *Festspielhaus* here (one year after its completion, and the year in which the famous production of Gluck's *Orpheus* was staged). It stands in a line of development stretching from Richard Wagner's *Festspielhaus*, Bayreuth, to Rudolf Steiner's second *Goetheanum* at Dornach; it is an example of a significant sub-species of the genre, in which the temple building becomes the locus of a modern-day cult of light, with the Hellerau *Festspielhaus* being such a shining example. In this manner the Dionysian urge is united with the Apollonian (Apollo being, *inter alia*, the ancient Greek sun-god).[92]

At one level, these are modern-day 'temples' or glorious follies; Matthias Schirren has traced their antecedents back to Karl Friedrich Schinkel's charming garden structures at Glienecke, between Potsdam and Berlin.[93] The *Große Neugierde*, for instance, he characterises as a centralised, compact building, circular in plan, and raised up on a drum-like base: the formal precedent for

Bruno Taut's *Glashaus* at the Cologne Werkbund Exhibition of 1914. **(Fig. 3.14)** In contrast to Schinkel's folly, however, "Taut's Glass House did not provide any view out over its surroundings. All the senses were, rather, concentrated inwards on its various set-pieces: the kaleidoscope, the sound of the waterfall. The external world only partook of the aesthetic effect through the fall of light; in other words, it was reduced to certain transmitted, indirect effects. The Glass House was clearly not that dark chamber, in which – corresponding to Friedrich Rückert's pedagogic poem quoted at the entrance – Newton had to imprison the beam of light, in order to analyse it. Its internal space is nonetheless hermetic."[94]

Schirren's point concerning Taut's *Glashaus* is that its external (scaley) skin of glass is not primarily there for reasons of transparency, but in order to gather a mystical light within its enclosure. It is essentially a reversion to a medieval use of glass as might be experienced within the body of a cathedral fitted with stained glass windows. He makes the explicit connection between Taut's *Glashaus* and Tessenow's light box by referring to Paul Scheerbart's *Glasarchitektur* text of 1914, in which "Scheerbart's famous "double glass wall" was not only intended to provide better thermal insulation.[95] Between both glass walls Scheerbart envisaged lamps, which would cause the wall itself to glow with light." By this means of illumination the entire glass house would become a lantern, which would glow like fire-flies and glow-worms in still summer and winter nights", as he has it in his book *Glasarchitektur*. The description of the desired effects achieved through electric light will become an important theme in this little volume dedicated to Bruno Taut."[96] The important point to be made is that glass has implications for architecture beyond the simplistic, see-through nature of its materiality. When coloured or translucent glass is employed as a skin to an enclosure, it has the effect of limiting the relationship with the external environment, and focussing the space back onto itself. As Schirren put it, "Taut's Glass House could be characterised as an inverted viewing temple".[97]

To put it simply, glass as a material is not required in order for the spatial qualities of glass architecture to manifest themselves; similarly, as Colin Rowe and Robert Slutzky have shown, 'transparency' is not actually necessary in order to perceive spatial transparency.[98] This quizzical and apparently paradoxical statement becomes comprehensible if we refer to a 'phenomenological' glass architecture, an architecture suffused with an interior luminosity achieved by

deploying materials other than glass in order to achieve the kind of 'spatial luminosity' one normally associates with that material. Just as Rowe and Slutzky could refer to two kinds of transparency, one literal, the other phenomenological, so we, too, may talk about both a 'literal', and a 'phenomenal', glass architecture.

Rather than taking the expressive route travelled by, say, Bruno Taut with his 1914 Glass House, Tessenow plays with the conventional deep plan courtyard or atrium type and proposes a kind of inverted glasshouse. This is certainly the case with the Dalcroze Institute, but also with his major Berlin projects of the 1920s, the *Schwimmbad-Mitte*, **(Fig. 3.15)** and the reforming of the interior of Schinkel's *Neue Wache* guard house. **(Fig. 3.16)** In all of these cases, the natural light qualities of the central courtyard is represented by the *Festspielhaus* 'lightbox', in the case of Hellerau, the gridded, glazed box of the Pool building, and the oculus of the *Neue Wache*. In the cases of the Dance School and swimming pool, intermediate plan areas, in other words, those areas without windows or benefitting from the central 'atrium', receive natural light by means of roof-lights. A further subtlety of Tessenow's is his filtering of overhead light by means of secondary lay-lights placed below sky-lights. This represents a further approximation to the qualities of a milky, overcast sky.

Tessenow's designs, in terms of their internal planning, show an intelligence in the use of light which reinforces the conventional planning of his buildings. House designs tend to be thin plan *partis*, tending to the kind of internal organisation characterising a terraced house, even in the case of free-standing, single-family houses. They have a plan organisation tending to the centrifugal, with centrally located staircases and fireplaces, freeing up external walls for window openings. (The following section, 'Tessenow and Fabric', deals with some of the environmental design implications of such an approach.) These buildings reach out into their sites, continuing the compartmentation of space by means of the specifically architectonic device of the *Laube* (pergola); the following chapter, 'The Grid and the Everyday', explores this theme in greater detail. Institutional buildings, places of assembly and so on, such as the Dalcroze Institute, Hellerau and the *Schwimmbad-Mitte*, Berlin, adopt deep plans. Here, the main space in both cases, embedded deep within their respective plan forms, deploys light in such a way as to reinforce the abstract nature of the spatial idea. 'Interstitial' interior spaces, in the case of the Dalcroze Institute the lobbies and

rehearsal rooms, in the case of the swimming pool the changing rooms, receive light (but no view) by means of a system of lay-lights and roof-lights.[99]

Seeing and Scanning: Abstraction Empathised

A more literal reading of 'light architecture' comes with the advent of cinemas in the first decade of the twentieth century. There is not space here to chart the development of this characteristic building type of the twentieth century; suffice it to say that it had its genesis deriving from a variety of types, ranging from theatre, music hall, fairground attraction, and diorama. In fact up until about 1910 one can barely talk of the cinema as a building type at all: films were shown in a variety of makeshift spaces. Immediately prior to the First World War, however, the cinema as a distinct building type had begun to emerge.[100] Modelled on the proscenium arch theatre, it clearly had no need of a deep stage. In this sense the flat relief stage which we have already encountered at the Munich Arts Theatre and at the *Festspielhaus* Hellerau prefigured the architectural space of the cinema auditorium.

The shallow stage space of Tessenow's *Festspielhaus* and Max Littmann's Munich *Künstlertheater* are examples of the flatness that characterise Jugendstil and Art Nouveau aesthetics. It is also an instance of abstraction at work on the conception of interior space. This abstraction, at the end of the first decade of the twentieth century in Germany, can only properly be understood in contrast to its polar opposite, empathy. The protagonists of the theoretical debate were Adolf von Hildebrand (whom we have already met in Chapter Two's discussion of *Geist und Materie*) representing empathy, and Wilhelm Worringer, championing abstraction. Juliet Koss has written that

> [f]or Worringer, the theories promulgated by Hildebrand and Fuchs were as shallow as the relief stage; like the mind, the eye required depth....Fuchs relied on Hildebrand precisely when Worringer had begun to advocate abstraction and when Munich artists were exploring this newly theorized artistic urge. Rather than presenting the relief stage as a site of visual abstraction, Fuchs turned to an outmoded discussion of Greek sculptural relief and the aesthetic theory that supported it.[101]

Flatness *per se* (i.e. in its material manifestation) will be discussed in the following section 'Tessenow and Fabric'. What we shall pursue now is the idea of 'spatial flatness' in Tessenow's buildings, grounding it within the theoretical discourse of the early 1900s in Germany. Light, and most particularly the way in which it models space through the play of shadows, begins to stand for the quality of abstraction which theorists and architects were then groping their way towards. (Of course, this may be regarded as a reprise of the mysticism of light which played such a central role in European medieval ecclesiastical architecture.) In Tessenow's case, the spiritualised luminous interior, especially in the bodiless, weightless and ethereal *Festspielhaus* auditorium, may be related to Worringer's *Abstraction and Empathy* (*Abstraktion und Einfühlung*) text of 1908.[102]

Juliet Koss's detailed study of the design of the Munich *Künstlertheater* shows clearly how its architect, Max Littmann, was encouraged by his client, Georg Fuchs, to make manifest the ideas of empathy as propounded by the sculptor Adolf von Hildebrand. These ideas were couched in terms of the developing understanding of the physiology of vision. According to Koss, Hildebrand "distinguished two modes of perception: the distant view, or *Fernsicht*, comprised a two-dimensional, static image of an entire visual field. From a distance, that is, the viewer could see a work whole, both literally and symbolically. By contrast, the near view, or *Nahsicht*, offered a three-dimensional view of an object, insofar as its three dimensions could be perceived up close as a juxtaposition of surfaces at various levels."[103]

With near vision, the eye scans (*schauen*), as opposed to far vision, where the eye sees (*sehen*). Far vision tends to offer a flattened, two-dimensional impression, whereas near vision gives a rounded, three-dimensional effect. A good example by way of explanation of this phenomenon is a sphere: when we see a ball at close range, our binocular vision renders it round; the moon, on the other hand, always appears to us as a flattened disc. Koss goes on to relate Hildebrand's dualist version of vision to Nietzsche's Apollonian and Dionysian pairing: "Crucially, he associated distant vision with the notion of flatness: a remote view appeared flat, whereas an object's three dimensions could not be ignored when viewed from up close. The conceptual opposition between a distant, static image and a closely viewed succession of images suggests

Nietzsche's own contrast between a static Apollonian image, cool and distant, and a frenzied Dionysian mobility."[104]

For Hildebrand, then, aesthetic vision is associated with the "cool, distant Apollonian image", since it is this vision of *seeing* where the intellect has to intercede in order to complete the view. (Without the intellect, the distant silver disc remains just that, a flat two-dimensional image; our knowledge of astronomy transforms it into the volumetric globe of the moon.) In Hildebrand's aesthetic, the highest form of sculpture is that which most approximates to the flat image: the low relief.

Let us remember that kinaesthetic vision describes the rapid lateral movement of the eye as it scans an image. Koss seeks to associate the physiology of kinaesthesia with the new-found experience of the kinematograph at the turn of the century: "To a contemporary reader, the notion of the near view also hints at the development of the theory and practice of montage, through which a "temporal sequence of images" inspires an active, transformative kind of vision."[105] Paradoxically, this coupling of the kinaesthetic with the incipient cinematographic way of seeing could be seen in another way. The cinema, through its episodic and montage method of composition and through its viewers' kinaesthetic observation, allies itself far more to the theory of empathy than to any mooted abstraction. Modernism, with its emblematic theory of abstraction, is curiously dissociated from the 'modern' aesthetic of the masses *par excellence*, the cinema. The narrative art of the cinema, implicit in its essentially sequential nature of one frame following another, is allied to the figuration that comes with the close-up focus afforded to the expressive faces of film-actors. Equally, the compositions of the early cinema, based inevitably on human narratives, are anything but grand abstractions. (We are starting to veer far away from our subject, and yet this excursus offers an interesting insight into the empathy/ abstraction dualism: like the over-arching spirit/ matter dualism, we are dealing with terms not of mutual exclusivity, but rather with ones which frame a discourse in terms of their polarities.) In the case of the dualism offered by empathy and abstraction, Worringer proceeds to offer a rational critique of Hildebrand's position. In privileging far vision over the near, the urge to visual flatness should triumph over three-dimensional corporeality, and hence abstraction (the power of the mind) over empathy (the body 'feeling-into' the artwork).

When faced with the commission for the Dalcroze Institute, together with its auditorium space, Tessenow the pragmatist looked to his own experience in Dülfer's office, but also to contemporaneous practice in Germany, notably the prodigious output of Max Littmann, renowned for his string of theatre designs. Tessenow the idealist, however, was alive to the abstract impulse put into print by Worringer two years earlier, and responded with a balance of judgment remarkable for its boldness. Tessenow, while taking on many of Fuchs's and Littmann's innovations for Munich, jettisoned the empathy baggage when it came to the interior space and conceived of it much more abstractly. Interestingly, the sequence of foyer spaces and stair-halls (*Treppenhallen*, to use Tessenow's idiosyncratic terminology) while abstract in a decorative and planar sense, evokes great corporeal swellings and attenuations in the ebb and flow of its spaces.[106]

(ii) TESSENOW AND FABRIC

This section deals with Tessenow the 'materialist'. 'Tessenow the Fabricator' examines his fascination with aspects of construction, and his willingness to engage in patenting novel construction techniques: the *Patentwand*, with all its shortcomings, is illustrated. In 'Flat Fabric' we continue the discussion of flatness which was broached in the previous section as a development in aesthetics. Here, its practical execution is examined, as well as its conceptual relationship with two key late nineteenth-century terms, *Sachlichkeit* and Realism. Tessenow's relationship to the nineteenth-century architect to whom the epithet 'materialist' is most commonly applied, Gottfried Semper, is explored next. In 'Warm Fabric' it is suggested that Semper's 'hearth' element finds a ready expression in Tessenow's discreet championing of environmental comfort in his Hellerau schemes, whereas 'Clean Fabric' conflates his desire for hygiene with the aesthetic of 'whiteness': this brings us back full circle to the spiritual values of 'white' expressed earlier in the chapter.

1. TESSENOW THE FABRICATOR

Tessenow's practical bent may be traced back to his craft training in Mecklenburg prior to his taking up architectural studies. His early writings deal with practical matters: carpentry, joinery details, and so on. In a similar manner to the young Le Corbusier-to-be during the years of the First World War, Tessenow was engaged in piloting and furthering innovative constructional practices and methods. His '*Patentwand*' (patented wall) would be the most famous example of such endeavours. It is as if progressive, 'advanced' architects sought to ally themselves with practical construction rather than renew the tired 'battle of the styles' debate. Construction *per se* begins to figure as a 'neutral' focus of aesthetic energy. The interest of architects such as Le Corbusier and Tessenow in patenting their innovative constructive methods is an indication of the new legal connotations of 'architect' and his deep engagement in the economy.

Tessenow's craft training and his practice in Trier which was solely concerned with the design of small-scale housing propelled him to become an 'expert' on domestic timber construction. His book *Zimmermannsarbeiten*

('Carpenter's Works') was published in 1907 and brings together his own designs, and those of fellow-architects, for staircases, windows, pergolas, indeed the whole range of details associated with timber as building material. **(Fig. 3.17)** The book is prefaced by his essay '*Plauderei über Holz als Baumaterial*' ('Some Words on Wood as a Building Material') which is reproduced in Appendix A. During his final year in Trier, in 1908-1909, Tessenow had been developing a loadbearing timber construction with brickwork infill. He would finally manage to receive a patent for this form of construction in 1911, with retrospective effect from 1 August 1909.[107]

Tessenow's *Patentwand* is an ingenious hybrid construction, uniting the benefits of dry timber assembly, with its speed of erection, with the thermal mass and insulating properties of brick cavity work. Additionally, the brickwork serves to brace the timber framework against racking. It comprises a timber studwork frame that bears on a brick foundation some three courses (225 millimetres) above external ground level. The sole plate sits on a damp-proof course separating it from the top course of bricks. Timber boards 25 millimetres thick and 200 millimetres wide extend the full story height of the wall from sole plate to head. The bricks are stack-bonded, fitting neatly into the spacings between vertical boards. The bricks are positioned by means of triangular-section vertical beads. These maintain a consistent width of cavity, and promote the structural integrity of the wall construction. The cavity is ventilated at low-level by means of holes left in the skirting board zone, and at high level directly to the roof space. The brickwork provides a good key for rendering the wall externally, and plastering internally.[108] **(Fig. 3.18)**

Konrad Wachsmann, the great Weimar proponent of timber-framed construction, studied under Tessenow after the First World War. Wachsmann refers to three main types of timber construction methods: (i) the on-site wood frame method; (ii) the panel method; and (iii) the log house method. Of these three methods, the on-site is the one which best approximates to Tessenow's *Patentwand* (patented wall).[109] One variation, the 'Frank' method, shows the possibility of infilling between vertical studs with concrete.[110] What is clear from the illustrations of Wachsmann's book is the diversity of claddings that may be applied to timber-frame houses. (Only the log house, being a massive method of construction, suggests its own ineluctable exterior finish.) There are wood-sided

houses by Poelzig and Wachsmann, whose famous design for Albert Einstein at Caputh near Potsdam is illustrated, **(Fig. 3.19)** and externally rendered schemes by Schmitthenner. An illustration of this house under construction shows the 'light-weight stone' infill resembling the brick infill of Tessenow's *Patentwand.* **(Fig. 3.20)**

The timber-framed methods not only allow a variety of claddings and hence of external surface; they also give rise to variations in massing and style, ranging from the traditional houses of Schmitthenner (with their shades of Mebes's book *Um 1800*) to the cubistic volumes of Wachsmann. His Children's Convalescent Home in Spremberg **(Fig. 3.21)** has echoes of Tessenow's giant order of the Klotzsche School; in adddition, the trabeated structure of a *Laube* (gazebo) continues the main entry axis out into the landscape. The benefit of employing framed construction is evident from the vertical juxtaposing of an unrelieved first floor wall over a continuously fenestrated ground floor.[111]

As early as 1907 Tessenow, in his book *Zimmermannsarbeiten: Entwürfe für Holzbauten*, argued for a '*sachlich*' approach to the use of materials in buildings, and sought to disengage performance from appearance:

> In order to construct our buildings, as is the case with the solution of all practical tasks, it is the fitness of means which is of utmost importance, and not their appearance. The pleasant appearance of a truth is of value insofar as it enables us quickly to perceive the truth. We should, however, be on our guard against the sympathetic appearance, which wood as a building material so often has for us, because our taste is so very fickle and we in the building trade may well come to regret the expense involved in expressing our taste.[112]

Tessenow used a mixture of his own projects and those of other architects to illustrate the book. His designs invariably have a stripped down aesthetic when compared with those of his colleagues.

Tessenow's understanding of frame, where the 'fill' is intrinsic to the frame both structurally (as a means of stiffening) and environmentally (by providing thermal mass) is more complex than any simplistic designation of it as 'merely' tectonic. His *Patentwand* seeks to address a number of problems, and not merely structural ones. It is perhaps because of this double (at least) functioning of the external wall that Tessenow sees the expressive need to assert the grid in

non-structural ways. These include the use of gridded pergola structures and regular arrays of light fittings.

In Tessenow's work, external walls and roofs are in perfect balance. They do not vie for supremacy of expression, and so are consequently in a state of repose with each other. It is perhaps this equilibrium which marks Tessenow out as a proto-modernist from the vantage point of architectural history; unlike Wright, whose roofs dominated, or Le Corbusier, whose flat roofs were suppressed behind parapet walls contiguous with external walls, Tessenow adopts the traditional poise between the two elements. Reyner Banham puts a transatlantic gloss on the wall versus roof debate in modernist aesthetics when he writes that roofs had overwhelmed the walls, "normally the most conspicuous and elaborate parts of the package, the surfaces on which architectural pretensions had been most assertively inscribed. In European modern house-architecture, especially after Adolf Loos, the walls become the master elements and roofs were banished from view, but in the US, even those who have much to say about walls, like Frank Lloyd Wright, are proud to have broken out of them."[113]

The centralisation of a compact plan, and the concommitant redundancy of the peripheral wall, has been commented on by Banham in respect of Catherine Beecher's book, *The American Woman's Home* (1869). This 'independence of the outer shell' Banham recognised as

> probably latent in the domestic technology of all wood-building cultures. Those of northern Europe, including Norway and much of Russia, usually possess a primitive vernacular plan-type in which an open hearth or massive stove is located in the centre of the house. In Norwegian usage, even when the smoke-stove was provided with a chimney and moved, for convenience, to the perimeter of the house-plan, it still stood within the skin of the wooden wall, with a clear space between the masonry of the hearth and the woodwork. Later still, architecturally sophisticated buildings in wood in Norway, such as the Stiftsgärden palace in Trondheim, move the fireplaces back to the centre of the thickness of the building, where they are backed up in pairs on the internal partition walls and the chimneys emerge through the ridge of the roof (as does that of Catherine Beecher's proposal).[114]

To reiterate, Tessenow's buildings occupy a happy medium in which both the walls and the roof co-exist in balance. Roofs sit trimly on external walls, without any attempt at producing overhanging eaves. The two houses designed by

Tessenow in Hellerau in 1910, at Heideweg 4 and 6, **(Fig. 3.22)** are those which most immediately conjure up the ideal of the *Biedermeier* dream as expressed by Mebes in his book *Um 1800*. The ideal is surely Goethe's summerhouse at Weimar. **(Fig. 3.23)** Here, the meeting of roof and wall is given a graceful inflection by means of splaying out at a reduced pitch the first three rows of tiles, so that the roof appears to be sinking under its own weight onto the supporting external walls, an example of structural empathy of a kind of which Schopenhauer would have approved. True to the North American example of some forty years earlier, fireplaces are placed centrally with their backs to the staircase-hall. **(Fig. 3.24)** They are, incidentally, located just to one side of the longitudinal axis, permitting their chimneys to occur forward of the ridge-line. Just as the primary heat sources are quite independent of the external shell, so the main producers of water vapour are equally divorced from the periphery. The bath-tub backs on to the staircase, and the laundry becomes a free-standing wash-house, paired up with its neighbour in the miniature version of the main house and standing between the two.[115]

This is not to argue for any great breakthrough in domestic design in terms of either planning or environmental design; instead there is a cool and considered response, aesthetically and environmentally, to the facts of domestic economy as they were known at the time.[116] Here, Tessenow's endeavours and enlightened outcomes may be viewed in the same light as, say, those of the young Ludwig Mies in his design for the Riehl House, Neubabelsberg (1907).[117] **(Fig. 3.25)** There is the same homage to Biedermeier expression, and the same attention to domestic economy, which distinguishes the production of both Mies and Tessenow from that of the older Behrens.[118]

Tessenow's planning principles in these modest Hellerau houses do indeed indicate the practical expression of a new dualism in architecture, that is between core and periphery, where the core is the locus of mechanical and environmental design equipment, as well as of 'servant' circulation space, and the periphery is the primary liveable 'served' area. The constructional strategy aids the expression of this dualism: periphery is tectonic frame (the *Patentwand*); core is masonry. The conservativism of Tessenow prevents him from taking the next logical step (logical, that is, with the hindsight of the twentieth-century Modern Movement in architecture). This would be to express the tectonic periphery as

frame.[119] Tessenow retains the stereometric external volumes of his buildings for reasons not only of propriety of aesthetic expression, but also for environmental design reasons, thermal mass being desirable for external walls.

2. FLAT FABRIC

Commodity

Frederic Schwartz, in his book *The Werkbund: Design Theory and Mass Culture before the First World War,* talks about "the commodity character of surface form and [shows] how decoration was divorced from the rest of the construction precisely because ornament was so closely linked to the commodity's exchange value".[120] Schwartz follows the classic reductionist reading of Semper in concentrating on the duality of two out of his four elements, namely the tectonic frame and the infilled or hung enclosure. He goes on to substantiate this reading by citing Karl Scheffler, for whom the facade exists only "for the display of the commodity."[121] The superfluous nature of applied decoration is underlined by the characterisation of construction as comprising a noble core, associated with the provision of a building's structure, and the appliqué of an ornamental skin: "Apartment building facades are differentiated only when the decorators and stucco workers arrive with their cornices, their stucco decoration in the taste of some period-style or other, when roofs and towers are arbitrarily attached and the familiar orgy of proletarianized ornament begins."[122] An inverse snobbery underlies Scheffler's prose: he snears at the Berlin *petit- bourgeois*, whose aspirant presumptions to escape the confines of the *Mittelstand* and rise to the level of the bourgoisie by purloining its trappings are exposed as those of the social-climbing *parvenu.* For Scheffler, ornament is associated with the proletariat; the juxtaposition is complimentary neither to ornamentation nor to the working class. This is illustrated by a photograph of circa 1910 showing apartment blocks under construction in Berlin, before the application of surface ornament.[123]

Schwartz goes on to associate the *Werkbund* not simply with matters pertaining to production, but also with those of interest to the consumer: "The

Werkbund did not see its site of intervention only as the seemingly voracious realm of mass production; their work had also to take into account the presence of mass consumption. In their analyses of the behavior of visual form in its fallen state, they were just as concerned with the use of form by the consumer as with its manipulation by the manufacturer."[124]

The pairing consumer/producer complicates the Marxist valorising of production and leads to a far more complex interrelationship of the two terms. In aesthetic and cultural terms, 'style' is juxtaposed with 'fashion'. Georg Simmel clearly regarded fashion in class terms, as opposed to the more neutral connotations of style, when he wrote of "the need, on the one hand, of belonging, and that of distinction on the other hand...so that ultimately... [f]ashions are always class fashions."[125] The *Werkbund* highmindedly saw style as the class-neutral flip side of the fashion coin. (Its paradoxic effect was the relatively high cost of producing 'style' artefacts in contrast to the cheapness of 'fashion' ones. This would render 'neutrally styled' consumer durables desirable (and affordable) objects for the bourgeoisie, and this effect is still with us today: minimalist and hi-tech designs are out of reach of most clients' budgets.)

In Tessenow's buildings, extended planar expanses of walls invariably emphasise block, cuboid form. Openings in the wall surface, be they windows or doors, are always discrete, and relatively small in proportion to the overall superficial area. Indeed, Tessenow devotes a whole section of his book *Hausbau und dergleichen* (1928) to a study of appropriate means of making openings in walls. The opening is always subservient to the wall plane itself, and the three-dimensional cubistic nature of the overall building volume is always emphasised by the continuity of surface around corners. In this way Tessenow's architecture differs from the Jugendstil aesthetic of, say, Josef Hoffmann. In Hoffmann's Stoclet House, Brussels (1904-1911), each surface of white marble cladding reads distinctly as a facet of the prismatic volume of which the building is composed. **(Fig. 3.26)** This is achieved by means of a gilded metal 'braiding', which serves to frame each plane, distinguishing each one from its immediate neighbour. Such an overtly aestheticising role of the surface tending to dematerialise the sense of volume is anathema to Tessenow for whom 'style' is an intrinsic product of three-dimensional massing.

How do Tessenow's designs relate to the foregoing discussion of commodity in the context of pre-First World War aesthetics? In contrast to Josef Hoffmann and Otto Wagner, whose overt display of surface claddings (and in the case of Wagner, of tectonic expression too), Tessenow seeks to render his buildings as *un*articulated volumes, privileging the eidetic image over tectonic and superficial expression. In this sense his buildings resist the commodification that is the ineluctable consequence of an aesthetic decision to promote cladding. The reason is simple: when one sees a building which has an obvious clad surface, one realises that the decision to use this cladding as opposed to that one is a relatively subjective one, so that to a great extent the external 'wrapping' of the building (its *Stilhülse*, to use Werner Oechslin's term) may be changed at will, leaving the essence of the building, its *Kern*, untouched. Tessenow's aesthetic, like that of his contemporary Behrens, never allows this dichotomy: his buildings have an apparent solidity reinforcing an Idealist reading of the architectural object.

Sachlichkeit

Style would also 'neutralise' gendered fashion: one is reminded of Adolf Loos's valorising the neutral uniform of the English gent in contrast to the individualistic fashions of his female consort.[126] To be more accurate, style would tend to de-feminise women's fashion by bringing it within the ambit of the mask-like 'neutrality' of the man's costume.[127] Schwartz also draws attention to Karl Scheffler's praise of the masculine in a similar vein.[128] The term used in *Werkbund* circles to characterise the positive and timeless attributes of style as opposed to the transitory and ephemeral ones of fashion was *sachlich*. The key feature of *Sachlichkeit* is reticence: understatement and suppression of individuality.[129]

Style and fashion form a useful dialectical pairing, with style being equated with the 'neutrality' of *Sachlichkeit*. The development of *Sachlichkeit* has, actually, a far more materialist background. This emerged out of the antagonism of Realism and Idealism. Realism, as the word's etymology suggests, is firmly rooted in the world of things, of materiality. In this sense, Realism and Idealism are related in the same way that *Materie* and *Geist* are bracketed together. Harry

Mallgrave, in his essay 'From Realism to Sachlichkeit: The Polemics of Architectural Modernity in the 1890s'[130] claims that Otto Wagner believed that "realism (the principle of utility) was [indeed] compatible with idealism (the principle of art)."[131] In other words, this is a claim of Wagner's which marks him out as more of an architect at the end of the nineteenth-century tradition, rather than as one of the "pioneers of the modern movement."[132] Tessenow is likewise an architect to be seen more in this light.

Idealism and Realism

Style and fashion had become, by the early 1900s, the pair of terms into which the dialectic of spirit and matter had been transmuted in the circles that were to coalesce into the *Deutsche Werkbund*. For Schwartz, "Style/Fashion [like Culture/Civilisation and *Gemeinschaft/Gesellschaft*] was a discursive pair in which each element implied the other and defined it by opposition. The pair represents, in fact, these more widespread dichotomies transposed to the critical vocabulary of art."[133] Style, then, was viewed as the positive term, the artistic corollary of culture and community. Its antithesis, fashion, was inextricably linked to (base) materialism and the apparent requirement of a capitalist economy to be constantly engineering new 'needs' to be satisfied by fashionable products in the marketplace. This led to one commentator pronouncing that "Fashion is the transient, Style the lasting."[134] The precursors of the pairing Fashion/Style, certainly in architectural circles, were Realism and Idealism.

Harry Mallgrave, in his edited collection of essays *Otto Wagner: Reflections on the Raiment of Modernity*, has drawn attention to the chief German-language exponents of 'Realism' in the decades immediately prior to the founding of the *Werkbund*, and to Tessenow's early years of architectural practice. Georg Heuser, for instance, writing in 1886, sought to define an architectural vocabulary based on metal frameworks and standard industrially-produced sections; in an illustration accompanying an article in the journal *Deutsche Bauzeitung* of 1888 he contrasts prevailing, traditional material forms of columns and beams with their new equivalents, all formed from extrusions of flat rolled sections.[135] *'Realistik'* (as it was termed by Heuser) was particularly fostered by the *Deutsche Bauzeitung*, through the endeavours of its editor Albert Hofmann. It

would be wrong to view this as a purely technological aim: Hofmann linked realism in architectural design to realism in cultural criticism generally. He was referring in particular to the French literary idea of *réalisme* as propounded by Emile Zola, Gustave Courbet and their supporters.[136]

Tessenow the Semperian

Tessenow's move to Dresden in 1909, in the wake of the commissions for the *Gartenstadt* Hellerau, would have put him in direct contact with the 'Semperians', most topically, with the work of Constantin Lipsius. There he would have seen Lipsius's two great achievements, both of which were nearing completion in 1883, that *annus mirabilis* of German architectural theory: the Dresden *Kunstakademie- und Ausstellungsgebäude* (Art Academy and Exhibition Buildings). **(Fig. 3.27)** Lipsius's work, already looking slightly anachronistic at the time of completion, represents an elegant restatement of Semper's 'history' of architecture. This is clear from the heavy stereotomy of the base, the cladding treatment of the wall, with its development from columnar to arcuated expression, and finally the extraordinary tectonic gesture of the "lemon press" dome.[137] This ferrovitreous dome, a "bizarre, pleated paraboloid,"[138] represents the culmination of a vertical development from Semperian base stereotomy to airy tectonics. This, as Berry makes clear, is one of the sources of Otto Wagner's appropriations of Semper's theory. Tessenow's understanding of Semper's *Vier Elemente der Baukunst* (Four Elements of Architecture) results in a very different architectural synthesis, one in which stereotomy and tectonics are melded both literally (as with the *Patentwand*) and aesthetically (as in the appliqué trabeation on the facade of the Klotzsche school).

Where Lipsius made an over-literal transposition of the Semperian elements of stereotomic base, claddings, and tectonic frame, Otto Wagner in Vienna effected a rather more skillful (and certainly more original) melding of the elements (while maintaining roughly the vertical classifications of base, wall and roof). These are expressed, if we take the example of the Danube Canal Master's House (*Schützenhaus*), by the granite base, the alabaster wall panels, and the projecting observation bay in the roof with its expressed steel frame and corrugated metal roofing. Tessenow instead offers us, at the Dalcroze Institute, a

far more homogeneous mix, with form kept in check by fabric, as it were. It is perhaps this refusal on Tessenow's part to thematise one aspect of architectural production, to favour, say, the realism of materiality over the idealism of form, which has contributed to his relative neglect as an historical figure.

The other appropriation from Semper, and indeed a development of the Semperian notion of the architectural 'element', will be found in Tessenow's practical working-out of the hearth theme. This will be the 'focus' of the following section.[139]

3. WARM FABRIC

Only disused architecture is cold; ruins are skeletal, and no longer exude the lived-in warmth of functioning buildings. According to Lisa Heschong, "[w]hen the fire dies, its remains become cold just as the body becomes cold when a person dies. Drawing a parallel to the concept of the soul that animates the physical body of the person, the fire, then, is the animating spirit for the body of the house."[140] In English, the house is the cold, skeletal structure, the home is the warm locus for the family.[141] Referring to life in a French village, the anthropologist Lawrence Wylie remarked, "It is inevitable that the English word "home" cannot be translated directly into French. The nearest equivalent in French is the word *foyer*, the hearth."[142] For Walter Benjamin, the tactile and the visual comprise the two sides of architecture's coin. Tactility is experienced, whereas visibility is mediated.[143] According to Beatriz Colomina, "[Experience] (Erfahrung) is etymologically linked with danger (Gefahr)."[144] All this serves to introduce an aspect of Tessenow's work which is far removed from merely superficial stylistic considerations. His architecture stands in contrast to, say, Auguste Perret's formulation where architecture was that which made "les belles ruines". (Tessenow's buildings, with their extensive deployment of the *Patentwand*, clearly need to be maintained; as ruins they make a sorry sight.) Tessenow's architecture constitutes a dynamic environment, one in which heat, light and sound are integral (and designed) components of the whole, and not mere afterthoughts.

Returning to Semper's discourse of the *Four Elements of Architecture*, there are really only two possible elements which present danger: the tectonic frame, and the hearth; the frame, once it has been designed with the appropriate safety margins and erected, possesses a danger which is, at most, only potential. The hearth with its fire, which can flare up at any time, provides the element of danger through which we can truly experience the building.

Luis Fernández-Galiano, in his book *Fire and Memory: On Architecture and Energy*, retells the tale first recounted by Reyner Banham. "[It concerns] a primitive tribe that has just come across a clearing in the wood where it plans to spend the night – an archetypal tribe that, as the author reminds us, has so many antecedents in architectural criticism, from Laugier to Le Corbusier. There are fallen branches and some wood in the clearing. The tribe has a dilemma: whether to use the wood to build a small shelter or as firewood for a bonfire. An entire theory of architecture is encapsulated in this simple question."[145]

Fernández-Galiano takes the latter route, that is, of using wood as fuel as opposed to bulding material, and in so doing unwittingly enlarges on the Semperian 'element' of the hearth. He writes: "[In answer to] our tribe's dilemma, both strategies are feasible. Both present themselves in most cultures and both deserve to be called architecture. Indeed, the thermal space of the bonfire is no less architectural than the visual space of the hut. Only an obstinate fetishism for icons or an object-oriented, hieratic conception of architecture can deny the bonfire the status of *ab ovo* architecture so easily assigned to the hut. What is a house but a hearth?"[146]

What indeed? And so, at a stroke, the thermal is reinstated as a crucial element of architecture, and is presented as one part of the dualistic pairing *visual/ thermal*. The thesis is developed as a dialectic, in which "hut and fire, construction and combustion, are inextricably linked in the history of habitation, a unique combination of constructed order and combustible disorder. Energy brings architecture into the world of processes and life. But it also bestows architecture with consumption, fugacity, and irreversible time. Architecture brings together fire and hut, chaos and organization."[147]

Tessenow's engagement with the practicalities of environmental design has already been noted largely in respect of artificial lighting in the previous section; heating and ventilation were practical concerns equally deserving his attention.

The architectural profession in Germany received important information about such technical matters through its technical journals. The publication in 1893 of H. Rietschel's *Leitfaden zum Berechnen und Entwerfen von Lüftungs- und Heizungs- Anlagen* (Berlin: Springer, 1893, reprinted 1909), in the same year, that is, as the great works on architectural space discussed in Chapter Two, gave a solid rationale aiding the designer of heating and ventilation systems.[148] Tessenow's skill in the deployment of the techniques at his disposal, and his invention in devising novel constructional and environmental control methods are always means to an ideal end: he does not thematise them as desiderata in their own right. Nonetheless it is clear that the production of buildings, i.e. their construction methods, and the equipment allowing his idealist spaces to be used and enjoyed, i.e. their heating, lighting and ventilation systems, are key concerns of his which, as we have seen, had an impact on his internal planning. These practical concerns were, however, subsumed within his overall idealist architecture: overtly 'practical' tracts such as *Zimmermannsarbeiten* (1907) were not to be repeated in later years.

In the discussion of Semper's *Vier Elemente der Baukunst* in the preceeding chapter, it was suggested that the hearth, in contrast to the other elements of earthwork, framework, and enclosure, could not be simply ascribed to one or other of Carl Bötticher's dualistic pairings *Kernform/Kunstform*. To reiterate, "The hearth doesn't 'fit'," and in order to make sense of it, we need to reconsider it in terms of both *Werkform* and *Kunstform*, as both technical form and symbolic form. This is precisely the pairing implicit in Tessenow's foregrounding of the hearth in his projects. It assumes an important reassessment of the centrality of the hearth, and, by extension, the vitality of environmental design *tout court*, in the reading of Semper. With this dissertation I hope to redress the imbalance between 'form and content' of an architectural project which is the critical legacy of Semper's writings. In doing so I do not mean to suggest that Semper himself gave equal weighting to all four of his architectural motives; indeed the contemporary Semper scholar Harry Mallgrave regards *The Four Elements of Architecture* as a staging post towards his development of theories of stylistic development as evidenced by his grand opus *Der Stil*.[149]

According to Heidrun Laudel, "[t]he hearth now became the germ, superior to the other elements."[150] It is, according to Laudel's reading of Semper, the Ur-

architectural prime mover, and lies at the heart of social intercourse, and hence of architectural design. "[Fire was] not to be understood as the original element, but as a social moment."[151] It was the function of the other three elements to sustain the hearth: "The other elements – roof, earth mound, and cladding – were [for Semper] as it were [...] protective negations." They served to protect "the fire in the hearth from the three hostile natural elements": from the weather, from floods, and from attacks by animals and enemy warriors."[152]

For Gaston Bachelard, fire is a unique symbol: "[Sexualised] fire is preeminently the connecting link for all symbols. It unites matter and spirit, vice and virtue. It idealizes materialistic knowledge; it materializes idealistic knowledge."[153] The sexual connotations of fire were established by Bachelard in an earlier passage from *The Psychoanalysis of Fire* which relates the making of fire to the sexual act: " [...] it is quite easy to establish that the eurhythmy of an active rubbing motion, on condition that it be sufficiently gentle and prolonged, brings about a euphoria. One has only to wait until the violent acceleration has settled down, until the different rhythms are coordinated, to see the smile and the look of peace return to the face of the worker."[154] This passage, intriguingly, links the eurhythmy of dance to the generation of heat, and by extension to the locus of heat generation, the hearth.

The sacral nature of fire renders the hearth the first among equals of Semper's four elements of architecture. In terms of the evolving development of the centrality of space in nineteenth-century architectural discourse, it is the one element with the greatest spatial connotation in terms of locating spaces within a hierarchical matrix. Whereas the cladding encloses any space, and is dependent on the tectonic frame for its support, as well as being dependent on the stereotomic base to provide a level and prepared ground, it is only the hearth which proposes a specific location for the life-giving fire. This location is invariably an interior; Bachelard continues with his body metaphors moving swiftly from the sexual to the metabolic: "to say that a substance has an interior, a center, is hardly any less metaphorical than to say that it has a belly. To speak of a quality and a tendency amounts then to speaking of an appetite. To add, as does the alchemist, that this interior is a hearth, in which the indestructible fire-principle is smoldering, merely establishes metaphorical convergences centered on the certainties of digestion."[155]

In an earlier section of this chapter, 'The Light of Utopia', we considered both the 'thin-plan' house type, and 'deep-plan' institution type, and their respective repercussions on natural lighting of interiors. They have their implications for heating and ventilating of buildings, too. In terms of house design, Tessenow's centrifugal planning of central staircase, with major rooms located to the four (external) corners, places the heat emitting stoves (*Kachelöfen*) on inside walls. This aids circulation of fresh air, and encourages the cavity ventilation predicated by the *Patentwand* construction to work optimally.

4. CLEAN FABRIC

In her essay 'Friedrich Wolf and the 'Neues Bauen', Christina Flötotto compares a photograph of Mies van der Rohe's apartment house at the *Weissenhof Siedlung*, Stuttgart, with that of a fivefold magnification of a piece of woven fabric. **(Fig. 3.28)** She writes:

> The apartmenthouse by Mies van der Rohe at the Weissenhofsiedlung and the fivefold enlargement of a woven piece of textile, when compared, show an amazing likeness, not only functionally, but also in structure and form. Starting out from the argument that naked skin should be exposed to air, coverings for the naked skin should be of a porous, woven fabric which stimulates health through its high level of porosity. The illustrations suggest architecture can also perform this function by creating a porous membrane around the body – the long band of horizontal fenestration takes over the function of the breathing pores setting up, on the façade, an alternating rhythm of solid wall and ventilation space. "Like the new clothing", writes Wolf, "the 'New House' is based on simplicity, sachlichkeit, light, air. Truth and clarity."[156]

Although this is a rather fanciful analogy (which someone like Geoffrey Scott would have enjoyed debunking) it does, nonetheless, contain a grain of truth. The Dresden physician Dr Anna Fischer-Dückelmann's *Die Frau als Hausärztin* (*The Wife as the Family Physician*, 1905) was a widely-read manual of healthy living, promoting the ideals and practices of the Reform movement in many areas. It offered a hymn to outdoor living, with the encouragement to sleep in permeable wooden 'air huts' during the warm season.[157] Tessenow's reformist tendencies of the late Wilhelminian period inevitably touch on hygiene as a leitmotif. The location of Dresden has particular importance here (see below).

Tessenow's use of the 'colour' white marks him out as an incipient modernist from our perspective one hundred years after the event. However, it may be argued that his reasons for employing white were various, and were contingent on the particular contexts in which he found himself. That these different contexts led him to use white as part of his developing aesthetic is a tribute to his synthesising powers as an architect coming into his prime. The different contexts are, first, the local Dresden concerns about hygiene; second, the national importance accorded to cleanliness and purity in the context of the Reform movement generally; third, notions of colour, ornament and gender in Tessenow's writings and in those of his contemporaries, and fourth, the 'colour'of Stripped Classicism and a renascent vernacular tradition.[158]

One of the many concerns of the Reform movement in Wilhelmine Germany was that of hygiene. The Garden City movement was itself born out of the squalor that the reformers felt was endemic in the modern city of *Mietskasernen* (rental barracks).[159] While there were serious attempts to tackle parts of the problem (mains sewers dug, broad avenues cut through dense urban centres *à la Haussmann*), a broader holistic approach had to await the postwar Weimar Republic years. Detailed concerns about public hygiene were addressed around the turn of the century, with Dresden an important focus of this particular aspect of the Reform movement. In 1911 the Dresden industrialist Karl Lingner organised the first International Hygiene Exhibition. (Dresden and its immediate region focused on Meissen was an important centre for the porcelain trade, hence the intimate connection with the artefacts of hygiene.) A permanent museum was planned, which had to wait until the closing years of the Weimar Republic to be realised.[160] **(Fig. 3.29)**

The colour white begins, at the turn of the century, to be emblematic of the newly discovered concern for personal and public hygiene, which formed part of the mosaic of reformist ideas of the time. As Mark Wigley notes, "[t]he white surfaces that traditionally mark cleanliness do just that, they mark rather than effect it. The whiteness of the supposedly hygienic spaces originated with the garments and cosmetic powders that were periodically changed in order to take the sweat of the body out of sight but not to remove it. Putting on a new white shirt was equivalent to taking a bath."[161]

Tessenow takes it for granted that we should require our artefacts to be clean and pure:

> If we look for the qualities which we take to be generally good or aspirational today, then cleanliness is perhaps of the first order; opinions amongst us will differ as to how cheerful or sad our environment is, whether it should be crooked or straight etc; but actually we always require it to be as clean as possible. There are, of course, very many points of view according to which cleanliness is not at all particularly wonderful; however it is only very seldom, if at all, that uncleanliness is ever something that we will admit as an objective.
> We will always have a soft spot for those jobs which lay claim to external cleanliness, be it street paving, our furniture, our clothing or our pots and pans. And wherever, in our dealings with other people, we have a common striving for cleanliness, we always confirm this urge as an obvious good, so that cleanliness becomes for us an especially good means of agreeing the what and how of our daily and professional life.[162]

Later, he goes on to equate material cleanliness with the purity of our thinking and our sensibilities, which he presents as a kind of *mens sana in corpore sano* (healthy mind in a healthy body): "Just as, in general terms, material cleanliness is important for us, so is the cleanliness or purity of our thinking and sensiblity."[163]

Tessenow, though, does not merely use white indiscriminately as a cipher for hygiene. Instead, there is the select use of white on the external walls of private dwellings, and on the internal walls and ceilings of public buildings. It is as though Tessenow implicitly entrusts the cleanliness of his domestic interiors to the families living there. Significantly, he distinguishes between the concepts of cleanliness and hygiene. He appears to argue against the fetishisation which 'cleanliness' necessarily undergoes in its journey towards 'hygiene'. An element of a building can be executed in a clean (*sauber*) manner; but the very inexactitude of building would seem to mitigate against using hygiene as a leitmotif:

> We have had occasion to talk about hygiene in connection with the cleanliness of manual work; indeed it has a great deal to do with the subject of cleanliness; but "that depends", if at times it suited us better, then we have not have spoken of hygiene, and in fact it is not particularly important here; if we are concerned, say, to develop a piece of furniture from which it is easy to remove dust, and we thereby maintain that it is healthier not to have any dust in our rooms, then such a motivation is very useful for us at the moment; but much more important are our feelings which revolt against dust, without

> considering whether or not it is healthy: 'hygiene' is neither here nor there. When we clean our windows we want the upper panes to be as clean and transparent as the lower ones; it could be that window-cleaning is unhealthy, we nonetheless consider it to be a good thing.[164]

Tessenow shows himself to take a measured view when it comes to cleanliness. He links it with his musings on the nature of order in the built environment: "The work of tradesmen, building our streets and bridges and houses and furniture etc. is always rough work to a particular extent and so therefore the notion of order is especially apt and necessary."[165] Here, 'order' seems to be the corrective for a lack of 'hygiene' in the building trades; the passage is reminiscent of Tessenow's more famous and much-quoted aphorism "Order is more or less always a wretched thing."[166]

With the Dalcroze Institute, on the other hand, natural sandstone and colour-washed render comprise its facing materials. The internal public spaces, the foyers, staircases, hallways and the performance space itself are all white: either painted, or, in the case of the performance space, hung with the white veil of the backlit cloth. Here, the 'white' of the exterior is the colour of neo-classical stone buildings before the 'discovery' of their polychromatic ancient models. Tessenow, in common with the majority of architects working in the idiom of the classical revival in the twentieth century, seems to have neglected the use of strong, applied colour in the built environment.[167]

Wigley sees the whiteness of modernism imbued with all the masculinity of a man's starched white shirt; in this whiteness there is all the uniformity of the bourgeois man's costume. This is in stark contrast to the multi-coloured gaiety of the bourgeois woman's atire. In his writings Tessenow hints at such a gendered nuance of applied decoration which, by definition, is opposed to the use of 'white', be it the self-colour of external materials or applied finishes inside:

> The actual values of ornament coincide with those of the ladylike: it is especially effective in silent laughter (ladies do not laugh out loud), in teasing (she is always superior, but is unable to express this in a tangible manner), in the fanciful (she is always dreaming and is fearful of real life) etc.
> The ladylike itself – in certain contrast to the womanly – we seldom find today; we lack the necessary esteem for such a concept, and in this day age it is of little consequence and seldom has any conviction for us.[168]

In all this talk of the emblematic nature of white, 'standing for' hygiene, we must not lose sight of the fact that Tessenow and his client had a very practical agenda for cleanliness and purity for the Dalcroze Institute. Sunbathing and showering were important functions to accommodate (the cultivation of the body beautiful) and both are prominent in the planning of its internal and external areas.

Colour, be it the inherent colour of building materials or the applied colour of finishes, does not figure prominently in today's conception of Tessenow. This is due both to the careless upkeep of his buildings throughout the twentieth century, as well as to Tessenow's proverbial reticence in expressing himself in colour: not for him the bold, primary colour schemes of, say, Bruno Taut in his Berlin *Siedlungen* (housing estates) of the 1920s.[169] Yet for Tessenow, colour was as important as form in the conception of a building; they had an equivalence which linked them together as the Siamese twins of a building's design. As he wrote in 1925: "As a means of design, colour has roughly the same power, the same significance, same value or importance as form...Much form needs much colour, and little colour needs little form."[170]

One should not be surprised, then, to find the formally simple, not to say mute, designs for Hellerau to be of limited chromatic variation. Tessenow equates reticence of form and colour with urban or social projects, as he writes: "Simple and silent forms as with silent, retiring colours are always principally urban, or are – if one so wishes – always extremely social [...]."[171] His palette of paint colours was actually more extensive than was hitherto thought to be the case, as Fabian Zimmermann's research at Hellerau has shown.[172] It is appropriate to end this section on 'Tessenow and Fabric' with the words of a writer who has written specifically about the theory of architectural surface. Co-author with David Leatherbarrow of the book *Surface Architecture*, Mohsen Mostafavi wrote the introduction to the work of the Swiss architect (and recipient of the annual Heinrich Tessenow Prize in 2000) Peter Märkli.[173] "You can, says Märkli, 'build a colourful house using only variations of white or black or grey'. According to Goethe's theory of colours, black is the equivalent of darkness and white the representative of light, therefore 'grey represents half-shadow, which partakes more or less of light and darkness, and thus stands between the two'."

This is the point at which Tessenow's considerations of fabric coincide with those of light. As a quintessential architect of the north, he recognises that the subdued lighting conditions under which his buildings will be seen favour the use of subdued colours. Mostafavi makes a similar claim of Märkli's work, when he writes: "Even though Märkli feels a close affinity with both Le Corbusier and Mediterranean culture, his choice of colours acknowledges that the light in Switzerland is not the same as in the Mediterranean, which seems to have been Le Corbusier's preferred model for the effects of sunlight. Where Le Corbusier's buildings are surfaces which reveal their objective truth in the brightness of daylight, Märkli's buildings work best when seen in fainter light – what [Athanasius] Kircher referred to as opaque light, *lumen opacatum*, locating colour as a degree of darkness. Märkli's buildings respond to their specific light consitions in the same way as altarpieces in dimly lit churches, where 'shadows [are] soft – conditions all agreeing with the character of their colouring...' "[174]

The artist David Batchelor has talked about colour, or rather the fear of colour, in modernist art and architecture.[175] In talking of the minimalist interior of the house of an art collector, he writes:

> This great white interior was empty even when it was full, because most of what was in it didn't belong in it and would soon be purged from it. This was people, mainly, and what they brought with them. Inside this great white interior, few things looked settled, and even fewer looked at home, and those that did look settled also looked like they had been prepared: approved, trained, disciplined, marshalled. Those things that looked at home looked like they had already been purged freom within. In a nutshell: those things that stayed had themselves been made either quite white, quite black or quite grey. This world was entirely purged of colour. All the walls, ceilings, floors and fittings were white, all the furniture was black and all the works of art were grey.[176]

How Tessenow managed to relate abstraction to the everyday, how in the end he enabled users of his buildings to feel at home, will be the subject of the next chapter.

NOTES TO CHAPTER THREE

[1] "Most theatres shared with other monumental buildings their free placing [freie Stellung] in the city, a placing which Manfred Semper wished to reserve for official theatres [Staatstheatern] even though he warned against placing them on a deserted plaza, like the Hofburg Theatre in Vienna." German text: "Die meisten Theater teilten mit anderen Monumentalbauten die freie Stellung in der Stadt, die Manfred Semper den Staatstheatern reserviert haben wollte (wenn er auch davor warnte, sie – wie das Hofburgtheater in Wien – auf eine "Platzwüste" zu stellen)." Valentin W.Hammerschmidt, *Anspruch und Ausdruck in der Architektur des späten Historismus in Deutschland (1860-1914)* (Frankfurt/Main: Peter Lang, 1985), p.432. To this day every German town of any size can boast of its civic theatre. This is a cultural relic from then still disunited German nation (pre-1871) consisting of a myriad of duchies, principalities and kingdoms.

[2] Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass: MIT, 1978).

[3] It is telling that the Weimar Republic was declared from the German National Theatre in the centre of the small Thuringian ducal town in 1919.

[4] See Paul Zucker, *Theater und Lichtspielhäuser* (Berlin: Wasmuth, 1926).

[5] "Behrens also set out his ideas on the role of theatre in society. High on the hill, in the festival hall, everything was to be organised to satisfy the spiritual needs of the participants." Stanford Anderson, *Peter Behrens and a New Architecture for the Twentieth Century* (Cambridge, Mass. and London: MIT, 2000), p.60.

[6] "Only very few important theatres were fully integrated into the street façade in germanophone Europe (as opposed to the English practice) and these tended to be those dedicated to the 'light' muse, such as the Comic Opera [Komische Oper] in Vienna (1873-74, E.von Förster). Here it became necessary to demonstrate functional characteristics by means of corresponding motifs in the elevation, since the whole mass of the building volume was not visible, whereas freestanding theatres were able to communicate the main facts about the division of the building's volume into the entrance area, the foyer, the nave-like auditorium and the stage area. By such means stylistic details, decorative figures and architectural motifs were able to concern themselves purely with additional criteria, above all those pertaining to expressing social rank and performance repertoire." German text: "Völlig in die Straßenfront integriert waren im deutschen Sprachraum (anders etwa als in England) nur weniger bedeutende, meist der "leichten" Muse gewidmeten Theater, wie die Komische Oper in Wien (1873 –74, E.v. Förster), bei denen sich die Notwendigkeit ergab, die Charakteristik der Funktion durch entsprechende Motive in der Fassade zu erreichen, da der gesamte Baukörper nicht sichtbar war, während bei den freistehendend Häusern die Gliederung der Baumasse im Eingangsbereich, Foyer, mittelschiffartigem Zuschauerraum und Bühnenbereich die Hauptinformation vermittelte und Stilformen, Figurenschmuck und Architekturmotive nur zusätzliche Aussagen, vor allem über Rang und Repertoire, machten." Hammerschmidt, *Anspruch und Ausdruck in der Architektur des späten Historismus in Deutschland*, p.432.

[7] See Nina Luebbren, *Rural Artists' Colonies in Europe 1870-1910* (Manchester: Manchester University Press, 2001).

[8] "By day the stage was naturally lit by the cupola windows and balanced by artificial lighting. At night an even, diffuse illumination revealed the overall cooperation of the arts while being itself consistent with that ideal. There were neither coulisses nor soffits to provide naturalistic illusion or slur the sound. Beyond the slightly elevated rear stage, the vista was closed first with a colonnade and then by a wall – semicircular in plan and

permanent. The locale and time lay in the poetry and were to be evoked in the viewer's imagination, not represented in naturalistic sets." Anderson, *Peter Behrens and a New Architecture for the Twentieth Century*, p.59.

[9] "Behrens claimed that mime and dance were the origin of the theatre and must again become its basis. The pure form of the figure and the movement of the dance would be enhanced if only white, or at most a single color, were used for the costumes." Ibid. p. 59.

[10] "Behrens's proposals, rather than illusionistic, were intended for a sensate immediacy between the actor and viewer. The shallow stage with the consequent emphasis on forestage acting, the proximity of seating and acting areas, the lack of definition between these areas and their inclusion in one architectonic space, the simplicity and architectural permanence of the stage background, the emphasis on dance and movement, and the simple illumination all serve to establish that theatrical contact which became the prime interest of revolutionary twentieth-century stage and theater designers." Ibid. p. 61.

[11] "[Jaques-Dalcroze] and his disciples wished to proselytise for the new cult of eurhythmics, to bring about a change of consciousness in their audience through direct exposure (they would have called it 'participation') to their work, and so help to herald and usher in a new age of individual and communal harmony based on the beneficent reunification of mind with body, so happily epitomised by the Greeks, and now offered again by eurhythmics as an ancient birthright to dispossessed modern man." Richard C. Beacham, *Adolphe Appia, Theatre Artist* (Cambridge: Cambridge University Press, 1987), p.62.

[12] [In 1881, Appia] saw a performance of Gounod's Faust, which reinforced his tentative sense of the inadequacy of painted flats and raised again troubling questions about the spatial arrangement of the stage. 'I was conscious of the flimsiness of the settings and the flatness of the stage floor.' He felt, without yet being able to articulate his motions into any coherent theory, that the actors' movement and, consequently, the expressiveness of their performance, suffered from the absence of different playing levels and from the failure generally to use the performance area more imaginatively. The scenic arrangement seemed an inadequate environment for containing or complementing the ostensibly significant actions taking place there. Far from enhancing his own imaginative vision of the piece, the production seemed grossly inferior to it. Something was terribly wrong;'afterwards I toured the theatre alone, murmuring to myself "is it for this that these thick walls were built, this massive construction?"." Ibid. p.9.

[13] Adolphe Appia, *Oeuvres Complètes*, pp.97-98, citing a letter of Appia's to Jaques-Dalcroze. French text: "Tessenow a compris de manière vraiment géniale que *l'architecture de cet édifice doit s'effacer devant la vie* que vous voulez y faire naître. Il a compris que le style de cet institut repose sur la tranquilité absolue et élégamment retenue de chaque ligne et de chaque surface, parce que ces lignes et ces surfaces doivent répondre aux besoins de la vie et surtout des mouvements qu'elles doivent limiter et envelopper. En fait, de ce point de vue-là, on n'aurait pas pu faire mieux, et je trouve l'intuition de Tessenow absolument étonnante justement pour cela."

[14] "The setting was to be conceived of as a sculptural area possessing height, depth and volume, into whose static and concrete composition the actor introduced life and motion." Beacham, *Adolphe Appia, Theatre Artist*, p.25. "In order to enhance both a plastic setting and the music itself, it was necessary first to identify and then to utilise two types of light. The first of these was general illumination and brightness, a *diffused* light, which provided a sort of luminous undercoat for later, more suggestive effects. Such general lighting was difficult to obtain in the late nineteenth-century theatre, and Appia devoted a great deal of thought and experiment later to achieve it. This neutral light for seeing was without

suggestive nuance and conveyed no feeling or emphasis, but it was a prerequisite for the second type of *formative* and creative light used in conjunction with it." Ibid. p.27.

[15] See Anderson, *Peter Behrens*, p.51, for the famous photograph showing Behrens's setting of Georg Fuchs's *Das Zeichen* on the grand entrance stairway in front of Olbrich's *Ernst-Kudwig-Haus*, Darmstadt. The occasion was the opening of the exhibition 'Ein Dokument deutscher Kunst', 15 May, 1901. "[The photograph] shows the moment at which the formerly unknown prophet has descended from the golden portal above and is about to reveal the shrouded sign-a great crystal. The symbolism of the crystal relies on a metaphorical relationship between transformations that take place at the micro- and macrocosmic levels; for example, just as mere carbon under intense conditions assumes a particular crystal structure and becomes the prized diamond, so the power of art may transform everyday life into a resplendent life filled with meaning." Ibid. p.29.

[16] "Hitherto, only quiet attention had been expected of the audience. To encourage this, comfortable seats in the semi-darkness have been offered, favourable to a state of complete passivity...light, no longer constrained to illuminate painted canvas, can spread out into space, filling it with living colour and infinite variations...in delivering the mise en scène from the yoke of lifeless painting and illusion...in giving it thus the greatest possible flexibility and utmost liberty, we also set free the imagination of the dramatist...the influence of this scenic reform...cannot even remotely be estimated." Beacham, *Adolphe Appia, Theatre Artist*, p. 66, citing Appia, 'Eurhythmics and the Theatre', pp.72–74.

[17] "Appia was the first to develop the concept of employing light through the equivalent of a musical score – the lighting plot – to convey emphasis and counterpoint as a visible correlative to the flow of the music – drama itself." Ibid. p.27.

[18] Ibid. pp.40-41.

[19] "The entire hall at Hellerau – the area for performance as well as for viewing – was lit by means of thousands of lights, some of them coloured, installed behind translucent linen which had been dipped in cedar oil and covered all the walls and ceilings of the building. Bernard Shaw, who visited Hellerau with Granville-Barker in June of 1913, was greatly impressed by the novel arrangement: 'The theatre has walls and roof of white linen with the lights behind the linen...This afternoon we went again and saw the lighting installation – the acres of white linen and the multitude of lights behind and above it. It needs only a transparent floor with lights beneath it to make it capable of anything heavenly." Ibid. pp. 66-67, citing Alan Dent, *Berrnard Shaw and Mrs Patrick Campbell. Their correspondence* (New York, 1952), pp.137–139.

For the transparent floor Shaw and Granville-Barker would have to travel south to view the recently completed atrium of Wagner's *Postsparkassenamt* (Postal Savings Bank) in Vienna.

[20] Richard and Helen Leacroft, *Theatre and Playhouse: An illustrated survey of theatre building from Ancient Greece to the present day* (London and New York: Methuen, 1984), p.124.

[21] Ibid. p.124.

[22] The Leacrofts describe the Dalcroze Institute in their book *Theatre and Playhouse*, but largely in terms of the 'open stage'. Regarding innovations in lighting, they give a lengthy description of the incorporation of a sky-dome in the *Schauspielhaus*, Dresden in 1913-14.

[23] See Adolphe Appia, *Oeuvres Complètes*, vol.II, pp.371-378 for the influence of Fortuny on Hellerau.

[24] Adolphe Appia, *Oeuvres Complètes*, vol.III, p.103, citing Fritz Engel, *Berliner Tageblatt* (3 June 1912). French translation: "Je n'ai jamais vu une salle aussi exclusivement "cadre" et donc presque nue. En soi, elle n'est rien; elle est seulement une enveloppe protectrice contre tout ce qui peut déranger, distraire, égarer. Et, surtout, (...) elle est dispensatrice de lumière. (...)"

See also Peter Behrens 'Über die Kunst auf der Bühne', in *Frankfurter Zeitung* (20 March 1910), no 78, cited in Gisela Moeller, *Peter Behrens in Düsseldorf: Die Jahre von 1903 bis 1907* (Weinheim: VCH Verlagsgesellshaft, 1991), p.379: "For BEHRENS, only "diffuse light, whose rays fell in the direction of the spectators' gaze" was artistically effective. It was the only kind of illumination appropriate to the relief style." German text: "Künstlerisch wirkungsvoll war BEHRENS nur "das diffuse Licht, dessen Strahlen in der Richtung der Blicke der Zuschauer fallen". Es war die allein den Reliefstil begünstigende Beleuchtung".

[25] See Frédéric Kastner, *Le Pyrophone-Flammes chantants* (Paris, 1876). This was a new edition of his *Invention du pyrophone: Expériences nouvelles sur les flammes chantantes* (Paris, 1875).

[26] See Ph.D. thesis Pierre-Breuillard-Limondin and Marie-José Mausset, *Baranoff-Rossiné* (Paris VIII, 1979-1980).

[27] Another possible inspirational source for the 'light-organ' is Albert Cozanet, *Corrélation des sons et des couleurs en art* (Paris, 1897). Cozanet was the real name of Jean d'Udine, one of the first French adepts of Jaques-Dalcroze.

[28] Adolphe Appia, *Oeuvres Complètes*, vol.III, pp.108-109. French text: "[...] une salle blanche, avec une haute coupole, sans aucune adjonction architectonique."

[29] See Ibid. p.109 for conjectural influences from painters and, most interestingly, cinematographers. Little is known about von Salzmann's painting output.

[30] Ibid. pp.162-163.

[31] On his arrival in Dresden in the spring of 1911, von Salzmann experimented with stage lighting in Dresden's *Altes Landhaus*. Appia reports that he used carbide lamps, car headlamps and mirror systems. Von Salzmann even tried to use phosphorous paint to achieve indirect diffuse lighting. Ibid. pp.125-129.

[32] This is a lighting system not dissimilar to that employed by the architect Norman Foster at the Sainsbury Centre for the Visual Arts, University of East Anglia, Norwich 1978. We see a version of it again in his design for the terminal building at Stansted Airport, Essex, 1991.

[33] Ibid. pp.109-110. French text: "Les articles de l'époque disent l'infinité des nuances obtenues: jamais les visiteurs n'avaient connu une matérialisation aussi "matérialisante" de la lumière, jamais une matérialisation aussi "immatérialisante". La lumière diffuse de Salzmann remplissait littéralement la salle, matériellement *et* spirituellement."

[34] Ibid. pp.128-129 gives an outline of the geneaology of modern dance, linking Jaques-Dalcroze, Laban, Wigman, Bausch, et al. Appia makes the point that Mary Wigman

sought to *divorce* dance from music. Does this prefigure architecture's separation from painting and sculpture in the 20th century?

[35] See Juliet Koss, 'Empathy and Abstraction at the Munich Artists' Theatre', in Karen Koehler (ed.), *The Built Surface: Architecture and the pictorial arts from Romanticism to the twenty-first century* (Aldershot: Ashgate, 2002), vol. 2.

[36] Leacroft, *Theatre and Playhouse*, pp.136-137.

[37] "[...] instead of a lighted space, we have a light-producing space. Light is conveyed through the space itself, and the linking of visible light sources is done away with." Beacham, *Adolphe Appia, Theatre Artist*, 1987 p.67 citing Alexander von Salzmann 'Licht, Belichtung und Beleuchtung', *Claudel-Programmbuch* (Hellerau, 1913), p.70.

[38] Ibid. p.67. Beacham has produced, in collaboration with the Berlin architect Fabian Zimmermann, computer animations of the lit space of the interior of the Dalcroze Institute.

[39] Ibid. p.78 citing Paul Claudel in Gernot Giertz, *Kultus ohne Götter* (Munich: Kommissionsverlag J. Kitzinger, 1975), p.169.

[40] Emile Jaques-Dalcroze, *The Eurhythmics of Jaques-Dalcroze* (London: Constable, 1917), introduction by Prof. M.E.Sadler, second revised edition, p.28.

[41] Bazarov is the nihilist hero of Ivan Turgenev's novel *Fathers and Sons* (1862).

[42] See Juliet Koss, *Empathy Abstracted: Georg Fuchs and the Munich Artists' Theater* (Ph.D. diss: MIT, 2000).

[43] Karl Toepfer, *Empire and Ecstasy: Nudity and Movement in German Body Culture, 1910-1935* (Berkeley and Los Angeles: University of California Press, 1997).

[44] "[I]n *Sein und Zeit* (1927) Heidegger linked the mysterious concept of "unveiling" simultaneously to the construction of truth and to the manifestation of being itself." Toepfer, *Empires of Ecstacy*, p.31.

[45] Contemporary 'materialist' architects tend to share Tessenow's (and Loos's) distinction between outside and inside. An important exception is the Swiss Peter Märkli, with his pursuit of *béton brut* as finishing material both externally and internally. Other architects, such as Caruso St John with their Walsall Arts Gallery project (2000), and Herzog de Meuron (Basel station signal box: 1994) make nice distinctions between outside and inside with their carefully considered arrays of layered materials.

[46] Colin Rowe and Robert Slutzky, 'Transparency: Literal and Phenomenal', in Colin Rowe, *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, Mass. and London: MIT, 1976).

[47] Gerda Wangerin and Gerhard Weiss, *Heinrich Tessenow: Ein Baumeister 1876-1950 Leben.Lehre.Werk* (Essen: Richard Bacht, 1976), p.248.

[48] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass: MIT, 1994).

[49] Compare, for instance, the photographs of the Stadtbad Berlin-Mitte reproduced in Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk*

(Stuttgart: Deutsche-Verlags-Anstalt, 1991), pp.116-117 with reproductions of Adolphe Appia's four 'Espaces rythmiques' (1909) in ibid. p.20.

[50] See, for instance, the care with which Tessenow denotes the subtle veiling of windows in his perspective drawings of modest dwellings of 1907 in ibid. pp. 48-49. Here is a parallel between Tessenow's ambivalence towards light and the views expressed by Jun'ichirō Tanizaki in his essay *In Praise of Shadows* (Jun'ichorō Tanizaki, *In Praise of Shadows* (London: Vintage, 2001), trans. Thomas J. Harper and Edward G. Seidensticker). However, Tanizaki's essay on light relates to the specifically Japanese culturally-conditioned distaste for over-emphatic dissonances and clashes across the whole sensorial range. Tessenow, on the other hand, cannot quite free himself from the nineteenth-century disinclination to abandon the proprieties of shading restricting views into private places. It is not suggested that Tessenow was familiar with Tanizaki's work, although Bruno Taut had famously visited Japan and extolled its inherent nous for *sachlich* design in the late Weimar years.

[51] Toepfer, *Empire and Ecstasy*, p.32.

[52] Fritz Neumeyer, 'Der neue Mensch: Körperbau und Baukörper in der Moderne', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994), p.15.

[53] Paul Scheerbart, *Glasarchitektur* (Berlin: Verlag der Sturm, 1914), p.120.

[54] "The rise of electric lighting is inseparable from this milieu, its cleanliness and slightly mysterious quality seemed to chime in well with the interests of an intelligentsia that was turning away from the gross materialism and determinism that had characterised so many mid-century attitudes, in favour of a more mystical and aesthetic approach. The tenuous curves, pale walls and luminous decorations of Art Nouveau and Tiffany would be unthinkable without electric lighting, not only in the purely physical sense that effluents of gas lighting would have rotted delicate fabrics and darkened the décor, but also in the purely aesthetic sense that the quality and distribution of light that could be achieved is entirely apt to the style." Reyner Banham, *The Architecture of the Well-tempered Environment* (London: The Architectural Press, 1969), pp.43-44.

[55] Ibid. chapter 4, 'The kit of parts: heat and light'.

[56] Ibid. pp.68-69.

[57] The light-fittings designed by Behrens for his Obenauer House, Saarbrücken (1905-1907) are good example. See Anderson, *Peter Behrens*, pp.180-183 for illustrations.

[58] Banham, *The Architecture of the Well-tempered Environment*, pp.69-70.

[59] The disparity between the technical and formal strains in design theory throughout the twentieth century is an oft-repeated cry of Banham's: "No doubt this accounts for the periodic waves of revulsion against 'glass boxes' and fashionable returns to solid concrete and massive masonry, where visible form is still generated by external light and cast shadows, for which there is established theory and customary terminology." Ibid. p.70.

[60] Heinrich Tessenow, *Geschriebenes*, ed. Otto Kindt, (Braunschweig: Vieweg, 1982), p.162. German text: "Die Fabrikarbeit, die Maschinenarbeit zwingt den Arbeiter zu einem weitgehend mechanischen, d.h. menschenunwürdigen Arbeiten;"

[61] Banham, *The Architecture of the Well-tempered Environment*, p.77.

[62] " Without doubt it is this depressingly un-modish exterior that has caused the Royal Victoria Hospital to be universally overlooked by historians of the Modern Movement until the last few years. It is not mentioned by any of the historian-protagonists of Functionalism; it received not even a footnote in Pevsner's *Pioneers of the Modern Movement*, in spite of the fact that in all except the purely stylistic sense it was far more modern and far more pioneering than anything that had been designed by Walter Gropius, the hero-figure of the book, before 1914." Ibid. p.84.

[63] Ibid. p.84.

[64] "His [Frankl's] explanation of architectural experience becomes, like that of the functionalist, vacuous and circular. It is for this reason that we will find that the concept of 'space' can be eliminated from most critical writingswhich make use of it without any real detriment to their meaning. Here is Frankl writing of the Jesuit churches of Posen and Breslau, and the *Schlosskirche* in Friedrichshafen:

> The relative height of the galleries has an important influence upon the spatial effect. If they are entirely below the spring of the nave vault, they combine additively with the chapels below. If they extend *above* the spring, so that they break into the great vault like lunettes, then the higher they extend the more closely the total spatial effect approaches that of a hall.
>
> Here the reference to a 'spatial effect' is in fact entirely redundant; the sense of the passage remains unchanged if one substitutes for the expression the simpler term 'shape', for clearly all that Frankl's examples show is that the higher the galleries extend the more closely does the *shape* of the church approach that of a hall."

(Roger Scruton, *The Aesthetics of Architecture* [London: Methuen, 1979], pp. 48-50, citing Frankl, *Principles of Architectural History*, p.43).

[65] "All would insist, and rightly, that new concepts of space, such as were pioneered by Mackintosh at the Glasgow Art School, are crucial to their conception of modernity, none seem to have acknowledged that such spaces would usually be uninhabitable (and therefore not architecture) without massive contributions from the arts of mechanical environment-management. Narrowly pre-occupied with innovations in the arts of structure, they seem never to have observed that free-flowing interior spaces and open plans, as well as the visual interpenetration of indoor and outdoor space by way of vast areas of glass, all pre-suppose considerable expense of thermal power and/or air-control, at the very least." Banham, *The Architecture of the Well-tempered Environment*, p.86.

[66] "[...] the Larkin building is something of a watershed. The Royal Victoria Hospital and its innumerable predecessors in the realm of 'welfare architecture' for industrialised mass-societies, often present the image of new functional needs and mechanical possibilities bursting through a crust of conventionally conceived architectural forms, whereas in the Larkin Building, the transformation of the exterior, both in detail and in mass, appears to be keeping pace with transformation of the interior economy of the building-type. Thus Wright, in the Larkin Building design, serves as a bridge between the history of modern architecture as commonly written - the progress of structure and external form - and a history of modern architecture understood as the progress of creating human environments." Ibid. p.92.

[67] This objection one could equally raise with respect to Loos's duality of exterior and interior.

[68] Heinrich Tessenow, *Geschriebenes*, p.62. German text: "Die Werklichkeit des Straßenbaues ist in allen wichtigen Hinsichten völlig anderer Art als die Werklichkeit des Hausbaues, denn die Straßen sind etwas wesentlich anderes als die Häuser; und so gehört es auch zu den schwersten Aufgaben aller baulichen Gestaltens, Straßen und Häuser zu einem überzeugenden oder harmonischen Ganzen miteinander zu verbinden."

[69] Ibid. pp.64-65. German text: "Die Straßen unterscheiden sich von den Plätzen wie das Männliche sich von dem Fraulichen unterscheidet, und mehr noch: Zwischen den Straßen und dem Männlichen ebenso wie zwischen den Plätzen und dem Fraulichen besteht so etwas wie eine lebendigste Verwandtschaft, so daß jede Kultur die Straßen um so höher wertet und um so mehr Straßen erbaut, je höher sie das Männliche wertet, wie sie umgekehrt immer um so mehr Plätze erbaut, je lebendiger in ihr der Sinn für die wesentlich fraulichen Eigenschaften ist."

[70] Ibid. p.65. German text: "Die Straßen oder das großweltlich Ungeformte, immer Unfertige, immer Vorwärtsdrängende oder Fortschreitende, das einlinige (berufliche) Vorwärtswollen, das Karriere-Machen usw. ist etwas wesentlich Männliches. Je straßiger oder straßig wichtiger die Straßen sind, um so männlicher sind sie auch, sowohl der ganzen Art wie dem Betriebe wie auch den einzelnen Konstruktionen oder den einzelnen Formen nach. Der betonte Glaube an die Straßen oder an den Fortschritt ist ein betont männlicher Glaube. Und da die neuere Weltgeschichte den Glauben an den Fortschritt oder an die Straßen ganz außerordentlich betont, so ist sie zunehmend auch eine Geschichte des männlichen Wollens, des männlichen Denkens und Arbeitens (überhaupt eine Geschichte des Denkens und Arbeitens), der muskulösen oder äußeren Erfolge oder Mißerfolge oder überhaupt eine Geschichte des Männlichen geworden. Sie hat mehr und mehr alles Frauliche beiseite gedrängt oder erniedrigt, oder sie hat zunehmend die Frauen genötigt, daß auch sie möglichst nur männlich – etwa männlich-einseitig-beruflich oder männlich-großweltlich-umherreisend oder männlich-tüchtig – sein möchten."

[71] This is my preferred reading of this passage of Tessenow's. A more sinister understanding, one that prefigures Nazi propaganda, is given by incorporating his final comments, equating the modern spirit of relentless movement with 'Gypsy-dom':" The entire modern world is gypsy-like, much more so than it is aware of and is willing to admit; and it will remain so for a long time and indeed become more so, than it knowingly wishes." Ibid p. 68. My translation: "The entire modern world is gypsy-like, indeed much more so than it believes itself to be and wishes to admit to; and it will remain so for a long time and will become ever more so than it knowingly wishes to." German text: "Die ganze moderne Welt ist zigeunerisch, viel mehr wohl, als sie selbst es weiß und sich gestehen will; und sie wird es wohl noch lange sein und noch viel mehr werden, als sie wissentlich es werden will."

[72] Werner Hegeman, *Das steinerne Berlin* (Braunschweig: Vieweg, 1992), originally published 1930.

[73] Robin Evans, *Translations from Drawing to Building and Other Essays* (London: Architectural Association, 1997).

[74] Ibid.

[75] See Witold Rybczynski, *Home: A Short History of an Idea* (London: Heinemann, 1988). Rybczynski offers a potted cultural history of the development of domestic space under headers such as 'Intimacy and Privacy', Light and Air', 'Austerity' and 'Comfort and Well-Being'. As such, it owes much to Banham's *Well-tempered Environment.*

[76] See Schwarzer, *German Architectural Theory*, pp.16-117.

[77] Linguistically, German '*Haus*' has a more extended connotation than its English cousin 'house'; it refers to any freestanding building irrespective of size and function.

[78] An excellent example of such a 'feminine' space is to be found in Tessenow's illustration of the Hall (*Diele*) reproduced in Tessenow, *Hausbau und dergleichen*, p.113 and included here as an illustration on page 3.

[79] See 'The Invention of the Twentieth Century: Berlin 1918-1933', and 'The Dream Factory: Los Angeles 1910-1945', in Peter Hall, *Cities in Civilisation: Culture, Innovation, and Urban Order* (London: Weidenfeld & Nicholson, 1998).

[80] Banham, *The Architecture of the Well-tempered Environment*, p.204.

[81] Ibid. p.208.

[82] Wener Oechslin, 'Lichtarchitektur', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994), p.117.

[83] See also Wolfgang Pehnt 'Turm und Höhle' in Magnago Lampugnani and Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit.*

[84] Francesco Dal Co, *Figures of Architecture and Thought: German Architecture Culture 1880-1920* (New York: Rizzoli, 1990), p.16.

[85] Ibid. pp.16-17.

[86] See Janos Frecot, Johann Friedrich Geist and Diethart Kerbs, *Fidus 1868-1948* (Munich: Rogner & Bernhard, 1972), pp.233-247 for a discussion of visionary ideas of the theatre at the turn of the century. Janet Leeper's article 'Peter Behrens and the Theatre', *The Architectural Review* (August 1968), vol.144, pp.138-139 relates all the German figures of theatre reform, including Fuchs, Appia, and Behrens.

[87] Volker M. Welter, *Biopolis: Patrick Geddes and ther City of Life* (Cambridge, Mass and London: MIT, 2002), p.137.

[88] Ibid. p.146. Welter cites William Richard Lethaby, *Architecture, Mysticism and Myth* (London: Percival, 1892), p.5.

[89] The opera was originally titled *Siegfrieds Tod* (Siegfried's Death).

[90] Cornelius Gurlitt, *Die deutsche Kunst des 19. Jahrhunderts* (Berlin, 1900). Edited version published as Cornelius Gurlitt, *Zur Befreiung der Baukunst: Ziele und Taten deutscher Architekten im 19. Jahrhundert* (Gütersloh/Berlin: Bertelsmann Fachverlag, 1969).

[91] Welter, *Biopolis*, pp.150-151.

[92] Welter points the reader on to two publications which link the idea of the temple, stylistic questions, and the life reform movement (*Lebensreformbewegung*). These are *Okkultismus und Avantgarde. Von Munch bis Mondrian 1900-1915*, (Frankfurt/Main: Schirn Kunsthalle, 1995), exh. cat., and Richard Hamann and Jost Hermand, *Stilkunst um 1900* (Munich: Nymphenburger Verlagshandlung, 1975).

[93] See Matthias Schirren, 'Das Glashaus als hermetische Leuchte', in Angelika Thiekötter *et al.* (ed.), *Kristallationen, Splitterungen: Bruno Tauts Glashaus* (Basel: Birkhäuser, 1993).

[94] Ibid. p.122. German text: "Tauts Glashaus diente aber keiner Aussicht in die Umgebung. Alle Sinne wurden vielmehr auf Inszenierungen im Inneren des Gebäudes konzentriert: das Kaleidoskop, das Rauschen des Wasserfalls. Die Außenwelt war nur über den Lichteinfall, also vermittelt und auf bestimmte Wirkungen reduziert, am ästhetischen Effekt beteiligt. Zwar war das Glashaus nicht jenes dunkle Zimmer, in das – nach dem eingangs zitierten Lehrgedichts Friedrich Rückerts – Newton den Lichtstrahl sperren mußte, um ihn zu analysieren. Doch ist auch sein Innenraum hermetisch."

[95] Scheerbart, *Glasarchitektur.*

[96] Ibid. p.122. German text: "Die von Scheerbart gerühmte "doppelte Glashauswand" sollte nicht nur der besseren Wärmedämmung dienen. Zwischen den beiden Glaswänden stellte sich Scheerbart Lampen vor, die die Wände selbst zum Leuchten bringen sollten. "Durch diese Beleuchtungsart wird das ganze Glashaus zur Laterne, die in stillen Sommer- und Winternächten glühen kann wie Leuchtkäfer und Glühwürmchen", heißt es in seiner Glasarchitektur. Die Beschreibung der mit elektrischem Licht zu erzielenden Effekte sind ein Hauptthema dieses Bruno Taut gewidmeten Bändchens."

[97] Schirren, 'Das Glashaus als hermetische Leuchte', in Thiekötter *et al* (ed.), *Kristallationen, Splitterungen: Bruno Tauts Glashaus*, p.125. German text: "Tauts Glashaus könnte man als einen nach innen gestülpten Aussichtstempel bezeichnen." See also Regine Prange, 'Das kristallene Sinnbild', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950.*

[98] See Colin Rowe and Robert Slutzky, 'Transparency: Literal and Phenomenal', in *The Mathematical Villa and Other Essays* (Cambridge, Mass: MIT, 1976).

[99] An example of an institutional building which is a hybrid of these two types is Tessenow's Klotzsche School, Dresden (1925-1927).

[100] Peter Hall states that there were already 2280 cinemas in Germany by 1919; between 1911 and 1919 Berlin's 'West End' around the Tauentzienstrasse and the Kurfürstendamm the great cinemas such as the Marmorhaus, Capitol, Gloria-Palast, Ufa-Palast and Rialto were all opened. Hall, *Cities in Civilization*, p.255.

[101] Koss, 'Empathy and Abstraction at the Munich Artists' Theatre', in Koehler (ed.), *The Built Surface*, vol.2, p.105.

[102] Wilhelm Worringer, *Abstraktion und Einfühlung: Ein Beitrag zur Stilpsychologie* (Munich, 1908), reprinted Amsterdam: Verlag der Kunst, 1996. Worringer's book was originally published as *Abstraktion und Einfühlung* (Neuwied: Heuser'sche Verlagsdruckerei, 1907).

[103] Koss, *Empathy Abstracted: Georg Fuchs and the Munich Artists' Theater*, p.185.

[104] Ibid. p.185.

[105] Ibid. p.185.

[106] See Anderson, *Peter Behrens and a New Architecture for the Twentieth Century*, pp. 5-25. Of interest is his chart which presents the spectrum of aesthetic sensibilities spanning between the poles of empathy and abstraction. Anderson terms the former practitioners 'patheticists', the latter 'idealists'.

[107] See Wangerin and Weiss, *Heinrich Tessenow*, p.70, for the details of the patent whose citation reads:

> Tragfähige Holzfachwerkwand mit zwischen je zwei senkrechten Steinreihen eingeschalteten senkrechten Zwischengliedern. Patentschrift Nr. 239 961, Klasse 37a, Gruppe 3/28. Ausgabe der Patentschrift am 24.10.1911. Das Patent gilt ab 1. 8. 1909 als geschützt.

[108] See Ibid. p.26 for a description of the *Patentwand* construction.

[109] Konrad Wachsmann, *Building the Wooden House: Technique and Design* (Basel: Birkhäuser, 1980). This book is a reprint (in English translation) of the original title *Holzhausbau – Technik und Gestaltung* (Berlin: Wasmuth, 1930). It includes new contributions by Christa & Michael Grüning and Christian Sumi.

[110] Ibid. p.24. "Although it would appear that the relatively good results that have been achieved justify the use of the wood frame and plaster method, it should nevertheless be noted that these houses no longer exhibit the purity and simplicity of the house built entirely of wood. Above all, the advantages of a dry construction are sacrificed. Even though one has found ways to protect wood in the immediate vicinity of water, the mere fact that moisture must be introduced into a wooden house should give one pause. Also not to be discounted is the fact that, aside from the interior work, a house entirely of wood requires only one type of construction worker, not two."

[111] See illustrations ibid. pp.45-61.

[112] Heinrich Tessenow, 'Plauderei über das Holz als Baumaterial', in Heinrich Tessenow, *Zimmermannsarbeiten: Entwürfe für Holzbauten* (Freiburg i. Br: Verlag Paul Waetzel, 1907), facsimile edition Hannover: Th. Schäfer, 1994. German text: "Für die Ausführung unserer Bauten, wie immer für die Lösung praktischer Aufgaben, kommt es in erster Linie auf die Tüchtigkeit der Mittel an, nicht auf deren Schein. Der angenehme Schein einer Wahrheit hat hauptsächlich insofern Wert, als er uns die Wahrheit schneller als solche annehmen läßt. Wir sollten aber gegenüber dem sympathischen Schein, den das Holz als Baumaterial so oft für uns hat, auf der Hut sein, weil sich ja schließlich unser Geschmack mit uns selbst fortwährend ändert und wir Bauleute später leicht bedauern, daß unsere Geschmacksäußerung so kostspielig geworden ist." See Appendix A for full text.

[113] Banham, *The Architecture of the Well-tempered Environment*, pp.95-96.

[114] Ibid. p.100.

[115] See illustration Marco De Michelis, *Heinrich Tessenow 1876-1950: Das Gesamtwerk* (Stuttgart: DVA, 1991), pp.218-219.

[116] See also Rybczynski, *Home.*

[117] The relationship between the historiography of modern architecture and its technology is fraught. Banham, in *The Architecture of the Well-tempered Environment*, attempts to redress what he sees as a cultural imbalance by giving the North American engineers and entrepreneurs their due in the historical development of modernism: "The development process [of air conditioning] had been in train since the turn of the century – while European modern architects had been trying to devise a style that would 'civilise technology', US engineers had devised a technology that would make the modern style of architecture habitable by civilised human beings. In the process they had come within an ace of producing a workable alternative to buildings as the unique means of managing the environment, and had thus come within an ace of making architecture culturally obsolete, at least in the senses in which the word 'architecture' had been traditionaly understood, the sense in which Le Corbusier had written *Vers une Architecture.*" Banham, *The Architecture of the Well-tempered Environment*, pp.162-163.

[118] Banham comments that "[T]he Behrens house, lacking any over-all geometrical discipline, and being somewhat asymmetrical on every elevation, is nevertheless so completely constrained by pre-technological habits of planning and environmental management that the apparent freedom of its exterior proves to be no more than apparent. It remains a tight little traditional cubic box carved into smaller boxes." Ibid. p.112.

With respect to Mies's Riehl House, Barry Bergdoll has drawn attention to the similarity of its composition, with a loggia which mediates between the house and its supporting garden wall, to an illustration of a farmhouse in Mebes's book *Um 1800.* Bergdoll 'The Nature of Mies's Space', in Terence Riley and Barry Bergdoll (eds), *Mies in Berlin* (New York: The Museum of Modern Art, 2001).

[119] Contemporaneous with these Garden City housing schemes in Germany, Frank Lloyd Wright would be 'breaking the box' and thematising the dualism between 'core' and 'periphery'. He is able to indulge in the generosity of deep overhanging eaves (which allows him to glaze the external walls) because of his clients' deep pockets, and large North American building plots.

[120] Frederic J. Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War (*New Haven and London: Yale University Press, 1996), p.35.

[121] Karl Scheffler, 'Um das Handelsobjekt nach aussen zu empfehlen', in *Die Architektur der Grossstadt*, p.30.

[122] Ibid. p.34.

[123] See Walter Curt Behrendt, *Die einheitliche Blockfront als Raumelement im Städtebau: Ein Beitrag zur Stadtbaukunst der Gegenwart* (Berlin: Bruno Cassirer, 1912).

[124] Schwartz, *The Werkbund*, p.37.

[125] Georg Simmel, 'Die Mode', in *Philosophische Kultur* (1911), repr. Berlin: Wagenbach, 1986, p.40.

[126] See Janet Stewart, *Fashioning Vienna: Adolf Loos's Cultural Criticism* (London and New York: Routledge, 2000).

[127] This is Mark Wigley's argument in his book *White Walls, Designer Dresses* (Cambridge, Mass: MIT, 1995).

[128] Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War*, p.40 citing Scheffler: "The battle of the Werkbund is in the first place a campaign to achieve a new masculine reason; it is a battle against the inordinate foolishness of the times, an attempt to legitimize that which is, in a higher sense, self-evident and to bring that simple human quality back into evertday things, that quality which seems simply classic." Karl Scheffler, 'Gute und schlechte Arbeiten im Schnellbahngewerbe', in *Jahresbericht des Deutschen Werkbundes* (1914), no 3, pp.42-43.

[129] It is fascinating to trace the development of the term 'style' in the discourse of modernity. There was no doubt that style existed in the 1830s and 1840s (In welchem Style sollen wir bauen?); in the Werkbund era it became the positive term in a dialectical relationship with 'fashion'; by the time of late-Modernism at the end of the twentieth century it is almost a taboo term, replaced by the politically-correct term 'language' ('architectural language').

[130] Harry Francis Mallgrave (ed.), *Otto Wagner: Reflections on the Raiment of Modernity* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities, 1993).

[131] Ibid. p.283.

[132] Nikolaus Pevsner, *Pioneers of the Modern Movement* (London: Faber & Faber, 1936).

[133] Schwartz, *The Werkbund*, p.28.

[134] Heinrich Pudor, 'Praktische Vorschläge zur Erzielung von Qualitätswaren,' *Volkswirtschaftliche Blätter* 9, no 15/16, 1910, p.283 cited in Schwartz, *The Werkbund*, p.29.

[135] J. Duncan Berry, 'From Historicism to Architectural Realism: On some of Wagner's Sources', in Harry Francis Mallgrave (ed.), *Otto Wagner: Reflections on the Raiment of Modernity*, pp.255-259.

[136] See the above essay for a discussion of the influence of French realism on German architectural theory. Of particular importance in mediating the French views are the Hart brothers. Heinrich Hart, 'Die realistische Bewegung: Ihr Ursprung, ihr Wesen, ihr Ziel,' *Kritisches Jahrbuch* (1889) , no 1, pp.40 - 56. Berry goes on to cite Paul Sédille as a crucial French architectwho, through his practice and writings, furthered the cause of Realism. Sédille was the architect of the renowned Printemps department store in Paris (1881-1885). He is quite careful to distinguish realist architectural form from 'crass materialism', and argues potently for buildings to be appropriately 'dressed'. In other words, to use the German terminology, that there is a distinction between a building design's *Werkform* and its *Kunstform*. Berry later develops his thesis and cites Sédille as a possible source for Otto Wagner's architecture in Vienna.

[137] See Berry, 'From Historicism to Architectural Realism: On some of Wagner's Sources', in Mallgrave (ed.), *Otto Wagner: Reflections on the Raiment of Modernity*. The dome is extraordinary, too, for the present-day visitor. The author, on seeing the building for the first time, assumed it to be a 'cheap' East German repair job, in much the same manner as that effected to the Berlin Cathedral after the Second World War.

[138] Ibid. p.251.

[139] 'Focus' is derived from the Latin for hearth or fireplace.

[140] Lisa Heschong, *Thermal Delight in Architecture* (Cambridge: MIT, 1979), p.72. This passage of Heschong's is cited in Luis Fernández-Galiano, *Fire and Memory: On Architecture and Energy* (Cambridge, Mass. And London: MIT, 2000), English edition translated by Gina Cariño, p.13.

[141] See Gilles Barbey, *L'Habitation Captive: Essai sur la Spatialité du Logement du Masse* (Saint-Saphorin (CH): Editions Georgi, 1980).

[142] Lawrence Wylie, *Village in the Vaucluse* (Cambridge, Mass: Harvard University Press, 1964), pp.145-146. Cited in Heschong, *Thermal Delight in Architecture*, p.43.

[143] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass. And London: MIT, 1994), pp.71-73.

[144] Ibid. p.72.

[145] Luis Fernández-Galiano, *Fire and Memory: On Architecture and Energy* (Cambridge, Mass: MIT, 2000), trans. Gina Cariño.

[146] Ibid. p.8.

[147] Ibid. p.8.

[148] H. Rietschel, *Leitfaden zum Berechnen und Entwerfen von Lüftungs- und Heizungs-Anlagen* (Berlin: Springer, 1893), reprinted 1909, English translation of 7th German edition published as C.W.Brabbée, *Heating and Ventilation* (New York: McGraw-Hill, 1927).

[149] "Because of its accessibilty, *The Four Elements of Architecture* has in recent times always figured prominently in discussions of Semper's thought, but the importance of the book should not be overestimated. Its promised new perspective was only in a stage of incubation as far as his later theory is concerned, and within this context the book represents at best a transitional stage towards more coherent and incisive deliberations. Its main ideas, in fact, within a decade were almost entirely superseded by Semper's much larger study of the problem of style." Harry Francis Mallgrave, *Gottfried Semper: Architect of the Nineteenth Century* (New Haven & London: Yale University Press, 1996), p.189.

[150] Heidrun Laudel, *Gottfried Semper: Architektur und Stil* (Dresden: Verlag der Kunst, 1991), p.83. German text: "Der Herd wurde nun als "Keim, von den übrigen Elementen abgehoben."

[151] Ibid. p.84. German text: "[Feuer war] nicht als Urform, sondern als ein soziales Moment zu begreifen war."

[152] Ibid. p.84. German text: "Die übrigen Elemente – Dach, Erdaufwurf und Umzäunung – waren ihm "gleichsam [...] schützende Negationen". Sie dienten den Abwehr der "dem Feuer des Herdes feindlichen drei Naturelementen": des Witterungseinflusses, der Überschwemmungen und der Angriffe durch Tiere und feindliche Krieger."

[153] Gaston Bachelard, *The Psychoanalysis of Fire* (Boston: Beacon Press, 1964), trans. Alan Ross, p.55. French text: "[Ainsi le feu sexualisé] est par excellence le trait d'union

de tous les symboles. Il unit la matière et l'esprit, le vice et la vertu. Il idéalise les connaissances matérialistes; il matérialise les connaissances idéalistes." Gaston Bachelard, *Le Psychanalyse du Feu* (Paris: Gallimard, 1949).

[154] Ibid. p.30. French text: "[...] il est assez facile de constater que l'eurythmie d'un frottement actif, à condition qu'il soit suffisamment doux et prolongé, détermine une euphorie. Il suffit d'attendre que l'accélération rageuse soit calmée, que les différents rythmes soient coordonnés, pour voir le sourire et la paix revenir sur le visage du travailleur."

[155] Ibid. p.75. French text: "[...] dire qu'une substance a un intérieur, un centre, n'est guère moins métaphorique que de dire qu'elle a un ventre. Parler d'une qualité et d'une tendance revient alors à parler d'un appétit. Ajouter, comme le fait l'alchimiste, que cet intérieur est un foyer où couve le feu-principe indestructible ne fait qu'établir des convergences métaphoriques centrées sur les certitudes de la digestion."

[156] Christina Flötotto, 'Friedrich Wolf and the 'Neues Bauen', in *Edinburgh Architecture Research* (Edinburgh: University of Edinburgh, Department of Architecture), September 2000, vol.27, p.92. She cites Wolf 'Die Luft', p.241.

[157] Anna Fischer-Dueckelmann, *The Wife as the Family Physician* (Milwaukee: The International Medical Book Co. and London: Kegan Paul, Trench, Trübner & Co., 1908), pp.185-186.

[158] How 'white' were Tessenow's buildings? One must be careful not to read the 'colour' white into either the current appearance of his rendered buildings, or into extant monochrome photographs of them. Fabian Zimmermann, architect of the conservation of the *Festspielhaus* Hellerau in the 1990s, and of its partial restoration, has been kind enough to share with me his observations on Tessenow's application of colour on the exterior of buildings:

> Farben: Nun, das ist ein sehr kompliziertes Thema, über das wir alle lange und mit Freude spekuliert haben. So weit ich weiss, gibt es bis heute keine gesicherten Erkenntnisse darüber wie es beim Festspielhaus wirklich gewesen ist. Seinerzeit wurden eine Vielzahl von Thesen erörtert und verfochten. Die unterschiedlichen Anstriche der Pensionshäuser sprechen dazu ihre eigene Sprache: eine einheitliche Meinung gibt es nicht.
>
> These 1: Es war weiß: Das entspricht der ersten gesicherten Farbschicht, widerspricht aber der Erkenntnis, dass Grundanstriche wie zu der Zeit üblich immer weiss waren, aber nie weiss gelassen wurden sondern danach mit einer Reihe andere Anstriche überdeckt wurden. Es scheint aber auch textliche Überlieferungen vom weissen Haus auf dem Hügel zu geben. Sofern ich weiss beziehen sich die aber auf einen späteren Zustand. Sicher ist, aufgrund der Fotos, dass in den 20 iger Jahren tatsächlich weisse Fassungen existiert haben. Ich halte es aber nicht für die Urfassung.
>
> These 2: Es war gelblich. Verschiedene Varianten wurden bei den Pensionshäusern ausprobiert, die alle nicht zufrieden stellend sind. Es gibt zwar eine sehr frühe Farbschicht die dem entspricht, andererseits ist es nirgends vermerkt worden. Da solche gelblichen Farbtöne zu der Zeit schon lange üblich waren, für Schlösser und auch großbürgerliche Villen u.ä., also mit einer klaren Bedeutung versehen waren, würde es mir sehr seltsam vorkommen wenn das von Reformideen durchdrungene Hellerauer Festspielhaus auch einen solchen Farbton gehabt hätte - ist es denn ein Schloß ? Es ist aber nicht auszuschließen.

These 3: Es folgten mehrer Schichten hintereinander die mit ausgedünnter Bürste aufgetragen wurden, so dass die untere Schicht durch die obere noch durchscheint. Die Abfolge der ersten drei Schichten wie vorhanden könnte dem entsprechen. Als letzte Schichten wird ein helles grau angenommen. Auch das ist nicht bezeugt als Farbe für das F[est]S[piel]H[aus], würde aber der Raffinesse und Subtilität Tessenows, wie an vielen anderen Fällen sichtbar, entsprechen.

These 4: Alle Farbschichten sind nachträglich aufgebracht, original war ein farbloser Putz, in diesem Fall möglich da der Putz in sich der Zusammnsetzung eines Edelputzes entspricht und in seiner Farbe aussergewöhnlich wenig grau sondern sandfarben ist, in etwa wie die großen Säulen des Portikus. Wenn man auf die Fotos sieht, merkt man kaum Unterschiede in den Farbtönen zwischen dem Sandstein und dem Putz. Das ist zwar auch mit [Thesen] 2. und 3. herzustellen, würde aber auch der Subtilität Tessenows entsprechen. Wir selber hatten uns (...) für diese Fassung entschieden, weil sie in einem geistigen Sinne am meisten vornehemer Zurückhaltung entspricht und in keine ideologischen Farbdiskussionen eingegriffen hätte. Aber auch das ist nicht bezeugt.

[159] See Georges Teyssot, *Die Krankheit des Domizils: Wohnen und Wohnbau 1800-1930* (Braunschweig: Vieweg, 1989) and Kristiana Hartmann, *Deutsche Gartenstadtbewegung: Kulturpolitik und Gesellschaftsreform* (Munich: Heinz Moos, 1976).

[160] Wilhelm Kreis's *Deutsches Hygiene-Museum* was completed in 1930; its location is at the western end of Dresden's *Großer Garten* at Lingnerplatz 1. It is a building with curious echoes of Tessenow's *Bildungsanstalt* at Hellerau in both its massing and in its use of the imagery of stripped classicism in its entrance front.

[161] Mark Wigley, *White Walls, Designer Dresses* (Cambridge: MIT, 1995). In the passage quoted, Wigley refers to Georges Vigarello, *Concepts of Cleanliness: Changing Attitudes in France since the Middle Ages*, trans. Jean Birrell (Cambridge: Cambridge University Press, 1988).

[162] Heinrich Tessenow, *Hausbau und dergleichen* (Braunschweig: Vieweg, 1986), reprint of 4th edition 1953. German text:

Wenn wir nach den Eigenschaften suchen, die wir heute weitgehend gleichartig für gut oder für erstrebenswert halten, so steht vielleicht die Sauberkeit obenan; wir sind uns sehr uneinig darüber, wie weitgehend unsere Umwelt etwa lustig oder traurig, krumm oder gerade usw sein soll; aber wir wollen eigentlich immer, sie möge so sauber sein wie nur irgend möglich. Es gibt wohl sehr viele Gesichtspunkte, von denen aus die Sauberkeit nicht weiter etwas besonders Großartiges ist; aber wir werden dagegen nur sehr selten oder gar nicht das Unsaubere als Ziel gut sein lassen.
Wir werden überall solche Arbeiten besonders lieben, die einer Forderung nach äußerer Sauberkeit entgegenkommen, ganz gleich, ob es sich dabei um eine Straßenpflasterung oder um unsere Möbel oder Kleider oder um unser Kochgeschirr oder um sonst etwas handelt. Und überall, wo wir in einem Zusammenleben und Zusammenarbeiten mit anderen Menschen die Sauberkeit fordern, bejahen wir uns diese Forderung gegenseitig als sehr selbstverständlich gut, danach ist die Sauberkeit ein besonders gutes Mittel, uns über das Was und Wie unserer alltäglichen oder gewerblichen Arbeiten zu verständigen.

[163] Ibid. German text: "Ebenso wie uns sehr allgemein die materielle Sauberkeit wichtig ist, ebenso wichtig ist uns allgemein auch die Sauberkeit oder die Reinheit unseres Denkens und Empfindens."

[164] Ibid. pp.29-30. German text:

> Wir haben gelegentlich, wenn es sich um die Sauberkeit der gewerblichen Arbeit handelte, von der Hygiene gesprochen, die ja mit der Sauberkeit sehr viel zu tun hat; aber "je nachdem", wenn es uns irgendwie anders besser paßte, so haben wir von der Hygiene auch nicht gesprochen, und tatsächlich ist sie hier auch wohl nicht besonders wichtig; wenn wir uns bemühen, zum Beispiel ein Möbel so auszubilden, daß es in der Benutzung leicht vom Staub zu reinigen ist, und wir betonen dabei, daß es gesundheitlich doch besser sei, den Staub nicht im Zimmer zu haben, so mag solche Begründung uns im Augenblick sehr nützlich sein; aber viel wichtiger ist hier wohl unser Gefühl, das sich gegen den Staub überhaupt wehrt, ohne besondere Rücksicht darauf, ob er gesund oder ungesund ist; die Hygiene ist nur ein Nebenbei. Wenn wir unsere Zimmerfenster putzen, so wollen wir, daß sie in ihren oberen Teilen ebenso sauber und blank sind wie unten; vielleicht ist das Fensterputzen sogar ungesund; aber wir alle halten es jedenfalls für gut.

[165] Ibid. p.20. German text: "Das gewerbliche Arbeiten, das Bauen unserer Straßen und Brücken und Häuser und Möbel usw. ist immer in einem besonderem Maße grobes Arbeiten und so ist ihm die Ordnung besonders gemäß oder notwendig."

[166] " Die Ordnung ist mehr oder weniger immer armselig;" 'Die Ordnung', in Heinrich Tessenow (Otto Kindt, ed.), *Geschriebenes*, p.34; originally in Tessenow, *Hausbau und dergleichen*, p.20

[167] Yet Tessenow's contemporary Otto Wagner clearly had not, as his work in Vienna in the first decade of the century will prove. Neither had the British architect John Outram at the end of the twentieth century. Perhaps the key to understanding their use of applied colour is their extremely free use of the classical language.

[168] See 'Das Ornament' in Heinrich Tessenow, *Hausbau und dergleichen* (Braunschweig: Vieweg, 1986), reprint of 4th edition 1953. German text: "Die eigentlichen Werte des Ornamentes liegen dort, wo auch die eigentlichen Werte des Damenhaften liegen: Es ist besonders wirksam im stillen Lachen (die Dame kann es nicht laut tun), im Spotten (sie ist immer überlegen, aber kann das Bessere nicht greifbar nennen), im Träumerischen (sie träumt immer und fürchtet das Reale) usw.
Das eigentlich Damenhafte – in dem bestimmten Gegensatz zu dem Frauenhaften – finden wir heute nur selten; es fehlt uns dafür an der notwendigen Schätzung, ist unserer Zeit nur sehr wenig gemäß und hat darum für uns nur selten das Überzeugende."

[169] See also Eckhard Herrel, 'Farbe in der Architektur der Moderne', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994).

[170] "Die Farbe hat als Gestaltungsmittel wohl ungefähr die gleiche Kraft, die gleiche Bedeutung, gleiche Geltung oder Wichtigkeit wie die Form.....Viel Form will viel Farbe, und wenig Farbe will wenig Form." 'Die äußere Farbe unserer Häuser', in Heinrich Tessenow, *Geschriebenes*, p.188.

[171] Ibid. p.45. German text: "Die einfachen und stillen Formen ganz ebenso wie die stillen, zurücktretenden Farben sind immer etwas wesentlich Städtisches, oder sind – wenn man so will – immer etwas sehr soziales, [...]"

[172] Fabian Zimmermann has revealed, in the course of conversations with the author, site observations at the *Dalcroze-Institut* into Tessenow's original colour schemes. He believes Tessenow built up bodies of colour incrementally, by applying many coats of paint of progressively darker shades until the desired colour was achieved. Tessenow may well have been designing the colour scheme on the spot by means of trial and error. See note no 158 above.

[173] Mohsen Mostafavi (ed.), *Approximations: The Architecture of Peter Märkli* (London: AA Publications, 2002).

[174] Ibid. p.15. The Kircher referred to is Athanasius Kircher (1602-1680), a 17th century Jesuit scholar and polymath. See Athanasius Kircher, *Ars magna lucis et umbrae* (Rome, 1643; 2nd edition Amsterdam 1671), and Joscelyn Godwin, *Athanasius Kircher: A Renaissance Man and the Quest for Lost Knowledge* (London: Thames & Hudson, 1979).

[175] David Batchelor, *Chromophobia* (London: Reaktion, 2000).

[176] Ibid. p.11.

CHAPTER FOUR: The Grid and the Everyday

This chapter explores the two themes of the grid and the everyday in the context of Tessenow's work. Here, 'the grid' stands for the concept of architectural repetition, while 'the everyday' is the materialist side of the equation within an aesthetic system of the banality of the everyday.[1]

(i) TESSENOW AND THE GRID

This section begins with an overview of the place occupied by the grid in Idealist architecture. It focuses on early twentieth-century practitioners, such as Lauweriks, Berlage and Behrens, and suggests that its translation into building is implicit in the spatial organisation of Tessenow's *Festspielhaus*. It continues, in 'Grids and Frames', to discuss Tessenow's cogent essay on symmetry and regularity, *Hausbau und dergleichen*, published in 1916, as a reflection on his body of work achieved at Hellerau before the First World War. 'Tessenow's Grids' concentrates on the specific device of the pergola. This acts as both a symbol of Reform generally, as well as referring in particular to Semper's element of the tectonic frame.

1. THREE-DIMENSIONAL PLANNING GRIDS

The grid is the most obvious manifestation of the organising power of geometry in architectural design. In the Vitruvian triumvirate of *commoditas, firmitas, and venustas* (commodity, firmness, and delight, in Henry Wotton's version), the existence of a three-dimensional spatial matrix is implicit in the correct positioning of the architectural elements of column, architrave, and arches etc.[2] With Durand's systematic use of a Cartesian matrix in order to govern the disposition of spaces and architectonic elements in the early nineteenth century, the grid assumed an ever more pragmatic, codified nature.[3] It became a ubiquitous blueprint governing the layout of all kinds of public buildings, and personified the universalising aspect which the hold of the *Beaux-Arts* had over architectural design.

The efforts of architects concerned with geometry at the turn of the century were aimed at rediscovering the pure spirit of mathematical relationships in

architecture, and to reclaim the significance of geometry from the pragmatics of rational and economical building layout.[4] Durand established the *Ecole des Beaux-Arts* practice, whereby a systematic use of squared paper established the grid as a useful device which rationalised the planning, structural design, and construction of complex civic buildings. The grid, therefore, lost its idealist component, which it had had in the hands of architects of the preceding generation, such as Friedrich Gilly in Germany and Claude-Nicolas Ledoux in France, and became a purely pragmatic, operational tool. (Idealist concerns found alternative outlets for expression, most particularly in the question of the style to be applied to the rationally gridded building scheme. The obvious example of a notable *cause célèbre* in the 1830s is Charles Barry and A. W. N. Pugin's competition entry for the Houses of Parliament, London (1834). In this scheme Barry's layout might have been expressed in any of the prevailing stylistic garbs; Pugin supplied the Gothic Revival dress which met with client approval.) One of the key developments by the turn of the century was to question the dissociation of 'plan' (in its broadest sense of organisational scheme underlying a building design) from 'expression'. In doing so, a significant number of architects sought to find a new meaning for the grid, in order to elevate it from its purely pragmatic function into the realm of the Ideal.

Tessenow belonged to this group of architects, as any close inspection of his plans, sections, and elevations will show.[5] His interest in the pure spirituality of the grid, i.e. the grid as a three-dimensional expressive device inherent in the building's aesthetic system as opposed to a mere organisational tool, is a key aspect separating him from his fellow-architects involved in designing *Gartenstadt* Hellerau, Hermann Muthesius and Richard Riemerschmid. These figures were, broadly, more interested in the materialism of style, the import of a *behaglich* (comfortable) English Arts and Crafts style, in the case of the former, and the search for an authentic Southern German *Heimatstil* in the case of the latter, than in the universal, purely architectural significance of geometry, repetition, and proportion, as was the case with Tessenow.

The reemergence of the significance of the grid is usually attributed to Dutch architects around the turn of the century.[6] The main figure was Johannes Ludovicus Mathieu Lauweriks (1864-1932), who in 1904 started

teaching at the Düsseldorf School of Arts and Crafts, having been invited there by Peter Behrens. Lauweriks, according to his main interpreter, Nic. Tummers, was the conduit by whose means largely Dutch theosophical ideas concerning the significance of number and proportion in the visual arts were transmitted to wider German professional circles.[7] Hanno-Walter Kruft maintains that there is a relationship between late nineteenth-century biological ideas concerning the natural growth of organisms and the design of architectural space according to geometrical proportioning systems: "Starting from a grid system based on the circle and the square, Lauweriks evolves a proportioned 'symbolic geometric original figure' (*Entstehungsfigur*) capable of being assembled from system cells in the same way as the subdivided organic cell-structure found in nature. These system cells are constructed according to Classical mathematical proportions and accumulate their matter in obedience to the needs of the architectural organism."[8]

Lauweriks invariably made use of squared paper in his drawings. **(Fig. 4.1)** This was not unusual in itself; what is noteworthy is the fact that the square cells of graph paper, which all architects would have used at that time as faint underlays in order to facilitate architectural planning, remained as highly visible guidelines in 'final' drawings.[9] In Lauweriks's architectural renderings the means of production were foregrounded; it was not long until a similar manifestation of hitherto hidden or cryptic props was seen in actual buildings. (In other words, the frame would break the confines of its hitherto skeletal banishment and begin to be made visible to the building user as an aesthetic device. But this is to anticipate later developments in architecture.)

In his *Stirnband* development in Hagen (1910), Lauweriks's use of squared paper in tartan grid format is telling and allows a geometric discipline to permeate down to the actual thickness of materials. **(Fig. 4.2)** The echelon of the staggered site plan at Hagen is reiterated, at a smaller scale, in the right-angled twists and turns of coping stones, and of the format of the house elevations themselves. **(Fig. 4.3)** This patterning would appear to presage the monochrome grids of Piet Mondrian.[10]

It is the architect Le Corbusier who provides an intriguing link between the prevailing Dutch ideas of proportion and contemporaneous developments in German architecture, including Tessenow's work at Hellerau.[11] He is the

twentieth-century architect who most famously espouses the cause of proportional systems. His notebooks testify to the debt he owed to German design of the Wilhelmine period.[12] Richard Padovan and H. Allen Brooks have both sought to emphasise the formative importance Lauweriks had on the young Jeanneret.[13] In particular, Le Corbusier's reference to a villa at Bremen belonging to one 'Thom Brick' has been attributed to the house of Thorn Prikker, Stirnband in Hagen (1910) designed by Lauweriks.[14] **(Fig. 4.4)**

Proportion was one of Le Corbusier's many architectural interests. He is also the twentieth-century architect who perfected the art of public relations. In today's parlance, he might be termed a master of spin. What he chose to publish – or even record in his private *carnets* – has to be balanced against what he refrained from speaking about. His notebooks barely mention his acquaintance with Tessenow, although Brooks has established that he had been offered employment with him on the Dalcroze Institute project. This is highly significant if we are to subscribe to the latest view of Le Corbusier as a consummate self-publicist, obsessed with controlling others' views of him as a creative genius. Current scholarship suggests that Le Corbusier suppressed many aspects of his early career in order to aid the myth of his unalloyed genius: this has contributed to the relative eclipse of figures such as Tessenow whom the young Jeanneret had met on several occasions in Hellerau. It is one of the tasks of this study to give a more complete picture of the highly significant events in Germany in the years before the First World War.

Heinrich Tessenow, on the other hand, whilst sharing Le Corbusier's interest in publicity, always kept it in proportion, never allowing considerations of image to override design decisions. As the architect Giorgio Grassi said of him and his work, "Tessenow's entire architectural teaching is contained within the four walls of that symbolic and infinitely repeated single-family house which he built around him. There is a correspondence between the house and the man. He always seeks to direct attention away from himself to the subject of his work; and in this he succeeds very well since, in the end, there is nothing we can say about *him*, and the entire work has cost us a minimum of effort. Nor do we feel cheated on this account."[15]

Giorgio Grassi's hymn to Tessenow, his respect both for his reticence and for his lack of any self-aggrandizing vainglory, represents a homage to both

the man and the qualities reflected in his architecture. Frederic J. Schwartz, in his book on the *Deutscher Werkbund*, talks of Cologne 1914 as a watershed; what I wish to suggest here is that Dresden in the period immediately prior to the outbreak of hostilities marks a similar point of departure for architecture, one which was not nearly so well *orchestrated.*[16] The events on the Elbe were not advertised to the same extent as those on the Rhine, nor did they feature as prominently in the subsequent mythology of design history. To borrow another, more apt, metaphor from geography, Dresden appears as a flood plain, rather than as a watershed, in architectural and cultural history, a place where the various streams of incipient modernism converge and intermingle. Come 1918, the remnants of incipient modernism would lie, like so much flotsam and jetsam, on the drained flood plain of the post-war world. This was the *tabula rasa*, the blank sheet, on which the new architecture of the (Weimar) Republic would be written and drawn. If the grid stands for architectural repetition, as was stated at the start of this chapter, then by extension it may be said to stand for repetition in the sense of its publication in various media.

According to Padovan, grids may lead to what he terms either an "open" or a "closed" architecture.[17] An open architecture is one suggestive of movement and development: the architecture of De Stijl is its epitome. A closed architecture, on the other hand, is 'perfect' in itself, admitting of no further development. Le Corbusier's *tracés régulateurs* (regulating lines) underlying the designs of his buildings lead (in Padovan's terms) to a closed architecture.[18] In an 'open' architecture any implicit framing of the architectural object is destroyed. Where does Tessenow stand in relation to this duality? His building plans, certainly, are perfected geometric schemes, prime examples of closed architecture. One thinks of the layout of the *Festspielhaus*, with its perfectly judged juxtapositions of rectangles. One could no more think of adding a bay here or there, as one might consider tampering with Le Corbusier's Villa Savoye, Poissy (1930). And yet one thinks again of the numerous examples of additive pergola structures which characterise the way Tessenow grounds his otherwise uncompromising cubic volumes in their sites. Here an open architecture, at least as far as concerns the siting of buildings, has been achieved (see 'The Aedicular' later in this chapter). 'Proportions' are

used merely to set up the dimensions of the planning and structural grid; they have no practical or idealist use beyond that. If an open architecture is one of universal ambitions, then its opposite represents the architecture of individuality. This brings us back directly to the early twentieth century, when individuality was regarded, at best, as outmoded and at worst, as decadent. One only has to think of the critical reaction to the excesses of Art Nouveau in France, Austria, and Belgium. Indeed, Richard Schaukal, author of one of the many books in favour of *Sachlichkeit* (realism), wrote, "The evil which bedevils our age is called individualism".[19]

What is the significance of proportion for architecture? According to Rudolf Arnheim, on perceiving any organism such as a building

> we acknowledge that the organism has certain general biological needs. It requires clarity and simplicity for the purpose of orientation; balance and unity for tranquility and good functioning; variety and tension for stimulation. These needs are better satisfied by some patterns than by others. The square and the circle are simple and balanced. A slight deviation from a simple shape is ambiguous, hard to identify. A rectangle of the ratio 2:1 may disturb us by pretending unity and rectangularity while threatening to break up into two squares. The proportion of the golden section – in which the smaller part is related to the larger as the larger is related to the sum of both, and which yields a ratio of roughly 8:5 – may successfully combine unbreakable unity with lively tension.[20]

For Arnheim, the Vitruvian triumvirate of commodity, firmness, and delight are clearly satisfied by good proportions. However, while he (and other advocates of proportion) is primarily motivated by the need to rationalise 'delight', he nonetheless recognises the organisational, pragmatic, and tectonic ramifications of designing with a sense of proportions, which is to make use of grids in the planning of buildings. The grid is, if one likes, the materialist counterpart to the ideal of proportion.

As Iain Boyd Whyte has pointed out, 1893 (the *annus mirabilis* of German architectural writing referred to earlier) was also the year of the first edition of a new Dutch architectural publication, *Architectura*, which opened with a leading article by Willem Kromhout, 'Het rationalisme in Frankrijk' (Rationalism in France). A year later Lauweriks (together with K.P.C. de Bazel) joined the Dutch *Theosofische Vereeniging* (Theosophic Union). Boyd Whyte writes:

> In the theosophical gnosis they saw a means of combating the spiritual decline of the nineteenth century: aesthetic sensitivity rather than blind faith would provide access to the secret laws of nature, with systems of geometry, proportion, and color yielding an insight into the physical order of the universe. On the basis of this knowledge, the artist could create works on the microcosmic scale that echoed the structures of the universe.[21]

Proportioning systems were not new. German architects of the late nineteenth century who had read their *Handbuch der Architektur* (Handbook of Architecture) would have been familiar with August Thiersch's illustrated article on proportion (published in 1883), which dealt both with its mathematics and with its application in architectural dsign. Thiersch is unequivocal on the benefits deriving from the application of proportion: "We have found, in observing the most successful products of art in all important periods, that in each of them a fundamental shape is repeated, and that the parts form, by their composition and disposition, similar figures. Harmony results from the repetition of the fundamental form of the plan throughout its subdivisions."[22]

Berlage's Stock Exchange building in Amsterdam was a crucial building that acted as an exemplar to a wide cross-section of German architects. **(Fig. 4.5)** It was lauded for both its theoretical content, as well as for its demonstration of mastery of construction techniques. Iain Boyd Whyte has written that "[Berlage's] Stock Exchange is a parable of Berlage's social theories, with individualism, greed, and mendacity giving way to higher aspirations of community and equality. Out of the temple of Mammon was to emerge the Volkshuis, or temple of the people."[23] However, it also functioned as an object lesson in how to apply simple proportioning systems to complex building projects: "Among the regulating figures that emerged from these studies [in the circle around Berlage at the time of the design of the Stock Exchange] were the Egyptian triangle – an equilateral triangle with a base-to-height ratio of 8:5 – and the right-angle triangle with sides in the ratio 3:4:5. A further important figure, favored by De Groot, (Jan Hessel de Groot taught at the Quellinus School in Amsterdam and developed proportioning systems based on the triangle) was a rectangle inscribed inside a circle, which was itself inscribed within a larger quadrangle, giving a ratio between the sides of the larger and smaller rectangles of $1:\sqrt{2}$."[24] Wilfried Wang specifically links Berlage with Behrens in their use of a 'geometrical matrix' to organise the

design ranging from small artefacts such as light-fittings to entire buildings. He identifies the zoologist Ernst Haeckel as the main source in the German-speaking world for supplying the biological analogy for such geometrically based design, with the publication in 1899 of his book *Kunstformen der Natur* (Nature's Art-Forms,): "The designs of Berlage and Behrens for lamps and other household appliances, for example, adopted Haeckel's geometric matrix of the circle inscribed in the square. This matrix did not only allow the industrial products to be 'typified' (a key aspiration of the *Deutscher Werkbund* founded in 1907), but buildings, too, were endowed with an explicitly geometrical order."[25] Wang illustrates this point with a chandelier design of Berlage's which derives directly from Haeckel, **(Fig. 4.6)** as well as an AEG publicity poster by Behrens, showing a light bulb inscribed within a circle and a triangle. **(Fig. 4.7)** The architect Fabian Zimmermann, on restoring the entrance foyer and staircases of Tessenow's *Festspielhaus* in Hellerau, discovered similar geometric principles in his research.[26] **(Figs. 4.8 and 4.9)**

For Berlage, proportion is more a property of the visual sense, with its harmonies most clearly perceived by observing the subdivisions of a flat surface. This sits rather uncomfortably with his 'modern' stance of espousing 'architecture as space' in Schmarsow's sense, as can be seen from his 1908 lectures in the Arts and Crafts Museum in Zürich:

> The art of architecture resides in the creation of space, not in the design of facades. A spatial enclosure is produced by walls, and thus the space or the various spaces find external expression in a more or less complex arrangement of walls. It is also important in this sense that the walls should remain flat, for an overarticulated wall loses its intrinsic, wall-like character. By *sachlich*, clear work, I mean that the architecture of the wall remains two-dimensional decoration, that the projecting elements are limited to those offered by the construction, such as window supports, water spouts, gutters, single cornices, and so on. It follows from this so-called wall architecture, in which vertical articulation disappears of its own accord, that the vertical supports such as piers and columns are not given projecting capitals, but rather that the development of the transitions are developed within the wall. The windows form the true decoration of the wall plane; they are installed only where necessary, and then in appropriate sizes.[27]

The flat, planar architecture of both Behrens and Tessenow is evoked by this passage, which appears to be a debt to the sculptor Hildebrand's notion of the

importance of planarity (discussed here in Chapters Two and Three).[28] Berlage continues in Semperian mode:

> We architects must also first study skeleton, just as painters and sculptors do in order to give their figures the correct form. For the cladding of every natural object is, so to speak, an exact reflection of the inner skeleton, which, in that it presents us with the most perfect construction, can be called a work of architecture. But logical construction is the dominating element here, and the cladding is not a loose covering entirely negating the construction like a badly fitting suit but is totally rooted in the inner building and is ultimately a form of decorated construction.[29]

The reference to the badly fitting suit, of course, relates to Adolf Loos's sartorial stance on architectural criticism.[30] The wall becomes for Berlage the primary surface for establishing harmonic proportions, and for expressing a building's tectonics:

> The ordering and articulation of the wall surface, therefore, is of the greatest significance, as it must reflect both the practical disposition of the internal spaces and the artistic volition that turns a shed into a work of art. To reconcile these potentially conflictingt demands, Berlage turned to geometry as a way of uniting both plan and the elevation under one ordering system. "Unity in diversity" was to be achieved - at least on the drawing board - by geometric means.[31]

Whyte views Wagner and Muthesius, together with Berlage, as forming the triumvirate representing the 'architectural conscience of Europe in the years leading up to World War 1'.[32] As for Tessenow, he, like Berlage, "sat in the mainstream of modernist ideological thought, which did not aspire to seize the means of production by force but aimed instead to avert social revolution by improving the living and working conditions of the laboring classes."[33] Berlage would seek to apply the 'universal' tools of proportion to benefit the 'common man'. However, since proportion is, for him, largely a visual matter, it should not merely be applied to practical projects. The Reform architects of the pre-war period in Europe would also exercise their skills in the design of utopian schemes which had little chance of being realised. When it came to designing a 'temple' to Beethoven,[34] Berlage wrote:

> By neutral forms I mean a logical construction so that the architectural impact – and it is here that the focus should lie – is the exclusive result of noble proportions, simple lines, and pure construction. And this truly demands no mediocre architectural skills. On the contrary, it demands the

> very highest, since the other expressive means are excluded. It is self-evident that this does not imply the pedantic exclusion of all decoration, but, rather, that the decoration must be totally subordinated to the actual architectural composition, so that when one is in the auditorium, no single element stands out that might cause distraction.[35]

How much more pregnant are these words when applied to Tessenow's *Festspielhaus* in Hellerau! This interpretation of Berlage's wider ideological aims regarding the relationship of individual building to the community in which it is set is also obviously applicable to Tessenow in the context of Hellerau:

> In setting up a dialectical relationship between the beautiful and utilitarian, on the one hand, and the sublime and transcendental, on the other, Berlage resolved the problem that had dogged his aesthetic wranglings in the 1880s. His own work in the period around 1910 followed this pattern, with well-designed and undeniably attractive housing complemented by essays on the architectural sublime. In establishing this dialogue, he prefigured much of the theorizing of German Expressionist architecture as it evolved between 1914 and 1920, which also proposed spectacular systems of spiritual elevation surrounded by modest, almost traditional housing.[36]

Practical architects (amongst whose number we are bound to include Tessenow), in employing proportional systems in their design praxis, will seek to be systematic in their use. The grid and the frame, discussed in the next section, are the tools developed for this purpose. It is here that we shall observe the ways in which Tessenow employed idealist grids in architectural design in ways which accord fully with Berlage's stipulations of 1905 in his *Gedanken über Stil in der Baukunst.*

2. GRIDS AND FRAMES

Tessenow's architecture of *sachlich* organisation and uncluttered elements is founded, to a large extent, on his extensive use of the grid and manipulation of framing devices. His designs deploying planar elements (which find their locations according to a three-dimensional rectilinear matrix) have ample recourse to the organisational powers of the grid. The mathematical, abstract qualities of the grid are tempered, though, by Tessenow's judicious placing of

interruptions to the planes which 'fill in' the grid: the framed openings of doors, windows and fittings.

Grids and frames formed the foundation of the young Tessenow's design vocabulary. This dates back to the early years of his carpenter's apprenticeship, to matters aesthetic which were initially inculcated during his early period spent in Munich, principally spent working in Martin Dülfer's office. Dülfer had collaborated with the architects Rudolf Alexander Schröder, as well as with Paul Ludwig Troost (1878-1934),[37] in designing the interiors of the Heymel apartment, Munich (1899–1901). **(Fig. 4.10)** Here, the grid and the frame become a device of almost superficial decoration, with squared mirror-glass, ceiling grids, and so on, filling every available plane.[38] This use of the grid as decorative motif would be exploited by the Viennese Jugendstil architects, most particularly Josef Hoffmann, to great effect. These excesses would be tempered by Tessenow in a manner which is almost Loosian in its understatement. The regularly spaced, simple windows of Tessenow's terraced houses '*Am Schänkenberg*', 1910 **(Fig. 4.11)** share a similarity with the fenestration of Adolf Loos's *Haus am Michaelerplatz*, Vienna, of the same year. **(Fig. 4.12)** Both architects aspired to use the grid either as an underlying organising principle, as these examples show, or as applied motifs with constructional or other functional uses. One might compare Loos's square-gridded coffered ceiling of the American Bar, Vienna, **(Fig. 4.13)** or the gridded, coffered ceilings of Behrens's Wiegand House, Berlin, (1911-1912), **(Fig. 4.14)** with Tessenow's gridded layout of pendant light fittings in the stairwells of the Dalcroze Institute, Hellerau. **(Fig. 4.15)** In all cases the grid is used to reinforce, rather than de-emphasise, spatial design, as is the case with Hoffmann's applied patterns.

We have discussed the overt framing mechanisms employed in architectural design: proportional systems, regulating lines, and so on. These are applied systems of abstraction, which aid the design of architectural space. The other kind of framing device used in architecture is the concrete, experiential one of the opening in a plane: the door or window. Beatriz Colomina refers to the *querelle* between Perret and Le Corbusier concerning the vertical or horizontal window: "Perret's window corresponds, as [Bruno] Reichlin has shown, to the traditional space of perspective representation in

Western art. Le Corbusier's window corresponds, to the space of photography."[39] For Colomina, Perret's architecture "falls within the humanist tradition and Le Corbusier's within the modernist "[40] And yet photography, relying as is does on single point perspective vision, is far closer to the 'humanism' of perspective drawing than the abstractions of orthographic projections such as plan, section, elevation, and, of course, the axonometric, that convention of drawing so favoured by Le Corbusier.[41] This paradox will be further elaborated in Chapter Five ('The Historiography of Tessenow') where I will take issue with K. Michael Hays's 'post-humanist' critique of Tessenow. Rosalind Krauss has described the grid as one of the defining tropes of the modernist aesthetic. Its chief characteristic is for it to be marvellously self-referential:

> Unlike perspective, the grid does not map the space of a room or a landscape or a group of figures onto the surface of a painting. Indeed, if it maps anything, it maps the surface of the painting itself. It is a transfer in which nothing changes place. The physical qualities of the surface, we could say, are mapped onto the aesthetic dimensions of the same surface. And those two planes – the physical and the aesthetic – are demonstrated to be the same plane: coextensive, and, through the abscissas and ordinates of the grid, coordinate. Considered in this way, the bottom line of the grid is a naked and determined materialism.[42]

But for Krauss the grid balances its pragmatic and materialistic nature with an emblematic show of spirit. The modernist grid, Cartesian, absolute and infinite in its extension, is fundamentally different in nature from earlier, pre-modern versions, dependent as they are on measurements which are relative, both to each other, and more importantly to the human frame. As Erwin Panofsky wrote, "The styles that may be grouped under the heading of 'pictorial' subjectivism – the styles most eloquently represented by seventeenth-century Dutch painting and nineteenth-century Impressionism – could do nothing with a theory of human proportions, because for them solid objects in general, and the human figure in particular, meant little in comparison with the light and air diffused in unlimited space."[43] If, as Marx famously said, "All that is solid melts into air," then the locations of solid particles, dispersed throughout the atmosphere, need to be given by the commensurate numbers of an objective, materialist grid. (Whole numbers such as these are needed in order to

describe the three co-ordinates of three-dimensional space without which the precise locations of particles subject to Brownian motion are impossible to ascertain.) Such a grid, in contrast to the incommensurate relativism of Antique and Renaissance theories of aesthetics and manuals of art, favours no one object over any other, and suggests instead a sort of egalitarianism of things in the constructed and depicted world.

Early twentieth-century architecture began to deal with growing confidence with the abstraction of the grid: in other words the grid began to be accepted for its own intrinsic value as a standard of truth, rather than as a mere tool aiding the disposition of architectural elements. However it could not free itself – yet – from the subjective relativism implied by an underlying theory of proportions.[44] An example to substantiate this view might be a significant London building of the period: Daniel Burnham's *Selfridge's* department store of 1908. **(Fig. 4.16)** The three-dimensional gridded logic of its steel-frame structure is hidden behind an impeccable giant order of Corinthian columns rising from the ground floor base comprising display windows. The aesthetic scheme is totally at odds with the underlying structural rationale. The logic of the Cartesian grid, which would lead in the 1920s to the aesthetic system of Mies van der Rohe, and the constructional basis of Gropius's work, could not yet be jettisoned from the cultural legacy of proportioning systems. Tessenow's explicit deployment of gridded elements – the squared pattern of the layout of light fittings in the *Festspielhaus* entrance hall, or the squared trellises applied to external wall surfaces of houses – is the evidence of his desire to incorporate the grid of commensurate measurements with the spatial patterning of suites of classically proportioned rooms.

So far we have talked of frames and grids as if the two terms were interchangeable. They are not. The implicit relationship of frame to grid stands in contrast to their explicit differences. At one level, the grid could be viewed as a mutiplication of separate frames, so that the frame appears as a subset of the grid. At another level, the frame could be regarded as something man-made, or some supernatural organising system, imposed on a 'natural' terrain composed of individual 'frames'. On yet another level, the frame implies the

presence of a centripetal force, focussing attention towards whatever lies within, a still centre of repose, whereas the grid is endowed with a corresponding centrifugal force which implies outward thrust, a dynamic force. The frame, as isolating device, stands in contrast to the grid, which wants to unify.[45]

Karl Ernst Osthaus (1874-1921), the great patron of the *Deutscher Werkbund* in general terms (and of the architects Lauweriks, Behrens, and Van de Velde in particular) equated the conventional picture frame with the need to 'frame' any commodity which comes onto the market, "[T]he mystery of the marriage of the buyer with the commodity requires concentration. It must employ all means to isolate the commodity. Above all, the window needs a frame."[46] The frame elevates the commodity to the status of the artwork.[47] With the interior of the *Festspielhaus*, Tessenow removed the traditional frame, the proscenium arch, which separated performers from audience. A 'frame' of sorts persists: it is the light-box which envelops everyone. The removal of the framing device of the proscenium arch (or, more accurately, 'portal') does not mean that the two sides of the equation, in the case of the *Festspielhaus* the performers and the audience, are one and the same: the inherent hierarchies are maintained, such that members of the audience and of the performers know who they are, and indeed even within the audience the hierarchy of priveleged and less privileged seating positions (front of stalls, the 'gods') are maintained. As Beatriz Colomina would have it, "[framing is the] strategy of physical separation and visual connection."[48]

Experience of Tessenow's buildings, and examination of his drawings, would suggest that he was an architect obsessed with questions of symmetry and systems of proportion. Yet he approaches the question of proportion only once directly in his writings. In *Hausbau und dergleichen* (House-Building and such things) he has a chapter entitled 'Regularity and Symmetry in particular' (*Die Regelmässigkeit und besonders die Symmetrie*).[49] With the aid of twelve simple line drawings he discusses proportion in an intuitive manner. **(Fig. 4.17)** He uses terms such as "lively", "dead", and "empty" to describe good or bad examples of symmetry. His motto at the end of the chapter summarises this intuitive, quasi-mystical approach to symmetry: "Symmetry is the better,

the harder it is to find the axis".[50] It seems likely that Tessenow viewed proportion instrumentally, in the same way that his contemporary Behrens did. As Francesco Passanti has observed, "Behrens used proportional systems expressively, or one might say musically, to set a theme and then play on its variations, to set a rule and then willfully break it, to set up several clashing rules and then willfully reconcile them. The expressiveness of Behrens's proportions lies in the *structure* of the proportional system, not in any intrisic quality of a particular proportion [...] Behrens was singlemindedly interested in *Wirkung*, the visual effect on the viewer, and had eclectically integrated into that concern techniques taken from Viollet-le-Duc's Dutch followers J.L.M.Lauweriks and Berlage, as well as from Thiersch, and others."[51] Scrutiny of Tessenow's drawings, and reading the rare passages which he devotes to proportions, lead one to the conclusion that he, like Behrens, was interested in their effect and not, like the obsessive Lauweriks, with their inherent rules of generation.

3. TESSENOW'S GRIDS

The three-dimensional planning grids discussed above are immaterial: lacking substance, they are 'Idealist' constructs that are useful to architects in setting out buildings. The most material they ever get are the thin pencil traces delineating gridlines. Tessenow's architecture abounds, however, in applied grids of almost graphic simplicity. They manifest themselves as two-dimensional trellises applied to the external walls of buildings, or as three-dimensional pergola structures. They are, in effect, proportion made manifest in the tectonic ordering of a building. Mohsen Mostafavi has described the effects of proportion which the Swiss architect Peter Märkli used on an apartment block in Sargans (1986):

> The shifts in the alignment of the pillars mask the divisions of the apartments behind the loggia, thereby reinforcing the sense of a single volume, a large house. The rhythm and proportion of the pillars, in contrast to the blankness of the base and the position of the entrance, create a dynamic field – one in which the eye is perpetually shifting, like the pillars, seeking a moment of equilibrium.[52]

> During one of our conversations, Märkli makes a quick sketch of a square. Three of its angles appear to be at ninety degrees but the right side of the square cirves slightly to meet a shorter bottom side. The sketch has produced an imperfect square. Märkli then points out how important he thinks it is to translate this square into architecture. This, as he points out, is not to be done literally but in a manner that is still able to convey the square's particular qualities.[53]

Märkli, recipient of the Heinrich Tessenow Prize in 2000, is clearly working in the same visually intuitive manner as Tessenow did in the early twentieth century. For instance, his warning against any overemphasis of the central axis is based not on any canons of proportion, but on the visual clarity, one could say the incommensurate, innate beauty, which results from such a method. In *Hausbau und dergleichen* he warns against "[t]he piling-up of individual forms about the axis of symmetry, as the example shown in Figure 5 suggests, [which] always indicates a strong indulgence of axial requirements and tends towards paralysis; straight away something dead or empty is introduced, in spite of the variety of forms, while a symmetrical elevational drawing – say as shown in Figure 6 – with its few features of interest at the edges of the image, invariably possesses a restrained sense of movement."[54]

This is not to say that Tessenow did not avail himself of simple geometrical devices in order to set out his terse plan and elevational patterns. Marco de Michelis illustrates studies by Stefania Bellabarba and Danilo Coletti showing how such simple additions of squares and circles set out the principal parts of Tessenow's *Einfamilienhaus am Schänkenberg*.[55] **(Fig. 4.18)** These are precisely the kinds of diagram taught by Lauweriks at Düsseldorf in the first decade of the century.

The new emphasis on space as an architectural category arose in the 1890s as a direct result of the three publications in the *annus mirabilis* of 1893.[56] Tessenow, in his writings, makes no direct reference to these works; however, the visitor walking through his spatial sequences can have no doubt of their deliberateness of design. Latent in the series of house designs, it was not until completion of the Dalcroze Institute that the full power of his mastery over three-dimensional rhythmic space could be detected. Tessenow was undoubtedly encouraged in this by his close association with his patron Dohrn, and his colleagues Jaques-Dalcroze, Appia, and von Salzmann. This, the first

significant collaboration between the young architect and other artists, led to an exchange of views in which all the arts represented were enriched. Karl Lorenz recounts that, as a young student in Munich, Dohrn was most impressed by Theodor Lipps's lectures. Lipps, let us recall, was a leading exponent of 'psychological aesthetics':

> He views musical rhythm psychologically with the teaching of the constant tension and relaxation cycle of the spiritual condition, such that the rhythm relates to the tendency to conserve the already started cycle; this disposition in favour of the subject enables one to empathise with the rhythm, which itself corresponds with the soul's need for order.[57]

Lorenz goes on to explain the effect the Dalcroze method had on musical education: it was to change it forever. Hitherto, one would rely on the eye's seeing a note and translating it by an almost involuntary hand action to the production of the note on an instrument or through the voice; now the body would experience the music through its movement in space. **(Fig. 4.19)** It brought in train the 'internalisation' of the music, such that it was 'felt' rather than merely read and mechanically reproduced. **(Fig. 4.20)** Jaques-Dalcroze set out his method in 1906; what is extraordinary is its applicability to architecture, which could easily be substituted for the word 'music' throughout the text.[58]

Adolphe Appia tells that Behrens was the architect initially earmarked to design the Dalcroze Institute;[59] he surmises that due to his large workload, in particular his burgeoning commissions for the AEG in Berlin, his engagement was not feasible. It is striking that Jaques-Dalcroze's initial idea for his school seemed to have Behrens in mind: "A framework analogous to that of a railway station, with at the end, vaulting the space at the left and right hand sides, pillarless arches so as to enable one to go directly from hall to hall, without being hindered by pillars [...]" [60] Could he have been thinking of the AEG Turbine Hall in Berlin? **(Fig. 4.21)** This was on site in the spring of 1909; Jaques-Dalcroze could easily imagine its great glazed gable front sliding open (the pylons set back from the plane of the 'pediment' would seem to allow it to do so). Indeed, Marco de Michelis recounts Dalcroze's letter to Appia in 1910, in which he proposes to engage "Germany's best electrician, a certain Behrens."[61]

It is clear from the above that Tessenow employed methods similar to Berlage's in order to find the 'correct' proportions to three-dimensional space, and by extension, to relate in scale terms the parts of a buiding to its overall disposition. (The relationship of the four-pillar gable with its end walls has an obvious similarity to the figure of the four masters' houses and the end blocks, which form the return to the square in front of the Dalcroze Institute.) Use of proportional grids is not the same, however, as their overt expression. Tessenow was loth to make explicit the presence of an underlying grid. He would have known of Bruno Taut's exhibition pavillion for the *Träger-Verkaufs-Kontor* **(Fig. 4.22)** at the *Zement-Kalk-Industrieausstellung*, Berlin (1910). Here, the masonry building of the pavilion itself, designed in vaguely Romanesque style, sits within an open gridwork of steel beams and columns. The effect of separating out, in so extreme a manner, the tectonic from the stereotomic, is startling. In later pavilion designs, Taut would fuse the two modes of expression, as in the Monument to Iron **(Fig. 4.23)** at the *Internationale-Baufach-Ausstellung*, Leipzig (1913), and most famously at the Glass House **(Fig. 4.24)** in the Werkbund Exhibition, Cologne (1914).[62] In Tessenow's post-war work, such as the Swimming Pool, Berlin-Mitte (1927–1930), the tectonic grid of the pool hall is expressed 'honestly' in contrast to the flatness and relative anonymity of its *Lochfassade* exterior. With the *Landesschule*, Klotzsche (1925–1927) the notional tectonic frame is present as an implant on the building's (courtyard) facade. **(Fig. 4.25)** This seems to be the recapitulation of the aesthetic of the *Gartenlaube* (pergola) imposed on the (stereotomic) building. In both cases the 'honest expression of structure' takes place on the 'inside' in a dichotomy which might best be summed up as 'outside simple, inside complex'. This is, interestingly, exactly the position Adolf Loos arrived at in the dichotomy of inside and outside. With Tessenow, it is present in embryo in the *Festspielhaus*, where the relatively conventional exterior 'hides' interiors of stunning originality.

All this is a long way from both the intention and influence of the seminal building project exactly contemporaneous with Tessenow's Hellerau *Festspielhaus*: the *Fagus-Werk*, Alfeld an der Leine, designed by Walter Gropius and Adolf Meyer (1911–1914).[63] **(Fig. 4.26)** Gropius was true to his membership of the 'artistic' faction of the Werkbund: for all its industrial

aesthetic, the building actually housed administative offices; the assumed column structure turns out to be of brickwork; the 'striped' brick elevations show a debt to Behrens's work for the AEG Turbine Hall in Berlin; and, most persuasively, the image of the building was perpetuated and used commercially in order to advertise the products of the factory. Max Hertwig's ink drawing of the Works, dated 1911, **(Fig. 4.27)** and based, consequently, on the architects' drawings, is executed in a similar vein to Lucian Bernhard's image of the *Festspielhaus*, used in a poster to advertise the Orpheus production of 1913 (see Fig. 1.12). Gropius was far more knowing in his use of architecture as a medium of communication; Tessenow much more straightforward. He exposed the classical repose of the *Festspielhaus* as opposed to the actual architectural innovations of its interior, whereas the Hertwig image distorted the scheme, rendering it in a false tectonic guise.[64]

Tessenow's 'framing' distinguishes the tactility of his designed or chosen artefacts of furnishings and fittings from the spare grid of his spaces. This is in contrast, say, to Josef Hoffmann's appropriation of the grid, where it dominates the entire spatial continuum of his architecture. Tessenow distinguishes the visual abstraction of the grid from the softened forms of everyday, haptic experience. For Hoffmann, "[f]urniture is made to take on the same quality as spaces themselves; there is nothing "sculptural" about it, nothing that reveals any contrast between the space and its occupant ...For Hoffmann, space and furniture are part of the same whole. They *are* its inhabitants."[65]

There is, in fact, one artefact which continuously engages Tessenow over the entire span of his career in which the frame and the framed, as it were, elide. This is the *Gartenlaube*, the pergola attached to the house and extending its space into the garden, which becomes in Tessenow's hands a means of contextualising object buildings within their sites. **(Fig. 4.28)** This is a fine example of frame *qua* centrifugal, abstracted matrix coinciding with a frame with a centrifugal, space-defining function. To paraphrase Aldo van Eyck, it is an example of both space-making and place–making.[66] It is instructive to compare Tessenow's use of the pergola, or even Behrens's, with Charles-Edouard Jeanneret's effacing of the pergola of the Villa Schwob, La-Chaux-de Fonds (1916) in the photograph published in *l'Esprit Nouveau*.[67] (Colomina recounts how Le Corbusier was embarassed by a pergola structure

that he had designed for the house.[68] In subsequent publications illustrating it he had it airbrushed out of sight. What offended was perhaps the clear reference it suggested to the kinds of garden structure he would have been familiar with, from his journeys to Germany in 1909 and 1910, from his acquaintance with the work of Behrens and Tessenow. In writing his own history he had a need to distance himself from advanced architecture in Germany, in order to appear the more 'original' from the perspective of the 1920s.) For Tessenow, the pergola is a framing device, both literally and figuratively, a means of relating building to site context. (The other kind of frame, that formed by the photograph or drawing published in a book or journal, has been touched on briefly in Chapter One. Colomina's contention that "[p]hotography and layout construct another architecture in the space of the page"[69] is important in tracing Tessenow's relationship with the wider media.) Like Jeanneret, and indeed the later Le Corbusier, Tessenow is unhappy at using the rawness of the tectonic frame expressively. Where he does make use of such frames, he does so in order to contrast their inherent immateriality with the solidity of the buildings and gardens from which they spring.

The pergola motif would have been familiar to the bourgeois German at the turn of the century. *Die Gartenlaube* was the title of one of the most successful magazines read by the middle class; its cover featured an iconic pergola – frequently decked out in Semperian festive mood – and it communicated bourgeois comfort before it suggested, at the start of the twentieth century, more overtly political, Reformist aims. Indeed, at mid-century the pergola motif was so popular that it became employed as frontispiece decoration to many books. In Tessenow's work, the 'natural' is there in its actuality, and is seen against the background of a 'neutral' architectural frame. **(Fig. 4.29)** The frame itself does not attempt to mimic natural form; instead its form is a clarification of aesthetic form in the historical development of trabeated structure, united with a simple 'unconscious' or vernacular empathy that the workman feels with his tools and his materials. Look at the timber detailing of the *Schüler- und Lehrerhäuser* at the Dalcroze Institute, for instance. The pergola structure is reduced to its structural minimum (and there is clearly a great deal of aesthetic satisfaction to be

derived from its economy of form); its tectonic form is stripped down to a clear expression of overlapping structural members. **(Fig. 4.30)** There is the vaguest reminiscence of Hellenistic trabeation expression in the square 'capitals': in the *Wintergarten* (winter garden) at the rear of the house, the junction between windowhead and ceiling is made by a series of three slightly projecting bands of white-painted timbers. These relate to the external wall and eaves junction developed for the house proper, and reinforce the idea of external pergola as both an attachment to, and integral part of, the house as a whole. This garden room is equipped with simple single-glazed windows which, since they eschew the double-window construction found in the house, suggest straight away 'garden room', as well as allowing a much reduced and correspondingly elemental and spare trabeated window construction. **(Fig. 4.31)**

Tessenow's use of the *Gartenlaube* is very much in the spirit of a reprise of Gottfried Semper's understanding of the origins of architecture, where the raw tectonic frame is 'dressed' in order for it to be used for festive purposes. According to Harry Mallgrave, "Semper traces the origin of monumental architecture not to the simplicity of a primitive hut, but to the festive celebration, to the improvised festival and stage apparatus "covered with decorations, draped with carpets, dressed with boughs and flowers, adorned with festoons and garlands, fluttering banners and trophies."[70]

Semper's words might almost describe the set of interiors designed by Tessenow in the 1920s for Dresden's *Internationale Kunstausstellung*, 1926. The building had originally been designed by Dresden's *Stadtbaurat* (City Architect), Hans Erlwein, in 1914 for the exhibition halls of the Dresden Artists' Association (*Die Ausstellunghallen der Künstlervereinigung Dresden*).[71] Nikolaus Pevsner, writing in the *Dresdner Anzeiger*, described the sequence of spaces leading up to the Dresdner Saal thus: "The entire fourth side of the big square is taken up by the Dresden Room, which Tessenow has subdivided into twelve large, bright compartments with a wide corridor in the middle, using partition walls in the most beautiful manner."[72] **(Fig. 4.32)** The *Sachlichkeit* of the changes wrought by Tessenow to Erlwein's neo-classical pavillion is evident: "It has been refashioned by the architect of the art exhibition, by Heinrich Tessenow, and derives its effect, devoid of any decoration, solely

from its well considered proportions."[73] Henrik Karge, in his essay on Tessenow's remodelling of the exhibition halls, reserves his greatest admiration, however, for the square-plan addition designed by Tessenow for the exhibition of German art: **(Fig. 4.33)**

> The rooms dedicated to German art have been conceived in a much more intimate fashion; Tessenow has accommodated them in a square addition as an extension within the courtyard of the south wing. It is In fact to all intents and purposes a new building of Tessenow's, one that has remained virtually undiscovered from the point of view of research, and represents a strict as well as an original concept: a ring of square and rectangular cabinets surrounds a small (decorative) atrium (*Zierhof*), in the centre of which another square is formed crowned by an open pergola, whose four columns once more relate to the square grid. In spite of the strict geometric layout the cabinets and the little courtyard must have created an extraordinarily light and festive impression. The atrium – an "architectonic jewel" - which served the exhausted public as a place of rest and refreshment, had particularly impressed Pevsner. He points out that Tessenow has consciously striven here for a melding of nature and architecture, by means of separating the individual paving slabs from each other by strips of grass and encouraging planting to take over the white posts of the pergola.[74]

Karge is correct in underlining the relative neglect of this space in the literature on Tessenow. The motif of the pergola is brought inside, as it were, and is used to structure interior space while retaining its garden connotations. This represents a reprise of the *Gartenlaube* motif reaching back to the late nineteenth century. It also represents Tessenow's dematerialisation of the grid, reducing it to its *Existenzminimum*, as it were. De Michelis's chronological monograph on Tessenow's work clearly attests to the sudden shift in the use of the grid which has been dematerialised to the extreme. The *Zierhof*, with its pergola courtyard (1926) is followed in the same year by the exedra of the *Café zum Rosenhof* built in the grounds of the Fifth Exhibition of German Work, Dresden (*5.Jahresschau Deutscher Arbeit*). 1925 saw the design of Tessenow's *Landesschule* in Klotzsche, Dresden. Here, the pergola motif becomes the element unifying a variety of buildings into an appropriately scaled ensemble.

Tessenow would remain loyal to the pergola motif throughout his career. While he was to adapt the pergola for appropriate use in buildings of civic scale as outlined above, he persisted in its original function, namely that of

denoting the domestic nature of a project, and of fusing motifs of inner spatiality and exterior landscape design. The design of his own suburban Berlin (Zehlendorf) house in as late a date as 1930 persists in the reprise of the *Gartenlaube* as both functional element (it adds an 'outdoor room' of an area some two-thirds that of the living room), in addition to acting as a scaling component in the composition where it, together with the 'aedicular' entrance lobby to the west and storage shed to the east, comprise the only additive exceptions to the otherwise pure, prismatic volume of the main body of the house.[75] **(Fig. 4.34)** The fact that Tessenow employed the pergola and 'garden room' forms as additive structures to prismatic house volumes marks him out as slightly outmoded when compared with his fellow-architects who were more accepting of the developing aesthetics of an incipient 'International Style' (the term, deriving from Hitchcock and Johnson's book and exhibition of 1932 is still two years in the future from the date of the design of the Zehlendorf house).

The house designed by Hans Poelzig for the Stuttgart *Weißenhofsiedlung* (1927) is perhaps closest in conception to the one Tessenow would have designed had he not decided to pull out of the scheme. Of all the built projects, it is the one (with the arguable exception of Hans Scharoun's) with the most organic site relationships, where the garden is designed as a series of discrete exterior rooms as an extension of the internal sequence of spaces. Also, pergola structures are used as additive elements to the cubistic volume of the house.[76] **(Fig. 4.35)** Compare this with Tessenow's design for his own house in Berlin-Zehlendorf (1930). This most modest house is a perfect example of such a usage, where additive gridded elements are deployed for both their 'idealist' connotations, as well as for their intrinsic enhancement of habitation.[77] As such, it provides a natural bridge to the second, 'materialist' section of this chapter, concerning Tessenow and 'the Everyday'.

(ii) TESSENOW AND THE EVERYDAY

1. *ARCHITEKTUR DER MITTE*

An important component of architectural discourse around the turn of the century concerned notions of the ordinary. This formed the counterpoint to the more distinctly 'spiritual' aspects associated with the grid, which formed the nexus of the previous section. I wish here to distinguish aesthetic theory derived from observations of the everyday (for instance, Schopenhauer's dicta concerning the material expression of architectural form and its relation to the effects of gravity on the stone blocks of an arch) from a theory of the everyday *per se*.

The English Arts and Crafts movement was the first significant Western attempt at providing a thorough-going aesthetic of the everyday. The German equivalent tradition, in the form of the Wilhelmine architecture of the *Reformbewegung*, exhibited many of the traits of its English cousin: for instance, the *Biedermeier* revival inspired by Paul Mebes's book *Um 1800* (Around 1800) was mirrored by England's Shavian Queen Anne style, while Richard Riemerschmid's regional crafts revivalism finds its echo in the work of Raymond Unwin and Barry Parker, in their designs for Letchworth and Hampstead Garden Suburb.

Tessenow's work represents a more rarified distillation of the built environment of the everyday. It takes, as it were, the spirit of the *Mitte*, and works it up into a carefully considered aesthetic response. It represents the architectural version of a term which has hitherto largely been the preserve of literature: *Heimat*.

Friedrich Lienhard (1865-1929) was the editor of *Heimat: Blätter für Literatur und Volkstum* (Heimat: Journal for Literature and Popular Culture). Elizabeth Boa and Rachel Palfreyman, in their study of the Heimat phenomenon in German turn of the century literature, have written that "[i]n an article of 1902 entitled 'Los von Berlin?' ('Out of Berlin?'), [he attacked] the decadence of city life, its hectic pace, and, as he saw it, the soulless rationalism of Berlin intellectuals with their pursuit of fashionable trends and lack of the larger vision."[78] However, they go on to maintain that Lienhard's *Heimat* vision integrated the values of both town and country:

> ...Lienhard denies that Heimat art is a turn backwards against the modern world, rather it represents expansion and completion: 'wir wünschen ganze Menschen mit einer ganzen und weiten Gedanken-, Gemüts- und Charakterwelt, mit modernster und doch volkstümlicher Bildung...wir wünschen Stadt und Land'. ('...we require complete people with mental and spiritual characters developed in breadth and depth, educated in both the modern and traditional manners...we require town and country.')[79]

Much of what Tessenow wrote under the rubric '*Mitte*' came to have the same integrating, non-judgmental qualities as Lienhard argued for in the field of literature. More deeply entrenched *Kulturpolitiker* such as Julius Langbehn or Paul Schultze-Naumburg, representing values of the conservative right, sought an alliance with the nascent Reform movements in art, design, and architecture.[80] Julius Langbehn (appropriately named, Langbehn sounds like 'long legs' in German: Boa and Palfreyman draw attention to his long-winded prose style) encapsulated certain entrenched attitudes of the German *Mitte* in his publication *Rembrandt als Erzieher* (Rembrandt as Educator). They write:

> Langbehn's tract does circle round one unifying theme: the pursuit of stable identity under the perceived threat of the modern urban mass. Its success surely came from its mix of folk psychology, cultural theory, and an aesthetic programme, the three elements combining to form a symbolic universe of signs imbued with a vaguely expansive meaning. The signs, which might include bodily or facial features, clothes, landscapes, details of domestic interiors, architecture, painting, become the interchangeable signifiers of a trans-historical Germanic essence.[81]

For Langbehn, "[f]ear of the masses was assuaged by identification with the Volk. Awkward questions about the distribution of power and wealth were deflected into an aesthetic doctrine of the simple life signified in handicrafts such as the delicacy of hand-made lace as against the coarse machine-made product."[82] Boa and Palfreyman maintain that "*Heimat* marks the threshold between nature and culture. The physical place of childhood in the life of an individual, Heimat is also a social space in which the little animal is socialized to join humankind...it also connoted the rural or provincial roots from which urban industrial society was moving in a trajectory away from nature towards ever-greater civilization or, alternatively, alienation."[83] They characterise *Heimat* in terms of one of the leading Wilhelmine exponents of its popular literature, Clara Viebig. In her story 'Simson und Delila' in the collection *Kinder*

der Eifel (Children of the Eifel, 1897), a scene (reminiscent of a Romantic setting painted by Caspar David Friedrich) is summarised as follows:

> Our first sight of the ruined abbey in the forest comes when Suß, hopping through the undergrowth like a little kobold, leads Hubert's mother there to bring her son back home before he is sent off to Wittlach. Its great ruined portal standing free in radiant moonlight amidst the surrounding canopy of trees has a stern grandeur softened by the dew-bespangled willow twigs growing through the crumbling masonry like tresses of hair. The abbey points back to an earlier age of faith from which the materialistic present has fallen away and evokes a utopian harmony of culture and nature and of masculine grandeur and feminine grace.[84]

The literature of *Heimat* oscillates between the nationalism propounded by the hero of Heinrich Mann's novel *Der Untertan*, Diederich Heßling (but undermined by Mann's treatment of him), and the provincialism of a writer such as Clara Viebig. In the Wilhelmine era, Tessenow is to Viebig as, say, Behrens is to Mann. Whereas Behrens was commissioned to design for the AEG, and for the state (most famously, the German Embassy in St Petersburg), Tessenow built in the provinces. For Viebig, as for the young Tessenow, "the unseen metropolis signifies somewhere else that is not the Heimat. But nor is Berlin shown as antithetical to the village; it represents rather a national arena where the mayor will fight for local interests. This quite complex political and economic geography conveys a relationship of tension but not enmity between village and metropolis, between farming and industry, and between province and nation."[85]

Tessenow's analogous text containing echoes of Viebig's *Heimat* litertaure surfaces many years later, with the publication of *Handwerk und Kleinstadt* in 1917. Written in the context of the degradations of the war, it could not be further from the patrician attitudes of Behrens with all his metropolitan prejudices: "we resist it [the war] in much the same way that we have reviled and abused our machine products as cheap and nasty only in order to build new and yet bigger factories."[86] However, any putative nostalgia associated with Tessenow has been emphatically denied by Manfredo Tafuri and Francesco Dal Co.[87] In their history of modern architecture they begin by quoting Karl Scheffler thus:

> "Van de Velde is a complex force, Tessenow is a simple and assured will; the genre of Van de Velde compared with the linear purity of Tessenow appears as the monumental impulse of an obsessed man seduced by detail; he seems like an engraver of forms alongside an individual thinking in three dimensions." The reduction to essentials typical of Tessenow, the crystalline purity of his designs have nothing to do with the ambiguities of the early phase of the Werkbund, but are equally distant from the classicism of Behrens. The values of Tessenow are antecedent to the positive values that appear in the metropolitan civilization, but this does not make them nostalgic. In his analyses of artisanal labor, all exaltation of detail is denied. Rather, he attributes to his own architecture the vocation of creating a pure bourgeois condition.[88]

With Tessenow, technical form and domestic form elide in order to produce an architecture uncannily reminiscent of both the standardised type and of bourgeois domesticity without the mimetic qualities of either.

2. DOMESTICITY

For Tessenow, domesticity defines humanity; his version of 'humanism' as a philosophical *Weltanschauung* is an elaboration of domestic economy. Architecturally, this represents a defence of Laugier's 'primitive hut' account of the origins of architecture. Tessenow's essay 'Wie Adam Baumeister wurde' ('How Adam became an architect') puts the matter succintly: its sociological modernity in terms of the ongoing reform movements in Germany of the 1900s lies in the identification of Eve, the *Ur-Frau*, in cultivating her man Adam and spurring him on to desist from his nomadic, hunting existence to a settled housing of his growing family and cultivation of its surrounding terrain.[89] Tessenow's thought is aided by the common etymology of the words *Hausbau* and *Anbau* (house-building and (crop) cultivation).[90]
Materialism, as an intrinsic good, is challenged, or rather the nature of its obverse, poverty, is recast in terms of spiritual well-being, as opposed to the acquisition of material possessions. It represents the asceticism of a strictly puritanical Northern temperament.

> Our poverty, as long as as it is not poverty of living culture (*Wohnlichkeit*) or does not prevent us from enjoying this culture, is as good as no poverty at all; and our wealth of living culture, insofar as it promotes ... we can ill do without.[91]

Tessenow goes on to relate another pair of cognate words, *wohnlich* (habitable) and *gewöhnlich* (usual). He implicitly attacks the avant-garde's identification of the unusual with progress in the arts. There is an unmistakeable echo here of Adolf Loos's contemporaneous rejection of everything that the *Wiener Werkstätte* represented, personified for him in the person of Josef Hoffmann.[92] The essential quality of Tessenow's form-making, its grounding in domestic architecture, is remarkable for its lack of nostalgia in terms of expression. This marks him out, during his pre-war Hellerau years, from such regionalists as Riemerschmid, and even from Muthesius, with his anglicising tendencies. As Francesco Dal Co has written: "Tessenow's works – projects for one-family houses in particular, the dwellings in Hellerau and Hohensalza, the Dalcroze Institute in Hellerau, and the school in Klotzsche – express his lucid reduction to essentials."[93]

These essentials, for Tessenow, are matters domestic which, in the German context, play themselves out in the interior of the dwelling. He is most 'at home' when he situates his idealised aesthetic indoors. Even when he designs external space it is, as we have shown in the previous section, produced in the image of 'rooms' within a house. Beatriz Colomina, in her book *Privacy and Publicity*, has characterised modernism as having a supremely publicising nature. She writes, "Modern urban space, as opposed to traditional "place," cannot be understood in experiential terms. The "exterior" is not only image but a picture, a photographic image. If, for [Ferdinand de] Saussure, writing is the photograph of speech, and for Loos the interior is that which cannot be photographed, for [Camillo] Sitte "modern" urban space is the photograph of "place." The "outside" is a photographic image. The mask is first and foremost a picture."[94] For Colomina, the architect at the forefront of unmasking architecture is Adolf Loos, of whom she writes, "Loos realized that modern life was proceeding on two disparate levels, the one of our individual experience and the other of our existence as society. For Loos it was hopeless to try to render the outside in the experiential terms of the inside. They are two irreducible but interdependent systems. The interior speaks the language of culture, the language of the experience of things; the exterior speaks the language of civilization, that of information. The interior is

the other of the exterior, in the same way as experience is the other of information, culture the other of civilization."[95]

What Colomina is doing is invoking the language and dualisms of Ferdinand Tönnies's *Gemeinschaft und Gesellschaft* (Community and Society), first published in 1887. She cites a passage from Georg Simmel's 1904 article 'Fashion', in which he writes, "Over an old Flemish house there stands the mystical inscription: There is more within me."[96] This was a typical theme of philosophical discourse at the turn of the century: Francesco Dal Co, in his book *Figures of Architecture and Thought*, inevitably places the iconoclast Friedrich Nietzsche at the centre of modern man's dichotomous condition: "When Nietzsche concludes that "the most characteristic feature of this modern man" lies in the "strange contrast of [having] an interior to which there is no corresponding exterior, and an exterior to which there is no corresponding interior," and that "the whole of modern culture is essentially internal."[97]

Nietzsche is talking here in almost Freudian terms about the repression practiced by the individual in order to be able to live in the world. Tessenow is alive to this discourse of the 'inner man'; one only has to think of his comments in his essay *Die technische Form* (Technical Form): "It would be more beautiful, we would relate better to each other, if we were to show openly our anxieties and our joys, or the plumbing of our houses and streets etc., everything that concerns us as human beings; but we lack the ability to reveal things in this manner, so that such public displays embarrass or injure us, and we are obliged to keep so much concealed."[98] What is fascinating is Tessenow's laconic equation of psychological '*Innerlichkeit*' (intimacy) with a building's functional *Sachlichkeit*. This is summed up eloquently by Dal Co as follows: "Architectural culture consistently aims at defining a space of dwelling where the tensions that repel, that are polar opposites, "interior" and "exterior," culture and civilisation, become reconciled to one another, creating a harmony capable of fulfilling, at least partially, the wish expressed in [Hermann] Hesse's entreaty, "leave me, O world, let me be."[99]

Like Colomina, Dal Co ascribes the interior realm to culture, and the exterior to civilisation. He comments on Werner Sombart's thesis "that [it is] urban growth [which] brings with it a definitive rupture with the organic and

synthetic past of the community."[100] He elaborates this dichotomy of public and private values in the following terms:

> The modern city is, in fact, the milieu in which luxury loses its public character and becomes an object for private consumption, thus altering its meaning as an expression of a given epoch, an expression tied to a certain extent to the passing down of a ritual attitude and to the durability of norms derived from the continuity between the handicraft organization of labor and the family structure.[101]

The proliferation of luxury goods designed for private consumption, goods destined to be taken indoors, is attested to by the range of manuals dedicated to the propagation of good taste in bourgeois circles. Most prominent amongst the authors of such texts was the Viennese Joseph August Lux, whose book *Der Geschmack im Alltag* (Everyday Taste) set out to cover the whole range of domestic items needed to furnish the homes of such people. The appropriate style of these artefacts was decidedly *sachlich*, in the manner of a Riemerschmid, Behrens, or Tessenow. Lux first establishes his philosophical background, which clearly owes a good deal to English design theory of Ruskin and Morris:

> Beauty must shine out from inside to outside. If the interiors of houses are optimally arranged, then they will glow like a secret light through the walls, and no further decoration is required in order to render the city beautiful and liveable.[102]

The appropriately named Lux echoes themes of Scheerbart and Taut, whose book *Glasarchitektur* and *Glashaus* pavilion were respectively published and built in 1914. Lux's chapter headers read like the catalogue of a department store (or the pages of an AEG brochure). Under the rubric 'Doors and Windows', Lux compares "[a]n old white door, without doubt elegant", with two overdecorated examples of doors: "Interior decorator's art, not shying away from any tastelessness. Useless, wilfull draperies, which only get in the way. Dust-collectors and incubators of germs."[103] Similarly his illustrations of stoves (*Kachelöfen*) bear an uncanny resemblance to Tessenow's own designs.[104] Lux devotes a chapter to the question of the plan ('*Der Grundriß*'). He appears to be a follower of Muthesius's anglophilia, in that he maintains "that in the English house some 2/3 of the whole house is devoted to liveable space (*Nutzräume*), whereas in our average larger flats this is reduced to perhaps

one sixth of the whole area".[105] Tessenow's extreme economy of plan in respect of his terraced houses has already been noted (see Chapter Three 'Warm Fabric'); his larger designs for villas for the bourgeoisie or aristocracy are similarly tightly planned with respect to the 'servant spaces' of hallways and corridors. The Böhler House, St Moritz (1916) and Count Dorét's House, Hungary (1919) are good examples of this. **(Figs 4.36 and 4.37).**

Domestic architecture has a particular affinity with the Biedermeier style. Here is Hans Sedlmayr writing in *Verlust der Mitte*:

> The love for what is small is perhaps the most characteristic feature of the Biedermeier style. The style that bars this name is only a partial phenomenon of the decade from 1830 to 1840, though a very characteristic one. It has its gravitational center not in utilitarian architecture but in the home, or more precisely, in the single apartment, which often contains the entire bourgeois world in a single room...The Biedermeier style manages to create a new union of all the arts. The center of this unity is the apartment and the home. It is absurd to speak of a Biedermeier church: in a certain sense, the subject no longer exists. The reference point of all the arts has become man, as a private entity: the private man who renounces life in public, but is not a solitary man.[106]

Tessenow, of course, did manage to build public and private buildings in the same idiom, and is equally successful ('at home') at both. The common thread in the variety of commissions is his recourse to aedicular forms. This forms the subject of the following section.

3. THE AEDICULAR

A characteristic of Tessenow's architecture is his use of aedicular forms. These are building forms which refer to the classical image of the house, and involve the use of the double pitched roof and the gable ends of such forms. The 'classical image of the house' is the idealised house, i.e. the temple form ('the house of the gods'). The use of the aedicule is also a recourse to the idea of the primitive and to the origins of architecture which are represented by such forms. In Western architecture it is the Abbé Laugier's formulation of architectural origins, contained in his *Essai sur l'architecture*, which was the catalyst for redefining the importance of such forms.[107] It was the direct

inspiration for a line of architectural development, particularly strongly represented in Germany, which includes the starkly columnar architecture of the Greek Revival, and in particular the designs of Gilly and of Schinkel.[108] Francesco Dal Co refers to the motif of the bridge, which functions as a metaphor linking private and public, culture and civilisation, etc. In architectural terms, it is represented by liminality: the threshold of the door or window opening which mediates between the private world of the interior with the public realm of the exterior. Dal Co cites the following passage of Tessenow's from *Hausbau und dergleichen* (1916):

> Dividing and joining...constitute, in truth, an endless chapter, and...if it were possible for us to achieve unity in every aspect of our labors, there would be no need to take into consideration either dividing or joining...However, what we produce in connection with everyday life is unlikely to achieve such a result; for this reason, we must take dividing and joining into consideration, or else resign ourselves to inarticulateness.[109]

This passage bears an uncanny resemblance to Georg Simmel's writings seven years' earlier:

> Since man is the being who joins, who must always separate, for without separating he cannot unite, we must first conceive intellectually the purely indifferent being-there of the two banks in their separateness before we can join them with a bridge. So much is man the being-limit that he has no limit. The establishment of his being-at-home by means of the door means that, in the interrupted unity of natural being, he has separated a fragment. But just as such informal delimitation becomes a Form, in the same way the limitedness of this Form finds its meaning and its value only in that which the door makes possible: the possibility of man's flinging himself at any moment beyond this limit and out into freedom.[110]

Tessenow finds it important to delimit a building's interior space from its external form. By extension, a building's external form is delimited from its site by means of its clear, 'typical' shape. **(Fig. 4.38)** This is where the power of the aedicular form comes to the fore in the way it clearly distinguishes a building from its surrounding site.[111] The preceeding section on 'the grid' showed how Tessenow would use the framing devices of the trellis, the gazebo etc. in order to construct links between the geometric forms of his buildings and their surrounding sites. A building, however, while located *in* a

site has an autonomy which renders it not *of* the site. This autonomonous relationship renders it part of the man-made world of artefacts, making it subject to the 'laws' of architectural history.

The aedicule, as we have already said, is a diminutive version of the archetypal house, a house of the gods, no less, a temple form. In this way it represents the hearth, the place of burnt offering to the god's image. Lisa Heschong has talked about the aedicule (Latin: *aedicula*) in the following terms:

> The inglenook, the gazebo, and the porch swing [also] have strong definitions of their spaces. They are each a bit like a little house set off for a special thermal purpose. They might be termed "thermal aediculae." Although the term aedicula is most often used in conjunction with a sacred or ceremonial little house, it can also be used to describe any diminutive structure used to mark a place as special. Summerson, in his wonderful essay on the use of the aedicula in Gothic architecture, relates it to the urge of the child to hide under a chair or table and pretend that he is in his own house. Summerson contends that there is a basic human "fascination of the miniature shelter." Perhaps this is because the aedicula intensifies one's experience of the place by working somewhat like a caricature. By reducing some things in scale, it exaggerates the importance of other things, most especially the size of a person in relation to the space. Making thermal places that incorporate the qualities of an aedicula is a way to emphasize the importance of the place as a setting for people.[112]

Tessenow frequently avails himself of the aedicule motif in order both to humanise space as well as to signify place. At its most basic – and literal – his designs for garden pergolas (*Gartenlauben*) mark out exterior territories and relate building form to garden design. **(Fig. 4.39)** The significance of these structures as framing devices and as representations of simple trabeation has been explained in the previous section, 'Tessenow's Grids'. It is important to state that these pergolas function as aedicules whether they are flat-roofed constructions, or have pitched – gabled or pyramid – roofs. Indeed it is the stressing of the cubic mass, or, in the case of garden pergolas, the implied cubic mass defined by the corner posts and roof timbers, which is important. For this reason the gable front, when it is employed by Tessenow, loses its shrivelled, reduced form which is its characteristic in *Biedermeier* architecture, and assumes a massive presence. This is nowhere more evident than in the gabled 'pediments' of the Dalcroze Institute. Tessenow here deploys the gable

to the same powerful effect as, say, Josef Hoffmann and Peter Behrens. Hoffmann's scheme of steeply-pitched pediments for the Austrian pavilion at the *Deutscher Werkbund* exhibition, Cologne, 1914, and Behrens's flatter gable of the *Festhalle*, also at the 1914 exhibition, which achieves its powerful solemnity by being flanked by a pair of squat pylon-like pavilions, are good examples.

Even in smaller buildings, the gable is used to govern the scale of the chief volume of the building, with implied aedicular forms 'carved out' from the building mass. This is the case with the Teachers' Training Centre (*Lehrerbildungs-anstalt*), Peine, **(Fig. 4.40)** as well as a host of single-family dwellings. The aedicule in its purest form, i.e. the form most reminiscent of the posited 'primitive hut', is that which is replete with a simple columnar support framework. Tessenow's garden pergolas naturally adopt this form. In larger, more complex buildings he is content to let the gabled roof 'stand for' the complete primitive structure. In the case of the Dalcroze Institute this allusion is aided by the 'temple front' formed by the row of six square-plan columns, with the two outermost ones *in antis*.

What is the significance of the aedicule for Tessenow's architecture? Literally, the aedicule *is* the domestic; but through its transcendent associations with temple forms (the temple being 'the house of the gods') it had necessarily undergone a set of transformations which progressively rendered it the most anti-domestic of architectural forms, representing, by the late nineteenth century, such institutional uses as banks, museums, company headquarters and so on. Tessenow, along with his fellow-architects Behrens, Hoffmann and many others, sought to reunite the opposite poles of architectural end-users, on the one hand house-dwellers, and on the other hand, institutions: the individual with the universal, the everyday with the ideal. Aedicular forms were still found to have the potency to communicate these polarities, allowing architects to design modest dwellings and monumental institutions within a common architectural language. It is ironic that one of the hallmarks of modernism half a century on, at least in its formulation according to Philip Johnson and Henry-Russell Hitchcock (in their 1932 book and exhibition *The International Style*), was its absence of aedicular forms.[113] Perhaps, though, having reclaimed the simple pitched-roof form as appropriate for universal architectural application,

regardless of building type, the Reformist architects of the Wilhelmine period actually paved the way for the next generation to jettison the aedicule for similar 'universalising' objectives.

John Summerson's account of the "fascination of the miniature shelter", is a most significant milestone in the historiography of the aedicular form in recent times.[114] His reclaiming of the aedicule as a vital theme in Gothic architecture goes some way in explaining how Reformist architects in general, and Tessenow in particular, used the aedicule to bridge the gap between, on the one hand, the asymmetry of the Gothic revival and, on the other hand, the classical tradition of bilateral symmetry. If we look at Tessenow's second (unrealised) proposal for the Dalcroze Institute we see a whole family of aedicules which reduce in size from the single, dominating form of the main pitched roof with promiment gable ends, down to a whole series of clustered little houses. The image this ineluctably conjures up is that of the archetypal medieval monastery, where the individual monks' houses are subordinate in size, but similar in shape, to the main body of the church. It is precisely this fascination with scale relationships, facilitating the connection of disparate elements of an architectural composition, which so fascinated Charles-Edouard Jeanneret on visiting the monastery at Ema, near Florence. The idea of an architectural community, in the sense both of housing a body of like-minded individuals, and of being housed in a set of related architectural forms, was to resurface in his projects of the 1920s and his schemes of the 1950s. His visits to Hellerau during the construction of the Dalcroze Institute alerted him early on to the possibilities of using aedicular forms additively in order to make larger architectural compositions.

Tessenow, too, on his arrival in Dresden, found a royal city replete with an abundance of aedicular forms. These were to be found in the Biedermeier houses of the outlying villages, the lavish villas of the southern districts of the city, as well as in the numerous classical embellishments of the intact inner Baroque core. Tessenow's contemporary in Dresden, the *Stadtbaurat* (City Architect) Hans Erlwein, lent his *Italienisches Dörfchen* (Italian Village, 1911-1913) a homely air by means of the main gabled pediments incised into both sides of the long roof, as well as the numerous scaled-down aedicules dotting the roof in the form of dormer windows. Located between the *Semperoper*

(1871-1878), Chiaveri's *Hofkirche* (Catholic Court Church, 1739-1751) and the Elbe, this extensive, low-lying ensemble manages to strike exactly the right note of decorum and gaiety in its version of *Biedermeier Sachlichkeit* of which Paul Mebes would surely have approved.[115] **(Fig. 4.41)**

The immediate source of Tessenow's use of the aedicule must be traced to his 'master', the architect Martin Dülfer. His Beyer Building of the Technical University is exactly contemporaneous with Tessenow's Dalcroze Institute, and shares a similar heaping-up of aedicular forms, albeit with a marked picturesque intent: more Riemerschmid than Tessenow, in fact. In a later Technical University building of Dülfer's, the Fritz Förster Building (1917-1926), it is Tessenow's aedicular forms which are 'borrowed' in the accentuated gable front which owes its form to Tessenow's Dalcroze Institute, Hellerau.[116] **(Fig. 4.42)** Aedicular forms represent one specific type of representation of the architectural everyday; it is time now to consider the banality of the everyday more generally, as it was manifested in the early 1900s.

4. THE EVERYDAY

"To live is to leave traces." Walter Benjamin [117]

If everyday life leaves ineluctable traces, then these traces will be bound to have a bearing on architecture. Walter Benjamin's motto will find an echo resounding throughout the twentieth century, as the ordinary and the everyday assume great significance for the development of art and architecture. One thinks of the *Arte Povera* movement beginning at mid twentieth century, or the relationship of architecture to the facts of daily life represented by New Brutalism in the late 1950s and early 1960s. At the beginning of the twentieth century the theme of the everyday began to assert itself in the fact that the objects of daily use were becoming subject to a common aesthetic treatment, such as the ubiquitous designs of *Jugendstil.* Equally, the 'everyday' began to be the subject matter of artists' work, especially in the new medium of photography.

The rise of the neutral and the impersonal is connected not merely to a new sensibility of the twentieth century; it is intimately connected to new patterns of production and consumption emerging out of the nineteenth century. Frederic J. Schwartz cites Georg Simmel's comments equating the alienation of the consumer from the producer with the demise of custom work:

> Custom work, which predominated among medieval craftsmen and which rapidly declined only during the last century, gave the consumer a personal relationship to the commodity. Since it was produced specifically for him, and represented, as it were, a mutual relationship between him and the producer, it belonged, in a similar way as it belonged to the producer, also to him. Just as the radical opposition between subject and object has been reconciled in theory by making the object part of the subject's perception, so the same opposition between subject and object does not evolve in practice as long as the object is produced by a single person for a single person.[118]

Tessenow's engagement with the everyday was twofold. On the one hand, his architectural production, in terms of the design and execution of buidings, was profoundly affected by his reading of the banality of the everyday, domestic cultural artefacts which he came across. However, Tessenow also operated as a communicator, using the proliferating technical press to 'sell' his ideas. Here, the printed word and image become the media of expression, as he avails himself of the culture of advertising, one of the hallmarks of Wilhelmine design culture. Schwartz locates advertising squarely within the ambit of design theory and practice; indeed, it is one of the distinguishing features of mass culture driving modernism in the early decades of the twentieth century.[119]

Advertising is the interface of fashion with its public; as the vulgar flip side of the style coin it also has associations, in the hands of culturally conservative commentators, with the perceived enemies of traditional culture. (This frequently manifests itself as a cipher for Jews.) Here, the writings of, say, Werner Sombart, coalesce with the more strident tones of Julius Langbehn. Leaving aside for now these fascinating connections of *Werkbund* theory with German nationalist strivings, one might indulge in the kind of comparative philology undertaken by Semper decades earlier and make the connection between craft or industry (*Gewerbe*), and advertising (*Werbung*). Seen in this light, the activities of production and publicity have an intrinsic relationship; the

argument would concern the *Werkbund* differentiation between the intimate relationship existing between the client/purchaser and the craft item, as opposed to the more abstracted and alienated relations of industrial producer and consumer, whch necessarily requires the presence of a mediating tradesman (*Händler*) in order to function.

At the end of the nineteenth century the recently invented building type of the department store becomes the locus of the tradesman *par excellence*; however, it is by virtue of its architectural presence, its 'style', which masters the extrinsic signs of advertising, subsuming the world of fashion within its confines. Schwartz makes the point forcefully by reprinting an image from the *Jahrbuch des Werkbundes* (1912), in which a newly built department store in Cologne, executed in a refined Behrensesque manner (similar to his 1910-1912 *Mannesman* Building in Düsseldorf), is contrasted with the street-scene across the square in which it is located which presents an array of narrow, largely gabled houses, bristling with the detritus of advertising hoardings and signs.[120] **(Fig. 4.43)** The same visual point will be made some ten years later in the famous photograph which Ludwig Mies van der Rohe used (in a photomontage) to illustrate his glass skyscraper project for Berlin, where the purity and simplicity of his design is strongly contrasted with the confused and anarchic commercial bustle of the *Friedrichsstrasse*.[121]

One of the key ways that Tessenow engages with the everyday is his favouring the term *Baukunst* (building art) to describe his activity over that of *Architektur*. On the one level, the word *Baukunst* with its impeccable Germanic etymology has an immediate connotation of everyday quiddity compared with the highfalutin *Architektur*, with its automatic ring of classical, Mediterranean civilisation.[122] To appropriate Ferdinand Tönnies's characterisation, *Baukunst* is a manifestation of *Kultur*, while *Architektur* smacks of *Zivilisation*. Here Tessenow shares the views of Hermann Muthesius and Otto Wagner. Muthesius's book *Stilarchitektur und Baukunst* (Style-architecture and Building-art, 1902) specifically sought to restate 'outmoded' architecture in terms of the 'art of building'; Otto Wagner's book *Moderne Architektur* (Modern Architecture), first published under that title in 1896, was renamed *Die Baukunst unserer Zeit* (Architecture of our Time) by the time of its 1914 edition.[123] But Tessenow's engagement with the everyday took on another

aspect, in that he deliberately couched his public pronouncements on his work in readily understandable vocabulary, and moreover he used as his chosen media learned, but non-academic, journals. By this means he reached out to the informed public and professionals in the building trades, over the heads of the 'professorial' class of architectural grandees. Publications such as *Zimmermannsarbeiten* (1907) and *Der Wohnhausbau* (1909) were written in a laconic manner designed to communicate with the interested lay person, as opposed to the university professor.

Tessenow belonged to a rising class of professionals who belonged to a first generation to break out of their respective families' artisinal backgrounds. Tessenow was largely self-taught in matters architectural, or at least his knowledge was gleaned from a variety of sources, most particularly during his thirteen itinerant years, from 1896 when he left his native Rostock, until 1909, when he settled in Dresden, initially as Martin Dülfer's assistant at the *Technische Hochschule*, and finally, in 1910, as an architect in his own right.[124] The peripatetic nature of the young Tessenow taught him to observe the features of buildings held in common, those which transcended regional differences. His years of apprenticeship and intermittent periods of study (*Lehrjahre*) concentrated his efforts on practical building matters. This blend of exposure to architecture within the varied regions of Germany, allied with the concentration on matters technical, might have led to the formation of Tessenow into a 'mere' technician; but his period of work with Paul Schultze-Naumburg in 1904/05 ensured that he would be alive to the wider significance of design. The paradox of Tessenow is that his self-consciousness as a 'modern' designer is belied by his apparently disingenuous writing style; the existence, not to mention the gravitational pull, of the *Großstadt* Berlin, for instance, never figures. And yet there are occasional glimpses in Tessenow's writings which acknowledge his understanding of the difficult relationship between 'the home' and incipient modernism. Francesco Dal Co cites an autobiographical note of his written in the autumn of 1902, on Tessenow's return to his native Mecklenburg region after the first six years of his *Wander- und Lehrjahre* (years of pilgrimage and apprenticeship, in Dal Co's translation):

> I returned to my native region, and I deceived myself into thinking that I had forever left my years of apprenticeship and pilgrimage. Although at the time it was impossible for me to foresee what lay ahead of me in terms of work, I thought that I would soon settle down somewhere to a stable and lasting situation; but it also became increasing clear to me that the architect's profession is tied to the big city and requires a predisposition and character also tied specifically to the big city.[125]

In this passage Tessenow acknowledges that he is indelibly tainted by the experience of travel and apprenticeship, and that somehow these experiences had transformed him into a 'modern' man, receptive to the exigencies of modern design. His achievement lay in transforming his understanding of the everyday into the material of his architecture.

Tessenow's keen involvement in the development of construction techniques was discussed in the previous chapter. He was eager to patent his technical innovations in order to protect his intellectual property, but also to increase the range of his architectural influence. The evidence of Tessenow's work would be shown clearly by his executed buildings, but also by the adoption by builders of, for instance, his *Patentwand* technique of stud wall construction allied with massive brickwork infill. In this sense Tessenow forms part of the avant-garde of architect-constructors, to be joined in later decades of the twentieth century by designers such as Le Corbusier and Jean Prouvé.[126] The repetition of banal architectural elements, such as the lattice grids applied to external walls to support climbing plants or the 'standard' format of windows, starts to locate Tessenow's work within the concerns of a specifically modern architecture of the twentieth century. On the subject of banality in late twentieth-century modernism, Klaus-Jürgen Bauer has written:

> Today Eternit has become a fashionable material, which many of the architects investigated here [in his book *Minima Aesthetika*] make use of, in order to indicate a certain modernity. Eternit, in other words the normal fibre cement sheet, covers the entire spectrum of the fashionable. From having a secondary role (cladding) which used to be a synonym for banality in a negative sense, it was subsequently enobled by modern architects who lead the field by using what are in out terms the material with the worst reputation, the *most evil*, usual, thoroughly banal material.[127]

The situation at the end of the twentieth century is one where knowing architects use the banality of the most ubiquitous stock materials from the local builders merchant's for their shock effect which is post-modern in its ethos. This is different from the situation of a century earlier, where architects had first to design their own versions of the banal prototype, before they could incorporate them into their buildings. And yet the effect on users and observers of such buildings is similar. From the point of view of architectural production, the increasingly sophisticated building components industry renders it hard to deploy materials artfully; banality is perhaps the result of a premeditated artlessness in the choice of materials.[128] Specifying banal building products for 'quality' projects raises the work to the level of architecture. Duchamps' readymade, after all, becomes identified as a work of art by virtue of its location within an art gallery.

As architects assumed ever more control over the environmental design of their buildings in the early years of the twentieth century, so banal items of equipment such as heating devices, vents, window mechanisms etc. achieve greater 'presence' within building designs. This growing desire on the part of clients for environmental control was satisfied by companies such as the AEG in Berlin. The integration of building services within architectural schemes was underscored by the appointment of a man such as Behrens as chief designer presiding over the AEG empire.

Reyner Banham wrote about the banality of the everyday equipment required to service buildings, with, as an example, the profusion of air conditioning units proliferating on the roofs of every North American building,

> where below eaves level, one is confronted with an orgy of eclectic modernist details often reaching extremes of uninhibited fantasy and above the eaves the air-conditioning plant is a free composition of geometrical solids of the sort that used to be the common stock in trade of the Purists and Functionalists of the twenties. One seems to see ghosts of the restrained and abstract International Style hovering above the exuberance of the current pop-art version of the American high-life which Oud discovered in the work of Frank Lloyd Wright. Except that what is above the eaves does not represent a conscious attempt at an idealised Machine Aesthetic, but is the outward form of the kit environmentally needed to make the high-life of supermarket America possible.[129]

So for Banham the flat roof represented a kind of stylistic datum: the forms of everything below it are subject to specific art-historical laws, be they art deco, neo-futurist, etc. Everything above it, i.e. the pragmatic forms of mechanical kit, is not subject to these laws, but generate their own would-be language of forms which will in turn become aestheticised as part of the Pop Art, Post-Modern and Hi-Tech styles. The common factor linking stylistic form with technical form (*Kunstform* with *Werkform*) is their reliance on type: the reduction of form to a norm. This is at one level nothing more than a definition of style *per se*. As far as the notion of type refers to late nineteenth-century German architectural discourse, it is its reliance on appropriating the norms of the everyday, instead of a recourse to specifically 'art' forms, which begins to transform type into its specifically twentieth-century meaning as elucidated by *Werkbund* propagandists in the first decade of the new century. The matter was put succintly by Le Corbusier, who wrote in 1927, "We prefer the banal and the everyday to individualism, this product of a fever. The rule precedes the exception. For us the usual, the rule, the common rule appears as one of the strategic bases on the way to development and beauty."[130]

Tessenow's modernity lies in his accepting the motifs of the everyday, as de Michelis written, "[it] lies in the game with these apparently everyday and traditional forms; he releases them from their usual context and presents them in unrelenting isolation, allowing the original being of these forms to come to the fore and to serve as a basis of a new order."[131] The forms De Michelis is referring to are those doors, windows, pergolas, and so on which are the only sparely used devices deployed by Tessenow to enliven the "almost cubic body" [132] of his house in the Berlin-Falkenberg *Siedlung* (1913).[133] Tessenow's acceptance of the existing formal types, such as doors, windows, etc., allied to his critical deployment of them in his schemes, makes him Muthesius's natural ally in the debate of the following year which served to electrify the *Deutscher Werkbund*, and is the subject of the following section.

5. THE TYPE AND THE INDIVIDUAL

The roots of the famous quarrel of Muthesius and van de Velde are to be found in the contrasting values ascribed to 'style' and 'fashion' in *Werkbund* circles. Fashion, representing everything ephemeral and transitory, stood, as we have already seen) for the values of capitalism. A useful term from *Werkbund* discourse is 'Impressionism'. As Schwartz has shown, this term had a far wider meaning in Wilhelmine Germany than the narrower art-historical epithet it has since acquired.[134] Once again, there are unfortunate, anti-semitic undertones inherent in the association of the 'irritant' Jewish merchant class and the ephemera of fashion;[135] the critic and art historian Richard Hamann in his book *Der Impressionismus in Leben und Kunst* (Impressionism in Life and Art) makes the explicit link between the aesthetics of Impressionism and the economics of liberal laissez-faire capitalism.[136] The contrasting attributes of fashion and style, of "fleeting atmosphere" as against "constancy, permanence and tranquility" are aspects of the dualism inherent in Tessenow's built work. Style, on the other hand, was viewed as the "corollary of Culture",[137] or, as Behrens put it 1910, "the unified formal expression, the manifestation of the entire spiritual life of an epoch."[138] It would be wrong, though, to suggest that the terms 'style' and 'fashion' were universally understood to represent such polarised views. Muthesius's negative connotations attributed by him to 'style', which he expounded in his *Stilarchitektur und Baukunst* (1908), attest to the difficulty of ascribing any fixed meanings to these highly charged words.

The interior of the auditorium of the Dalcroze Institute, whose environment is designed to be changeable, is in stark contrast to the constancy and repose of the exterior. If we try to relate these opposing qualities to the architectural discourse of the day, interpreted in the light of the four elements of Gottfried Semper, then stereotomy and tectonics stand for 'style', and the hearth and cladding, for 'fashion.' In Semper's hut the fire in the hearth flickers, flares up, and eventually dies down, and the woven claddings may be changed at will; the stone base and the tectonic frame of wall and roof, on the other hand, remain permanent fixtures and stand for the entire life of the building. Tessenow's architectural maturity is evidenced by his understanding that the two qualities of 'style' and 'fashion' are both necessary in the culture of

building: the exterior, public face must needs differ from the private nature of the interior. So far, so Loos. Tessenow differs from Loos in the honesty with which he addresses the need for both attributes to co-exist: not for him the quip and barbed comment to the detriment of a colleague.[139] There is an inherent understanding of the ageing process that buildings undergo, or more accurately, of the fact that different elements of buildings age at different rates.[140]

The idea of the type led to a new kind of form, one which would come to rival the mid nineteenth-century concepts such as *Kunstform* and *Werkform.* This was economic form. It is this 'form' which distinguishes twentieth century design from its precursors. It is a distinction pressed strongly by Schwartz who cites one of Naumann's associates, Richard Calwer, "The talk is no longer of "free competition" and "full autonomy of the individual," but rather of the "fusion of former rivals in the pursuit of common business interests."[141] The point here is that whereas the nineteenth century saw the development of technical means and artistic aims to guide the production of artefacts, the early twentieth century ushered in parallel developments in the organisation of economic life with the aim of streamlining production. The new factor is the cartel, the supra-individual grouping of a particular industry, which is organised in order to promote its products. Calwer again, "For the cartel, the interests of the individual company are no longer decisive, rather the collected interest of an entire branch or industry."[142]

Muthesius in his 1911 speech '*Wo stehen wir?*' (Where do we stand?) also underlined the subordination of individualistic concerns beneath the umbrella of the cartel. In his thinking, the *Werkbund* itself had the task of becoming the umbrella organisation providing the guiding principles for all progressive designers. In a sense the *Werkbund*, in Muthesius's analysis, would act as the animating spirit in order to marshal the disparate forces of unselfconsious, craft-based design to better serve the needs of a dynamic, capitalist economy. This would perfectly mirror the development from laissez-faire to corporatist capitalism that was such a feature of the growing world economic system. This of course set the stage for the famous quarrel between Muthesius, representing the idea of the type, and van de Velde, championing the individual artistic *Kunstwollen.*

For Muthesius, "[t]ypisierung, to be understood as the result of a beneficial concentration, will alone make possible the development of a universally valid, unfailing good taste."[143] In other words, the type is intended as a generic form to be adopted by different manufacturers of the same artefact. Competition between different companies would no longer be in terms of the variety of unique designs, rather it would be in terms of the varying quality of the manufactured artefact. However, the mobility of the term 'Type' frequently led to *Typenartikel* being replaced by the term *Markenartikel*; and here the *Werkbund* thesis almost comes full circle, but with one important difference, namely that the 'brand' in question is firmly that of the producer, as opposed to that of the retailer. The consumer, on visiting a fashionable department store in search, say, of a new-fangled electric kettle, would be referred to the AEG price-list detailing a limited variety of different models, all of them bearing the imprint of the AEG, with the name of the designer, Behrens, prominently displayed.[144]

How does this discussion of type relate back to Tessenow and the theme of the everyday? Let us recall Tessenow's enumeration of the parts of a house, and his insistence that we be aware of the origins of its constituent parts, and are able to trace back their provenance to the realm of raw materials, and his urging that we recognise the workmen who 'fashioned' them from raw materials.[145] Is Tessenow fighting a rearguard action against the tide of branded artefacts flooding into the domestic interior? To quote Victor Mataja, an economist writing on the culture of advertising of the period:

> Knowledge of brands has replaced a knowledge of goods...The knowledge of goods can only be empirically learned. Petroleum, lard, margarine, coffee, cocoa, tea...and hundreds of other articles from all areas of economic life are no longer bought and sold after an inspection of their quality, but rather simply according to the brand.[146]

In his (undated) essay *Die Wohnung* Tessenow both enumerates the constituent buiding components of a house, and then invites us to consider their manufacture, tracing back the providence of all their raw materials as far back as, for instance, the iron ore in the mountain.[147] Tessenow appears to require us to return to first principles in probing the house, the composite artefact *par excellence*. We are to imagine the rafters, the log, the tree, the

forest, and so on, and we are to do so for each and every material, and we are to imagine and empathise with the workman or craftsman by whose labour the material was refined step by step, until it became (sometimes in conjunction with other trades) the finished article.[148] But we are not to think of a particular person; it is, rather, the generalised craftsman whose image is invoked. This is the epitome of an artless world, in which vernacular tradition working within a geographical and social nexus produces just the 'type' of ineluctable artefact or building striven for by *Werkbund* members. Perhaps Tessenow is posing as an incorrigible Romantic; yet his engagement with all the forms of modernity of the early twentieth century would surely strip away his naivety. He knows that 'design' and the person of the designer has become the mediating figure standing between the craftsman and the consumer, and in this sense the van de Velde faction is arguably more honest in supporting the individuality of the artist as this mediating presence, as against Muthesius, for whom the abstracted idea of the type attempts to fill a very material hole. Tessenow's holistic view of the continuum linking raw materials with their refined versions, and then components with the finished artefact is echoed in Karl Ernst Osthaus's characterisation of alienated consumption, in which the oriental bazaar, where production and retailing share the same space, is favourably compared with the North European department store, whose "shopwindow ...shows us the commodity, and not production."[149]

Schwartz shows how, at the turn of the century, artists and designers had sharply defined spheres, which were reflected in legislation. The law attributed copyright (*Urheberrecht*) to artists, whereas the intellectual property of designers was accorded to the producer, the company realising the design (*Musterschutz*). However, in 1907, the protection of copyright was extended to designers; henceforth design would behave in a legal sense in a similar way to works of art. This would have a profound implication for the development, and inter-relation, of art and design throughout the twentieth century; the common legal footing of both activities underlies a shared teleology.[150] The received history of modernism has it that the *Typisierung* faction headed by Muthesius represented the progressive element, whereas the *Individualismus* of van de Velde is regressive; however in 1914 the split was viewed as a dichotomy, but more often than not in terms of a right-wing, pro-capitalist drive for

standardisation, as against the anti-capitalist resistance of the artist-designers. Gropius's support of the Van de Velde faction, counter to the later assumptions of his position in the debate, must be seen in the light of this dichotomy. The 'artists', in a curious inversion of their supposed political affiliations, were in fact, instrumental in the growth of advertising through their involvement in graphic arts. It was they, perhaps more than the 'designers', who were attuned to the significance of the sign in the economy, which was rapidly becoming an alienated one.[151]

Tessenow's ambiguous position in 'the type and the individual' debate goes some way in explaining his vacillating fortunes in twentieth-century architectural historiography. His ambiguity is quite different from that of, say, Gropius who, in the *Werkbund* debates at Cologne of 1914, came out in favour of the individualistic stance of Van de Velde; his contribution to architectural development, on the other hand, consists in his extolling the virtues of the type in terms of normative construction.[152] We shall discuss Tessenow and the historiography of twentieth century architecture in the following chapter; here we will seek to round off considerations of the materialist considerations of Tessenow in respect of 'the everyday'.

Much recent history writing has concerned itself with oral history: the consideration of the everyday lives of 'ordinary' people, substantiated by the evidence of their own words. Hermann Glaser's *Industriekultur und Alltagsleben* (*Industrial Culture and Everyday Life*, 1994), for instance, sought to relate broader themes of historical change to people's actual experience of life, and their dealings with new social and technical realities.[153] It is worth reiterating that while Tessenow's mental world was shaped by nineteenth-century Idealist principles, both his artisan background and his engagement with the 'real' world of construction obliged him to operate within a materialist framework. In a sense his mental furniture comprising philosophical ideas and design principles, shaped as they were by the nineteenth century, lagged behind the material engagement of his practice. As Auke van der Woud put it in respect of Dutch fin-de-siècle architecture:

> In those days [the mid nineteenth century] the demands that architecture and architects had to meet were not too different from what for a long time had been the usual thing to do. An occasional steam engine and two or

> three short railway lines made up the miracles of the modern era; sending a letter by home-pigeon was still the fastest way to communicate. By 1900 this world did not exist any more. It had relatively dense and global railway and telegraph networks, transatlantic ocean-liners, electricity, a few motor-cars and experimental aircraft. At that time, how could the architects have admired the Middle Ages and the Renaissance as sincerely, and in such a dedicated way as their predecessors had done in 1850? In his preface to the second edition of *The Seven Lamps* (1880) Ruskin himself wondered why his work was so widely appreciated again – this book was the most useless one he had written: it had little to do with daily reality.[154]

Van der Woud ends his study by considering a department store which opened in 1906 in The Hague. The *Grand Bazar de la Paix*, designed by J.C. van Dorssers, has never featured in any survey of Dutch architecture, we are told. Its relative anonymity and lack of stylistic pretensions actually renders it a far better harbinger of the future development of architecture than "the traditional, somewhat conservative architecture of Berlage, who has received all the accolades."[155]

In the following chapter this study draws to its conclusion by considering how Tessenow and his architecture have been critically received in the course of the twentieth century. Not too dissimilar from the lack of critical reception afforded to van Dorsser's work, Tessenow's qualities have been distinctly undersold to date. In re-evaluating Tessenow's architecture it is hoped that its material and spiritual *differerences* vis-à-vis those of the nineteenth century will become evident.

If Tessenow's domesticity stops well short of the maudlin or the sentimental, he equally refuses to become so obsessed with grids that his architecture reduces to a mere mathematical exercise. Instead he fits into the middle ground, and is an example of an architect who has found the happy balance, the symmetry, between the intellectual and the real, the grid and the everyday. Fritz Schumacher, writing about German architecture between 1900 and 1914, had this to say:

> We see two streams running side by side, one ... from the warm areas of 'empathy', one from the cool areas of 'abstraction'. Both are necessary in order to measure up to the tasks demanded of the times. ...It is not our intention, to designate the characteristic artists of the period between 1900

> and 1914 to one or other School, since the agitated life of our time is not so simple; we only want to identify two clearly recognisable poles, from which these streams flow. Some men belong ... indisputably to one side or the other, but there are those in whose work the streams mingle, not because they themselves vacillate, but because the tasks before which they stand fall sometimes into the category of the domestic-concrete (*Heimisch-Gebundenen*), and at other times into the category of the abstract-urban (*Losgelöst-Großstädtischen*).[156]

Schumacher argues passionately for an inclusive cultural history, one which resists the temptation to polarise one's view of the world into two opposing camps. In the final chapter I shall examine the historiography of Tessenow, during a twentieth century riven by ideological divide, and come to much the same conclusions as Schumacher regarding the mingling of different cultural streams.

NOTES TO CHAPTER FOUR

[1] See Wilfried Wang, 'Geometrie und Raster. Der mechanisierte Mensch' in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994).

[2] Sir Henry Wotton, *The Elements of Architecture* (London, 1624).

[3] J.N.L. Durand, *Précis des leçons d'Architecture données à l'Ecole polytechnique*, 2 vols (1802-1805) (Paris, 1819).

[4] See Richard Padovan, *Proportion: Science, Philosophy, Architecture* (London: Spon, 2001).

[5] See de Michelis, *Heinrich Tessenow*, pp.58–62, for a discussion of Tessenow's use of proportional systems; some geometrical studies, carried out by S. Bellabarba and D. Colletti, are reproduced, showing how the primary shapes of a single-family house "am Schänkenberg" may be inscribed within squares and circles overlaid over plans, sections, and elevations (Fig. 4.18).

[6] For a discussion of the Dutch contribution to the development of proportional systems see introduction by Iain Boyd Whyte to Hendrik Petrus Berlage, *Thoughts on Style: 1886-1909* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1996).

[7] See 'Ein Beitrag zum Entwerfen auf systematischer Grundlage in der Architektur,' in: *Ring* I, Heft 4, 1909, pp.25-34; repr. in: Nic. Tummers, *Der Hagener Impuls. Das Werk von J. L. M. Lauweriks und sein Einfluß auf Architektur und Formgebung um 1910* (Hagen, 1972), 22ff. Also of interest is Herta Hesse-Frielinghaus and others, *Karl Ernst Osthaus: Leben und Werk* (Recklinghausen: Bongers, 1971).

[8] Hanno-Walter Kruft, *A History of Architectural Theory from Vitruvius to the Present* (trans. Ronald Taylor, Elsie Callander, Antony Wood), London: Zwemmer and New York: Princeton Architectural Press, 1994), p.377. The biological analogy would prove to be a fashionable viewpoint of the 1970s: witness the work of Philip Steadman, *The Evolution of Designs: Biological Analogy in Architecture and the Applied* Arts (Cambridge: Cambridge University Press, 1979), Lionel March, *The Geometry of Environment: an introduction to spatial organisation in design* (London: RIBA, 1971) and the rediscovery of D'Arcy Thomson's book *On Growth and Form* (1917).

[9] See Winfried Nerdinger with Florian Zimmermann (eds), *Die Architekturzeichnung: Vom barocken Idealplan zur Axonometrie* (Munich: Prestel, 1986). Nerdinger's essay 'Entwerfen auf Millimeterpapier' (ibid. pp.166-169) traces the use of squared paper back to Bramante. Several Riemerschmid schemes are illustrated, including the library in the Weigand House (1902/1903) and the Hörburger House (1907). See also Peter Collins 'The Origins of Graph Paper as an Influence on Architectural Design' in *Journal of the Society of Architectural Historians*, (1962), vol.21, no 4, December, pp.159-162.

[10] See Richard Padovan, *Towards Universality: Le Corbusier, Mies and De Stijl* (London: Routledge, 2002). Padovan argues for a closer affinity of Lauwerks with Van Doesburg, rather than with Mondrian. See ibid. pp.134-135.

[11] The link between Le Corbusier and Tessenow is broached in Chapter One.

[12] Le Corbusier (Ch.-E.Jeanneret), *Les voyages d'Allemagne* (Milan: Electa and Paris: Fondation Le Corbusier, 1994).

[13] H. Allen Brooks, *Le Corbusier's Formative Years* (Chicago and London: University of Chicago Press, 1997); Padovan, *Towards Universality*, pp.120–145.

[14] See Nic. Tummers, *Der Hagener Impuls. Das Werk von J.L.M. Lauweriks und sein Einfluß auf Architektur und Formgebung um 1910* (Hagen, 1972), also Gerda Breuer a.o., *J.L.M. Lauweriks* (Krefeld, 1987).

[15] *9H* (1989), no 8, 'On Rigour', eds Richard Burdett & Wilfried Wang, p.52.

[16] Frederic J. Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War* (New Haven and London: Yale University Press, 1996), p.222.

[17] See Appendix E: 'On Universality'.

[18] Richard Padovan ascribes the origins of regulating lines to German architects in the nineteenth century: "The concept of proportion based on similar figures seems to have been invented by August Thiersch in the 1870s, inspired by Fechner's recently published researches and by the philosophical ideas of his grandfather the philosopher Friedrich von Thiersch, friend and associate of the Munich Neoclassicist architect Leo von Klenze....The theory was taken up by Heinrich Wölfflin (1864-1945), who published analyses of Greek and Roman facades using Thiersch's method in 1889. Early in 1910 Le Corbusier [sic] tried unsuccessfully to get work with the Munich architect Theodor Fischer, a convert to Thiersch's theory. He probably encountered the theory a few months later, however, in Behrens' office, in the Düsseldorf branch of which Thiersch's son, the architect Paul Thiersch, worked from 1906 to 1907." Padovan, *Proportion*, pp. 318-319.

[19] Richard Schaukal, *Vom Geschmack* (Munich: Müller, 1910), p.84. German text: "Das Übel, an dem unsre Zeit krankt, heißt Individualismus".

[20] Rudolf Arnheim, 'A Review of Proportion', in Gyorgy Kepes (ed.), *Module Symmetry Proportion* (London: Studio Vista, 1966), p. 218. Article reprinted from *The Journal of Aesthetics and Art Criticism* (1955), XIV:1.

[21] Iain Boyd Whyte, Introduction to: Hendrik Petrus Berlage, *Thoughts on Style: 1886-1909* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1996). Introduction by Iain Boyd Whyte, p.14.

[22] Cited in Paul Hugh Scholfield, *The Theory of Proportion in Architecture* (Cambridge: Cambridge University Press, 1958), p.102. The translation is by Professor Ghyka, and is taken from his article on Corbusier's Modulor in the *Architectural Review* February 1948. The passage has also more recently been cited in Padovan, *Proportion* 1999 p.318. German text: "Wir finden, durch Betrachtung der gelungensten Werke aller Zeiten, dass in jedem Bauwerk eine Grundform sich wiederholt, dass die einzelnen Teile durch ihre Anordnung und Form stets einander ähnliche Figuren bilden. Das Harmonische entsteht durch Wiederholung der Hauptfigur des Werkes in seinen Unterabteilungen." August Thiersch 'Die Proportion in der Architektur' in *Handbuch der Architektur* (Darmstadt, 1883), vol.IV.

[23] Berlage, *Thoughts on Style*, Introduction by Iain Boyd Whyte, p.40.

[24] Ibid. p.14.

[25] Wilfried Wang, 'Geometrie und Raster: Der mechanisierte Mensch' in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994), p.38. German text: "Berlages und Behrens' Entwürfe für Lampen und andere Haushaltsgegenstände beispielsweise nahmen Haeckels geometrische Matrize des ins Quadrat einbeschriebenen Kreises auf. Mit dieser Matrize ließen sich aber nicht nur Industrie-Produkte typisieren (ein Hauptanliegen des 1907 gegründeten Deutschen Werkbunds), sondern auch Bauten mit einer explizit geometrischen Ordnung."

[26] Zimmermann has recounted to the author how one extant conical lamp fitting was discovered in a Hellerau attic. It was used to manufacture facsimiles of the entrance foyer lamps (the smallest ones) and the stair hall fittings (medium size). The largest lamps in the 'family' were the three located above the long table in the first floor boardroom. Zimmermann has established that all three lamp sizes share the same proportions.

[27] Ibid. p.29 citing Hendrik Petrus Berlage, *Grundlagen und Entwicklung der Architektur: Vier Vorträge gehalten im Kunstgewerbemuseum zu Zürich* (Rotterdam: W.L. & J.Brusse; Berlin: Julius Bard, 1908), pp.115-16.

[28] Behrens's interest in abstraction would lead him, through the remaining Wilhelmine years, and on into the Weimar Republic, towards an ever-deepening enthusiasm for the discipline of proportional systems *per se*. These were often pursued in spite of their sometimes unfortunate effects on building planning. See Peter Blundell Jones, *Modern Architecture through Case Studies* (Oxford: Architectural Press, 2002). Speaking of Behrens's block of flats in the Stuttgart *Weißenhofsiedlung* (1927) Blundell Jones writes:

> A little analysis [of the building] shows that this interest [in proportional systems] persisted, even if in asymmetrical form, for both plans and elevations turn out to be full of parallel diagonals. These reflect the method established by August Thiersch in his *Handbuch der Architektur* of 1883: Thiersch's son Paul had worked for Behrens. When diagonals concur, it means that the rectangles which they cross share the same proportion even without a significant size relationship. It is therefore a quick way to check for proportional harmony, or to impose it. Examination of Behrens's plan suggests as a repeated base figure a single flat plan just over 12 x 8 metres, precisely proportioned in the ratio three to two. When variously turned, doubled and overlapped, it seems to produce most of the key dimensions of the plan. The same figure works in the elevations, its resonant diagonals showing this to be a three-dimensional compositional system. (Ibid. p.42).

So far, so good. However, Blundell Jones goes on to draw our attention to the drawbacks of following the rules of such a compositional system to the letter:

> Whatever one's feelings about its aesthetic efficacy, this kind of concern was not pursued without a price. Obviously room dimensions follow the system, rather than precise functional planning of the kind pursued by Oud and Bruno Taut [architects who also built model dwellings for the Siedlung], necessitating a looser fit and larger rooms. Behrens was not much interested in the minutiae of domestic life, and was criticised for creating kitchens where the stove was overshadowed by the cook. Further, an aesthetically based manipulation of forms on paper with

overlaps and intersections makes more sense than on the building site." (Ibid. p.42).

[29] Hendrik Petrus Berlage, *Thoughts on Style: 1886-1909* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1996). Introduction by Iain Boyd Whyte, p.30, citing H.P.Berlage, *Gedanken über Stil in der Baukunst* (Leipzig: Julius Zeitler, 1905), p.23.

[30] For instance, Janet Stewart in *Fashioning Vienna: Adolf Loos's Cultural Criticism* (London: Routledge, 2000) points to Loos's essay 'Architecture' in which "Loos draws attention to the 'strange correspondance' between the outward appearance of people and the exterior of buildings." Ibid. p.130.

[31] Berlage, *Thoughts on Style*, p.30.

[32] Ibid. p.43.

[33] Ibid. p.45.

[34] Beethoven underwent a great revival of popularity in the early twentieth century. "It will generally be admitted that Beethoven's Fifth Symphony is the most sublime noise that has ever penetrated into the ear of man." E.M.Forster, *Howard's End* (Harmondsworth: Penguin, 1975), (originally published by Edward Arnold in 1910), p.44.

[35] Ibid. p.55 citing H.P.Berlage, 'Concertzalen' (1908) in *Beschouwingen over bouwkunst en hare ontwikkeling* (Rotterdam: W.L.&J.Brusse, 1911), p.98.

[36] Ibid. p.57.

[37] Troost would go on to make use of vastly simplified, monumental trabeated structures in his work for the Nazi regime in Munich.

[38] See Stanford Anderson's introduction to Hermann Muthesius, *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and its Present Condition* (Santa Monica: The Getty Center for the History of Art and the Humanities, 1994), pp.14–16.

[39] Ibid. p.133.

[40] Ibid. p.134.

[41] The single point perspective, while offering a more 'realistic' image than orthographic conventions, is nonetheless reliant on monocular vision, as opposed to the binocular image which the brain interprets as 'vision'. For a discussion of the difficulty of pairing filmic montage with abstraction see Chapter Three 'Light Architecture'. Seeing and Scanning: Abstraction Empathised.

[42] Rosalind E. Krauss, 'Grids', Rosalind E. Krauss, *The Originality of the Avant-garde and other Modernist Myths* (Cambridge, Mass: MIT, 1985).

[43] Erwin Panofsky, *Meaning in the Visual Arts* (Harmondsworth: Penguin, 1970), p.137.

[44] Panofsky sums up the contrast between modern and pre-modern views of 'the object' in a succint manner: "Those who like to interpret historical facts symbolically may recognise in this the spirit of a specifically 'modern' conception of the world which permits the subject to assert itself against the object as something independent and equal; whereas classical antiquity did not as yet permit the explicit formulation of this contrast; and whereas the Middle Ages believed the subject as well as the object to be submerged in a higher unity." Ibid. p.130.

[45] See Appendix E for a discussion of Padovan's notions of the 'Universal' and the 'Particular'.

[46] Frederic J. Schwartz, *The Werkbund: Design Theory and Mass Culture before the First World War* (New Haven and London: Yale University Press, 1996), p.171 citing Karl Ernst Osthaus 'Das Schaufenster' in *Jahrbuch des Werkbundes* (1913), no 2, p.62.

[47] See Schwartz, *The Werkbund*, pp.171-172, for a discussion of the function of the trademark as a 'framing' device.

[48] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass. And London: MIT, 1994), p.255.

[49] Heinrich Tessenow, *Hausbau und dergleichen* (Braunschweig: Vieweg, 1986), reprint of 1953 4th edition published by Waldemar Klein, Baden-Baden; pp.24-29.

[50] Ibid. p.29. German text: " Die Symmetrie ist um so besser, je schwerer man ihre Achse findet".

[51] Francesco Passanti 'Architecture: Proportion, Classicism and Other Issues', in Stanislaus von Moos and Arthur Rüegg (eds) *Le Corbusier before Le Corbusier* (New Haven and London: Yale University Press, 2002), p.79.

[52] Mohsen Mostafavi (ed.) *Approximations: The Architecture of Peter Märkli* (London: AA Publications, 2002), p.14.

[53] Ibid. p.11.

[54] Heinrich Tessenow, *Hausbau und dergleichen*, p.27. German text: "Die Häufung der Einzelformen um die Symmetrieachse, wie das beispielweise mit der Figur 5 skizziert ist, zeigt immer ein starkes Nachgeben der Achsenforderung und neigt immer zum Starren; es wird sich da immer gleich etwas Totes oder sehr Leeres einstellen, trotz der Vielheit der Formen, während eine symmetrische Flächenzeichnung - etwa nach der Figur 6 – mit der irgendwelche seitlichen Bildteile besonders interessieren, immer eine merkwürdig verhaltene Bewegung hat. "

[55] De Michelis, *Heinrich Tessenow*, p.58.

[56] See Chapter Two 'Space Theorised: The 1893 Texts'.

[57] Karl Lorenz, 'Der Traum vom "Laboratoire d'une humanité nouvelle' in Reinhard Ring (ed.), *Hellerau Symposion: Fragen zur Geschichte der Rhythmik/ Des questions sur l'histoire de la rythmique* (Remscheid and Geneva: Bundesverband Rhythmische Erziehung e.V./ Fédération Internationale des Enseignants de Rythmique, 1993), p.25 citing *Musik in Geschichte und Gegenwart* (1960), vol. 8, line 932. German text: "Den musikalischen Rhythmus psychologisiert er mit der Lehre von ständigem Spannungs-

und Entspannungswechsel bei der seelischen Auffassung, der sich mit der tendenz verbindet, die begonnene Weise des Wechsels beizubehalten; diese Veranlagung des Subjektes ermöglicht Einfühlung in den Rhythmus, der mithin einem Ordnungsbedürfnis der Seele entspräche."

[58] See Appendix B, *Methode Jaques-Dalcroze: Rhythmische Gymnastik.*

[59] Further evidence for this view is given by the critic Karl Scheffler. In his contribution to the Programmbuch published on the occasion of the 1912 *Schulfeste* at Hellerau, he wrote: "When I was asked my opinion about the choice of architect to build the Institute I could only come up with the name of Peter Behrens, since I had not yet made the acquaintance of Tessenow." German text: "Als ich, vor der Wahl eines Architekten, um meine Meinung befragt wurde, wer das Haus bauen könne, wußte ich, da ich Tessenow noch nicht kannte, nur den Namen Peter Behrens zu nennen." Wolf Dohrn (ed.), *Die Schulfeste der Bildungsanstalt Jaques-Dalcroze: Programmbuch* (Jena: Diederichs, 1912), p.5.

[60] Adolphe Appia, *Oeuvres Complètes* (4 vols.) (Bunstetten (CH): Société Suisse du théâtre, 1983-1992), Denis Bablet (ed.), vol.III, "...une charpente analogue à celle d'une gare de chemin de fer, avec au fond, à droit et à gauche, des arcs de voûte sans piliers, de façon à pouvoir communiquer directement entre les cours, sans être gêné par les piliers..."

[61] De Michelis, *Heinrich Tessenow*, p.22, citing a letter from Dalcroze to Appia, 11.04.1910, Geneva: Dalcroze Institute archive.

[62] All three of these schemes were carried out with the assistance of Franz Hoffmann.

[63] See Annemarie Jaeggi (trans. Elizabeth M. Schwaiger), *Fagus: Industrial Culture from Werkbund to Bauhaus* (New York: Princeton Architectural Press, 2000).

[64] See Schwartz, *The Werkbund* (1996), pp.187-190. "Form, in the Fagus-Werk, represents production, but does not reflect it". "Gropius was to give the new factory (whose foundations were already being laid according to Werner's plan) a *facade*, for it was precisely an image that Benscheidt [the client] wanted from Gropius".

[65] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass: MIT, 1994), p.57.

[66] See Aldo van Eyck, Hermann Hertzberger *et al.*

[67] See illustration ibid. p.109.

[68] Ibid. p.107.

[69] Ibid. pp.114-118.

[70] Gottfried Semper, *The Four Elements of Architecture and Other Writings* (Trans. Harry Francis Mallgrave and Wolfgang Herrmann; intr. Harry Francis Mallgrave).

[71] See Volker Helas (ed.), *Hans Erlwein: Stadtbaurat in Dresden 1905–1914* (Dresden: Kulturamt Landeshauptstadt Dresden, 1997), exh. cat., p.112.

[72] Henrik Karge, 'Die Ästhetik der Sachlichkeit: Heinrich Tessenows architektonische Fassung der Internationalen Kunstausstellung von 1926' in Dresdner Hefte Beiträge

zur Kulturgeschichte, *Große Ausstellungen um 1900 und in den zwanziger Jahren* (Dresden: Dresdner Geschichtsverein, 2000), no 63, p.67, citing Nikolaus Pevsner 'Rundgang durch die Internationale Kunstausstellung' in *Dresdner Anzeiger*,(13 June 1926), p.30. German text: "Die ganze vierte Seite des großen Quadrates nimmt der Dresdner Saal ein, den Tessenow durch Scherwände aufs schönste in zwölf große, helle Abteilungen mit einem breiten Durchgang in der Mitte gegliedert hat."

[73] Ibid. pp. 66-67 (citing Pevsner). German text: "Sie ist durch den Architekten der Kunstausstellung, durch Heinrich Tessenow, umkleidet worden und wirkt nun, bar allen Schmuckes, nur durch die wohlerwogenen Verhältnisse."

[74] Ibid. p.68. German text: "Weit intimer sind die der deutschen Kunst gewidmeten Räume gestaltet, die Tessenow in einem quadratischen Anbau, der den Südflügel zum Innenhof hin erweitert, eingerichtet hat. Es handelt sich um einen – in der Forschung so gut wie unbekannt gebliebenen – Neubau Tessenows, dem dieser eine ebenso strenge wie originelle Konzeption zugrunde legte: Ein Ring von quadratischen und längsrechteckigen Kabinetten umzieht einen kleinen Zierhof, der in der Mitte wiederum ein Quadrat bildet und von einer offenen Pergola bekrönt wird, deren vier Stützen erneut im Quadrat angeordnet sind. Trotz der strengen geometrischen Einfassung müssen die Kabinette und der kleine Hof einen außerordentlich leichten und heiteren Eindruck hervorgerufen haben. Der Zierhof – ein "architektonisches Juwel", das dem erschöpften Publikum zur Erholung diente – hatte es Pevsner besonders angetan. Er hebt hervor, daß Tessenow hier bewußt für eine Verschränkung von Natur und Architektur gesorgt habe, indem er die einzelnen Bodenplatten durch Rasenstreifen voneinander trennte und die weißen Pergolapfosten beranken ließ."

[75] This is the house named '*Haus des Architekten*' (the architect's house) in de Michelis's monograph. It is located at Sophie-Charlotte-Straße 7, Berlin–Zehlendorf. It became *de facto* the house of Tessenow's mistress Chilla Schlichter, with whom he was together from 1922. See De Michelis, *Heinrich Tessenow*, pp.310–311.

[76] A pergola structure is also deployed, intriguingly, on the topmost flat roof terrace as if to 'replace' a putative pitched roof. See illustrations in Peter Blundell Jones, *Modern Architecture through Case Studies* (Oxford: Architectural Press, 2002), pp.40–41.

[77] At the time of writing, the house is still occupied by Frau Schneider, the widow of Tessenow's son-in-law, Hans-Joachim Schneider. I am indebted to Theodor Böll, archivist at the *Kunstbibliothek* Berlin, for kindly supplying me with the following information concerning Tessenow's relationships:

> Frau Eva Schneider war eine Freundin von Hede Tessenow, der jüngeren von den beiden Tessenow-Töchtern. Sie hat nach dem frühen Tod von Hede deren Mann Hans-Joachim Schneider, also den Schwiegersohn Tessenows geheiratet. Lotte Tessenow, die ältere der beiden Töchter, war mit dem mecklenburgischen Pastorensohn und Arzt Clorius verheiratet. Für sie hat Tessenow nach Kriegsende den Einrichtungsplan der Wohnung mit Praxisräumen in Schwerin gezeichnet. Deren Sohn, also ein Enkel Tessenows ist auch Arzt geworden. Die Familie ist aber sehr bald nach dem Kriege nach USA ausgewandert. John Clorius kam dann viele Jahre später wieder nach Deutschland und war bis zu seiner Pensionierung am Krebsforschungszentrum in Heidelberg tätig. Ihm gehört das erhalten gebliebene Haus in Neubrandenburg.
>
> Die familiären Verhältnisse Tessenows waren sicher nicht einfach. Er hat ja mit seinem Beruf und seinem Potential ein viel unruhigeres und "großstädtischeres"

Leben geführt, als es seinem eigentlichen Ideal entsprach. In den Wirren der Zeit mit all ihren auch gefährlichen Verlockungen und Verirrungen hat er eine beachtliche Haltung bewahrt. Seine Familie war ihm wichtig, obwohl seine Ehe unglücklich war. Chilla Schlichter hatte er nach seiner Rückkehr aus Wien in Hellerau kennengelernt, diese Begegnung von einer für ihn bis dahin unbekannten Intensität jedoch seiner Frau gegenüber nicht verschwiegen, sondern in einem anrührenden Brief mitgeteilt. Aber auch die Beziehung zu Chilla Schlichter war wohl nicht so einfach. Die Frauen werden ihn geliebt und ebensosehr gelitten haben. Tessenow selber hat wohl gespürt, daß er nicht allen Ansprüchen gerecht werden kann und versucht, irgendwie vertretbare Lösungen zu finden. (So verstehe ich auch den Bau des Zehlendorfer Hauses.) Alfred Roth, sein Schüler aus der Dresdner Zeit, Vertrauter und Assistant in Berlin, hat im wohl den Kauf des Grundstücks empfohlen und auch zum Bau des Häuschens für Chilla Schlichter geraten. Etwa zur gleichen Zeit erfolgte ja ein Umbau des Hauses in Neubrandenburg, bei dem Tessenow für sich einen Rückzugsbereich schuf. Mitten im Kriege, 1943, entflieht er in die ländliche Einsamkeit nach Siemitz, schafft sich seine Häuslerei wo er als eine Art Selbstversorger versucht über die Runden zu kommen und erlebt dort das Kriegsende. Seine Frau soll bei einem Bombenangriff unter ungeklärten Umständen in Neubrandenburg umgekommen sein.

[78] Elizabeth Boa and Rachel Palfreyman, *Heimat - A German Dream: Regional Loyalties and National Identity in German Culture 1890-1990* (Oxford: Oxford University Press, 2000), p.33.

[79] Ibid. pp. 33-34, citing Friedrich Lienhard, *Neue Ideale* (Leipzig/Berlin: Georg Heinrich Meyer Heimatverlag, 1901), p.198.

[80] See Paul Schultze-Naumburg 'Kulturarbeiten', published in Friedrich Avenarius's *Kunstwart* magazine from 1900-1917.

[81] Ibid. p.38.

[82] Ibid. p.39.

[83] Ibid. p.44.

[84] Ibid. p.45.

[85] Ibid. p.50.

[86] Heinrich Tessenow, *Geschriebenes*, p.130. German text: "...wir wehren uns gegen ihn [den Krieg] etwa so, wie wir auch immer unsere Maschinenprodukte billig und erniedrigend gescholten haben, um dann doch immer noch wieder neue und noch größere Fabriken zu bauen." Tessenow is bemoaning the German tendency for self-righteousness, while at the same same time pursuing mindless expansion in the economic field, which he implicitly links with territorial and military expansion.

[87] 'Modern Classicism: Architecture without Avant-Garde', Manfredo Tafuri and Francesco Dal Co, *Modern Architecture* (New York: Rizzoli, 1986), vol.1, trans. Robert Erich Wolf. This was one of the chapters written specifically by Dal Co.

[88] Ibid.p.96.

[89] The *bodenständigkeit* of the name Adam is contained within its Hebrew etymology, where Adam (אדם) is cognate with adamah [earth] (אדמה).

[90] Tessenow, 'Wie Adam Baumeister wurde', Heinrich Tessenow, *Geschriebenes: Gedanken eines Baumeisters*, Otto Kindt (ed.), (Braunschweig: Vieweg, 1982). Original essay (unpublished) in "Block" notebook pp.12-15.

[91] Ibid. p.15 cited from the essay 'Unsere Wohnung': "Unsere Armut, soweit sie nicht eine Armut an Wohnlichkeit ist oder uns nicht hindert, die Wohnlichkeit zu genießen, ist so gut wie überhaupt keine Armut; und unser Reichtum an Wohnlichkeit ist oder diese betontermaßen fördert, können wir gut entbehren."

[92] See Heinrich Tessenow, 'Unsere Wohnung', Heinrich Tessenow, *Geschriebenes: Gedanken eines Baumeisters* (Braunschweig: Vieweg, 1982), ed. Otto Kindt, pp.16-17:

> World history of the last century has more and more tended to regard everything measured or usual or livable (*Wohnliche*) as something despicable or at best as something peripheral. We are generally fearful – quite unjustifiably - of the livable, which is based on the fact that the used or useful or usual or the measured or that-which-is-measured or the limited is always something restricting, which takes delight in threatening to stifle us.
> We humans are all always – whether we particularly like it or not – concerned to have everything arranged for our comfort or to form worlds in which we are very much "at home", or we are very naturally constantly concerned to establish and to firm up certain boundaries for our lives and our endeavours; but immediately consequent on this and at the same time very naturally we battle over such boundaries or we seek to extend them or to destroy them."

German text:

> Die Weltgeschichte des letzten Jahrhunderts hat mehr und mehr dahin geführt, daß Mäßige oder das Gewöhnliche oder Wohnliche als etwas Verächtliches oder bestenfalls als etwas Nebensächliches anzusehen. Wir haben sehr allgemein – wenn auch vielleicht sehr unberechtigt- vor dem eigentlich Wohnlichen immer eine gewisse Angst, die darauf beruht, daß das Wohnliche oder das Ge-wohnliche oder das Gewöhnliche oder das Mäßige oder das Gemessene oder das Begrenzte immer auch etwas Einengendes ist, das uns gerne bedroht, uns zu ersticken.
> Wir Menschen alle sind immer – ob wir das besonders wollen oder nicht – darum bemüht, alles wohnlich zu haben oder uns Welten zu bilden, in denen wir sehr "zu Hause" sind, oder wir sind sehr natürlicherweise immerfort bemüht, für unser Leben und Treiben bestimmte Grenzen auszubauen und zu befestigen; aber gleich hinterher und ebenfalls sehr natürlicherweise bekämpfen wir dann auch immer wieder solche Grenzen oder suchen wir, sie zu erweitern oder zu zerstören.

[93] Manfredo Tafuri and Francesco Dal Co, *Modern Architecture* (New York: Rizzoli, 1986), vol.1, trans. Robert Erich Wolf, p.96. The passage continues:

> For him syntheses between different objects are simply not possible. Only in the single object can the compositional procedure manifest itself: "the becoming and uniting, the distribution and composition of the elements, is an inexhaustible chapter." There is no duration of the language outside of the repetition of that distributing and composing; values are only an unmediated reduction of form to work: "in artisanal work, truth coincides with purely technical form." Just as

artisanal work is the basis for every composition, so the cell of the middle-class dwelling becomes, for Tessenow, pivot of the social organization. Architecture expresses a norm in the measure to which it identifies itself with the relationship of bourgeois to artisan in production. Form is reduced to pure revalation of the gestures of the artisan's labor. Everything additional is superfluous. "What is needed," Tessenow wrote, "is to aim at a uniformity without too many exceptions: first we put up a life-size Venus on the roof cornice, then along comes the post office administration and install [sic] its telegraph apparatus near it." To this composition without idols every sort of ornamentation is alien: "Ornament, or decoration, is everywhere, but it is much better the less it is deliberate; put it another way, the more it pleases us, the more we treat it with indifference."

[94] Beatriz Colomina, *Privacy and Publicity: Modern Architecture as Mass Media* (Cambridge, Mass: MIT, 1994), p.31.

[95] Ibid. p.33.

[96] Ibid. p.35 citing Georg Simmel, 'Fashion', *International Quarterly* (New York, October 1904), p.130.

[97] Francesco Dal Co, *Figures of Architecture and Thought: German Architecture Culture 1880-1920* (New York: Rizzoli, 1990), p.20.

[98] Heinrich Tessenow, 'Die technische Form', Heinrich Tessenow, *Geschriebenes: Gedanken eines Baumeisters* (Braunschweig: Vieweg, 1982), ed. Otto Kindt, p.32: " Es wäre schöner, wir würden uns menschlich mehr verbinden, wenn wir unsere Kümmernisse und Freuden oder die Leitungsrohre unserer Häuser und Straßen usw., alles was uns menschlich angeht, offen zeigen könnten; aber es fehlt uns das Können, alles so zu zeigen, daß die Offenheit nicht uns und andere geniert oder kränkt, und so müssen wir viel verstecken."

[99] Francesco Dal Co, *Figures of Architecture and Thought*, p.23.

[100] Ibid. p.31.

[101] Ibid. p.31.

[102] Joseph A. Lux, *Der Geschmack im Alltag: ein Buch zur Pflege des Schönen* (Dresden: Gerhard Kühtmann, 1912), p.1. German text: "Die Schönheit muß gleichsam von innen nach außen strahlen. Wenn im Innern der Häuser alles aufs beste gestellt ist, dann wird sie wie ein heimliches Licht durch die Mauern leuchten, die keines weiteren Schmuckes bedürfen, um die Stadt lieblich und wohnlich erscheinen zu lassen." See also Joseph A. Lux, *Das neue Kunstgewerbe in Deutschland* (Leipzig: Klinkhardt und Biermann, 1908), and Paul Schultze-Naumburg, *Häusliche Kunstpflege* (Jena: Eugen Diederichs, 1916).

[103] Ibid. pp.18–19. German text: "Alte weiße Tür, zweifellos vornehm"; "Dekorateurkünste", die vor keiner Geschmacklosigkeit zurückschrecken. Unsachliche, unmotivierte Draperien, die nur im Wege sind. Staubfänger und Bazillenherde".

[104] Ibid. pp.8-9; compare these illustrations to Tessenow's drawings in de Michelis, *Eingebaute Kleinbürgerwohnungen* (1907) p.48 and *Eingebaute Arbeiterwohnung* (1908) p.196.

[105] Ibid. p.24. German text: "daß im englischen Hause etwa 2/3 des ganzen Hauses den Nutzräumen angehören, während in unseren durchschnittlichen größeren Mietwohnungen, die den obigen hochtrabenden Titel führen, die Nutzräume etwa auf das Sechstel der ganzen Wohnung beschränkt sind".

[106] Ibid. pp.245-246.

[107] See Chapter Two, *'Geist und Materie'* for a discussion of Laugier's significance in architecture.

[108] Recourse to the primitive is not the preserve of Western architecture. One thinks of the *Sukiya* style of the 17th century, and its elegant restatement of the posited origins of Japanese architecture in the designs of villas and tea-houses.

[109] Ibid. p.64.

[110] Ibid. p.65. This passage of Simmel's is not only couched in similar language to the later writings of Martin Heidegger, but also includes the metaphor of the 'bridge' which features in his essay 'Bauen Wohnen Denken' essay of 1951. (Heidegger, Martin, 'Bauen Wohnen Denken', Heidegger, Martin, *Vorträge und Aufsätze* [Pfullingen: Günther Neske Verlag, 1954], pp.145-162.)

[111] "Building a site", as opposed to building on a site, became a leading slogan of the Italian *Tendenza* movement of the 1960s and 1970s. The actual phrase is attributed to the architect Mario Botta during its Ticino Swiss incarnation.

[112] Lisa Heschong, *Thermal Delight in Architecture* (Cambridge, Mass. and London: MIT, 1979), p.40. Heschong cites John Summerson, *Heavenly Mansions and Other Essays on Architecture* (New York: Charles Scribner's Sons, 1948), p.2.

[113] Johnson and Hitchcock, *The International Style* (New York, Norton,1966).

[114] John Summerson, *Heavenly Mansions* (New York: Norton, 1963).

[115] Volker Helas writes:

> Under Erlwein's direction, civic buildings had great value placed on the simplicity of massing, the simplicity of materials and the sparing use of ornament. The architect-colleagues Dülfer, Kreis, Schumacher, Lossow, Kühne, Schilling & Gräbner generally built considerably more opulently. On the other hand Erlwein's 'compatriot' [from Bavaria] Richard Riemerschmid shared his views, for instance with the factory of the Hellerauer Werkstätten, as did Heinrich Tessenow. Walter Hahn characterised Erlwein's architecture in 1914, by comparing it with [Martin] Dülfer's extension to the Technische Hochschule: Dülfer "has opposed the recently established fundamentals of simplicity of composition, unity of materials and limited use of ornament, which have recently become for many of us matters of principle ... the architecture of Prof. Erlwein, representative of the local planning authority, is a complete contrast to the Dülfer school of design. What Erlwein has offered the city this year in his role as artist, in his well-known simple *bürgerlich* way of building, is the reinstatement of the former Italian Village.
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> German text: "Unter Erlwein wurde bei den städtischen Bauten großer Wert auf die Einfachheit der Massenanordnung, die Schlichtheit des Materials und die sparsame Verwendung des Ornaments gelegt. Die Architekten-kollegen Dülfer, Kreis, Schumacher, Lossow, Kühne, Schilling & Gräbner bauten größtenteils

wesentlich opulenter. Eine verwandtere Gesinnung zeigten dagegen Erlweins Landsmann Richard Riemerschmid, beispielsweise bei dem Fabrikbau für die Hellerauer Werkstätten, oder Heinrich Tessenow. Walter Hahn charakterisierte 1914 die Architektur Erlweins, indem er sie mit der Dülfers bei dessen Erweiterungsbau der Technischen Hochschule verglich: Dülfer "hat sich in Gegensatz gestellt zu den neuerdings vielen zum Prinzip gewordenen Grundsätzen der Einfachheit der Massenanordnung, der Einheit des Materials und einer sparsamen Verwendung von Ornamenten...Im vollen Gegensatz zu der in der Hochschule von Dülfer vertretenen Lösung der Bauaufgabe steht die Architektur Prof. Erlweins, des Vertreters der städtischen Baubehörde. Was Erlwein, der in seiner, wie ja bekannt, einfachen bürgerlichen Bauweise, mehr auf der historischen Grundlage weiterschreitend, der Stadt als Künstler dieses Jahres geschenkt hat, ist die Wiedererrichtung des ehemaligen Italienischen Dörfchens. (Volker Helas, 'Hans Erlwein Stadtbaurat in Dresden 1905-1914', in the exhibition catalogue of the same title [Dresden: Landeshauptstadt Dresden Kulturamt, 1997], p.12.)

[116] See Gilbert Lupfer, Bernhard Sterra and Martin Wörner (eds), *Architekturführer Dresden* (Berlin: Reimer, 1997), p.105.

[117] Walter Benjamin, 'Paris, Capital of the Nineteenth Century', *Reflections* (New York: Schocken Books, 1986), trans. Edmund Jephcott, pp.155-156.

[118] Schwartz, *The Werkbund*, p.53.

[119] See Matthew Sweet, *Inventing the Victorians* (London: Faber, 2001) for the centrality of advertising in Victorian Britain. He draws attention to the "[blurring of] the line between advertising and news: 'On Monday a serious accident happened off Southsea beach...their chance of life seemed a bad one, as none of them appeared able to swim. *Beecham's Pills*, however, tacked and picked them up.' (*The Graphic*, 1899). This is a caption to an illustration entitled 'Saved by Beecham's Pills', in which the survivors of a shipwreck are saved by a boat whose sails advertise the product in question. Ibid. p.40.

[120] Schwartz, *The Werkbund*, p.89.

[121] "For Muthesius, advertising had clearly not been assimilated to Culture, and the road to Culture would have to be sought outside of, and in opposition to, the realm of commerce." Ibid. p.91.

[122] The German word *bodenständig*, untranslatable into English, richly conveys connotations of earthy *Kultur*.

[123] See Hermann Muthesius, *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and its Present Condition* (Santa Monica, California: The Getty Center for the History of Art and the Humanisties, 1994), Harry F.Mallgrave (ed.), introduction by Stanford Anderson, and Harry F.Mallgrave (ed.), *Modern Architecture: Otto Wagner A Guidebook for his Students to this Field of Art* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1988), introduction and translation by Harry F.Mallgrave.

[124] See Gerda Wangerin and Gerhard Weiss, *Heinrich Tessenow: Ein Baumeister 1876-1950* (Essen: Richard Bacht, 1976) for a good chronology of Tessenow. According to them, 1910 was the year of Tessenow's entry into the BDA (*Bund*

Deutscher Architekten) and the *Deutscher Werkbund*. The BDA is the professional association akin to the United Kingdom's RIBA.

[125] Francesco Dal Co, *Figures of Architecture and Thought: German Architecture Culture 1880-1920* (New York: Rizzoli, 1990), p.45.

[126] The *Patentwand* did not prove to be a success. Its problems associated with damp penetration have bedevilled the upkeep of the houses in Hellerau. See Anke Brandt and Jens Merkel, *Die Gartenstadt: Dresden Hellerau* (Stuttgart: Universität Stuttgart Fakultät 1 Architektur und Stadtplanung, 1993), Vol. 2: Bauphysikalische Sanierung/ Gebäudeanalysen, pp. 164 and 167-171. Markus Ernst, in the section dealing with Tessenow's *Haus am Schänkenberg* 23, has two alternative proposals for dealing with the shortcomings of the patent-wall construction. Both involve stripping out the solid brick infill and replacing it with different combinations of thinner brick slips and thermal insulation. Ibid. (Vol. 3: Bauphysikalische Sanierung/ Sanierungskonzepte), pp.81-95.

[127] Klaus-Jürgen Bauer, *Minima Aesthetica: Banalität als subversive Strategie der Architektur* (Weimar: Verso, 1997), p.50: "Heute ist Eternit geradezu ein Modematerial geworden, das viele der hier untersuchten Architekten benützen, um eine gewisse Modernität zu verdeutlichen. Eternit, also die gewöhnliche Faserzementplatte, durchläuft das ganze Spektrum des Modischen. Von einer sekundären Rolle (Bekleidung) über den Großeinsatz hin zum Synonym für Banalität im negativen Sinne, danach die Veredelung durch moderne Architekten, die an der Spitze der Zeit stehen, indem sie sich dem in unserem Falle verrufensten, *bösesten*, gewöhnlichsten, durch und durch banalen Material annehmen."

[128] See Christoph Bignes, 'Ästhetik aus dem Warenlager, Ready-made und Dekontextualisierung in der Architektur', *archithese*, (1995), no 5, p.12; "By means of a transformation, of a metamorphosis, banal building elements and materials are changed through choice and use." German text: "In einer Transformation, einer Verwandlung, werden also diese banalen Bauelemente und Baustoffe hier durch Auswahl und Einsatz verändert." Cited in Bauer, *Minima Aesthetica,* p.53.

[129] Reyner Banham, *The Architecture of the Well-tempered Environment* (London: The Architectural Press, 1969), p.194.

[130] Le Corbusier, 'Wo beginnt Architektur?', *Die Form* , (1927), no 3, p.37. Cited in Bauer, *Minima Aesthetica*, p.67;German text: "Dem Individualismus, diesem Produkt des Fiebers, ziehen wir das Banale und das alltägliche vor. Die Regel steht vor die Ausnahme. Für uns erscheint das Gewöhnliche, die Regel, die gemeinsame Regel eine der strategischen Grundlagen auf dem Weg zu Entwicklung und Schönheit."

[131] De Michelis, *Heinrich Tessenow*, p.108. German text: "Die Modernität Tessenows liegt im Spiel mit diesen scheinbar alltäglichen und traditionellen Formen; er löst sie heraus aus ihrem gewohnten Beziehungsgefüge und präsentiert sie in einer schonungslosen Vereinzelung, die das urtümliches Wesen dieser Formen hervortreten und als Fundament einer neuen Ordnung der Formen erscheinen läßt."

[132] Ibid. p.108. German text: "[den] nahezu kubischen Grundkörper".

[133] See Ibid. p.238.

[134] "In Germany, Impressionism was the term used to describe the attempt by painters to capture fleeting, subjective images of modern life, but it was also used – with the emphasis on the aspect of subjectivity – to denote currents we would now classify as

Post-Impressionist, Symbolist, and Aestheticist. And the range of reference of this word was even wider than that; it was an "attitude,"a "trend" of the modern. The term achieved widespread popularity in Germany when Karl Lamprecht adopted it to describe the entire culture of the present in the last volumes of his Deutsche Geschichte, and his translation of the word multiplied its meanings into an entire constellation. Lamprecht called the turn of the century the age of Reizsamkeit. The German word Reiz means "impulse" or "impression," more precisely "stimulation," but also on the one hand "charm," on the other "irritant." This latter interpretation is the one Lamprecht gave to the term: Reizsamkeit came to mean "irritability" or "nervousness." Schwartz, *The Werkbund*, p.92.

[135] Of course, in English an impressionist is also someone who dissimulates, someone whom one cannot trust.

[136] Ibid. pp.92-93. Schwartz cites Richard Hamann, *Der Impressionismus in Leben und Kunst* (Cologne: Dumont-Schauberg, 1907), pp.154-155.

[137] Schwartz, *The Werkbund*, p.18.

[138] Ibid. p.18, citing Behrens 'Kunst und Technik', p.279.

[139] Otto Kindt (Tessenow's last assistant at the Technische Hochschule, Berlin, immediately prior to his dismissal by the Nazi authorities) in conversation with the author, recounted that on no occasion did Tessenow make disparaging remarks about any other architect. An exception is the account, addressed to the architect himself, of Tessenow's reproval of Albert Speer's architectural pretensions.

[140] Stewart Brand, *How Buildings Learn: what happens after they're built* (New York: Viking,1994) and Mohsen Mostafavi and David Leatherbarrow, *On Weathering* (Cambridge, Mass: MIT, 1993).

[141] Schwartz, *The Werkbund*, p.108. Schwartz cites Richard Calwer, *Kartelle und Trusts* (Berlin: Simon, 1906), pp.5-6.

[142] Schwartz, *The Werkbund*, pp.57-58.

[143] Ibid. pp.125-126. Schwartz gives a modified and emphasised translation of Ulrich Conrads (ed.), *Programs and Manifestoes on 20th-Century Architecture* (London: Lund Humphries, 1970), p.28. See also Fedor Roth, *Hermann Muthesius und die Idee der harmonischen Kultur* (Berlin: Gebr. Mann, 2001).

[144] This same relationship of producer-retailer-consumer persists almost unaltered to this day. We enter a department store, wishing to buy a radio, and are directed to the (similar) types produced by the rival brands of Roberts, Panasonic, Grundig, etc. The irony is that many stores now retail their 'own brand' goods, which are sold at a considerable discount with respect to 'named' brand maunfacturers' articles. The cheaper goods have become the 'types' of style, as opposed to the 'fashion' articles of 'designer' labels. This situation obtains within one store; between differently owned stores there is, of course, a pecking order established. All this points to the mobility of the dual pairing style/ fashion, and its persistent relationship to social class.

[145] See Chapter One, note 38.

[146] Victor Mataja, *Die Reklame: Eine Untersuchung über Ankündigungswesen und Werbetätigkeit im Geschäftsleben* (Munich: Duncker & Humblot, 1916) p.412 cited in Schwartz, *The Werkbund*, p.130.

[147] Heinrich Tessenow, *Geschriebenes*, p.14.

[148] See Chapter One, note 38.

[149] Schwartz, *The Werkbund*, p.170. The quotation in full is as follows: "The Orient knows no shopwindows. There the stalls of handcraftsmen and traders are lined up in roofed bazaars...The whole store is, if you will, the shopwindow.
But it is also the workshop...The weaver, shoemaker, tinker, and innkeeper go about their work before everyone's eyes, and even the miller pours his corn into the trough which his harnessed donkey goes round and round. The fascination of the bazaar is the result of the interest we take in creation and production. By watching, we understand and learn, and herein lies the ultimate reason why the Orient, like earlier antiquity, never lost Style in any of its crafts.
The shopwindow of the North shows us the commodity, and not production. What is missing is the fascination of becoming, which makes the oriental bazaar so attractive. One thinks only of the function of the commodity, not of the work it involved." Karl Ernst Osthaus, 'Das Schaufenster', *Jahrbuch des Deutschen Werkbundes* (1913), no 2, p.59.

[150] Schwartz, *The Werkbund*, pp.151-156.

[151] See Schwartz's chapter 'Exchange and Utopia' for a discussion of the relative 'positions' of the Muthesius and Van de Velde factions. "In providing this kind of [advertising] sign to be used applied to or accompanying the commodity on its way to the consumer, the artists, the "individualists," were answering to the demands of modern business much more, I think, than the "norm-givers" and "friends of the type" ever did." Ibid.p.177.

[152] See Reginald Isaacs, *Gropius: an illustrated biography of the creator of the Bauhaus* (Boston: Bullfinch, 1991).

> Henry van de Velde, Hermann Obrist, and Bruno Taut, among others, defended the individuality of the artist against the spread of standardisation and anonymity. Though Gropius believed in standardisation for certain purposes and shared Muthesius's longing for a Zeitstil, he also believed in freedom for the artist, and he supported van de Velde. He found Muthesius's behavior offensive and, more importantly, felt that the methods he suggested for achieving a modern style and form were wrong: "Muthesius was not clear in his statement. His main error was his belief that one can establish and fix a style by organizational methods from above. Against this the artists in the Werkbund reacted violently.
> He mixed up taste with creation. A type develops only by slowly growing connections, i.e., by the preference of the free wills of many individuals. Harmony of style cannot be dictated, but is a supraindividual, slow result.

Ibid. p.33 citing a handwritten statement by Gropius, Lincoln, Mass. ca 1965.

[153] Hermann Glaser, *Industriekultur und Alltagsleben: Vom Biedermeier zur Postmoderne* (Frankfurt/Main: Fischer, 1994).

[154] Auke van der Woud, *The Art of Building: From Classicism to Modernity: The Dutch Architectural Debate 1840-1900* (Aldershot: Ashgate, 2001), p.214; first English-

language edition (revised) of *Waarheid en karakter. Het debat over de bouwkunst 1840-1900* (Rotterdam, 1997), translated by Yvette Blankvoort and Bard Janssen.

[155] Ibid. p.215. Van der Woud concludes his book by suggesting that the two concepts of truth and character – for him the mainstays of nineteenth century architectural theory – were fundamentally reinterpreted in the twentieth century:

> If this was where aesthetics now found itself, what remained of truth and character? The architecture of the twentieth century would provide an answer. Truth can be pursued as long as the architect is prepared to play the old game with a wink and a nod at the insiders, his fellow architects. Character is the narrative that client and architect wish to relay to the public: their cultural ideals, edified or vulgar; their commercial, functional or artistic messages; their hidden intellectual or emotional meanings, their cheap fantasies or glorious illusions. Twentieth-century architecture would find new fundamentals outside of itself; tools for its further development that were perhaps richer and nore multiform than ever before. The expression of truth and character changed, but they remained an ineradicable, an essential part of architecture in a theoretical, de facto way: like the taste of a fruit, or the smell of a flower. (Ibid. p.216.)

[156] Fritz Schumacher, *Strömungen in deutscher Baukunst seit 1800* (Braunschweig, 1982), originally published in Leipzig by Seemann, ca 1935, p.140 ff. Cited in Volker Helas, 'Hans Erlwein: Stadtbaurat in Dresden 1905-1914', Volker Helas (ed.) *Hans Erlwein: Stadtbaurat in Dresden 1905–1914* (Dresden: Kulturamt Landeshauptstadt Dresden, 1997), p.10. German text:

> Wir sehen zwei Ströme nebeneinanderlaufen, einen...aus den warmen Bereichen der 'Einfühlung', einen aus den kühlen Bereichen der 'Abstraktion'. Beide sind nötig, um den Aufgaben gerecht zu werden, die die Zeit stellt...Es ist nicht unsere Absicht, die Künstler, die zwischen 1900 und 1914 charakteristisch hervortreten, in zwei Schulen zu ordnen, so einfach ist das gärende Leben dieser Zeit nicht; wir wollen nur zwei deutlich erkennbare Pole bezeichnen, aus denen die Kräfte strömten. Manche Männer gehören...deutlich zur einen oder zur anderen Seite, aber es gibt auch sollche, in deren Werk sich die Strömungen mischen, nicht weil sie hin und her schwanken, sondern weil die Aufgaben, vor denen sie standen, bald mehr im Bereich des Heimisch-Gebundenen, bald mehr im Bereich des Losgelöst-Großstädtischen lagen.

CHAPTER FIVE: The Historiography of Tessenow

The fortunes of Tessenow have waxed and waned during the course of the twentieth century, as the writing of architectural history has swung from one ideological and philosophical extreme to another. If one general historian can categorise the twentieth century as an 'age of extremes', then it is not surprising to find extremities in the historical account of an enterprise at once materialist and idealist such as architecture.[1]

This chapter will examine Tessenow's fluctuating reception as the century unfolds. In doing so, it will concentrate on critical views of his work from fellow architects, theorists, and historians; it will inevitably relate to particular sensibilities reflected in the historiography of the periods in question and will necessarily concentrate on certain architectural themes which Tessenow was seen either to represent or to be antithetical towards.[2] For instance, the section on the Weimar Republic will locate Tessenow within his contemporaneous position within *Neues Bauen*, in terms of Expressionism on the one hand, and the 'white architecture' exemplified by the *Weissenhofsiedlung* on the other. More recent debates of the late twentieth century relate the renewed interest in Tessenow to a resurgent Rationalism, while the – for want of a better word – 'materialist' urges of the 1990s permit his work to be understood in yet another light. (The term 'Rats and Mats' derives from Aldo van Eyck's exasperation with contemporary Rationalist architects: see Peter Buchanan's article 'O Rats!' *Architectural Review*, April, 1983.)

What is particularly interesting and gratifying for a student of Tessenow who has spent so much time persuading others of his various architectural virtues is the fact that more and more general surveys of architectural history are again referring to him after years either of neglect or of partisan appropriation by one ideological position or another.[3]

1. WILHELMINE EMPIRE, WEIMAR REPUBLIC

Around 1910

From Corfu Heine went aground;
Kaiser Bill's a great big – art lover.[4]

Wilhelmine Germany was a nation of extreme cultural polarities, with the apex of the social pyramid, the Kaiser, generally characterised as a militaristic bore with few pretensions to higher artistic values but with a tendency to meddle in artisitic ventures. In such a milieu the protagonist in Heinrich Mann's novel *Der Untertan*, Diederich Heßling, feels thoroughly at home.[5] On the other hand, it is also the nation of the Reform movement in its various guises: Reform clothing, Reform diet, the Garden City movement, and similar tendencies. In the first decade of the new century Heinrich Tessenow was intensely aware that he was working as a reform architect; the integrative nature of architectural production necessitated his acting as a reformer across various aspects of design. Most importantly, if the reform message was to get across, it had first to be transmitted effectively.

Tessenow's unexecuted projects and completed buildings were published widely in the proliferating technical journals of Wilhelmine Germany.[6] These were principally the *Bautechnische Zeitschrift*, and the *Deutsche Bauhütte*, with occasional showings in *Der Baumeister*, *Süddeutsche Bauhütte*, *Der Bauzeichner* and, increasingly from 1905, *Der Wohnhausbau*.[7] The year 1909, his move to Dresden, marked a turning point in his fortunes. In 1910 the first of the Hellerau commissions was begun, together with two major projects further west, one the Metzges House, at Remagen on the Rhine, **(Fig. 5.1)** and the other the Hostel for the Jewish Agricultural College at Steinhorst, near Celle. His failure to get his work published in the *Deutsche Bauzeitung*, the premier German architectural journal during the Wilhelmine years, remains inexplicable, although as the leading conservative journal of its kind Tessenow's Reformist credentials might have proved too much for it to countenance.

With Tessenow's growing involvement with Hellerau, and with the circle around the garden city's main protagonists, Hermann Muthesius, Karl Schmidt,

Wolf Dohrn and others, came his fêting by 'progressive' cultural critics. Karl Scheffler's (1869-1951) 1912 article on Tessenow in *Kunst und Künstler* portrays him as the standard-bearer of new '*sachlich*' standards of design, and as an architect antithetic to the 'artistry' of a Henry van de Velde. The seeds were sown of what would become the great *Werkbund* debate between the Belgian architect and Muthesius at its congress at Cologne in 1914. Here is Scheffler in 1912 praising the work of Tessenow:

> If one compares his [Tessenow's] buildings with the admirable works of [Hermann] Muthesius or with the more irregular works of [Richard] Riemerschmid – it is an apt comparison, since both architects built so much in Hellerau – then the houses of both of these architects will certainly appear to the layman to be more interesting and richer; nonetheless in the final analysis, compared to the certitudes of Tessenow, they seem to be more or less naturalistic and romantic.
> If one places Tessenow alongside the Weimar practitioner [Henry] van de Velde, then it must be admitted that the much greater feeling for movement and sensitivity, spiritual plenitude, inventor's temperament, strong originality and passionate modernity all resides with the Belgian; with Tessenow, however, as has already been said, there is something universal which reaches out beyond all originality, something quintessential. Van de Velde is a complicated energy, Tessenow is a simple manifestation of will; van der [sic] Velde's manner has the effect of a man in the grip of a monumentalist drive obsessed by detail compared to the simple planar purism of Tessenow, like a chiseller of form next to a cubistic thinker. Finally, if one compares what Tessenow desires and does with Viennese architecture, particularly that represented by Josef Hoffmann, then one can say that Viennese design becomes, with Tessenow, serious, Northern, sensible, manly and German, and that in Hellerau it is cured of all artistic poison.[8]

Scheffler is clearly overjoyed that (in his eyes) effete Viennese *Jugendstil* and its muscular, though no less fussy, Belgian variant should at last be trumped by an honest, *tüchtig* young German architect's work. In his book *Die Architektur der Großstadt* (1913) he included a substantial essay on Tessenow alongside ones on Messel, Ludwig Hoffmann, Behrens, Muthesius, Hermann Obrist and August Endell.[9] Karl Storck, another critic, on entering the Hellerau *Festspielhaus*, was equally amazed at its distinctive, primeval qualities: "When I entered this space for the first time, I was struck by the impression of space which had been tamed. This is pure space, silent space."[10] This is one of the earliest critiques of a building in Germany which resounds to the strictly spatial

theorising of August Schmarsow of some twenty years earlier. Storck relates Tessenow's ethereal spatiality evinced by the Hellerau 'light box' to its more tangible qualities of volume and measure: "Tessenow's original art consists of thinking in terms of volumes and measurements."[11]

The historian Matthew Jefferies has drawn attention to the burgeoning influence 'industrial culture' had on Wilhelmine society, in particular the important rôle it had in fashioning *Werkbund* attitudes during the early years of the century.[12] Indeed, it was an achievement of the *Werkbund* that it succeeded in defining, and then promoting, the existence of such an *Industriekultur* at all. It is particularly fascinating to note the architectural development of one architect, Heinz Stoffregen, who in 1910 designed a series of buildings for the Anker linoleum company at Delmenhorst.[13] **(Fig. 5.2)** They are faced in brick, and share the massive, bulky appearance of Poelzig's contemporaneous work.[14] Of these buildings the critic Adolf Behne wrote that "pathos is combined with a tendency for the tragic, so that one can almost sense the shadows of Agamemnon and Aegisthus!"[15] By 1913 his style had moved in the direction of the stripped classicism of temple front and planar, punched-window side elevations legitimated by Behrens and Tessenow. Stoffregen's design for the *Norddeutsche Seekabelwerke AG* machine hall at Nordenham **(Fig. 5.3)** bears a striking resemblance to Tessenow's first scheme for the Dalcroze Institute at Hellerau, and shows the extent to which the *Werkbund* was successful in extending an understanding of culture to encompass the manufacture of industrial artefacts. The equation of 'classicism' with cultural endeavour, be it of an industrial, literary or musical nature, meant that theatres, factories and schools could all share the same architectural expression. (An anomoly in this respect is Riemerschmid's Hellerau *Deutsche Werkstätten* factory, which takes the vernacular forms of the Bavarian farmyard as its aesthetic.) The point here is that, unlike Riemerschmid, the 'advanced' architects of the first decade of the century had succeeded in bringing manufacturing, education and artistic production all under the umbrella of the term 'culture'. Tessenow is certainly to be included in their number.

At Hellerau, in 1910, Tessenow had designed a building for dance and music, successfully incorporating the developing aesthetic norms of buildings for industry, in addition to the established aesthetic for buildings for the arts.

The Weimar Years

Tessenow spent the war years in Vienna; he ended his self-imposed 'exile' in 1919 when he returned to Germany, dividing his time between Hellerau, where he began his relationship with Chilla Schlichter who was to remain his lifelong companion, and Neubrandenburg, where his wife and family were installed.[16] In 1920 he took over the chair in architecture at the Dresden *Kunstakademie* from Hans Poelzig, and there he stayed until 1926 in order to take up the Chair at the Berlin *Technische Hochschule*.[17] His chair at Berlin came to be viewed as being at the opposite pole to that of his 'rival' Poelzig. As Werner Durth puts it:

> While Poelzig was able to attract the restless spirits amongst the student body, Tessenow came to be regarded as the calming opposite: instead of a burgeoning profusion of forms he would "preach" a simple and elegant form of building which down to its details betrayed a love of craftsmanship. Different to his colleague Poelzig, who like Bonatz provoked his students to participate in competitive experimentation, Tessenow was regarded by his pupils as a quiet and modest man, who offered certainties and a clear orientation instead of restlessness.[18]

The 'repose' of Tessenow is confirmed by the account of his pupil Rudolf Wolters (and, incidentally, Albert Speer's best friend during his student years in Berlin) who has stated that

> [h]e guided us away from everything formally fashionable and false towards the real, uncomplicated and human. I was never to forget, to the end of my life as an architect, his introductory sentence in one of his books: "The simple concept is not always the best, but the best is always simple."[19]

It is ironic that the professor of architecture who would nurture the young Albert Speer was Tessenow, the most unassuming of teachers and the one with the least trace of a demagogue in his character.[20]

Richard Hamann, in his popular art history of 1932, equates Tessenow with Josef Hoffmann and Peter Behrens in their strivings for a *sachlich* purism.[21] This popular history clearly identifies Tessenow with mainstream restrained modernism; however, Hamann singles out Tessenow for moving beyond the 'stripped classicism' of Behrens and Hoffmann towards a more thorough-going expression of planarity and community, as illustrated by his low-income housing at Hellerau.[22]

More significant than any of the above-mentioned texts by Hamann, Behne, or Scheffler in swaying public opinion was the series of *Blaue Bücher* (Blue Books) edited by Walter Müller-Wulckow and published throughout the years of the Weimar Republic. These popular picture books sought to popularise "the aesthetic and life-reform [*lebensreformische*] concerns of the bourgeoisie."[23] In three of the *Blaue Bücher* published in 1929 and 1932 Tessenow is well represented.[24]

It would be to present an incomplete and one-sided view of the Weimar Republic as an unremittingly 'Golden Age' of German civilisation prior to the 'Dark Ages' of the Nazi interregnum. What was indeed remarkable about the Weimar Republic was its sense of liberality sandwiched between the illiberal tendencies of late Wilhelminism and the extremes of '*Gleichschaltung*' ('unification', or bringing into line with Nazi Party strictures) suffered immediately after 1933. However, many of the cultural attitudes which came to prominence during the period of Nazi rule already had their advocates in the 1920s. For instance, the racist ideologue Bruno Tanzmann set up his publishing house within the Dalcroze Institute, Hellerau, after the First Word War.[25] The building was, in his opinion, the "Acropolis of Germanic world ideas [...] the ideal focal point of the nationalistic cultural movement."[26] Such right-wing acclaim for his work did little to bolster the critical reception Tessenow received in the latter years of the Weimar Republic. However, it was the criticisms from the same nationalist wing of German society that particularly harmed Tessenow. The scheme in question was his most prestigious building project ever realised in the closing years of the Weimar Republic; it received

such an adversely critical reception that his own conviction in his self-worth was thrown into doubt. This was his remodelling of Schinkel's *Neue Wache* guard house on *Unter den Linden*, Berlin.[27]

Schinkel had designed and built the Prussian Guard House between 1816 and 1818. By the nineteen-twenties it had fallen into disrepair, and in 1930 a competition was launched to convert it into a monument to honour Germany's fallen soldiers. The brief stipulated that the exterior should be left virtually untouched, with good access assured to the inside; it also recommended that the centre should be designed as a small courtyard, open to the sky.

Tessenow's entry, together with that of Mies, rejected this last stipulation. His proposal, the undisputed winner in the judgment of the jury, was for a simple unified space, with stone-clad walls, white painted plastered ceiling and a tesselated floor of small square basalt setts. Its only fittings comprised a black granite block, measuring 1410 x 1410 millimeters and 1670 high, on which lay a gilded silver wreath of 235 oak leaves flanked by a pair of slim bronze candelabras. Apart from these, the space was lit naturally by an unglazed oculus in the ceiling, open to the elements. This description might lead one to suppose Tessenow's scheme to be rather crude, almost rustic in character. His detailing, however, elevated the memorial into the realms of the sublime. The floor, for instance, was covered in molten lead: this caused it to glisten after a rainfall, before the water had all drained away. The oculus opening, too, was carefully detailed with its plastered reveal lightly curved, its junction with the ceiling masked by a crisply articulated bronze ring. This had the effect of softening the shadow cast on the floor during bright sunshine.

Tessenow's care and dedication in the execution of this work is attested by his decision to make a full-size wooden mock-up of the proposal, near to his Charlottenburg studio, in order to 'fine-tune' the architectural details. The reduction of the architectural expression to a minimum of spatial and surface variation is balanced by the extremely finely judged qualities of the details. In this sense Tessenow's proposal had much in common with Mies van der Rohe's green marble-clad space, although where Mies formed a relationship, via a rear door opening, with the small chestnut grove behind the *Neue Wache*, Tessenow closed the room, focusing the visitors' attention solely inwards, onto the wreath.

Although there might have been unanimity amongst the jury, the scheme's public reception was quite different. For many conservative-minded critics it represented an abstraction too far: one Friedrich Sproemberg, a Cologne architect, imputed Tessenow with having designed a "Berlin Jew-monument" ("*Berliner Judenmal*"), with the black granite block recalling the Kaaba in Mecca. The whole concept represented an "obscene symbolism", ("*obzöne Symbolik*"), a "triumph of the Children of Israel over German soldiers, soiling the German people with Jewish blood."[28] Equally disgraceful was the 'obvious' analogy of the male and female sexual organs in the relationship of granite block beneath oculus opening.[29] The jury's view was upheld, and the scheme duly executed. However, the ensuing critical reception coincided with a downturn in Tessenow's fortunes (there were barely any of his projects being realised on site) all of which had a detrimental effect on his morale.

In the outgoing years of the Weimar Republic, then, Tessenow's work had begun to appear as something of an anachronism. His *Neue Wache* remodelling scheme, in its very simplicity outmanouvering Mies van der Rohe as well as Behrens (both of whom submitted competition entries), marked him out as an architect at the forefront of architectural endeavour: students still flocked to Berlin to join his seminars.[30] On the other hand, his distancing himself from the 'leftist' *Weissenhofsiedlung* group, and his apparent alignment with the conservative architects of the Stuttgart School, Bonatz, Schmitthenner *et al.*, made him a figure difficult to place in either camp.[31] In the heavily politicised Berlin of the late 1920s and early 1930s to be 'of the centre', was paradoxically to render oneself marginal. This reversal of values, where the *Mitte* or middle ground became peripheral, is the principal reason for Tessenow's decline as a public figure in the German world of partisan architecture in the 1930s.

This is to anticipate the turn of events in 1933. What is clear is that there was a wide range of cultural opinion throughout the Weimar years; although it is convenient to bracket 'progressive' *Bauhäusler* opposed to 'regressive' architects of the '*Block*', there was in fact a continuous spectrum of opinion with occasional unexpected leaps from one grouping to another. Tessenow himself provides such an instance with his (unexpected) winning of the competition to remodel Schinkel's *Neue Wache* Guard House in Berlin, where

he was vilified by the political right for designing a scheme of such monumental simplicity, without any of the usual trappings of state power. Another case is the 'alternative' *Siedlung am Fischtalgrund* (Berlin-Zehlendorf, 1928-1929) designed by '*Block*' architects Paul Schmitthenner, Paul Mebes, Hans Poelzig, Alexander Klein and others under the co-ordination of Tessenow **(Fig. 5.5)**. This was conceived as a counter-project to the *Onkel Toms Hütte* housing scheme, and was the result of a concerted local campaign that was highly critical of the expression of collectivisation designed by Bruno Taut, Otto Rudolf Salvisberg and Hugo Häring **(Fig. 5.6)**. The fact is that this counter-proposal was seen as a largely parochial affair to the extent that an architect of impeccable 'progressive' credentials as J.J.P.Oud could write in 1929 "I am always pleased to see Tessenow's spirit at large. We are still much in need of his clarity for modern architecture [*das Neue Bauen*]."[32]

The relatively parochial debate in Berlin centred on the *Onkel Toms Hütte Siedlung* and its counter-project *Am Fischtalgrund* represented a pale reprise of the far more polemicised debate over Stuttgart's *Weißenhofsiedlung,* **(Fig. 5.4)** which had as its alternative scheme the *Kochenhofsiedlung* master-planned by Schmitthenner. The so-called *Dächerkrieg* (War of the Roofs) was born, apostrophised as such by Karl Scheffler, who, in an essay with that title of 1929, was quick to point out the symbolic pitch which the roof (flat or otherwise) had attained by then:

> Following Tessenow's neat formulation, just where have we got to with the roof? If an architect builds a tall, steep, broadly sheltering roof it stands as a symbol of German-National orientation. If he lowers the pitch, something like a democratic house arises; if however he makes it quite flat it becomes a sign of radical communist views. The roof has become an expression of political conviction.
> A good roof is not easy to build. It is, to tell the truth, the benchmark of the sum of aptitude, ability and experience which the architect possesses. So it is very tempting not to have to worry about it, and having renounced the roof, to make of it a principle. There are, however, absolutely no rules here. In one instance a flat roof is good, in another a pitched roof. The good architect must be able to use both types according to need.
> Modernity resides elsewhere. The flat roof, too, is by no means anything new. If one looks at Berlin from above, one finds that half of all buildings have flat roofs. It is therefore equally trivial to insist in advance on a flat roof, as it is unconditionally to prefer the use of a pitched roof.[33]

Scheffler's apolotical stance mirrors Tessenow's own views. It is not hard to see Scheffler's satirical image of the roof pitch as an index of political inclination reflected in England in John Betjeman's *Ghastly Good Taste, or, a Depressing Story of the Rise and Fall of English Architecture*,[34] or Evelyn Waugh's satirical novel *Decline and Fall*, where the aristocrats' bemusement at the haughty figure of Professor Otto Silenus anticipates the reception Britain would afford to Nikolaus Pevsner in the mid-1930s.[35] Winfried Nerdinger, however, warns against ascribing too much significance to these local stylistic altercations: "In this way the so-called 'Zehlendorf War of the Roofs' was above all a demonstration of the different architectural styles of two housing associations [*Baugenossen-schaften*] which only did the rounds of a few Berlin newspapers for a limited period. It was only because of the demonstrative confrontation in Albert Sigrist's (pseud. Alexander Schwab) socially engaged *Buch vom Bauen* (Book of Building) that this opposition of double-pitched and flat roof, which was so widespread in the Weimar Republic and at most was discussed at a regional level only, became a symbol of political dispute concretised in the form of architecture."[36]

Tessenow's prominence in German architecture towards the end of the Weimar period is attested not only by his being widely published in Müller-Wulckow's *Blaue Bücher* series, but also by his featuring prominently in the publications of Gustav Adolf Platz (1881-1947), Mannheim's *Stadtbaurat* from 1913 until 1923 and subsequently its *Stadtbaudirektor* from 1923 until 1932. His two most important books of the period, both published by Propyläen, the prestigious art publishers, provide important documentary evidence of architectural taste at the time, and locate Tessenow squarely at its centre. Roland Jaeger has undertaken a penetrating study of Platz, which excels at emphasising the role he fulfilled in the developing historiography of modernism.[37] Jaeger paraphrases Platz's view of Tessenow in the following terms:

> At the end of his presentation of the pre-war period (and as introduction to the 'twenties) Platz places the lone figure of Tessenow, whose traditionalist simplicity he posits as forerunner of objective modernism (*sachliche Moderne*): "Once the over-cooked reverence of the artistic element (i.e. the decorative) has disappeared, then 'function' remains as

> the inducement for building. The clearest solution to the problem, in cubic, ordered blocks of building."[38]

Platz would have in mind Tessenow's major commissions for Hellerau, as well as his *Lehrerbildungsanstalt*, Peine (1911-1912). In a further book for Propyläen, *Wohnräume der Gegenwart* (1933), he identifies Tessenow as representing one strand of the aesthetic synthesis which he claims is represented by Behrens:

> Platz portrays these contributions [of Otto Wagner, Adolf Loos, Henry van de Velde, Peter Behrens, Josef Maria Olbrich, Josef Hoffmann, Bruno Paul, Heinrich Tessenow and others] as stations in a process of clarification [*zielgerichteter Klärungsprozess*] which is sustained neither by Jugendstil ("grandiose aberration of an overwrought individualism") nor by eclectic vernacular art [*Heimatkunst*] or neo-classical Biedermeier in his discussion of the various positions. In the discussion of the various viewpoints which forms part of the Deutscher Werkbund debates, Platz presents Behrens as the synthesis of the various positions of van de Velde (artistic will), Tessenow (craftsmanship), Muthesius (the type), and Loos (objectivity).[39]

In the pantheon of German architects Jaeger brackets Tessenow, together with Bonatz, as an outsider, as someone "in the middle of the division of the progressives into evolutionaries and revolutionaries."[40] In his book on Platz Jaeger gives the most recent comprehensive summary of the key texts that stake out the history of the period in question.[41] It is worth giving the most important ones here:

1. Gurlitt, *Die deutsche Kunst seit 1800* (1907), 3rd edition, but the first bearing this title.
2. Karl Scheffler, *Moderne Baukunst* (1907).
3. Karl Scheffler, *Die Architektur der Großstadt* (Berlin: Bruno Casierer, 1913).
4. August Grisebach, *Die Baukunst im 19. und 20. Jahrhundert* (Berlin: Akademische Verlagsgesellschaft Athenaion, 1916).
5. Adolf Behne, *Der moderne Zweckbau* (Munich: Drei Masken Verlag, 1926).

6. Peter Meyer, *Moderne Architektur und Tradition*, (Zurich: Verlag Dr H.Girsberger, 1928). (Not mentioned at all by Platz in his second edition.)
7. Hans Hildebrandt, *Die Kunst des 19. und 20. Jahrhunderts* (Wildpark-Potsdam: Akademische Verlagsgesellschaft Athenaion, 1931).

Jaeger criticises Panayotis Tournikiotis who, in his book *The Historiography of Modern Architecture*, tends to dismiss Platz for his "lack of historical discourse":

> The architecture that Platz *shows* us is not very closely defined in terms of its innovative or radical dimensions. It includes, on an equal basis, the projects of architects such as Heinrich Tessenow, who advocated a non-avant-garde architecture, cheek by jowl with a whole host of other projects and names now completely unknown outside the narrow circle of experts and completely absent from the histories with which we will be dealing later in this book. This juxtaposition reveals what is in effect an absence of a polemical approach and consequently allows the critical discourse to be eclipsed. *Die Baukunst der neuesten Zeit* balances somewhere between text and image, coolly providing information and material that allow us to read and see the architecture of recent times assembled as a complete opus. That, in any case, was the rationale behind the volumes in the extensive series published by Propyläen Verlag. But the simultaneous eclipse of both the critical and the historical discourse gives the book a much more "applied" character than is apparent at first sight, and, of course, deprive it of any right to be called *history*.[42]

I will return to the essence of Jaeger's dispute with the kind of architectural history mooted by Tournikiotis in the Epilogue. Suffice it to say here that 'applied' history, i.e. the kind of documentary 'photojournalism' pursued by Platz in 1930 nonetheless has its place in disseminating viewpoints, although it would be surprising if Platz imagined he was writing 'history' at all.

The buildings of Tessenow which he chose to illustrate are captioned as follows:

1. '*Reihenhaus*' (actually pair of cherubim on entrance gates). This can be identified as one of a pair of single-family houses at *Heideweg* 4-6, Hellerau.
2. '*Festspielhaus*'. (This includes a site plan showing the precise locations of fountains, sunbathing areas etc., p.567).
3. '*Landesschule*, Klotzsche'.

Platz located Tessenow squarely in the tradition of Paul Mebes, whose *Um 1800* book extolled qualities of Biedermeier domesticity and craftsmanship. He maintained, however, that he rose above its perceived 'dangers' of smugness and self-satisfaction; in this way his 'poverty' shares the pared–down ascetism of 1920s *Neues Bauen*, regardless of ideological stripe:

> Only Heinrich Tessenow managed to extradicate himself from the dangerous allure of comfortable *Biedermeierei*, although the roots of his craft lay in just this tradition, which lives on. He has eavesdropped on the spirit of Biedermeier and has enticed out its gentle tones, which slumber in those calm and so soulful spaces. Goethe's and Schiller's apartments in Weimar give a clear indication of how those noble spirits of the Napoleonic age and of the wars of liberation used to live: in an enforced self-restriction [*erzwungene Selbstbeschränkung*], in a perfected form, simple, but not without grace. Tessenow's interiors have these selfsame qualities, the appearance of his furniture as well. There is no ambition to parade richness and talent, only well-crafted workmanship and a rhythmic arrangement. As for the furniture, the secret of its effect lies in its clarity of form, as cubic as posible, calmness of composition, strict observance of horizontal datum lines, reticent bit nonetheless cheerful colours, all in all, the consequence of intuition. It is our good fortune that a sizeable proportion of our upcoming generation is being taught by Tessenow today.[43]

One is reminded of Tessenow's exquisite and intense drawings of the interiors of Goethe's house at Weimar, and his (unexecuted) proposal to refurbish the house.[44] Tessenow's simplified classicism evident in the Klotzsche *Landeschule* finds parallels elsewhere. Clemens Holzmeister, for instance, in Austria, whose *Kurmittelhaus* Bad Ischl (1927–1931), **(Fig. 5.6)** repeats the theme of stripped 'aedicular' entrance portico, and double height entrance hall with its insistent square-gridded floor pattern (where Tessenow, in his *Festspielhaus* staircases would keep the floor plain, and stress the grid in the grouping of the ceiling lamps).[45] The simple expression of the grid which finds its greatest apotheosis in Tessenow's Berlin-Mitte *Schwimmbad* project of 1927–1930 is reprised by Otto Bartning in his Gustaf-Adolf-Church (Berlin-Charlottenburg, 1934).[46] **(Fig. 5.7)**

The term *Neue Sachlichkeit* (New Objectivity), first coined by Gustav Hartlaub in 1925, describes one of the main directions of German modernism during the middle Weimar years. Expressionism represents the other direction.

Although subsequent historiography of the 1950s and '60s grants the modernist succession to *Neue Sachlichkeit* and the *Bauhäusler*, Expressionism in its various manifestations was 'rediscovered' in the 1970s by a number of critics, most notably Wolfgang Pehnt, Peter Blundell Jones, and Iain Boyd Whyte.[47] A key figure from the 1920s was the art historian, Franz Roh, whose book *Magical Realism* of 1925 provided an important counterweight to the theoretical outpourings of the *Bauhäusler*.[48] Certainly Tessenow's own writings, particularly those from the early Weimar years such as *Handwerk und Kleinstadt* (1919), have something mystical and ineffable about them, akin to the writings of Bruno Taut or the drawings of Hermann Finsterlin. What they lack is a sense of engagement with the world (admittedly a world which had barely begun to reconstruct itself after the ravages of war), a detachment akin to the 'activism' of the more politically engaged architects of the left around the end of the First World War.[49] Alan Colquhoun has written of the *Neues Bauen* as having no 'seamless system' ("*nahtloses System*").[50] By 1926 the critic Adolf Behne was supporting organic architecture (represented *in extremis* by the functionalist Hugo Häring) against the more mainstream modernism of 'rationalism', with its formalist inclinations.

2. THIRD REICH, POSTWAR DIVISION

The Nazi Interregnum

German architects responded in a number of different ways to Hitler's accession to power in January 1933. The great majority pursued their careers as before; for an important public figure such as Tessenow, reticent at the best of times and conspicuous in his silence as events unfurled, it marked an acceleration in the decline of his professional fortunes. The architects' professional organisation, the *Bund Deutscher Architekten (BDA)*, was quick to offer its support to the Nazis, as Anna Teut in her chronicle *Architektur im Dritten Reich* points out.[51] Its address on the occasion of its thirtieth anniversary assembly in May 1933 apostrophised Hitler as "the far-seeing politician, above all as an artistic person, who bestows on the newly-shaped

house of the German people a worthy appearance externally and a snug and clean interior."[52]

This was the official voice of German architecture, speaking in cringing terms immediately after the NSDAP's *Machtergreifung*. Tessenow's only entry in Anna Teut's compilation of sources on the Nazi interregnum in German architecture comes at the very end, with his putting his name, alongside other notable opponents (or, at least, non-Party members) such as Willi Baumeister, Richard Hamann, Max Taut and Lilly Reich, to a Post-War Declaration–Basic Demands (*Ein Nachkriegsaufruf–Grundsätzliche Forderungen*). Point 2 reads as follows: "The destroyed heritage must not be historically reconstructed; we must have new forms to house new programmes."[53] One of the final manifesto slogans is particularly resonant of Tessenow's style: "only that which is valid and simple [*Gültig-Einfache*] is manifoldly useful."[54]

On the wider international scene, too, Tessenow appeared to be largely consigned to history. Having emigrated to England in 1933, Nikolaus Pevsner seems to have forgotten his words of praise for Tessenow which he had written in the pages of the *Dresdner Anzeiger* in 1926, on the occasion of reviewing the International Art Exhibition (*Internationale Kunstausstellung*). In his famous book *Pioneers of the Modern Movement* (1936) he dwells at length on Behrens, Loos, and Hoffmann, as well as accounting for the 'dead end' which Art Nouveau represented for him.[55] The indecisive nature of Tessenow's work (in terms of conforming to the prevailing ideology of modernism or to the aesthetics of its conservative opponents), the inability to ascribe to him one or other polemical stance, would have made it extremely difficult for Pevsner to locate him in the middle of this, the most polemicised (in Continental Europe, at least) of decades. Pevsner's 'omission' (together with Sigfried Giedion's subsequent oversight of Tessenow in his 1942 book *Space, Time and Architecture*) aided the incremental forgetting of Tessenow in the West of the allied powers. In the Eastern Bloc his association with Speer clearly tainted his reputation.[56]

In his book *Baukunst und Stadtplanung im Dritten Reich*, Joachim Petsch brackets Tessenow together with Paul Schmitthenner and Paul Schultze-Naumburg as belonging to the band of conservative architects of the Weimar Republic.[57] Petsch divides these conservative architects into two groups: the

first, including Tessenow and the above-mentioned architects, develops the *Um 1800* theme as extolled by Paul Mebes in his eponymous book:

> .... the architecture around [the year] 1800 [is] the point of departure of architectonic design; particularly exemplary is the rendered and sparely formed residential house with its clarity of spatial subdivision and room connections. The architects who belonged to this group also looked to the architectural precedents of classicism when it came to the "higher" commisions for the state or for the economy around 1910; they continued this historic tradition in a much simplified formal language. Axial planning (*cours d'honneur*), symmetrical suites of rooms and the subdivision of building volumes by slim pilasters (*Lisenen*), projections (*Risalite*) and podia of travertine (*Muschelkalkplatten*) were the most important ordering and design motifs of monumental architecture of the 1920s (Paul Bonatz, Wilhelm Kreis, *inter alia*). The conservative architects rejected "inauthentic pathos". Naturally the fact that the imperial style continued to be employed in the 1920s does not mean that neo-classicism necessarily represents a proto-fascist or fascist form of building: it only became fascist architecture as a result of the particular political conditions and contexts.[58]

The other stream of conservative architects Petsch defines as those pursuing the development of regional building traditions.[59] The representative architects here are Theodor Fischer and Fritz Schumacher, typifying southern and northern Germany resectively.[60] The third grouping of architecture in the 1930s was modernism: in the period 1933–1945 this became cognate with the typologies of industrial architecture, as Jeffrey Herf has demonstrated in his book *Reactionary Modernism*.[61] A good example of such a building is Paul Baumgarten's Berlin Refuse Transfer Depot (*Müllverladeanlage*, 1934–1936) on the Spree.[62] **(Fig. 5.8)**

Herf identifies the simplistic error in assigning 'stripped' classical monumentalism thoughtlessly to Nazism. For instance, while 'official' policy stood for adopting this form of expression for public buildings, the *NS Studentenbund* "demanded a "new German art", derived from the living Nordic tradition, and relating to the Expressionism of the 1920s represented by the architects Mies van der Rohe and Heinrich Tessenow."[63] Robert Taylor, in his 1974 book *The Word in Stone*, concurs with this view of Tessenow as being wholly *salonfähig* (acceptable) to the Nazis:

> A final example [of an architect acceptable to the Nazi regime] is Tessenow, cited by one critic as a forerunner in the Nazi style...Tessenow wanted, along with Nazis and völkisch writers, to restore the craft tradition and the small town environment over that of the metropolis; he believed that style evolved from the Volk. He was, however, an opponent of the Nazi party. He was still praised for recognizing the need for a new, but not too avant-garde architecture. In the thirties his activities were not important, but his name was influential.[64]

Tessenow, although never a Nazi party member, nonetheless tended to align himself with architects of their political persuasion, rather than with those active opponents such as Hannes Meyer and Ludwig Hilberseimer. Helmut Weihsmann, in his monumental study of the architecture of the period, *Bauen unterm Hakenkreuz* (Building under the Swastika), claims that Tessenow tacitly supported those architects of the Stuttgart School, such as Paul Schmitthenner, Paul Bonatz, and German Bestelmeyer. (This is a similar line to that taken by Norbert Huse in his 1975 book on *Neues Bauen*.) These architects published their '*Block*' manifesto in 1928, partly as a right-wing reaction to the building of the *Weißenhofsiedlung* in Stuttgart.[65] However, Weihsmann goes on to cite Tessenow's admonishment of his former pupil Albert Speer, on seeing his setting for the NSDAP 1 May 1933 display of might at Berlin's *Tempelhofer Feld*: "Do you believe you have created anything there? It makes an impression, that is all."[66]

Recent scholarship has not shied away from dealing with the architecture of the Nazi period. Indeed, German endeavours have been focussed on locating the culture of the Nazi period within a wider European context, for instance, Hartmut Frank's edition of essays *Faschistische Architekturen* (Fascist Architectures: note the plural) as well as on stressing its continuity with late Weimar efforts, as evinced by Winfried Nerdinger's collection *Bauhaus-Moderne im Nationalsozialismus*. Frank has commented that both the 'progressive' and 'traditionalist' expressions of German architecture suffered under Nazism, in that neither was permitted to imprint their respective styles on civic buildings:

> Similarly [to modernist architecture: *Neues Bauen*] traditionalist architecture, born of the same Reform culture roots of German architecture, suffered the same fate. Neither the spartan architecture

> emanating from the Berlin School of Heinrich Tessenow, nor the idyllic-regionalist style from the Stuttgart School of Paul Schmitthenner were appropriate for the self-representation of the "Third Reich", for the monumental buildings of Party and state.[67]

Although Tessenow's own practice never recovered from the Depression of the late 1920s he was nonetheless active on the German architectural scene, at least until the mid-1930s. His work continued to be an example to many young architects, and the winning scheme for a competition to design a '*Haus der Arbeit*' (1934) was won by one Walter Kratz of Berlin with a scheme mixing "barn, barracks and cloister" whose composition bore an uncanny resemblance to Tessenow's Dalcroze Institute.[68] Tessenow's architectural differences with the Nazi authorities (aside from his political and social disquiet) were rooted in precisely the fact that he did not wish to "make an impression".[69] The Nazis required their civic projects to be staged spectacles, "Illusions in Stone" (*Illusionen in Stein*) as Dieter Bartetzko puts it.[70] For their Party set piece displays of might, in particular, this was achieved, by day, through the use of stripped classical forms blown up to scales beyond those of Roman Imperial architecture, and adorned with flags and other regalia of the NS regime. By night, this material architecture disappeared from view in a blaze of artificial light displays. It is therefore unsurprising that his 1936 competition entry for a KdF (*Kraft durch Freude*) Bathing Establishment at Rügen on the Baltic coast was rejected.[71] **(Fig. 5.9)** Its extreme abstraction appealed to powers of intellect and feeling far superior to the gods of national socialism.[72] The Nazi authorities' intense conservatism in aesthetic matters led them even to reject the work of avowed National Socialist architects, if it did not fit their preconception of what constituted an appropriate aesthetic response.[73]

Two Cold War Republics

The 1950s witnessed the freezing of political relations between East and West, so that the victors of the Second World War became locked in a permanent stand off in central Europe. Politically, the situation was a clear-cut one of a sharp distinction between the apparently irresolvable political

systems. In the West architectural discourse, in a likewise manner, settled down to accept the 'party line' of Giedion *et al.* The architectural histories written by Jürgen Joedicke, Bruno Zevi, Sigfried Giedion and Nikolaus Pevsner, and widely published in the post-war period, remained largely undisputed for a generation. Towards the end of the 1950s the group of architects known as Team Ten would question some of the tenets of modernism as transmitted by these historians; nonetheless the edifice of Western architectural *history* was relatively unaffected by any developments in architectural *theory* until the mid-1960s.

Tessenow, whose great surviving works were effectively 'off-limits' in East Germany, was sidelined; he was remembered chiefly for his Wilhelmine work at Hellerau, and for his conservative attitudes which nurtured Speer.[74] Henry-Russell Hitchcock writes: "Somewhat similar to Behrens's work of this period in its evident derivation from German Romantic Classicism, but more delicate in scale, was the work of Heinrich Tessenow (1876–1950), notably his Festival Theatre of 1910–13 and the other buildings he designed and erected for the Art Colony at Hellerau near Dresden."[75] Hitchcock is dismissive of Tessenow's work and accords it no historical value over and above its superficial resemblance to buildings of the – as he terms it - neo-Georgian revival of 1930s England.

The Danish architect Steen Eiler Rasmussen (1898-1990) admits to the strong influence Tessenow had on him as a student of architecture in Copenhagen towards the end of the First World War.[76] His influence in the 1950s and '60s was due to his books *London, the Unique City* (1934) and, most enduringly, *Experiencing Architecture* (1959). The conflation of urbanism and architectural design evinced by these books is something inherited from Tessenow's approach in his writings, as is the phenomenological, matter-of-fact manner adopted in *Experiencing Architecture.* At the outbreak of the Second World War Rasmussen wrote a book entitled *Nordisk Arkitektur* ('Nordic Architecture'). This was published in Copenhagen in 1940, and also in German translation as *Nordische Baukunst* in Berlin the same year.[77]

Another Danish architect and winner of the Tessenow Medal in 1964, Kay Fisker (1893-1965), produced a body of work in the 1920s and '30s which shows a palpable reference to Tessenow's restrained *Sachlichkeit.* He

travelled much the same path as Tessenow, so that the *Biedermeier* expression of his Østerlars Station, Bornholm (with Aage Rafn), replete with pronounced obelisk-like chimneys, steep pantiled roofs and 'picturesque' groupings of windows (1914-1916) became vastly simplified in his buildings for Aarhus University (with Povl Stegmann and C.F.Møller) over the period 1931-1942.[78] **(Figs 5.10 and 5.11)**

Tessenow died in 1950; on the occasion of his death the conservative journal *Baumeister* published a full-page eulogy to Tessenow as its frontispiece.[79] The author, Rudolf Pfister, interspersed the text – more of a homage than a eulogy – with selected quotations from Karl Scheffler. The final one reads as follows: "Every kind of delusion of grandeur, including the very idea, is foreign to him. Just like a craftsman, he considers each matter carefully and tries to do the sensible thing, as simply and thoroughly as possible." It highlights, of course, Tessenow's reticence and modesty, but also his practicality, and suggests that the austerities of Germany in the post-war period were best served by an architecture of simplicity and thoroughness. It is redolent of the technician's methods of an Ernst Neufert, whose norms of planning were on every drawing board. Indeed, there was a good deal in the architecture of the two Germanies of the 1950s to recommend to an architect schooled in the ways of Tessenow. Christoph Hackelsberger sees in much of the civic architecture of both postwar German states a faint aftertaste of Tessenow: "On the one side here is a bit of the Russian, on the other a little bit of the international, otherwise there is a great deal of simplistic innocence, and in the best cases a lot of diluted TESSENOW, an architecture of civic 'in-keeping', toned down to the lowest common denominator."[80] Typically, it was Tessenow's simple, repetitive housing designs which found resonance, in age of norms and economies. Peter Meyer, writing in the *Neue Zürcher Zeitung* in 1962, estimated that Theodor Fischer "with Heinrich Tessenow and Hans Bernouilli[81] [were the] pioneers of communal housing projects"[82] More than a decade later, the only redeeming feature of Tessenow's work worthy of praise to be mentioned in a significant scholarly work was his penchant for normative form and anonymity. Sebastian Müller wrote of

> [Tessenow's] desire to subjugate the world to a functionally and visually pleasant order, in which the nature of the order is itself equivalent to the pleasant and the pleasant does not need to be especially defined: this is completely in accordance with the spirit and depth of Muthesius's thoughts. This will to build led quite logically to the practice which renders superfluous all extraordinary formal innovations, and continues the tradition of anonymous construction in a spirit of simplicity corresponding to anonymity.[83]

Impossible to countenance were any architectural qualities worth mentioning outside his body of simple housing schemes: "A monumentalising of this intention, as Tessenow attempted with the Festspielhaus of the Jacques [sic] Dalcroce [sic] Educational Institute, turned out to be meaningless."[84]

3. RATS AND MATS

Rationalists

The Rationalist movement of the 1970s and 1980s was largely responsible for finding a new role for Tessenow's architecture, for rediscovering him and bringing his work to a new audience. Rationalism had its roots in a stream of architectural history which implied far more than a simplistic *rappel à l'ordre*, a reversion to historical forms.

Giorgio Grassi published an essay, 'L'architettura come mestiere' ('Architecture as Craft') as an introduction to the first Italian translation of Tessenow's *Hausbau und dergleichen*.[85] Grassi's stance is anti-capitalist: "Architecture as such is not considered as a public good."[86] He argues that "today ... [architecture] need not take on an avant-garde position, as it did in the 1920s and 1930s... and [f]or this reason, as it will become clear, it may be particularly important to reconsider Tessenow's ideas."[87] What did Grassi mean by this? Surely, that since capitalism had assumed world hegemony (as the Marxists might have it), architecture is compelled to work within its structures. In the 1920s and '30s, on the other hand, it needed to position itself, *pace* Grassi, one side or other of the barricades in the service of either fascism or socialism. Some thirty years later, with the fall of the Soviet bloc, Grassi might feel his view to be vindicated and even reinforced.

He argues against "[pitting] one type of architectural form against another, [and reducing] the discussion ... to a sterile *querelle*. By elevating the debate to the level of theory – with reference to such issues as transmissibility of design, architecture as a collective fact, tradition and formal innovation, etc. – the lack of an intellectual base for such arguments becomes apparent."[88] Instead of engaging in a narrow stylistic debate between, say, the merits of the flat roof versus the pitched roof,[89] or of the horizontal window against the vertical window, Tessenow "reasserts that architecture can only exist as a collective work."[90] This emphasis on the collective endeavour becomes, for Grassi, an emphasis on craftsmanship, which is, after all, an anonymous and normative association of skills. Tessenow's lack of formal training in schools of architecture, which were set up in the nineteenth century, according to Grassi, in order to "satisfy the needs of that dominant class, its sole requirement being the creation of social groups which serve its system of production, that is, the professional classes", together with his artisan background, mark him out as a man more receptive to the workshop [Italian: *bottega*] than the studio: "The workshop is more important than the studio", as Tessenow wrote at the end of his introduction to *Hausbau und dergleichen*.[91] Grassi makes specific reference to the fact that both Tessenow and Mies van der Rohe were carpenters and stone-masons respectively before becoming 'professional' architects.[92] Collective work, which Grassi clearly favours and detects in Tessenow, is seen as a 'classical' attribute, timeless, anonymous and constantly recurring in history; it is antithetic to the idea of the romantic genius, whose very individuality cuts across the virtues of collectivity. Grassi concedes that Tessenow attempted to resolve the contradictions present in this duality. He quotes Tessenow: "In the end industrial work [the craftsman's work: *die gewerbliche Arbeit*] is always inadequate. When it is very good, it consists of fifty per cent stupidity and fifty per cent intelligence. The best industrial work considers both equally valid and knows perfectly well how absolute things elude us, and says to itself: that which is intelligent is as stupid as that which is stupid is intelligent. We have to be certain, and at the same time doubtful about our certainty, in order to produce the best industrial work."[93] So Tessenow understood the limitation of the workshop; in this he shares with John Ruskin his view of the relation of craftsmanship to professionalism.

Grassi cites an apochryphal saying of Mies van der Rohe's, that "architecture is the visible expression of a point of view that others wish to share".[94] Mies and Tessenow, the sons of craftsmen and artisanally trained architects, would appear to have more in common than meets the eye.

Clearly all of the above fits into the precepts of a rational architecture as defined by Grassi and Aldo Rossi: "The motivation for the design and form of an element must be its recognisability, with the maximum clarity and persuaviseness possible."[95] This is key to understanding the link which Grassi and the Rationalists wished to forge between their architecture which comprises an overwhelming propensity of background fabric (shops, flats, etc.) and a small number of monumental 'object' buildings. This is an architecture of appropriate and communicable symbolism, as opposed to one which places undue emphasis on form and construction for its own sake, which Grassi takes as characterising the architecture of the Modern Movement. Tessenow, the house-builder who received the occasional commission for a civic building, certainly fits into this mould of a Rationalist architect who devotes only a small part of his energies to 'monumentally symbolic' design. And yet, for Tessenow, house-building is nonetheless a matter of design, albeit one conducted in a minor register; he recognises the modern, twentieth-century role of the professional architect who begins to assume design control over ever more reaches of the built environment. In this he diverges from his erstwhile colleague Schultze-Naumburg whose espousal of *Heimatstil* shows his entrenchment in a nineteenth-century pattern-book mentality.

Grassi's championing of Tessenow as a proto-Rationalist, as one who is able to distinguish between the everyday and the special, and who manages to frame the buildings of both polarities in appropriate symbolic form, has a resounding echo in Adolf Loos's dicta in his 1909 essay '*Architektur*'.[96] Indeed, there is a distinctly Loosian feel, both in its laconic written style and in its message, contained in an essay of Tessenow's, where he writes "we affirm or demand that a person in mourning should also profess this within the overall whole of his behaviour, but we do not require him to tell us of the particulars of his grief: similarly, we demand that a piece of industrial work should generally be truthful in simple terms; but we do not really want to see every glue joint

and every nail."[97] The recognition of a person's grief is crucial in the public arena, whereas the reasons for this grief are intimate and are 'covered' by the public display of mourning. In other words, for Tessenow the representational/symbolic has precedence over the formal/technical, in exactly the same way as it does for the Rationalist architect.

The German Rationalist architect who has paid perhaps the greatest homage to Tessenow is Oswald Mathias Ungers. In this respect his *Deutsches Architekturmuseum*, Frankfurt/Main (1979–1984) is particularly noteworthy, with its carefully gridded interior space and, at its centre, its caricature of the freestanding Germanic house, so obviously a reprise of Goethe's *Urhaus* as exemplified by the poet's summerhouse at Weimar, or indeed any number of Tessenow's essays in the idiom.[98] **(Fig. 5.12)** The German Rationalists' chief spokesman was the Italian theorist and critic Vittorio Magnago Lampugnani, one of the guiding lights of the (West) Berlin International Building Exhibition (IBA) of the 1980s. His history of twentieth-century architecture attempts to relate building design to urbanism (although there are surprisingly few town plans included). In a short chapter devoted to Traditionalism, Tessenow occupies a central, though equivocal, position. Lampugnani characterises him as "[a]n outsider within traditionalist architecture....every kind of avant-garde experimentation, as well as every kind of populist nostalgia, was foreign to him. For him, tradition was no boundary which he had to break, but also no superannuated ideal, to which one had to return. It was instead a spiritual condition [*Geisteshaltung*] which one had actively to conserve."[99] For Lampugnani, twentieth-century traditionalist architecture is a largely German affair (the Austrian Clemens Holzmeister, the Finn Eliel Saarinen as well as Auguste Perret, the great French exponent of 'structural rationalism' are also mentioned) and is seen as stemming from the *Biedermeier* ethos pervading Paul Mebes's *Um 1800* publication. Traditionalist architecture is regarded as providing the pause between the Rationalism of the 1920s (whose impetus is not renewed until the post-1945 endeavours of such 'Late Rationalists' as Arne Jacobsen, Egon Eiermann, Max Bill, and Gio Ponti) and the full-blown neoclassicism represented by the civic architecture of the United States, Germany, Italy, and the Soviet Union in the 1930s and '40s. Of the Hellerau *Festspielhaus* he

wrote, "The architectural language is classically inspired, but without pathos and virtually without decoration...The impression of interior space is governed by fitness to purpose, brightness, finely attuned proportions and rigorously formed details. For Tessenow believed, similarly to Mies, that design meant the development and distribution of a few recurring elements: he, too, chose the language of silence."[100] However, for Lampugnani, Tessenow "preceded from the type as basic architectonic form [*Urform*] and final stage [*Grenzfall*] of reduction."[101] In his estimation of modesty, repetition, and '*Sachlichkeit*' over innovation for its own sake, Tessenow would belong squarely in the Rationalists' camp were it not for his adherence to the democratic ideal which insisted on respect for the wishes of the individual. Tessenow's political stance of democracy, his advocacy of 'humanism' in a 'post-humanist' age (*pace* K. Michael Hays) is what rendered him an outsider in terms of the increasingly polarised debates of the late 1920s.

The Rationalists' generally apolitical view of early modernism (architecture as an 'autonomous' field of human endeavour being regarded as aloof from politics) had somehow to face up to its inherent elements of reaction.[102] While Christian Otto could talk of Tessenow's "absolute objectivity", he did so nonetheless in the context of the conservative *Heimatschutz* movement.[103]

Materialists

The Neo-Rationalism of the 1970s and '80s, with its theoretical roots deriving from a basically Marxist dialectic, seemed to have no difficulty in associating Tessenow's communitarian architecture with its project. Its prosaic expression (especially of the 'background' architecture of housing), the 'autonomous architecture' of a Giorgio Grassi or an Oswald Matthias Ungers, had an obvious visual reference to his work. **(Fig. 5.13)** The influence of post-structuralist thought on architectural theory also had its more obvious visual analogue: 'materialist' architecture. This section investigates the post-humanist discourse of the late 1980s and early 1990s for its references to Tessenow. It ends with a meditation on one of the practical consequences of this theoretical standpoint, one which we will term 'materialist' architecture.

The relationship to Tessenow is less obvious here than was the case with the Neo-Rationalist architecture dealt with in the preceding section. Chapter Four dealt with the architectural theme of banality,[104] and related Tessenow's appropriation of the domestic to this ubiquitous theme of recent design. This section rounds off the debate, linking concerns of the everyday and the material of a century ago with current interests in the quiddity of buildings.

K. Michael Hays maintains that architectural history has tended to marginalise avant-garde practice, represented for him by Hannes Meyer and Ludwig Hilberseimer, as opposed to the more "traditional, representational *Sachlichkeit* of Werkbund members like Hermann Muthesius or Heinrich Tessenow and the *Heimatschutz*," which he argues is the other polarised position which architects have adopted.[105] Hays seeks to substantiate this polarisation; in his book on Meyer and Hilberseimer he argues cogently that these two architects admirably represent the aims of post-humanist architecture. Prior to the publication of *Modernism and the post-humanist subject*, Hays had sought to reposition Tessenow as something of a proto-fascist. The occasion was an essay in the journals *Assemblage* and *9H* entitled 'Tessenow's Architecture as National Allegory: Critique of Capitalism or Protofascism?'.[106] This is a polemic clearly aimed at countering the recent lauding of Tessenow in Neo-Rationalist circles. Perhaps Tessenow's architecture is too conservative and dogmatic for his taste:

> At first gloss, Tessenow's project seems to comprise formal operations similar to those of Loos. One notes, for example, within the general abstraction of the house type, the large attic window relative to the small door, itself flanked by small, low windows that are not rationalised to the interior needs of light or placement. But what is the significance of the typological reduction and surface distortions in Tessenow's houses? In what follows I shall argue that these are first steps toward a delicate but total system constructed and elaborated by Tessenow to maintain the primacy of the unified bourgeois self.[107]

A "total system constructed and elaborated by Tessenow to maintain the primacy of the unified bourgeois self": This is architectural history seen through the very particular lens of post-structuralist architectural history. (It also endows Tessenow with far greater instrumental powers than he or his contemporaries would have admitted to). However, it does not get us very far, either in terms of understanding Tessenow, whose complex social,

psychological and political background does not admit such sweeping generalisations, nor on its own terms of understanding proto-modernism.[108] More persuasive is the analysis offered by Stanford Anderson which we will explore shortly; however, the inference that Loos is somehow a more authentic, radical precursor of modernism, while conforming to the contemporary hagiography of Loos, is nonetheless a somewhat partial view of his architectural production.

Hays continues in far more measured tones to credit Tessenow with the job of mediating between the Arts and Crafts attitudes of the southern German school of Theodor Fischer (1862-1938) and the purism of Friedrich Ostendorf (1871-1915). The simple eidetic image striven for finds its corollary in the geometry of Lauweriks, Behrens, and Bruno Taut. Here he writes from the perspective of German Idealism as it was interpreted by architects at the start of the nineteenth century instead of constructing a polemical 'position' for Tessenow viewed through the lens of post-structurally informed Marxist criticism of the 1980s and 1990s:

> Tessenow's purism, too, has an origin in theory. On the one hand, there is Theodor Fischer, a proponent of easy, comfortable architecture, who taught liberation from the constraints of strict symmetry and academically articulated facades, and an adaptation to nature as a principle of planning. But, on the other hand, Tessenow's buildings can be seen as resolving a conflict between Fischer and the teaching of people such as Friedrich Ostendorf, who insisted that a revitalization of art depended on the absolute clarity of the forms as means of communication. Ostendorf contended that truly architectonic designs were only possible on the basis of easily accessible, eidetic images. A building based on a mental image reduced to its simplest manifestation was clear, pure, and legitimate.[109]

This more measured, less polemical tone is echoed in much of the contemporary writing, particularly that emanating from Germany, on the 'difficult' subject of coming to terms with traditional architecture of the twentieth century. Hartmut Frank, writing in 1985, was keen to contribute to the process of 'normalising' German architectural history, of finding value in the work of architects whose work of the nineteen-twenties and 'thirties had been hitherto dismissed as not fitting into the canon of acceptability:

> Today if one studies the vernacular architecture [*Heimatschutzarchitektur*] (hitherto dismissed as 'blood and soil' architecture), in particular that of the

> Stuttgart School, in the knowledge of the architecture development of the 'fifties and 'sixties, we become aware of its thoroughly contemporary, not to say 'modern', character. It would be more correct, instead of labelling this architecture as 'traditional', to call it 'traditional modern' next to the modernist [*Neues Bauen*] and to research its evolution in this century from the point of view of its timeliness and no longer with the prejudice of its regressive-ness.[110]

Hays's wish to 'restore' Tessenow to his position as a repository of traditional values opposed to modernism is based on a well-reasoned set of arguments. It is worth spending some time to consider them, since they raise interesting questions as to the relationship of critical theory to architectural production and significance. More narrowly, his stance, if left unchallenged, will tend to diminish the value of the 'material' and 'spiritual' aspects of architectural development evident in Tessenow's work which have been detailed in the previous chapters.

Hays's main thesis resides in his distinction "between, on the one hand, the *critical* reassertion of traditionally derived architectural forms which counter and resist the proliferation and consumption of novel, unrooted images characteristic of industrial capitalism, and, on the other hand, the conciliatory reassertion of conservative architectural forms which *reinstate vestiges of a traditional authority* (an authority presumed to be challenged) through the creation of an illusory unity and totality in a compensatory system of communication."[111] He exemplifies this by 'comparing and contrasting' two pairs of buildings designed by Adolf Loos and Heinrich Tessenow. The first pair comprises Tessenow's project for a single-family house (1913), and Loos's Steiner House, Vienna (1910). **(Fig. 5.14)** In a nutshell, the Loos house acts as a symbol, whereas Tessenow's is allegorical. Both houses exhibit discontinuities between inside and outside; only Loos's, according to Hays's interpretation, "emphasise[s] the muliple levels within the cultural field of the modern,"[112] whereas Tessenow's represents a "liberal reconciliation and successful mastery of the conflict between high mimetic art and popular vernacular images."[113] Perhaps more telling than any imputed ideological difference between Tessenow's and Loos's architectural resolutions of inside and outside, where Tessenow's represents a striving for a mythic, bourgeois whole and Loos's lays bare disjunctions in the experience of modernity, is the

actual location of the two buildings. Loos's is emphatically urban, Tessenow's at best suburban: the metropolis (*Großstadt*) versus the small town (*Kleinstadt*). And the metropolis is most definitely the locus of modernism's struggle with tradition, both socially (Vienna's *Karl Marx Hof*, **(Fig. 5.15)** dubbed the *Rote Festung*) and architecturally (Le Corbusier's *Plan Voisin* **(Fig. 5.16)**; Ludwig Hilberseimer's *Berlin-Mitte* **(Fig. 5.17)** housing proposals).

The identification of the metropolis with modernity had become a *fait accompli* by the late Weimar period; the ascendancy of metropolitan values goes a long way to explain the eclipse of non-urban strains of *Neues Bauen* in the late 1920s – Häring's organicism, for instance, whose most famous scheme of farm buildings at Gut Garkau (1922-1925), **(Fig. 5.18)** would have to await the 1960s' revival of expressionist form to counter bland corporate modernism for its full effect to be felt. (Unsurprising, too, the disdain for Häring in progressive circles, given his decision to privelege the position of the bull in the cow-shed: 'bovinism' was simply not a viable position to hold, however accurate an exposition of farmyard power structures it represented!)

The second pairing Hays presents is of Tessenow's *Festspielhaus* and Loos's *Haus am Michaelerplatz*. Tessenow is rebuked for taking the classical form of the *Festspielhaus* and the vernacular type of the *Pensionshäuser* to the south, and presenting them in their isolated, 'enhanced' settings. Loos, on the other hand, is praised for his juxtaposition of masonry base (commerce) and rendered upper storeys (apartments). Hays regards this juxtaposition as a radical move, one which knowingly asserts the status of the individual elements (recessed windows; English bow windows) as reified objects, as mere commodities. Hays regards Tessenow's operation as "an allegorical [one]: the allegorical mind, even as it appropriates an object, sides with the object and protests against its devaluation to the status of a commodity, attempts to redeem the object through the attribution of new, more immediate, empathetic meaning."[114] Tessenow's sin appears to be to conjoin allegory with empathy, the latter term having already been devalued by Worringer in 1908 in relation to the incipient abstraction of modernism.

We could let the comparison take another turn. This would have us understand Tessenow's exterior as allegory, empathetic in its weight and axiality. Its interior, on the other hand, is experienced as progressively

abstract, weightless and suffused with light as one moves from the entrance foyer to take one's seat in the auditorium. (This theme is developed in Chapter Three.) Loos's interior presents the premises of *Goldman and Salatsch* gentlemen's outfitter's as materially opulent and spatially extravagant: the staircase connecting to the mezzanine dressing rooms is a theatrical *tour de force*. **(Fig. 5.19)** The difference is clear: Loos plays out the disjunction between commerce and domesticity on the outside, and hence in the public (metropolitan) realm "projected in an explicit manner onto the screen of the façade."[115] Tessenow on the other hand studiously avoids such disjunctions of architectural meaning.

Another fruitful comparison is that between the *Haus am Michaelerplatz* and Auguste Perret's Apartment Block, Rue Franklin, Paris (1902-1903). **(Fig. 5.20)** If we set aside Loos's vertical distinction of the facade into base and upper storeys, the Viennese building presents a flat surface, conforming to the stereotomy of the neighbouring buildings, with the primacy of the street elevation paramount. On the other hand, its rarely photographed rear courtyard, nothing more than a light shaft in fact, illustrates an unforced functionalism, a utilitarianism, 'real' as opposed to the artful one of the fronts. Perret's block of flats reverses the Loosian privileging of the street, in its emphasis of the continuity of the flat-fronted houses, and presents instead the indented (and in Loos's terms utilitarian) equivalent of the light-well as the street façade.

However, one might contest Hays's evaluation of allegory as one antithetical to the modernist project. Walter Benjamin, for instance, mounted a strong defence of allegory against the allure of the symbolic precisely because of its acceptance of the fragmented, disharmonious nature of the contemporary world.Hilde Heynen has written that "[a]llegory operates externally while symbols base their meaning on a premise of unity, a presumed harmony between inner and outer. The difference comes down to the fact that the symbol derives its significance from its inner being, while allegory resolutely limits itself to the external. Symbols permit one to get a glimpse of totality and unity, while allegory reveals the world as a 'desolate' landscape with ruins scattered here and there as silent witnesses of disaster."[116] In painting one thinks of Pablo Picasso's neo-classical period, or

of Giorgio de Chirico's mythic cityscapes; in music of Stravinsky's appropriation of classical form and motifs in, say, his suite *Apollon Musagète* (1928). Later, in his comparison of Tessenow's *Festspielhaus* with Loos's *Haus am Michaelerplatz*, Vienna (1910), Hays makes a superficial analysis of the exterior of the building compared with the complexities which Loos apparently indulged himself.

It is perhaps Tessenow's unending industry in producing beautiful, inimitable drawings of domestic interiors which Hays finds most suspiciously reactionary. On viewing such exquisite drawings, Hays talks about

> [Tessenow's] reification of objects – their split into use value and exchange value, and the fact that they ultimately function exclusively as producers of exchange value – profoundly affects the experience of the individual subject in the metropolis. And Tessenow grasped reification as a concrete historical situation and dilemma, seeing it as a fragmentation of the psyche and of its world, an enclosure in the henceforth compartmentalized spaces of bodily or perceptual experience over against rational, instrumental consciousness, of a daily realm of "originary" or "primitive" forms and objects over against the degraded instruments and products of capitalism, of the space of the organic and archaic over against the performance principles of industrial life and the growing independence of various occupations from one another, of the separation of various senses from one another, especially hand and eye, of the creator over against his creation; in short, of the *soul over against material life*. Out of these dualisms a solution emerged to Tessenow: the absence of objective or immanent meaning in life compels the artist to posit or construct meaning allegorically. In this chaos of desultory fragments, the allegorist is responsible for bestowing meaning in an inverted world. At the same time, Tessenow seems to have remained cognizant of the limitations of a solution that is confined to the realm of a purely aesthetic culture, leaving the forms and institutions of life unaltered. And he seems to have seen a leap of faith as the only way out of this dilemma: faith in the *Kleinstadt*. Thus, although the profane world is totally devalued, nevertheless, insofar as it is in turn read as an allegorical cryptogram of redeemed life, its status is simultaneously elevated.[117]

In a later issue of *Assemblage*, Stanford Anderson seeks to defend Tessenow from Hays's criticisms. In his essay 'The Legacy of German Neoclassicism and Biedermeier: Behrens, Tessenow, Loos, and Mies', he deals with the engagement of these architects with the theme expressed by Mebes in his book *Um 1800*:

> Tessenow was determinedly conservative, but his work continues to elicit interest for at least two reasons: first, his conservative society was not one of revival, but a fabrication addressed to his own time; and, second, his unique aestheticism aggrandizes his principal subject, the small, carefully crafted worker's house. Behrens would not have turned to the factory as the locus of architecture had he not constructed a historical and architectural discourse that made it such. Similarly, Tessenow did not turn to the worker's house merely as a newly available extension of architectural practice. The small house was the touchstone of his historical, political, and architectural discourse.[118]

He goes on to talk about Germany as the 'Land in the middle', mediating between continental extremes to the north, south, east, and west. Tessenow's role as mediator, exemplified in his architecture by the paradigm of the small worker's house, is explored in the conclusion to this chapter.

The 'materialist' architecture of the 1990s is the result of the struggles architects – chiefly West European ones – have had in coming to terms with the incessant emptying of meaning cultural artefacts have undergone. The Neo-Rationalism of the 1970s and early '80s had broken the causal link between form and function; form persisted, nonetheless, as an enduring ahistorical presence despite all programmatic vicissitudes. Its persistence was an attempt to mark the resistance offered by form to the vagaries of fashion. In this spirit, Aldo Rossi was equally at home in his Rationalist endeavour in designing a supermarket as he was a theatre or a school.

Materiality has tended to become interchangeable with the word 'materials', as Richard Weston complains in his book *Materials, Form and Architecture*. He suggests that "materiality has been adopted as the password for an attitude that seeks to express what materials *are* – and as such is concerned more with their emotional effect upon the observer than with conventional structural uses."[119] The materialist architects (that grouping of originally Swiss practitioners comprising Herzog & de Meuron, **(Fig. 5.21)** Diener & Diener, Peter Zumthor **(Fig. 5.22)** and others) persisted with the use of conventional building typologies (at least as regards external appearance); these typologies get transmuted into building *topologies*, as André Bideau has perceptively remarked.[120] An example is Herzog & de Meuron's *Haus Rudin*, Leymen, Switzerland. **(Fig. 5.23)** This combines the traditional format of the single-family house, but overlays it with Le Corbusier's idea of raising a house

up out of the ground on pilotis. The effect is a startling conflation of architectural ideas (though with rather unfortunate consequences for happy spatial and material relations of internal and external spaces). As Margit Ulama wrote, "This building provokes the fundamental question as to whether serious architecture [*anspruchsvolle Architektur*] is able to play with the usual image of the house in such a direct manner."[121]

On the face of it, the proliferation of 'blob' and 'box' schemes, initially surfacing as student projects in schools of architecture, and then as built schemes, could not be further from Tessenow's aesthetic. In an essay entitled 'Deep surfaces' (2001) the critic André Bideau has written:

> Designers and interpreters of Swiss German architecture tend to work hard to eradicate all strata of significance. For some time, efforts have been made to achieve a status "beyond signs", an expressive zero condition also aspired regarding construction [...] The success of phenomenologically simple categories like the "box" and the "blob" demonstrates how no longer the relationship of form and content, but rather the topology of surfaces and bodies is relevant and well marketable [...][122]

The 'materialist' architects referred to here have chosen to fuse their concern for materials with an interest in maintaining a building's autonomy of form, where choice of material and design of form are both 'autonomous' concerns, relatively unrelated to the client's programme. Indeed, programme in its conventional sense has all but disappeared from the discourse of this architecture. Where, with the Swiss architect Bernard Tschumi, 'events' supplanted function, now the purely phenomenal sensation of materials and forms becomes the only residue of depth left in these buildings.[123] Surface, one could say, has become the new depth. Weston, in his book on the relationship of materials to architectural form, quotes Nietzsche who expressed this self-same thought by reference to antiquity: "Oh, those Greeks! They knew how to live. What is required for that is to stop courageously at the surface, the fold, the skin, to adore appearance, to believe in forms, tones, words, the whole Olympus of appearance. Those Greeks were superficial – out of profundity."[124]

Ullrich Schwarz, too, understands the new concern for materiality, the quiddity of form, as an architectural resistance against an over-medialisation of space: "Material manifestation becomes a potential resistance, a defence of reality in the face of its threatened medial dissolution. In this sense surface becomes depth, and the reactivation of the senses come to the rescue of phenomena...This architecture [Zumthor, Herzog & de Meuron, Diener & Diener, *et al.*] is about visibility, not legibility."[125] This talk of resistance (and materials will resist, in a Schopenhauerian sense) has political activist overtones; one is reminded of the resistance offered in Switzerland by Rationalist architecture in the Italian-speaking canton of Ticino during the 1970s. Klaus Staeck, the German political graphic artist, made a striking satirical poster which had emblazoned in Gothic script above a photo of a typical West German modernist holiday house the text: 'German Workers! The SPD [Social Democratic Party] wants to take away your villas in Ticino.'[126] **(Fig. 5.24)**

In this 'materialist' discourse of architecture it is the received modernist understanding of the elusive term 'form' which is actually at issue. In the word 'form' there is, as Adrian Forty tells us, "an inherent ambiguity, between its meaning 'shape' on the one hand, and on the other 'idea' or 'essence': one describes the property of things as they are known to the senses, the other as they are known to the mind."[127] The new Materialism has tended to render its understanding of form to be a phenomenal category equivalent to that of materiality, abolishing any dualistic ('mind – body', or '*Geist – Materie*') distinction between them. In this scheme, where does the 'idea' reside? It can only lie 'on the surface'. This concept is not so very strange, or banal, if we consider the actual pragmatic meaning of the word 'form' as it appears in the vocabulary of construction, namely as a mould giving shape to something. (In building, for instance, a concrete beam is shaped by pouring wet concrete mix into formwork and allowing it to set.) There is, in this scenario, an ambiguity as to what is being given form: is it the space contained within, or is it the shape of the material 'box'? Perhaps our discomfort with the idea is the close congruence between the perceptual understandings of both 'form' and 'materials' in this context.

Look at Herzog de Meuron's *Tate Modern* (2000) in London, which resembles nothing less than a minimalist department store. Its thematic displays identify each floor so that,for instance, the exhibition on 'the body' appears as though it were, say, the soft furnishings department of *Selfridges*. The atrium space, too, a familiar spatial type associated with the shopping mall and other commercial architecture, lies at the heart of the enterprise. **(Fig. 5.25)** The architects' deployment of materials and shapes, however, seems to follow an organising principle which remains inscrutable. The brick planes outside, and the 'light boxes' inside, do not serve to 'reveal' the spatial or functional programme of the scheme. Rather, they appear as sheer phenomena. The brick facades 'hide' the complex three-dimensional arrangement of galleries within, while the massively scaled former turbine hall which acts as foyer and temporary exhibition space, masks the (complicated) circulation system of lifts, staircases, and escalators.[128]

An important juncture was reached in 1995 with the exhibition held in Pittsburgh entitled *Monolithic Architecture*. The catalogue featured a notable essay by Detlef Mertins which sketched an historical overview of the twin, related themes of monumentality and materiality in twentieth-century modernist architecture.[129] In his essay 'Open Contours and Other Autonomies', Mertins reflects on the purism of Amédée Ozenfant and Charles-Edouard Jeanneret which "rejected its [Cubism's] dismemberment of objects and figures" in favour of a system of painting "[which] led them to render everyday objects, such as bottles, glasses, plates, and guitars, as having physical integrity and weight while subjecting them to the structural principles of the flat canvas and the two-dimensional surface of the retina."[130]

How do we 'read' Heinrich Tessenow today in terms of the new 'materialist' architecture? There are two aspects to any such reading. Firstly, there is Tessenow's approach to shape and planning ("form"), and secondly his conception of flatness, in terms of its expressive role and its constructional reality.

The materiality of a building resides in our perception of it which operates at various scales of observation of phenomena. Perception at large scale – most notably at a distance from the object – enables us to be aware of form (as 'external shape'). The greater our distance from the object, the clearer our

perception of form we have. This is akin to Adolf Hildebrand's notion of low relief sculptural form.[131] Also, a distant viewpoint tends to flatten a three-dimensional 'solid' object into a two-dimensional 'picture' image. If we add to this an even more 'distant' image, that of the plan or sectional view, then we are enabled to gain an idea of form which could be characterised as 'shape *plus* planning'. Tessenow's architecture represents a striving for formal simplification allowing a clear image of both solid shape and internal organisation to be held in one's mind at the same time.

The purist simplicity of Tessenow's Hellerau housing *Am Schänkenberg* was barely equalled in any of his subsequent schemes.[132] As Erich Haenel's commentary on the scheme on its completion states: "Tessenow attained the highest degree of simplicity with this construction."[133] The famous photograph of a house in the centre of the terrace emphasises its purist simplicity, although the actual scheme has a more conventional form with end pavilions of gabled houses ending the composition. **(Fig. 5.26)** (In the cropping of the photograph, the scheme has been reduced to its idealist purity in much the same way as Le Corbusier's image of his Villa Schwob removes the offending garden pergola.) Extreme simplicity of form has its negative aspect, though as Haenel observes, "the puritanical character of these houses located *'am Schänkenberg'* has not found complete favour with the house-buying public, some of whom believe they can detect a certain smell of poverty; they prefer the friendlier, cheerier aspect of Riemerschmid's terraced houses [*aus guten Augen in die Welt blickenden*] to Tessenow's bald creations."[134]

The second aspect relating the work of Tessenow to that of the 'Materialists' is construction itself. It is secondary only insofar as a certain new attitude (or a reprise of *Biedermeier* methods) to materials is necessary in order to achieve some of the formal simplicity mentioned above. In order to achieve flatness of form the external skin of a building needs to be compressed. This is essential if both the internal and the external surfaces of the external envelope should appear as flat planes; it is also necessary in order to suppress window openings, so that fenestration appears more as a surface pattern from both outside and inside, and not as incisions cut into solid walls. In order for this to occur window and door reveals need to be reduced; this can only happen if the overall 'sandwich' of wall construction is thinned

down and compressed. Tessenow's *Patentwand* was his attempt to do just this: to solve all the requirements of a wall in terms of building physics (statics and environmental control) which in turn enable the wall to be 'flattened'. As André Bideau has commented:

> The densified surfaces of recent Swiss German architecture reflect problems posed by building physics and expressive needs, too. Essentially, the multi-layered skins of eighties buildings, charged with quotations, images and identities, are a first response to the new challenges posed by heat insulation after the energy crisis. As soon as other insulation materials and homogeneous constructions appear on the market in the nineties, facades are purged of their technical and semiotic connections. With walls smooth and compressed, space itself is revealed as a stereometric body and interior and exterior relate to each other in a tactile fashion.[135]

Tessenow strove for a flatness of surface that comprised and compressed both *Geist* (spirit) and *Materie* (matter), so realising the ineffable qualities of form by means of materialist considerations of construction. In this way his work in the formative first decade of the twentieth century prepared the ground for the aesthetic of *Neues Bauen* of the Weimar years.

In his book *Bild und Bau* Rolf Sachsse has explored the relationship between architecture and photography throughout the twentieth century.[136] His conclusion, hinting at the increasing congruence of the two media, would appear to pit him against the concerns of the 'materialists', as articulated above. Earlier in the book, Tessenow is cast firmly in the role of 'conservative' architect, and is summarily dismissed as having any meaningful contribution to make towards the development of architectural photography. However, he went on to state that

> [f]rom today's viewpoint it seems possible to construct an antagonism between the mentors of the extremes of modern and fascist architecture in Germany – namely that between on the one hand Peter Behrens (1868–1940) and Heinrich Tessenow (1876–1950), and on the other hand a third exponent, the Stuttgarter Paul Bonatz (1877–1956), who inherited the mantle of Fischer. From these three offices or classes flow all those biographical entanglements[137] which have influenced, for better or worse, German architecture in the twentieth century.[138]

This credits Tessenow with an important share in being the originator of much that was to turn out as positive in the development of German architecture, and resolves in a balanced manner the 'biographical entanglements' of twentieth-century German architecture.

An important event in the early 1990s was the major exhibition on Tessenow held at the *Deutsches Architekturmuseum* (DAM), Frankfurt/Main. Curated by Vittorio Magnago Lampugnani and researched by Marco de Michelis, author of the definitive monograph on Tessenow's work, it presented a comprehensive and balanced view of Tessenow. Its topicality was enhanced by the events taking place in Germany at the time: the opening up of the borders, and the accession of the GDR to the Federal Republic. This allowed scholars, architects, and the general public on either side of the former Iron Curtain to visit the extant work of Tessenow, and to reappraise its legacy. The exhibition catalogue provides a concise but lucid overview of Tessenow, both in terms of an intellectual biography, as well as a chronological account of his work.[139] As Lampugnani put it:

> Heinrich Tessenow was one of the most important masters of modern architecture in Germany; in his writings, his teachings and in his considerable range of influential buildings, he devoted his attention primarily to that central task of architecture: housing. Yet Heinrich Tessenow remains one of the most neglected masters of modern architecture in Germany; his simple, modest buildings are anything but spectacular and their subtle elegance becomes evident only at second glance [...] his ideas [...] seem as topical as they were seventy years ago.[140]

This small, but nonetheless comprehensive, exhibition devoted to Tessenow was followed a year later by a major exhibition '*Moderne Architektur in Deutschland: 1900 bis 1950. Reform und Tradition.*'[141] The exhibition and accompanying catalogue aimed to widen the terms of German Modernism to include such turn-of-the-century Reform architects as Tessenow and Riemerschmid, and to connect these expressions of tentative modernism with the interrupted modernism into the 1950s. It sought, in other words, to give voice to what the critic Manfred Sack called "silent modernism" (*die stille Moderne*).

Martin Steinmann, the Swiss architectural theoretician, had a similar aim of rediscovering hitherto unsung architects from the early years of modernism, and demonstrating their historical relevance to contemporary practice. (This process gathered pace with his assumption of the editorship of the prestigious journal *archithese* in 1981.) His essays on Hans Schmidt, Franz Scheibler and Kay Fisker are particularly rich in demonstrating the quiet persistance Tessenow's architecture had on a wide range of unassuming architects.[142] **(Fig. 5.27)** Steinmann ends his essay on Scheibler, a Tessenow pupil from his time in Dresden in the early 1920s, with the following observations which he subtitles "[e]ine andere Geschichte" (a different history). He maintains that the deployment of familiar types

> represents an attitude to architecture which has always existed, but which was excluded as an appropriate attitude in the twentieth century as a result of the modern movement [*des Neuen Bauens*] which continues to arrest our thinking: in a building we are constantly on the lookout for novelty. It represents an attitude, which typically does not invent new types, but re-uses old types in new guises, as long as requirements are satisfied: this is the case with the housing in the *Nordstrasse* [terraced housing by Scheibler, Zurich 1931].
>
> The architecture resulting from this attitude necessitates the respect of fine differences. Tessenow gives a beautiful image of this: "[A] shepherd, attempting to distinguish this one (..) from his flock of grey sheep, has to pay attention to the fine differences in the appearance of the individual sheep", he writes and adds: "and he can do this". [143]

A "different history", to be precise, that of "silent modernism", is precisely what is at stake in this study of Tessenow. We now turn to the epilogue for an indication of the contours of such a project.

NOTES TO CHAPTER FIVE

[1] See Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century 1914–1991* (London: Michael Joseph, 1994).

[2] The most comprehensive summary of the various histories written of modern architecture in the twentieth century is included in a substantial chapter of Roland Jaeger's book on the architect and critic Gustav Adolf Platz. Roland Jaeger, *Gustav Adolf Platz und sein Beitrag zur Architekturhistoriographie der Moderne* (Berlin: Gebr. Mann, 2000). Prior to this, Vittorio Magnago Lampugnani summarised the historiography of the Modern Movement in 'Die Geschichte der Geschichte der "Modernen Bewegung" in der Architektur 1925-1941: eine kritische Übersicht' in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950; Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994), Chapter 12, 'Die Baukunst der neuesten Zeit und die Architekturhistoriographie der Moderne'.

[3] See Alan Colquhoun, *Oxford History of Art: Modern Architecture* (Oxford: Oxford University Press, 2002). Colquhoun devotes one of twelve chapters to late Wilhelmine Germany ('Culture and Industry: Germany 1907–14'). Heinrich Tessenow gets a section of his own (as do Muthesius, Behrens and Gropius).
Of the *Festspielhaus* gable front he writes: "The rather steep pediment illustrates Tessenow's attempt to fuse German and Latin prototypes." He continues: "Tessenow's housing projects were supported by a social theory that romanticized the petite bourgeoisie as the foundation of traditional German social order, and his fastidious drawings conjure up a lost world of neat Biedermeier innocence." Of the *Festspielhaus* he writes: "Externally, the building itself was given a more vernacular, [in comparison to the abstract interior framing Appia's severe sets] Heimat-like appearance, with steep roofs which sit rather incongruously with the Greek portico of the central building. Another aspect of Tessenow's work becomes apparent in the Hellerau school: a quality of abstraction and formal purity that anticipates the work of Mies van der Rohe and corresponds to the Greek spirit of Appia's stage-sets and Dalcroze's choreography." Compare Tessenow's rather difficult mix of German 'Gothic' roof with classical pediment form with Bruno Taut and Hoffmann's Harkort Turbine house, Wetter-an-der-Ruhr, 1908. See illustration in Walter Müller-Wulckow, *Bauten der Arbeit und des Verkehrs aus deutscher Gegenwart* (Königstein im Taunus/Leipzig: Robert Langewiesche, 1925), p.12.

[4] This scurillous verse (anon.) is cited in Julius Posener, *Was Architektur sein kann: neuere Aufsätze* (Basel: Birkhäuser, 1995), p.218. German text: "Von Korfu der Heine schwund./ Der Kaiser ist ein – großer Kunstkenner." On hearing it a German-speaker 'hears' the repressed rhyme 'großer Hund' (literally 'big dog'; we might say 'utter ass' in English) instead of 'großer Kunstkenner' (great art-lover). The Kaiser's credentials as an art-lover are called into question, to say the least. The incident referred to is one where a statue of the (German-Jewish) poet Heinrich Heine was removed on the orders of the Kaiser from its position in Corfu (which was then, according to Posener, a possession of Wilhelm's).

[5] See Chapter Four, *'Architektur der Mitte'*.

[6] De Michelis accounts for the proliferation of Tessenow's published (but never executed) designs in the following terms:

> Vor allem in den frühen Jahren bis 1909 hat Tessenow durch seine Mitarbeit an Zeitschriften, auch als Verfasser von Rubriken für Lesezuschriften und als

Zeichner, reiche Erfahrungen gesammelt und sich als Architekt fortentwickelt. Die frühen Arbeiten entstanden also außerhalb konkreter Bauaufgaben oder Wettbewerben und beschränkten sich überwiegend auf Konstruktionsdetails wie Treppen, Fenster und Türen, Pergolen, Veranden oder Dachgaupen. Manchmal auch handelt es sich nur um skizzenhafte Ansichtszeichnungen, die nicht mit einem kompletten Entwurf zusammenhingen. (De Michelis, *Heinrich Tessenow,* p.155).

[7] For the background to the publishing record of Wilhelmine and Weimar architecture see Annette Ciré and Haila Ochs (eds), *Die Zeitschrift als Manifest: Aufsätze zu architektonischen Strömungen im 20.Jahrhundert* (Basel: Birkhäuser, 1991) and Roland Jaeger, *Gustav Adolf Platz und sein Beitrag zur Architekturhistoriographie der Moderne* (Berlin: Gebr. Mann, 2000). In addition to being published in the technical press, Tessenow was ocasionally featured in *Der Kunstwart*, a publication with a *Heimatkunst* cultural remit. De Michelis, *Heinrich Tessenow* contains a comprehensive chronological catalogue of every executed and unrealised project of Tessenow's, complete with exhaustive secondary literature sources. The most comprehensive survey of architectural publishing is to be found in Rolf Fuhlrott, *Deutschsprachige Architektur-Zeitschriften: Entstehung und Entwicklung der Fachzeitschriften für Architektur in der Zeit von 1789-1918* (Munich: Verlag Dokumentation, 1975).

[8] Karl Scheffler, 'Heinrich Tessenow', *Kunst und Künstler*, (1912) vol.10, p.45. German text:

Vergleicht man seine [Tessenows] Bauten mit den vorzüglichen Arbeiten von Muthesius oder mit den ungleichmässigeren Bauwerken von Riemerschmid – der Vergleich liegt nahe, weil beide Architekten in Hellerau viel gebaut haben – so wirken die Häuser dieser Beiden dem Blick des Laien zwar interessanter und reicher, dem endgültigen Urteil aber, gegenüber der Bestimmtheit Tessenows, immer mehr oder weniger naturalistisch und romantisch.
Stellt man im Geiste Tessenow neben dem in Weimar wirkenden van de Velde, so ist auf Seiten des Belgiers freilich die viel grössere Beweglichkeit und Sensitivität, die geistreiche Fülle, das Erfindertemperament, eine starke Originalität und leidenschaftliche Modernität; auf Seiten Tessenows aber ist dafür, wie schon gesagt, etwas über alle Originalität hinauswachsendes Allgemeingültiges, etwas Quintessenzhaftes. Van de Velde ist eine komplizierte Energie, Tessenow ist ein einfach erscheinender Wille; van der [sic] Veldes Art wirkt neben dem glattflächigen Purismus Tessenows wie ein vom Monumentaltrieb besessener Detaillist, wie ein Formenziseleur neben einem kubisch Denkenden. Vergleicht man endlich was Tessenow will und thut mit der Wiener Architektur, wie sie vor allem Josef Hoffmann vertritt, so kann man sagen, dass die Wiener Bauweise in Tessenow ernst, nordisch, vernünftig, männlich und deutsch geworden ist, dass sie in Hellerau von dem Gift der Artistik gesundet.

[9] Karl Scheffler, *Die Architektur der Großstadt* (Berlin: Cassirer, 1913).

[10] Karl Storck, *E. Jaques-Dalcroze: Seine Stellung und Aufgabe in unserer Zeit* (Stuttgart: Greiner und Pfeiffer, 1912), p.91. German text: "Als ich diesen Raum zum erstenmal betrat, da beschlug mich das Empfinden des gebändigten Raumes. Das ist nur Raum, schweigender Raum."

[11] Storck, *Jaques-Dalcroze*, p.91. German text: "Tessenows ureigenste Kunst ist es, in Massen und Maßen zu denken."

[12] Matthew Jefferies, *Politics and Culture in Wilhelmine Germany: The Case of Industrial Architecture* (Oxford: Berg, 1995).

[13] See Nils Aschenbeck, *Heinz Stoffregen 1879–1929: Architektur zwischen Tradition und Avantgarde* (Braunschweig/Wiesbaden: Vieweg, 1990).

[14] Platz includes an illustration of the factory in Gustav Adolf Platz, *Die Baukunst der neuesten Zeit* (Berlin: Propyläen, 1930), p.298.

[15] Ibid. p. 279, citing Adolf Behne 'Romantiker, Pathetiker und Logiker im modernen Industriebau', *Preußische Jahrbücher* (1913) vol.154, p.174.

[16] Schlichter had been a pupil of Dalcroze's; she and Tessenow met at Hellerau.

[17] I am indebted to de Michelis, *Heinrich Tessenow* for these biographical details of Tessenow's life. Julius Posener's autobiography *Fast so alt wie das Jahrhundert* (Berlin: Siedler, 1990) also provides fascinating insights into the Berlin architectural 'scene', in particular the contrast in teaching methods between Poelzig (who was Posener's teacher) and Tessenow.

[18] Werner Durth, *Deutsche Architekten: Biographische Verflechtungen 1900–1970* (Munich: Deutscher Taschenbuch Verlag, 1992), p.74. German text:

> Während Poelzig so die eher unruhig suchenden und weiterdrängenden Geister unter den Studenten anziehen konnte, wurde Tessenow gleichsam als ruhender Gegenpol empfunden: Statt aufschäumender Formenvielfalt "predigte er" ein einfaches und schlichtes Bauen, das bis ins Detail die Liebe zum Handwerk offen zutage treten lassen sollte. Anders als sein Kollege Poelzig, der ähnlich Bonatz' seine Studenten mit produktiven Irritationen zu einem Wettlauf der Experimente anregte, wird Tessenow von seinen Schülern als stiller und bescheidener Mann geschildert, der statt Unruhe Sicherheiten und feste Orientierung bot.

Durth quotes Rudolf Wolters, one of Tessenow's pupils who studied under him at the *Technische Hochschule* in Berlin in the mid-twenties. "Here was a modest, quiet priest at work [Tessenow giving a lecture] who had more to offer us than the famous speakers who preceded him. Here was no inventor like Peter Behrens, no revolutionary like Gropius, no aesthete like Mies van der Rohe, no overflowing phantasist like Poelzig – here was the philosopher among the architects." German text: "Hier war ein bescheidener, stiller Prediger am Werk [Tessenow giving a lecture], der uns mehr gab als die berühmten Redner, die vor ihm zu Worte gekommen waren. Dies war kein Erfinder wie Peter Behrens, kein Revolutionär wie Gropius, kein Ästhet wie Mies van der Rohe, kein überschäumender Phantast wie Poelzig – dies war der Philosoph unter den Architekten." Ibid. p.75, citing Rudolf Wolters, *Heinrich Tessenow zum Gedenken* (Coesfeld, 1951), unpublished manuscript, p.3.

[19] Wolters cited in Gitta Sereny, *Albert Speer: His Battle with Truth* (London: Macmillan, 1995), p.69.

[20] Speer's conversations with his biographer Sereny have shed a good deal of light on the spell Tessenow cast on his young protégés at the Berlin *Technische Hochschule* in the late 1920s:

> He was a very shy man," said Speer. "He spoke in a whisper. Instead of addressing us from the lecture-room platform as all the other professors did – from up above, so to speak – he would come down to us, sit at one of our long tables,

and people from other tables would crowd around, standing on stools to see over the heads of those who had managed to grab a seat. It was very informal, relaxed – it made for an atmosphere different from any other lecture room." He laughed happily when he recounted this. "Looking at it in retrospect, one might say that it affected, not our inner respect for him, which was enormous, but the more extreme manifestations of what now are often caricatured as German attitudes – you know, standing at attention, clicking heels and all that. When I visualize it now, I realize how much we changed – how very much we grew up, under his liberating influence. He used to talk to us, not just about architecture, but about life, about love for nature, for the land and also for one's country. (Ibid. p.69).

[21] Richard Hamann, *Geschichte der Kunst: Vol. 6 Von der Auflösung des Rokoko bis zur Gegenwart* (Berlin: Knaur, 1932) vol.6, illustrated edition, (Munich/Zurich: Droemersche Verlagsanstalt, 1964).

Die Gegensätzlichkeit zu diesen wird erst ganz stark in der sich anschließenden Bewegung eines Purismus, der auf jedes Ornament möglichst ganz verzichtet, durch strenge Gesetzlichkeit geometrischer Flächen die Wirkung von Vornehmheit und Schlichtheit zu gleicher Zeit anstrebt und mit einer auf Haltung und Repräsentation bedachten Monumentalisierung des Baukörpers zu einem feinen Klassizismus zurückstrebt. Die bedeutendsten Vertreter dieses Purismus, dieser neuen Stille und Größe sind Josef Hoffmann, Heinrich Tessenow [illustration of Festspielhaus] und Peter Behrens [illustration of AEG Turbine Hall]. Die Säulen- und Tempelfront wird wieder in ihr Recht eingesetzt. Aber auch in diesem Klassizismus setzt sich das Neue durch. Zunächst eine neue Betonung der kubischen Formen vor den menschlich-symbolischen: Säulen werden zu Pfeilern, verlieren ihren dynamischen Ausdruck, die Räume und Flächen zwischen ihnen werden ebensomaßgebend wie die körperlichen Formen der baulichen Massen. Ein neues Gefühl für die Proportionen von Flächen bildet sich und das Verantwortungsgefühl für das Ganze des Bauwerks und seine Stellung im Gesamtgebilde des städtebaulichen Komplexes. Eine neue öffentliche Gesinnung verneint die Rechte des Individuums auf verantwortungslosen Lebensgenuß, dem Reiz folgt die Ordnung. Noch wichtiger ist, daß mit dieser kubisch flächigen Proportionskunst ein Ausdruck der Schlichtheit gewonnen ist. Jedes einzelne Haus der Siedlung tritt infolgedessen als Individuum zurück; die Einheit des vielen Unwesentlichen schafft – entsprechend der Bildwirkung, die die Massenerscheinungen für das Auge im pleinairistischen Bilde erhielten – jetzt auch einen Stil des Lebens im kollektiven Sinne, einen Ausdruck der Einheit des Zusammenwohnens in der Siedlung, in der jedes Haus, einzeln unwesentlich, nur eine Nummer ist, das Ganze aber von der überzeugenden Kraft des Einverständnisses. Das hat Tessenow ausgezeichnet gelöst, wobei der Nachdruck noch auf dem Wohnen im bürgerlichen Sinne, dem Eigenheim der Heimatkunst liegt, die Form aber auf Rationalisierung, Zusammenfassung, Anpassung zielt. Noch wichtiger ist, daß man mit dieser Flächen- und Kubenkunst, mit rationalisiertem Block und Linie, herangeht an die neuen Aufgaben der versachlichten Zeit – Fabrik und Kraftwerk, Bahnhof und Geschäftshaus – und mit der puristischen Gesinnung diese Bauten radikal reinigt von allem, was Füllsel mit einer personenhaften oder naturvermittelnden Kunst bedeutet. Bilder im Sinne des 19. Jahrhunderts, Landschaften, Anekdoten, Stimmungen in diese Arbeitsräume zu stellen, sie mit hoheitsvollen Genien oder mit blumenreichem Ornament zu schmücken, das sei, sagt Tessenow, als ob man neben einer Kreissäge ein Beethovensches Quartett spielen lasse oder den Leim mit Kölnischem Wasser anrühre. Die Entmenschung der Bauformen, ihre Geometrisierung und Stereometrisierung stieß hier, wo es sich nicht um Empfangshallen, um repräsentatives oder gemütliches Wohnen, um Herrschen

oder Genießen handelte, auf den gerigsten Widerstand, wenn man auf die altgewohnten Ausdrucksformen der Architektur verzichtete. (Ibid. pp.857-858).

[22] It is possible that the art historian Hamann maintained an anachronistic view of Tessenow, Behrens, and Hoffmann. According to the contemporary art historian Norbert Huse, Tessenow already belonged to the 'traditionalists', as opposed to the avant-garde of the 'Neues Bauen'. He makes the interesting observation that the traditionalists had already formed into two distinct groupings by the late 1920s, namely the 'Regionalists' (including notably Fischer and Schumacher), and those who identified with a particular era 'Around 1800'. Tessenow, according to Huse, belonged to the latter. See Norbert Huse, *Neues Bauen" 1918 bis 1933: Moderne Architektur in der Weimarer Republik* (Munich: Heinz Moos, 1975), p.10.

[23] Gerd Kuhn (ed.), *Walter Müller-Wulckow und die deutsche Architektur von 1900 – 1930* (Königstein im Taunus: Langewiesche, 1999), p.3. German text: "die ästhetischen und lebensreformerischen Bemühungen des Bürgertums".

[24] See Walter Müller-Wulckow, *Architektur der Zwanziger Jahre in Deutschland* (Königstein im Taunus: Langewiesche, 1975), new edition of four *Blaue Bücher*, A: "Bauten der Arbeit und des Verkehrs" 1929; B: "Wohnbauten und Siedlungen" 1929; C: Bauten der Gemeinschaft, (1929); D: "Die deutsche Wohnung" (1932). The following projects of Tessenow are illustrated in the pages of the *Blaue Bücher* : B: Landhaus Böhlau, St Moritz (1916/17) illustration p.27; B: *Siedlungshaus*, Dresden-Hellerau, (1912) p.62, and *Reihenhäuser*, Dresden-Hellerau, (1910/12), p.63; C: *Festspielhaus* Hellerau pp. 76–78 and *Landesschule* Klotzsche pp.82–83; D: *Wohnzimmer* 1920. Caption: "Frühes Beispiel gut proportionierter Möbel in klarer harmonischer Raumgestaltung p.15; also *Wohnzimmer* 1920. Caption: "Betont einfache Möbel, von besonderer Leichtigkeit und Klarheit der Maßverhältnisse" p.34.

[25] See Klaus Bergmann, *Agrarromantik und Großstadtfeindschaft* (Meisenheim am Glan: Hain, 1970), 'Bruno Tanzmann und die Deutsche Bauernhochschulbewegung', pp.219-246.

[26] Cited in Werner Kleinerüschkamp (ed.), *Heinrich Tessenow: 1876–1950* (Frankfurt/Main: Deutsches-Architektur-Museum, 1991), exh. cat., transl. Ishbel Flett, p.14 from Bergmann, *Agrarromantik und Großstadtfeindschaft,* p.227. German text: "[das Dalcroze-Institut war] der Anfang zu einer neuen Akropolis des deutsch-germanischen Weltgedankens gelegt."

[27] Vittorio Magnago Lampugnani recounts the apocryphal story surrounding the critical reception of Tessenow's remodelling of the *Neue Wache*: "In spite of a number of objections, some of them vehement, the memorial was created the following year [i.e. in 1931]. In order to determine its precise dimension and form, Tessenow had a full-scale model built near his atelier where he experimented with endless patience until he arived at the optimum arrangement of the few elements involved. When the memorial was officially inaugurated on June 2, 1931, public reaction ranged from restraint to anger: the room had nothing of the rousing nationalistic oathos that might have been expected. Amongst the few that were moved by its quiet elegance was a man aged about 40 who stared entranced at the light rain falling through the circular opening in the roof onto the black granite block and from there flowing in fine rivulets to the ground. On the floor, paved with hand-hewn basalt lava stones and pointed with lead, shimmering little pools of water were formed; it seemed to him as though the stone wept. The man was [the renowned film critic of the Weimar Republic] Siegfried Kracauer." Lampugnani's source is the *Frankfurter Allgemeine Zeitung*, 3 June 1931.

See also Julius Posener's essay 'Streit um die Neue Wache', Julius Posener, *Was Architektur sein kann: Neuere Aufsätze* (Basel: Birkhäuser, 1995), pp.213–216.

[28] "[...] Triumph der Söhne Israels über die deutschen Soldaten, und sie besudelt das deutsche Volk mit jüdischem Blut." De Michelis, *Heinrich Tessenow*, pp.303-309.

[29] Ibid. pp.303-309.

[30] See Hartmut Frank, 'Monument und Moderne', in Romana Schneider and Wilfried Wang (eds), *Moderne Architektur in Deutschland 1900 bis 2000: Macht und Monument* (Ostfildern-Ruit: Hatje, 1998). Frank maintains that "[e]s ist keinesfalls der Londoner Kristallpalast oder der Pariser Eiffelturm, von denen die Moderne Bewegung in Deutschland ausgeht, sondern vielmehr der Bau des Gebäudes für den Deutschen Reichstag, die Bismarck-Türme und die sonstigen in ganzen Reichsgebiet erbauten Großdenkmäler. In den Büros von Paul Wallot und Bruno Schmitz schult sich eine ganze Generation deutscher Architekten, die sich in den Folgejahren im Deutschen Werkbund, in der Gartenstadt-Bewegung, im Werdandibund, im BDA (Bund deutscher Architekten), in der Bodenreformbewegung und zahlreichen anderen um Modernisierung bemühten Verbänden um den richtigen Kurs der modernen Architektur streiten wird." Ibid. p.230.

[31] See Volker Thurm-Nemeth (ed.), *Konstruktion zwischen Werkbund und Bauhaus: Wissenschaftliche Weltauffassung und Kunst* (Vienna: Hölder-Pichler-Tempsky, 1998). German text: "Es bestand eine weitgehende Übereinkunft in der Ablehnung historischer Stilformen. Diese Überzeugung verband nicht nur die Proponenten des Bauhauses, sondern darüber hinaus viele andere Persönlichkeiten und Gruppen, die an der zeitgemäßen Entwicklung und Gestaltung alltagsbestimmender Gegenstände, von Wohnungen, Häusern und Städten arbeiteten. (Hier ist schon kurz auf das Problem hinzuweisen, daß es auch eine große Anzahl von Architekten gab, die die transformierte Übernahme historischer Stilformen zu "zeitlosem" Klassizismus nicht ablehnten und sich trotzdem den Ansprüchen der Moderne verpflichtet fühlten, z.B. Behrens, Perret, Tessenow, Asplund, Piacentini, Holzmeister u.a.)" Ibid. p.44. Additionally, Tessenow's conservative attitudes, particularly as they applied to the appearance of external form, started to become viewed as reactionary because of his feting by a figure such as Paul Schultze-Naumburg. In 1928 his *The Face of the German House* was published, and it was this book which specifically bracketed Tessenow with Schmitthenner, of whose houses Schultze-Naumburg claimed "that they were German houses, [and that] they helped to produce a sense of national or racial identity". Barbara Miller Lane, *Architecture and Politics in Germany 1918–1945*, (Cambridge, Mass: Harvard University Press, 1985), 2nd ed., p.139.

[32] J.J.P.Oud letter of 26 October 1929, in response to an inquiry for work from the architect Rudolf Wolters, who had been laid off from employment in Tessenow's office because of the worsening economic conditions. Cited in Durth, *Deutsche Architekten*, p.91. German text: "es tut mir immer wohl, den Geist Tessenows weiter verbreitet zu sehen. Seine Klarheit brauchen wir für das Neue Bauen noch sehr."

[33] From 'Dächerkrieg' in Carl Georg Heise and Johannes Langner (eds), *Karl Scheffler: Eine Auswahl seiner Essays aus Kunst und Leben 1905-1950* (Hamburg: Hauswedell & Co., 1969). German text:

> Mit dem Dach steht es, nach einer hübschen Formulierung Tessenows, nun so: Wenn heute ein Architekt ein hohes, spitzes, breit bergendes Dach baut, so gilt das als ein Wahrzeichen deutschnationaler Gesinnung. Wenn er das Dach abflacht, so entsteht etwas wie ein demokratisches Haus; macht er das Dach aber

ganz platt, so bekundet er damit radikal kommunistische Gesinnung. Das Dach wird zum Ausdruck politischer Einstellung.

Ein gutes Dach ist nicht leicht zu bauen. Es ist recht eigentlich der Prüfstein für die Summe von Begabung, Können und Erfahrung, die der Architekt besitzt. Darum ist es sehr bequem, darauf zu verzichten und aus dem Verzicht einen Grundsatz zu machen. Gesetze gibt es hier aber überhaupt nicht. Einmal kann ein plattes Dach gut sein, ein andermal ein spitzes. Der gute Architekt muß beide Formen, je nach Bedürfnis, anwenden können. Die wahre Modernität liegt woanders. Auch ist das platte Dach keineswegs etwas Neues. Wenn man Berlin von oben ansieht, wird man finden, daß die Hälfte aller Häuser platte Dächer aufweist. Es ist also ebenso trivial, von vornherein das flache Dach zu wollen, wie das spitze Dach zur Bedingung zu machen.

[34] John Betjeman, *Ghastly Good Taste, or, a Depressing Story of the Rise and Fall of English Architecture* (London: Chapman and Hall, 1930), illustrations by Osbert Lancaster.

[35] Evelyn Waugh, *Decline and Fall* (London: Chapman & Hall, 1928). See also Nikolaus Pevsner (edited and introduced by Stephen Games), *Pevsner on Art and Architecture: The Radio Talks* (London: Methuen, 2002), p.xxii. Also Timothy Mowl, *Stylistic Cold Wars: Betjeman versus Pevsner* (London: John Murray, 2000).

[36] Winfried Nerdinger, ' "Ein deutlicher Strich durch die Achse der Herrscher": Diskussionen um Symmetrie, Achse und Monumentalität zwischen Kaiserreich und Bundesrepublik' in Romana Schneider and Wilfried Wang (eds),*Moderne Architektur in Deutschland 1900 bis 2000: Macht und Monument* (Ostfildern-Ruit: Hatje, 1998), pp.92-93. German text:

So war der sogenannte "Zehlendorfer Dächerkrieg" zunächst eine Demonstration unterschiedlicher Architektur von zwei Baugenossenschaften, die nur kurzfristig in einigen Berliner Zeitschriften kursierte. Erst durch die demonstrative Konfrontation mit entsprechender Unterschrift in Albert Sigrists (das ist Alexander Schwab) gesellschaftspolitisch engagiertem *Buch vom Bauen* (1930) wurde dieses Gegenüber von Sattel- und Flachdächern, das sich ganz ähnlich vielfach in der Weimarer Republik fand und höchstens regional diskutiert wurde, zu einem Symbol für eine in Gestalt der Architektur konkretisierte politische Auseinandersetzung.

[37] Roland Jaeger, *Gustav Adolf Platz und sein Beitrag zur Architekturhistoriographie der Moderne* (Berlin: Gebr. Mann, 2000). Gustav Adolf Platz, *Die Baukunst der neuesten Zeit* (Berlin: Gebr. Mann, 20000, reprint of the second edition of 1930 published in Berlin by Propyläen.

[38] Ibid. p.42. German text:

An den Schluß seiner Darstellung der Vorkriegszeit (und damit als Übergang zu den zwanziger Jahren) stellt Platz den Einzelgänger Tessenow, dessen traditionalistische Einfachheit er als Vorform der sachlichen Moderne deutet: "Verschwindet die überhitzte Verehrung des künstlerischen Elements (also des dekorativen), dann bleibt als Anlaß zum Bauen die 'Funktion'. Die schlichteste Lösung der Aufgabe, in kubischen, geordneten Baumassen."

[39] Ibid.p.89 citing Gustav Adolf Platz, *Wohnräume der Gegenwart* (Berlin: Propyläen, 1933), pp.20-31. German text:

Platz schildert diese Beiträge [von Otto Wagner, Adolf Loos, Henry van de Velde, Peter Behrens, Josef Maria Olbrich, Josef Hoffmann, Bruno Paul, Heinrich Tessenow u.a.] als Stationen eines zielgerichteten Klärungsprozesses, der weder durch den Jugendstil ("grandiose Verirrung eines überspannten Individualismus"), noch durch eklektizistische Heimatkunst oder neo-klassizistische "Biedermeierei" aufzuhalten gewesen sei. In der Auseinandersetzung der unterschiedlichen Auffassungen, die er auch anhand der Debatte im Deutschen Werkbund erörtert, präsentiert Platz dabei Behrens als Synthese der Positionen von van de Velde (Kunstwollen), Tessenow (Handwerk), Muthesius (Typisierung),und Loos (Sachlichkeit).

[40] Jaeger, *Gustav Adolf Platz*, p.140. German text: "Inmitten der Spaltung der Fortschrittlichen in Evolutionäre und Revoltionäre."

[41] See ibid. chapter 12: 'Die Baukunst der neuesten Zeit' und die Architekturhistoriographie der Moderne'.

[42] Panayotis Tournikiotis, *The Historiography of Modern Architecture* (Cambridge, Mass: MIT, 1999), pp.8-9.

[43] Platz, *Wohnräume der Gegenwart*, p.28. German text:

Der Gefahr der bequemen Biedermeierei war wohl als einziger Heinrich Tessenow entgangen, obwohl die Wurzeln seiner Kraft in eben dieser letzten, noch lebendigen Überlieferung lagen. Er hat den Geist der Biedermeierzeit belauscht und die zarten Klänge hervorgelockt, die in jenen schlichten und doch so seelenvollen Räumen schlummerten. Goethes und Schillers Wohnräume in Weimar geben eine klare Anschauung davon, wie die edelsten Geister der napoleonischen Zeit und der Freiheitskriege gelebt haben: in bewußter, wenngleich erzwungener Selbstbeschränkung, in einer vollendeten Form, die einfach, aber nicht ohne Anmut war. So wirkt auch das Wesen der Wohnräume Tessenows, so die Erscheinung seiner Möbel. Da ist kein Ehrgeiz, mit Reichtum und Talent zu prunken, sondern handwerklich gute Arbeit und Rhythmus der Anordnung. Das Geheimnis der Wirkung ist klare, möglichst kubische Form der Möbel, Ruhe der Zusammenstellung, strenge Einhaltung durchlaufender Höhen, zurückhaltende und dennoch heitere Farbenklänge, alles in allem: Auswirkung des Fingerspitzengefühls. Es ist ein Glück, daß ein beträchtlicher Teil des Nachwuchses heute von Tessenow erzogen wird.

[44] See de Michelis, *Heinrich Tessenow*, p.101 and pp.313-315.

[45] See Georg Rigele and Georg Loewit (eds), *Clemens Holzmeister* (Innsbruck: Haymon, 2000), exh. cat., pp.172–174.

[46] See Hermann Fehling (intr.), *Bauen in Berlin 1900–1964* (Berlin: Akademie der Künste, 1964), exh. cat., p.107.

[47] See Wolfgang Pehnt, *Expressionist Architecture* (London: Thames and Hudson, 1973) ; Iain Boyd Whyte, *Bruno Taut and the Architecture of Activism* (Cambridge: Cambridge University Press, 1982), and Peter Blundell Jones, *Hans Scharoun* (London: Phaidon, 1995).

[48] Franz Roh, *Nach-Expressionismus. Magischer Realismus. Probleme der Neuesten Europäischen Malerei* (Leipzig: Klinkhart und Biermann, 1925). The critic Alan Colquhoun has described late Weimar idealism as 'realistic' and points to Roh's

writings as lending credence to this view. In his book Roh produced a table contrasting qualities pertaining to Expressionism with those of Post-Expressionism: (Ibid. p.119.

Expressionismus	*Nach-Expressionismus*
Ekstatische Gegenstände	Nüchterne Gegenstände
Ausschweifend	Eher streng, puristisch
Warm	Kühl, bis kalt
Wie unbehauenes Gestein	Wie blank gemachtes Metall
Diagonalreich (in Schrägen), oft spitzwinklig	Eher rechtwinklig, dem Rahmen parallel
Gegen die Bildränder arbeitend	In ihnen festsitzend
Urtümlich	Kultiviert

[49] See Iain Boyd Whyte, *Bruno Taut.*

[50] Alan Colquhoun 'Kritik und Selbstkritik in der deutschen Moderne' in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994), p.262.

[51] Anna Teut, *Architektur im Dritten Reich: 1933–1945* (Frankfurt/Main and Berlin: Ullstein, 1967).

[52] The full text is as folllows:

> An Adolf Hitler, unseren Führer, den deutschen Volkskanzler in schwerer Zeit
> Du hast dem deutschen Reich neue Geltung verschafft, die alten deutschen Ideale der Gottesfurcht und Vaterlandsliebe und Einfachheit. Wahrheit und Unbestechlichkeit aufs neue aufgerichtet und jedem Volksgenossen neuen Mut gegeben.
> Wir verehren in Dir neben dem weitschauenden Politiker vor allem den künstlerischen Menschen, der dem neugeschaffenen Hause des deutschen Volkes eine würdige Erscheinung nach außen und ein gemütvolles reinliches Innere geben wird.
> So sehen wir in Dir bei der Aufrichtung unseres Berufsstandes den ersten deutschen Baumeister, dessen Führung wir vertrauen, weil sie dem Vaterland zu Ehre und Ruhm gereicht.

[53] Ibid. p.373. German text: "Das zerstörte Erbe darf nicht historisch rekonstruiert werden, es kann nur für neue Aufgaben in neuer Form erstehen."

[54] Ibid. p.374. German text: "...nur das Gültig-Einfache ist vielfältig brauchbar." This 'manifesto' is repeated in Hackelsberger's study of 1950s German architecture (see below note no 80). According to Hackelsberger, "Die Unterzeichner [of the manifesto], eine Elite der Unangepaßten, jener, die im Dritten Reich nicht profitiert hatten und sich auf der Suche nach der eigenen Zeit befanden, gehörten in der Folgezeit alle zu den Wirkkräften der vom Pragmatismus so kräftig gebremsten Entwicklung der fünfziger Jahre." Ibid. p.29.

[55] Nikolaus Pevsner, *Pioneers of the Modern Movement* (London: Faber & Faber, 1936). Revised edition retitled as *Pioneers of Modern Design* (Harmondsworth: Penguin, 1960). The new title confers on the modern movement the status of its being the *only* modern movement worth considering. For Pevsner, it *is* modern design.

[56] The reception of Tessenow by architects and critics working in the sphere of the Soviet Union remains to be researched.

[57] Joachim Petsch, *Baukunst und Stadtplanung im Dritten Reich: Herleitung/ Bestandsaufnahme/ Entwicklung/ Nachfolge* (Munich/Vienna: Carl Hanser, 1976).

[58] Ibid. p.39. German text:

> [...] die Architektur um 1800 [ist] Ausgangspunkt der architektonischen Gestaltung, wobei besonders das verputzte und sparsam gegliederte Wohnhaus mit einer klaren Raumaufteilung und Raumverbindung als vorbildlich galt..[D]ieser Gruppe gehörten auch die Architekten an, die die "höheren" Bauaufgaben des Klassizismus zum Vorbild nahmen, die ja auch für die Architektur des Staates und der Wirtschaft um 1910 als Vorbild gedient hatten; sie führten diese historische Tradition in einer weiter versachlichten Formensprache fort. Axiale Anlagen (Ehrenhöfe), symmetrische Raumabfolgen und die Gliederung des Baukörpers durch schlanke Lisenen, Risalite und Sockel aus Muschelkalkplatten waren wichtigste Ordnungs- und Gestaltungsmittel der Monumentalarchitektur der 20er Jahre (u.a. Paul Bonatz, Wilhelm Kreis). "Unechtes Pathos" lehnten die Konservativen Architekten ab. Natürlich bedeutet die Fortführung des imperialen Stils in den 20er Jahren nicht, daß der Neoklassizismus "an sich" schon eine präfaschistische oder faschistische Bauform darstellt: Zur faschistischen Bauform wurde er erst durch bestimmte politische Rahmenbedingungen und Sinnzusammenhänge.

[59] Petsch's schematisation is exactly the same as Norbert Huse's, whose *Neues Bauen* book was published the year before Petsch's, i.e. in 1975. Huse states that "[n]ach dem Verständnis des Publikums wie der Beteiligten stand der modernen Architektur eine konservative gegenüber, die sich bemühte, den Krieg zu überbrücken und an die Tradition anzuschließen. Zu ihren Vertretern gehörten Schumacher, Poelzig, Th. Fischer, Tessenow, Schmitthenner, Kreis, Bestelmeyer und viele andere. Unter ihnen kann man wahrscheinlich zwei Hauptrichtungen unterscheiden, von denen die eine den Stil ihrer eigenen Region zum Vorbild nahm, die andere den Stil einer bestimmten Zeit. Die erste Richtung hat ihre bedeutendsten Vertreter in Fischer und Schumacher, die auch im 20. Jahrhundert mit Erfolg die Identität süddeutscher bzw. norddeutscher Architektur zu wahren verstanden. Die Architekten der zweiten Richtung identifizierten sich meist mit der Zeit "um 1800", an die P.Mebes in einem folgenreichen Buch erinnert hatte. Tessenow, Schmitthenner, auch Schultze-Naumburg sind die wichtigsten Architekten. Gemeinsam war beiden Richtungen das distanzierte Verhältnis zur eigenen Gegenwart, der die Modernen sich mit so viel Hoffnung und Leidenschaft zugewandt hatten."

Some thirty years on, their writing seems naively hopeful, in the sense that 'conservative' and 'modern' were still – just – meaningful terms of architectural discourse. Back in the mid-seventies, one would have spoken of architectural *criticism*, and been blissfully unaware of structuralist, post-structuralist, and all manner of intertextuality. Charles Jencks had not yet written *The Language of Post-Modern Architecture*, nor had David Watkin challenged the historiography of modernism.

[60] Ibid. pp.39–40. German text: "Die zweite konservative Architektengruppe, durch Architekten wie Theodor Fischer und Fritz Schuhmacher repräsentiert, bemühte sich vorrangig um eine Weiterentwicklung regionaler Bautraditionen, wozu besonders die heimischen Materialien dienten. Aus diesem Grunde herrschte in Süddeutschland (Münchener Schule) der Putzbau mit vertrautem Gaupendach und in Norddeutschland der Ziegelbau vor. Gliedernde Fenster mit Fensterläden und malerisch angeordnete

Schornsteine sowie einfache symmetrische Verhältnisse überwiegen. Aufgrund der verwendeten Materialien und architektonischen Intentionen soll diese Richtung "Heimatschutzstil" genannt werden. Er findet sich – außer im privaten Wohnungsbau – bei Verwaltungsbauten des Staates und der Wirtschaft sowie bei Industriegebäuden."

[61] Jeffrey Herf, *Reactionary Modernism: Technology, Culture and Politics in Weimar and the Third Reich* (Cambridge: Cambridge University Press, 1984). The philosopher David Cooper has rooted Herf's "Reactionary Modernism" in the historical development of German philosophy, in particular as the fusion of the idealist philosophy of Nietzsche with the materialist philosophy of Dilthey. According to Cooper, "[t]here is nothing of the 'paradox' that Herf purports to find in the combination of reactionism and modernism exhibited by Spengler, Jünger and others. They are, one might say, two sides of the same coin. The political reactionism of these writers was the product in part of a deeper reactionism, the invocation of notions like myth, destiny, will, which Enlightenment thought had presumed to replace by the explanatory categories familiar from nineteenth- and twentieth-century social theory." David E.Cooper 'Reactionary Modernism' in Anthony O'Hear (ed.), *German Philosophy Since Kant* (Cambridge: Cambridge University Press, 1999), p.304.

[62] The building still exists. It was converted by the architect Josef Paul Kleihues into his practice's office in the 1980s.

[63] Ibid. p.72. German text: "..forderte eine "neue deutsche Kunst", die aus der lebendigen nordischen Tradition, zu der er den Expressionismus der 20er Jahre und Architekten wie Mies van der Rohe und Heinrich Tessenow zählte, hervorgehen sollte." Petsch goes on to distance Tessenow's personal stance, which abhored the Nazis, from his feting by Nazi architects and students who wished to establish a Nordic architecture: "Auch wenn die konservative Baukunst die Architekturszene bestimmte, so gab es durchaus Vertreter der konservativen Architektur, die als Gegner oder Kritiker des Nationalsozialismus anzusprechen sind, wie es wohl für Heinrich Tessenow zutrifft. Ibid. p.182.

[64] Robert Taylor, *The Word in Stone: The Role of Architecture in the National Socialist Ideology* (Berkeley, Los Angeles and London: University of California Press, 1974), p.116. Taylor's footnote here reads: "Rittich, *Architektur und Bauplastik*, p.127. According to Speer, Tessenow stood close to him in his thinking: "However, after 1933 he severed ties with me, since he could not approve of the new tack my interests were taking." (Correspondence, November 27, 1967.) Tessenow was approvingly quoted by the Nazi sympathizer, Böckler, in his *Landschaftsgemäss Bauen* p.43 (on the lack of harmony in German creative life). Although Nazi students flocked to his seminars in Berlin, he remained critical of the party. (Speer, *Erinnerungen*, p.31: *Inside*, p.14.)

[65] Helmut Weihsmann, *Bauen unterm Hakenkreuz: Architektur des Untergangs* (Vienna: Promedia, 1998), pp. 62–63. "Das als typisch deutsch apostrophierte Siedlerhaus sollte sich augenfällig von den Siedlungshäusern der Weimarer Republik unterscheiden. Statt des verhaßten Flachdachs, das als Indiz für heimatloses Bauen galt, kam das steile Sattel- oder Walmdach in Ziegeldeckung. Geschoßbauten wichen dem ebenerdigen Siedler-, Einfamilien- oder Doppelhaus. Passend zum jeweiligen Kulturraum und zur Landschaft sollten regionale Architektur- und Stilmerkmale Verwendung finden. Vorbilder hierzu gab es seit der Jahrhundertwende in der Gartenstadt- und Heimatschutz-Bewegung." Ibid. p.62.

[66] Ibid., p.191, citing Albert Speer, *Erinnerungen* (Berlin/Frankfurt a. M., 1969), p.40. German text: "Glauben Sie, daß Sie da etwas geschaffen haben? Es macht Eindruck, das ist alles." According to his biographer, Gitta Sereny, Speer was able to console

himself at this snub from his revered teacher with the thought that Tessenow "didn't understand the country's new spirit". Sereny, *Speer*, p. 100. Later, when shown Speer's plans for the new Chancellery in Berlin, Tessenow's laconic response to him was "[p]erhaps you should have taken a little more time." Ibid. p.158.

[67] Hartmut Frank (ed.), *Faschistische Architekturen: Planen und Bauen in Europa 1930 bis 1945* (Hamburg: Christians, 1985), p.12. German text: "Wenig anders [als dem 'Neuen Bauen'] erging es den eher traditionalistischen, wie das Neue Bauen der Reformkultur zu Anfang dieses Jahrhunderts entsprossenen Richtungen der deutschen Architektur. Weder die spartanische Baukunst aus der Berliner Schule Heinrich Tessenows noch die idyllisch-regionalistische aus der Stuttgarter Paul Schmitthenners kamen für die Selbstdarstellung des "Dritten Reiches" in den Monumentalbauten des Staates und der Partei in Frage."

[68] Winfried Nerdinger, 'Versuchung und Dilemma der Avantgarde im Spiegel der Architekturwettbewerbe 1933-35', in Winfried Nerdinger, *Bauhaus-Moderne im National-sozialismus: Zwischen Anbiederung und Verfolgung* (Munich: Prestel, 1993), pp.76-77.

[69] See Romana Schneider and Wilfried Wang (eds)., *Moderne Architektur in Deutschland 1900 bis 2000: Macht und Monument* (Ostfildern-Ruit: Hatje, 1998).

[70] Dieter Bartetzko, *Illusionen in Stein: Stimmungsarchitektur im deutschen Faschismus. Ihre Vorgeschichte in Theater- und Film-Bauten* (Hamburg: Rowohlt, 1985).

[71] See de Michelis, *Heinrich Tessenow*, pp.319–321.

[72] See Posener, *Was Architektur sein kann*, 'Der deutsche Umbruch', pp.217-228.

[73] See Barbara Miller Lane, 'Die Moderne und die Politik in Deutschland zwischen 1919 und 1945', in Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland 1900 bis 1950: Expressionismus und Neue Sachlichkeit* (Stuttgart: Hatje, 1994). "In den späten zwanziger Jahren, als er [Hoetger] das Paula-Modersohn-Becker-Haus und das Haus Atlantis in der Böttcherstraße in Bremen für Ludwig Roselius baute, trat er für eine mystische "Blut-und-Boden" Ideologie ein – ein "arisches" Phantasiegebilde, das seine Vorstellungen mit denen von Richard Walter Darré verknüpfte. 1933 bot Hoetger seine Dienste den Nationalsozialisten an. Doch seine Werke, ebenso wie die von Nolde und Barlach, wurden niemals von den Nationalsozialisten akzeptiert, da sie zu unkonventionell, zu ahistorisch und zu "modern" waren." Ibid. pp.239–240.

[74] The "Schmitthenner Case" ("*Der Fall Schmitthenner*") would continue to resurrect for Tessenow the guilt by association which tainted him by dint of his former pupil, Albert Speer. See Gilbert Lupfer, *Architektur der fünfziger Jahre in Stuttgart* (Tübingen/ Stuttgart: Silberburg, 1997), p.33. Tessenow, together with Theodor Heuss, Paul Bonatz, Ernst Neufert and Ludwig Mies van der Rohe campaigned to support Schmitthenner from losing his chair at Stuttgart. They failed. Lupfer enlarges on the position held by Tessenow during the Weimar years: "Selbst das letzte Tabu der progressiven Geschichtsschreibung fällt: Der Begriff "Moderne" wird auch für Architekten reklamiert, die als Traditionalisten galten. Barbara Miller Lane brachte das auf eine griffige Formel: "Tatsächlich gab es zwei 'Revolutionen' in der deutschen Architektur: die umfassendere um 1900 initiierte die moderne Bewegung an sich, während nach 1918 eine besondere Variante von Gropius und seinen Anhängern geprägt wurde." Auf dieser Grundlage können auch Architekten wie Hermann

Muthesius, Theodor Fischer, Richard Riemerschmid, Heinrich Tessenow oder Fritz Schumacher als Protagonisten einer traditions- und regionalgebundenen, aber nicht reaktionären Architektur gelten." Ibid. p.71. Lupfer cites Barbara Miller Lane, *Architektur und Politik in Deutschland 1918–1945* (Braunschweig/Wiesbaden, 1986), p.23.

[75] Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth, Penguin, 1987), first published 1958, p.458.

[76] Rasmussen was the recipient of the *Tessenow-Medaille* in 1973. He made a significant contribution to Wangerin and Weiss, *Heinrich Tessenow*, (1976), in the form of an essay given in full in Appendix D. It is characteristic of his admiration for Tessenow. See Hartmut Frank (intr.), *Bauen im Geiste Heinrich Tessenows: Für eine Baukultur der Einfachheit. Die Preisträger der Heinrich-Tessenow-Medaille 1963-2001* (Hamburg: Heinrich-Tessenow-Gesellschaft and Heinrich-Tessenow-Stiftung, 2002). The book formed the catalogue accompanying an exhibition of the work of the Tessenow Prize-winners held at the *Rathaus* Hannover in December 2002.

[77] There is curiously no trace of *Nordisk Arkitektur*, in any edition, in the catalogues of the British Library or RIBA Library, London.

[78] Nils-Ole Lund, *Nordisk Arkitektur* (Arkitektens Forlag, 1991), p.49; Wenche Findal (ed.), *Nordisk Funksjonalisme: Det Internasjonale og Det Nasjonale* (Oslo: Ad Notam Gyldendal, 1995), p.27; Simo Paavlainen (ed.), *Nordic Classicism: 1910-1930* (Helsinki: Museum of Finnish Architecture, 1982), exh. cat., essay by Kenneth Frampton 'The Classical Tradition and the European Avant-Garde: Notes on France, Germany and Scandinavia 1912-37' especially section 6. Heinrich Tessenow: Craftsmanship and the Provincial City. "The major inconsistency of Tessenow's career resides in the fact that for all his advocacy of the provincial city, he never once projected the potential order of its form. Instead he restricted himself to projecting one "garden city" colony after another, particularly after the rise of the Nazi Party in 1933, when his anti--gardism and his classico-vernacular approach afforded a convenient style in which to render the *Blut und Boden* ideology of the third Reich." Ibid. p.168.

[79] See Appendix C: Eulogy on Tessenow's death: Rudolf Pfister in *Baumeister* December 1950.

[80] Christoph Hackelsberger, *Die aufgeschobene Moderne: Ein Versuch zur Einordnung der Architektur der Fünfziger Jahre* (Munich/Berlin: Deutscher Kunstverlag, 1985), p. 47. German text: "Da ist auf der einen Seite weniges russisch, auf der anderen weniges international, sondern vieles von dümmlicher Arglosigkeit und im besten Fall wie abermals verdünnter TESSENOW, angepaßte Amtsarchitektur, zwecks protestfreien Gefallens abgemagert." In the fifties the Berlin writer Walther Kiaulehn would look back with some nostalgia at the work of Tessenow, in particular at what remained of his remodelling of Schinkel's *Neue Wache*, and the attempts of the East German authorities to 'improve' it. "Heinrich Tessenow hat sie in der Weimarer Zeit zum Reichsehrenmal umgebaut. Dieser feine Castrum hatte den richtigen Nerv für Schinkel. Er baute das alte Castrum zu seiner neuen Bestimmung aus, indem er den Hof hinter den Säulen öffnete, überdachte und mit einem offenen Oberlicht versah. Dieses Licht traf auf einen Sockel, auf dem ein goldener Eichenkranz lag. Rechts und links stellte er zwei große Kerzenständer auf. Das war alles. Es war das schönste Ehrenmal Deutschlands. Wie in Wind und Regen die Kerzen im Dunkel flackerten und wie das wenige Himmelslicht bei Tag und Nacht den goldnen Kranz von seinem Postament emporhob und zum Schweben brachte, ist in

seiner spröden Schönheit unvergeßlich." Walther Kiaulehn, *Berlin: Schicksal einer Weltstadt* (Munich: Beck, 1958), p.78.

[81] Hans Bernouilli (1876-1959). Swiss architect and town planner. See Hans Bernouilli, *Die Stadt und ihr Boden* (Basel: Birkhäuser, 1991).

[82] Peter Meyer, *Neue Zürcher Zeitung* 27.5.1962 cited in Winfried Nerdinger, *Theodor Fischer: Architekt und Städtebauer 1862–1938* (Berlin: Ernst & Sohn, 1988), p.122. German text: "mit Heinrich Tessenow und Hans Bernouilli [galt] als Bahnbrecher des gemeinnützigen Wohnungsbaus."

[83] Sebastian Müller, *Kunst und Industrie: Ideologie und Organisation des Funktionalismus in der Architektur* (Munich: Carl Hanser, 1974), p.74. German text:

[Tessenows] Wille, die Welt einer funktional und visuell angenehmen Ordnung zu unterwerfen, wobei der Ordnungscharakter an sich schon das Angenehme ist und das Angenehme nicht besonders definiert werden muß, liegt durchaus im Sinne und auf dem Niveau der Gedanken von Muthesius. Dieser Bauwille führte konsequent zu einer Tätigkeit, die außerordentliche formale Innovationen überflüssig macht und die Tradition anonymer Bautätigkeit in einer der Anonymität entsprechenden Simplizität fortsetzt.

[84] Ibid. p.74. German text: "Eine Monumentalisierung dieser Intention, wie Tessenow im Festspielhaus der Bildungsanstalt Jacques [sic] Dalcroce [sic] versucht, hat sich als sinnlos erwiesen."

[85] Giorgio Grassi, 'L'architettura come mestiere' in 'Osservazioni elementari sul costruire', Milan 1974. It was republished in Giorgio Grassi, *L'architettura come mestiere ed altri scritti* (Milan: Franco Angeli Editore, 1980). It was translated into English by Winston Burdett and Richard Burdett in Giorgio Grassi 'Architecture as Craft' in *9H* (1989), no 8.

[86] Ibid. p.34.

[87] Ibid. p.35.

[88] Ibid. p.39.

[89] Grassi cites an intriguing essay of Tessenow's, 'The Roof', which he wrote for an issue of *Das neue Frankfurt* in 1927: "... we possess a tested, age-old tradition in the construction of roofs which not only assures us of its validity but (and here I refer particularly to our experience with cupolas and towers) invites us to evaluate the roof as an architectural element: to the point that it would be absolutely unjustified for us to renounce completely, or even partly, to [sic] the pitched or sloping roof. The fact that we campaign in favour of the flat roof, that we seek to improve it, and in certain cases prefer it, so to speak, for its very character of negation, should seem a perfectly normal fact to every architect; but to think that the flat roof should within a short time win out would be absurdly to undervalue the pitched roof...". Cited in Grassi, *9H*, p.46 from Heinrich Tessenow 'Das Dach', *Das neue Frankfurt*, no 7, October/ December 1927, p.202.
What buildings was Tessenow building or designing at the time? Essentially flat-roofed ones such as the the *Landesschule* Klotzsche.

[90] Ibid. p.40.

[91] Tessenow, *Hausbau und dergleichen.*

[92] Grassi, *9H* (1989), no 8, p.42.

[93] Ibid. p.43.

[94] Ibid. p.44.

[95] Ibid. p.46.

[96] "Wenn wir im walde einen hügel finden, sechs schuh lang und drei schuh breit, mit der schaufel pyramidenförmig aufgerichtet, dann werden wir ernst und es sagt in uns: hier liegt jemand begraben. *Das ist architektur."* Adolf Loos *'Architektur'*, in Adolf Loos, *Trotzdem* (Innsbruck: Brenner, 1931), p.103.

[97] Ibid. p.47. The analogy of fashion with architecture is a typical Loosian ploy.

[98] See Fritz Neumeyer (intr.), *Oswald Mathias Ungers: Architektur 1951–1990* (Stuttgart: Deutsche Verlags-Anstalt, 1991), pp.108–117.

[99] Vittorio Magnago Lampugnani, *Architektur und Städtebau des 20. Jahrhunderts* (Stuttgart: Hatje, 1980), p.127. German text: "[e]in Außenseiter der traditionalistischen Architektur...Jeder Avantgardistische Experimentalismus, aber auch jede volkstümelnde Nostalgie war ihm fremd. Für ihn war die Tradition keine Bindung, mit welcher es zu brechen galt, und auch kein vergangenes Ideal, zu dem man zurückkehren mußte; sondern eine Geisteshaltung, die konsequent zu wahren war."

[100] Ibid. pp.128–129. German text: "Die Architektursprache ist klassizistisch inspiriert, aber ohne Pathos und nahezu ohne Zierat....Innen bestimmen Zweckmäßigkeit, Helligkeit, fein abgestimmte Proportionen und rigoros gestaltete Details den Raumeindruck. Denn Tessenow glaubte, ähnlich wie Mies van der Rohe, daß Entwerfen das Entwickeln und Verteilen weniger, immer wiederkehrender Elemente bedeutet: Auch er wählte die Sprache des Schweigens."

[101] Ibid. p.129. German text: " [Tessenow] ging vom Typus als architektonischer Urform und Grenzfall der Reduktion aus."

[102] The apolitical tendency in German Rationalism of the 1970s (mirrored by its British advocates) was in marked contrast to the political charge adhering to Italian Rationalism, where the writings of Grassi and Rossi sought historical continuity, and not mere stylistical change for its own (superficial) sake. Possibly German architects of the generation of '68 (the year of the student unrest in West Gemany) wished to 'forget' the recent schisms of this period and return to a period of 'classical' Schinkelesque calm and order. The art historian Dieter Bartetzko, in a well-formulated counter-attack against the German Rationalists' suppression of history, linked Post-Modernism with the state architecture of the Nazi years. They both share an interest in what he termed "*Stimmungsarchitektur*", which might be translated as atmospheric architecture, mood-setting and sentimental (it also has undertones of propagandising):

> Im Umfeld solch wiedererwachter Sensibilität für den Bedeutungsgehalt architektonischer Zeichen sollte es ein leichtes sein, den Mißbrauch zu entlarven, welchen die Baukunst im Dritten Reich mit Säule, Pfeiler und Kuppel trieb. Die Zeiten, als Ende der fünfziger Jahre Nikolaus Persner [sic], angeekelt von der braunen Vergangenheit, schrieb, über die NS-Architektur sei "jedes Wort zuviel", waren Mitte der siebziger Jahre endgültig vorbei. Die schleichende Rehabilitation

von NS-Kunst durch vordergründig dokumentarische Wiederverbreitung oder die gedankenlose Begeisterung, mit welcher im Ausland zum Beispiel Wiederaufführungen der Propagandafilme Leni Riefenstahls aufgenommen wurden, zeugten für die fortdauernde Anziehungskraft der während des Faschismus bevorzugten Motive und Gestaltungsweisen. Angesichts dieser sich erneuernden Faszination drohte die Unfähigkeit zu trauern in Leichtfertigkeit, in hilflosen Anti-faschismus umzuschlagen. (Dieter Bartetzko, *Illusionen in Stein: Stimmungsarchitektur im deutschen Faschismus. Ihre Vorgeschichte in Theater- und Film-Bauten* (Reinbek bei Hamburg: Rowohlt, 1985), p.33).

Bartetzko defines "Stimmungsarchitektur" as follows:

> Der heutige [Mitte der achtziger Jahre] Umgang mit historischen Formen aber ist nicht voraussetzungslos entstanden. Läßt man seine spielerisch-ironischen Formen einmal beiseite, so setzt er eine jahrzehntelange Tradition fort, deren zunehmend freier Umgang mit dem überlieferten Formenschatz rückblickend als eine – so paradox dies zunächst klingen mag – ausgefeilte Ikonographie des Vagen bezeichnet werden kann. Die dieser Ikonographie verpflichteten Bauten, welche die zuvor eindeutig definierten Baumotive zu Trägern von Atmosphärischem, zu Evokationen ahnungsvoller Andeutungen wandelten, werden hier als "Stimmungsarchitekturen" bezeichnet. (Ibid. p.30.)

His argument with contemporary post-modern architects is with their use of historical forms for their vague associations, rather than for their strict iconographic meanings. In this he detects a visual illiteracy in society at large, where client, architect, and passer-by are all complicit in a 'dumbing down' of design vocabulary. Thus he maintains that there is an equivalence of sorts between the associative architecture of 1980s' Post-Modernism, and that of 1930s and '40s Nazi buildings. As he wrote, "Die Stimmungsarchitektur im deutschen Faschismus also ist gleichsam die Schattenseite der heute gebräuchlichen. Ihr erleichterte die Ikonographie des Vagen den manipulierenden Einsatz von Baukunst." Ibid. p.32.

[103] Christian F.Otto, 'Modern Environment and Historical Continuity: The Heimatschutz Discourse in Germany', *Art Journal* (1983), pp.148–157. I am indebted to this reference in Simone Oelker, *Otto Haesler: Eine Architektenkarriere in der Weimarer Republik* (Hamburg: Dölling und Galitz, 2002), p.22.

[104] See Klaus-Jürgen Bauer, *Minima Aesthetica: Banalität als subversive Strategie der Architektur* (Weimar: Verso, 1997). There is only one reference to Tessenow, in which Bauer cites his architecture as a leading example of "sensible buildings of boring design" [vernünftige Gebäude mit langweiligem Design], to quote Philip Johnson and Henry-Russell Hitchcock in their 1932 book and exhibition catalogue *The International Style*. As examples of such work Bauer gives "Heinrich Tessenow mit seiner Ästhetik der Sparsamkeit und Reduzierung". Ibid.p.68.

[105] K.Michael Hays, *Modernism and the post-humanist subject: the architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, Mass: MIT, 1992), p.11. Later in the book Hays refers to Hilberseimer's debt to Tessenow: "As early as 1919, in one of the few preserved examples of his early work, Hilberseimer had organized his ideas for a Kleinstadt in a delicate but austere drawing in one-point perspective. In technique it followed Heinrich Tessenow's drawing style used for representing his Heimatstil rural buildings, and Friedrich Ostendorf's theoretical insistence on reduced, symmetrical building forms determined by functional program and the spatial implications of concomitant streets, plazas, and gardens. Ibid. p.252. See ibid. pp.4-5

for a discussion of late humanist works of architecture: Wagner's *Postsparkassenamt*, Garnier's Opera, say, compared with post-humanist works.

[106] The special issue of the now defunct *9H* journal did much to reawaken interest in Tessenow in the Engish-speaking world.

[107] K. Michael Hays, 'Tessenow's Architecture as National Allegory: Critique of Capitalism or Protofascism?', in *Assemblage 8*: February 1989 MIT (essay also published in 9H (1989), n0 8, pp.105–123: p.110.

[108] Marco de Michelis has defended his position vis-à-vis Tessenow from what he perceives to be an attack from Hays. See de Michelis, *Heinrich Tessenow*, p.124 (note 38).

[109] Ibid. pp.111-112.

[110] Hartmut Frank (ed.), *Faschistische Architekturen: Planen und Bauen in Europa 1930 bis 1945* (Hamburg: Christians, 1985), p.19. German text: "Untersucht man heute in Kenntnis der Architekturentwicklung der fünfziger und sechziger Jahre die bisher als 'Blut und Boden Architektur' abgetane Heimatschutzarchitektur, insbesondere die der Stuttgarter Schule, so offenbart sich ihr grundsätzlich zeitgemäßer, um nicht zu sagen 'moderner' Charakter. Es wäre gerechter, statt diese Architektur als 'traditionalistisch' zu etikettieren, sie als 'traditionalistische Moderne' neben das 'Neue Bauen' zu stellen und ihren Werdegang in diesem Jahrhundert gerade unter dem Gesichtspunkt ihrer Zeitgemäßheit und nicht länger unter dem Vorurteil ihrer Rückschrittlichkeit zu untersuchen."

[111] Michael Hays, 'Tessenow's Architecture as national allegory: critique of capitalism or protofascism?', in *9H*, p.54.

[112] Ibid. p.65.

[113] Ibid. p.65.

[114] Ibid. p.64.

[115] Ibid. p.62.

[116] Hilde Heynen, *Architecture and Modernity: a critique* (Cambridge, Mass: MIT, 1999), p.108.

[117] Hays, 'Tessenow's Architecture as national allegory', pp.121-122. Hays's text continues:

> [...] Tessenow's total organisation of architecture according to the idealization of the *Kleinstadt* set against the products of an inhumanly systematized society, ironically becomes itself a kind of straightjacket rather than a liberating convention capable of evolving new forms. It imitates fixed, seemingly obligatory patterns of imagery and belief, providing certain ways of seeing and thinking and rendering others aberrant or extreme. It encourages the *illusion* of a life-style while disguising the disappearance of subjectivity and interiority in the old sense, all with forms that would later become ciphers of an actual, enforced regression.

Architecture as a "liberating convention capable of evolving new forms"? Hays's predispositions towards the formal values of modernism are clearly expressed.

[118] Stanford Anderson, 'The Legacy of German Neoclaccicism and Biedermeier: Behrens, Tessenow, Loos, and Mies', pp.63–87, *Assemblage*, no 15 (August, 1991), p.73.

[119] Richard Weston, *Materials, Form and Architecture* (London: Lawrence King, 2003), p.193.

[120] See note no 122 below.

[121] Margit Ulama, *Architektur als Antinomie: Aktuelle Tendenzen und Positionen* (Vienna/ Bolzano: Folio, 2002), p.97. German text: " Dieser Bau provoziert die grundsätzliche Frage, ob anspruchsvolle Architektur heute auf solche direkte Weise mit dem gängigen Bild des Hauses spielen könne."

[122] André Bideau, 'Deep surfaces', *Werk, Bauen + Wohnen*, no 3, 2001, p.10.

[123] Ullrich Schwarz cites Sabine Kraft in her editorial in *Arch+*, no 142, 1998, p.22: "Nach der 'Architektur des Ereignisses' nun also eine 'Architektur für die Sinne?" He goes on to posit a curious reversal of roles, whereby the phenomenologically significant comes to reside in the skin of a building, becoming, in effect, its *depth.*

[124] Weston, *Materials, Form and Architecture*, p.160 quoting Friedrich Nietzsche *Die Fröhliche Wissenschaft (The Gay Science)* 1886. Preface to 2nd edition.

[125] *Werk, Bauen + Wohnen*, no 5, 1999, pp.22–32. German text: "Die materielle Erscheinungsebene wird zu einem Widerstanspotential, zur Verteidigung der Wirklichkeit angesichts ihrer drohenden medialen Auflösung. Die Oberfläche wird in diesem Sinne zur Tiefe, die Reaktivierung der Sinne zur Rettung der Phänomene....Dieser Architektur [Zumthor, Herzog & de Meuron, Diener & Diener, *et al.*] geht es um Sichtbarkeit, nicht um Lesbarkeit."
Ullrich Schwarz "Jenseits der Zeichen?" Schwarz goes on to quote Peter Zumthor, "Es gibt keine Idee, ausser in den Dingen." (Peter Zumthor, *Architektur Denken* (Baden, CH: Lars Müller, 1998), p.9.

[126] German text: 'Deutsche Arbeiter! Die SPD will Euch Eure Villen im Tessin wegnehmen.'

[127] Adrian Forty, *Words and Buildings* (London: Thames and Hudson, 2000), p.149.

[128] Richard Weston, similarly, while admiring many of the achievements of the Swiss 'Materialists', at the same time castigates them for ignoring other architectural concerns: "The 'Swiss Boxes', with their emphasis on the direct optical/haptic experience of materials, were a valuable cleansing after the semantic and formal excesses of the 1980s, but their appeal too often depended on downplaying – if not neglecting – some of the broader social and contextual challenges of architecture." Weston, *Materials, Form and Architecture*, p.208.

[129] Rodolfo Machado/Rodophe el-Khoury (eds), *Monolithic Architecture* (Munich: Prestel, 1995).

[130] Ibid. p.44. Mertins credits the Viennese historian Emil Kaufmann with making the connection between Le Corbusier's pleading the benefits of pure form with "the neo-Kantian discourse of autonomy" in his book *Von Ledoux bis Le Corbusier* (1933).

[131] See Chapter Two '*Geist und Materie*: Spirit as Space'.

[132] The scheme referred to is for two terraces of houses opposite each other, one of twelve family houses *Am Schänkenberg* 4 – 26, and the other for ten houses, numbers 1–15.

[133] De Michelis, *Heinrich Tessenow*, p.217 citing Erich Haenel, *Die Kunst* (1910). German text: "Tessenow hat im Aufbau den äußersten Grad der Einfachheit erreicht."

[134] Ibid. p.217. German text: "Aber der puritanische Charakter dieser Häuser, die 'am Schänkenberg' liegen, findet nicht ganz der Beifall der Bewerber. Diese glauben hier einen gewissen Armeleute-Geruch zu spüren und ziehen die sich freundlicher gebenden, aus guten Augen in die Welt blickenden Reihenhäuser Riemerschmids den kahlen Schöpfungen Tessenows vor." Mies van der Rohe's famous motto "less is more" was literally true in respect of Tessenow's houses Am Schänkenberg. As De Michelis reports (citing the memoir of Wetzel Holek, a worker at the *Dresdner Werkstätte* in the years before the First World War), "Trotz der äußersten konstruktiven Einfachheit, der geringen Wohnfläche von lediglich 46 m² und nicht zuletzt der Unmöglichkeit, ein Zimmer unterzuvermieten, sind diese Häuser, die billigsten in der ganzen Gartenstadt, als Stadtwohnungen nur sehr eingeschränkt tauglich. Der Mieterpreis, der ursprünglich mit 200 Mark veranschlagt worden war und im Moment der Bezugsfertigkeit bei 250 Mark lag, machte die Häuser für die Arbeiter der Deutschen Werkstätten in Hellerau mit einem Stundenlohn von allenfalls 40 Pfennig nahezu unerschwinglich." Ibid. pp.216–217.

[135] André Bideau, 'Deep surfaces', in *Werk, Bauen + Wohnen*, no 3, 2001, p.10.

[136] Rolf Sachsse, *Bild und Bau: Zur Nutzung technischer Medien beim Entwerfen von Architektur* (Braunschweig/Wiesbaden: Vieweg, 1997).

[137] The phrase "biographical entanglements" [biographische Verflechtungen] is a reference to the title of Werner Durth's study of German architects in the 20th century: *Deutsche Architekten: Biographische Verflechtungen 1900–1970* (Braunschweig: Vieweg, 1986).

[138] Ibid. p.107. German text: "Aus heutiger Sicht scheint es möglich, einen Antagonismus zwischen zweier Lehrer für die einander zunächst ausschließenden Extreme moderner und faschistischer Architektur in Deutschland zu konstruieren – nämlich den zwischen Peter Behrens (1868-1940) und Heinrich Tessenow (1876–1950), mit einem dritten Exponenten, dem Stuttgarter Fischer-Nachfolger Paul Bonatz (1877–1956). Aus diesen drei Büros oder Klassen lassen sich jene biographischen Verflechtungen entwickeln, die die deutsche Architektur des 20. Jahrhunderts so nachhaltig im Guten wie im Bösen beeinflußt haben."

[139] Werner Kleinerüschkamp (ed.), *Heinrich Tessenow: 1876–1950* (Frankfurt/ Main: Deutsches-Architektur-Museum, 1991), exh. cat., English translation by Ishbel Flett.

[140] Ibid. Introduction by Vittorio Magnago Lampugnani, p.7.

[141] Vittorio Magnago Lampugnani and Romana Schneider (eds), *Moderne Architektur in Deutschland: 1900 bis 1950 Reform und Tradition* (Stuttgart: Hatje 1992), exh. cat.

[142] Martin Steinmann, ' Hans Schmidt: Zur Frage des Sozialistischen Realismus,' *Das Werk*, no 10, 1972; Martin Steinmann, '...ein Mensch, der das Einfache und Normale wollte: Zu Franz Scheibler und seinen Bauten 1924-45,' *architheses* no, 1983; Martin

Steinmann, 'Die Tradition der Sachlichkeit und die Sachlichkeit der Tradition: Zur Architektur von Kay Fisker,' *architheses*, no 4, 1985. All of these essays are reprinted in Martin Steinmann, *Forme forte: Ecrits/Schriften 1972-2002* (Basel: Birkhäuser, 2003).

[143] Ibid. p.46, citing Tessenow, *Hausbau und dergleichen*, p.21. German text:

> [Die Verwendung von vertrauten Typen] stellt eine Haltung zur Architektur dar, die es immer gegeben hat, die aber im 20. Jahrhundert als angemessene Haltung ausgeschlossen wird, als Folge des Neuen Bauens, das unser Denken noch immer mit Beschlag belegt: noch immer suchen wir in einem Bau das Neue. Sie stellt eine Haltung dar, die beispielsweise nicht neue Typen erfindet, sondern alte Typen so lange den Bedürfnissen anpasst, bis sie - wie im Fall der Wohnungen an der Nordstrasse [terraced housing by Scheibler, Zurich 1931] - zu etwas neuem werden.
>
> Die Architektur, die aus dieser Haltung heraus entsteht, macht es notwendig, auf die feinen Unterschiede zu achten. Tessenow gibt ein schönes Bild dafür: "ein Schäfer, der in seiner Herde grauer Schafe diese (..) zu erkennen sucht, muss auf die feinen Unterschiede achten, die im Aussehen der einzelnen Schafe liegen", schreibt er und setzt hinzu: "und er kann das".

EPILOGUE

> There is no such thing as modernity in general. There are only national societies, each of which becomes modern in its own fashion.[1]

With these words Jeffrey Herf began his study of 'Reactionary Modernism'. Their phrasing recalls Leo Tolstoy's opening lines of *Anna Karenina*, and its theme of rapid social change with its burgeoning materialism (represented by the Karenins) is contrasted with personal and communal spiritual values (represented by Levin).[2] The German crisis of the twentieth century, of a wayward spirituality in the grip of rampant technical materialism, is the theme of Herf's book, and might be said to represent the polarities whose balance Tessenow tried to strike in his work. I have explored these polarities (in Chapters Three and Four) in terms of the abstractions of light and the grid as opposed to the material facts of fabric and expressions of the everyday; while in the last chapter I have attempted to locate Tessenow, by looking at him both as he was received in his time, and by viewing him retrospectively through the eyes of certain interested groups. In doing so, my immediate objective was to reclaim Tessenow from his relative neglect;[3] the wider aim seeks to reclaim the very idea of history from some of the negative attitudes of post-humanism.

The architectural historian Peter Blundell Jones has been active in rediscovering the role played by hitherto 'secondary' architects, particularly German ones such as Hans Scharoun and Hugo Häring, in the developing pluralist history of architectural modernism.[4] He proposes a return, perhaps, to an inclusive history of architecture as an alternative to an overly 'philosophical' post-structuralist reading of architecture. He writes, "[w]e move in our daily lives neither in a realm of pure utility (which would be difficult if not impossible to isolate) nor in a realm of pure signs and symbols. If a building is less than a text because the conventions of meaning are less securely established, it is at the same time much more than a text because we inhabit it, and because it gains its meaning in relation to experience of use."[5] His railing against the tendency for buildings to become globally ubiquitous commodities, the tendency expressed most forcefully by the sociologist Marc Augé, echoes Tessenow's own voice in the wilderness, particularly during the Nazi years, when he berated his pupil Speer for indulging in purely scenographic effects.[6]

What might be understood by an inclusive history of architecture, one which exists alongside the many bowdlerised interpretations of post-structuralism? Such a history might take as its guiding light the philosophy of pragmatism as practiced by one of its most prominent proponents, the philosopher Richard Rorty, for whom "[i]nquiry that does not achieve coordination of behaviour is not inquiry but simply wordplay."[7] The kind of behaviour that Rorty would like coordinated is concerted action to make the world a better place: "All areas of culture are parts of the same endeavour to make life better. There is no deep split between theory and practice, because on a pragmatist view all so-called 'theory' that is not wordplay is always already practice."[8] My intention is to reassert humanism, the kind of humanism expressed by Tessenow through his writings, projects and executed buildings, as something not necessarily blind, reactionary or implicated with the powers-that-be, but as something still appropriate and necessary for an understanding and production of architecture. This approach leaves post-humanism as one of several means of gaining a purchase on the various crises of the twentieth century, on the disjunctions of modernity.[9] The important point at issue here is the ambiguity of architecture which functions both as reflective, interpretative tool and as instrumental agent in the world. In other words, I argue that architecture is not *merely* a cognitive endeavour, and that attention to experience and values considered by some to be outworn is still valid. This ambiguity as to the role of architecture, its reflective, critical and cognitive aspect, as opposed to its instrumental, executive nature, concerned intimately with building, is what underlay the difficulties of transposing post-structuralist *theory* into deconstructionist *practice* in the 1980s and 1990s.[10]

There can be no doubt that Tessenow united 'theory' and 'practice' in a manner whose sole objective was the improvement of the designed environment, improvement, that is, in both material and spiritual terms. His self-effacing reticence, his desire for anonymity, was of course rooted in craftsmanship; and yet practical architect that he was, he recognised that modern building production was an essentially mechanistic process. In practicing both the art and craft of architecture he achieved his own personal balance between the exigencies of mechanical production and the unalloyed joy of painstaking freehand drawings. Julius Posener, in his lecture '*Handwerk und Maschine*' (1981), brackets Tessenow in that history of modernism which deals with the history of the

criticism of progress, as opposed to the history of progress.[11] It is a history which he believes has found contemporary currency, particularly in the scepticism attached to "the question as to the meaning of work, the meaning of everything which we do: and the fear we have of what has been done."[12] An (undated) essay of Posener's, *'Konstruktion und Form'*, deals with the idea of technical form that exercised Tessenow equally. He begins with some questions: "What does architecture concern itself with? Certainly with form, with symbolic form. Are technical forms symbolic, can they ever be so? Are art forms perishable?"[13] According to Tessenow,

> [t]echnology always searches for the smallest effort for the largest power. Form is only affirmed as something unavoidable, otherwise technology decries all form. For instance, the most favourable form would certainly be a sphere or at most a cube, not too large and with wires from there going everywhere – the simplest and cheapest thin wires, and above all a small button, and next to this a small white sign saying "Please Press"; that would be all. Technical work is fundamentally hostile to form, irrespective of the fact that we also have a sensual interest in all work, which makes us strive for beauty in everything even in the production of a machine, irrespective of the fact that the machine, or technology, has nothing to do with beauty.[14]

I have already remarked on Tessenow's reticence to refer to other architects; but this passage alone would put him alongside Auguste Perret who maintained that "[a]rchitecture is that which makes beautiful ruins"[15]

Sigfried Giedion himself was worried that the very success of the modernist project called for some measure of corrective action: "I have a feeling that there are many cases in life where the organization of things is experienced as too brutal. The architect's task is to make our life patterns more sympathetic." Giedion is explaining here his inclusion of Aalto's 'irrational' architecture into his canon of modernism. Robin Evans's interpretation of this passage is that "[g]ood architecture therefore alleviates; it removes impositions and smooths out the unpleasant roughness of sensation. If this orientation were pursued to its limit, building would disappear not by realizing the dream of dematerialization that enthralled so many other modern architects, but by receding into the background of perception, enabling human activity by following its varied courses without ever getting in the way."[16]

Evans points out that Scharoun's recognition of the dehumanising aspect of 'rational' architecture led to his adopting as a strategy the fragmentaion of the

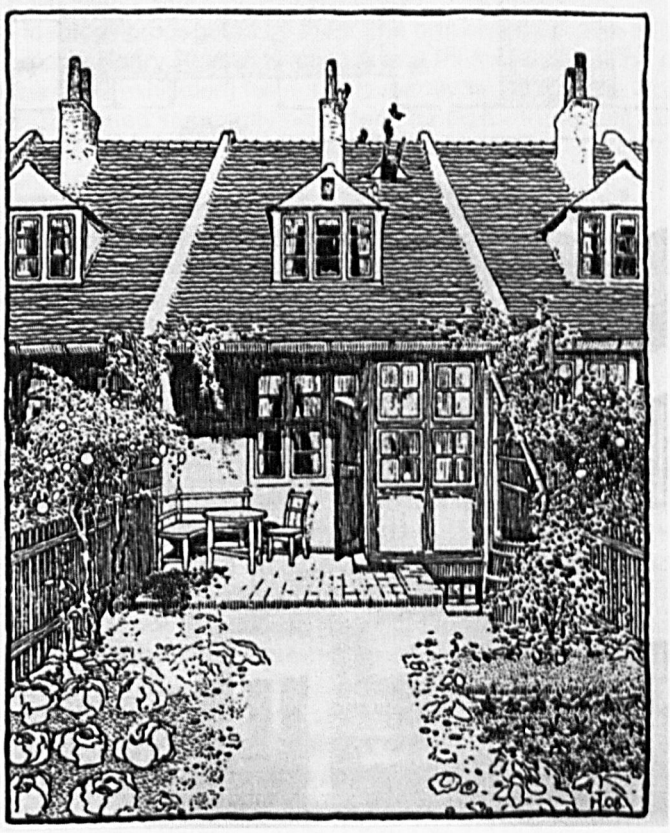
architectural object.[17] With contemporary architects, however, fragmentation is part and parcel of the post-humanist project.[18] Tessenow's whole architectural approach, on the other hand, was to mediate between contrasting polarities in order to reinstate a whole. (It is the mythic and potentially reactionary picture of this putative whole that a post-humanist such as Hays takes such exception to.) As Stanford Anderson has commented, "Tessenow was obsessed with the decisive role that middle elements must play in turning polar extremes to mutual benefit. He used a metaphor of fire and water, one extinguishing the other unless mediated by a vessel. Fire and water are dramatic, the pot ordinary. Fire and water are available, the pot requires human artifice. It is to the pot, then, that we must direct our energies, for it is what makes valuable the opposed forces of fire and water."[19]

If we accept Richard Rorty's scepticism with regard to Idealist philosophy in favour of one of pragmatism, that is, as the best means to his desired democratic ends, then the frequently nihilistic undertones of the post-structuralism advocated by many of the West's cultural theorists may be overcome. Rorty's pragmatism does indeed have a universal reach, and his concern for the polity of the great majority of the human race 'beyond the Western Gate' mirrors Robin Evans's stance.[20] I would term this a neo-humanistic one, a stance bound to have the utmost impact on architectural theory and its relation with the avant-garde. Evans is quite unequivocal about the social conscience he expects architecture to profess:

> Protagonists and antagonists agree that our age is one of enormous dislocation and uncertainty. How can they tell? Because everything signifies that it is so, everything that is within the chain of signification, from the news on television to the history of twentieth-century philosophy; but the experiences of everyday life do not always confirm it. From the stand-point of everyday existence, as led by many of us in the privileged haven whence all these ideas of dislocation come, the world is much safer, much more consistent, and far more certain than it has ever been. The truly haunting Other is not what lies outside the text but what lies outside the picturesque garden of the Western World. Beyond are the vast majority for whom dislocation needs no representation, and whose visions of chaos are more likely vengeful and in preparation of a new order.[21]

Tessenow's concerns were universal ones; nonetheless he understood the contours of his constricted sphere of influence. His humanism lay in his operating

within the limited confines of his own culture, and by improving conditions within "the picturesque garden of the Western World" he hoped to effect changes by practical example on the wider world. Heinrich Tessenow understood, like Voltaire's Pangloss (but without Voltaire's cynicism), that in order to best serve humanity he had first to cultivate his own garden before tending those further afield: "*Tout cela est très bien dit, mais il faut cultiver son jardin*".[22]



NOTES TO EPILOGUE

[1] Herf, *Reactionary Modernism*, p.1.

[2] Leo Tolstoy, *Anna Karenin*, trans. Rosemary Edmonds, (Harmondsworth: Penguin, 1954). "All happy families are alike but an unhappy family is unhappy after its own fashion."

[3] One looks on the shelves of the RIBA library, for instance, and there are the two standard studies by De Michelis (in Italian) and Wangerin/ Weiss (in German), and one or two other minor texts, none of them in English. The situation is worse downstairs in the RIBA bookshop, the major architectural retailer in the UK, where one searches in vain for anything on Tessenow.

[4] See Peter Blundell Jones, *Modern Architecture Through Case Studies* (Oxford: Architectural Press, 2002), p.5:

> Although the ideology propagated by them [the proponents of The International Style, most notably Henry Russell Hitchcock and Philip Johnson, the organisers of the eponymous 1932 exhibition] fell out of favour in the 1970s, the interpretation they presented has remained stubbornly persistent, for Post-modernists did them the honour of rejecting 'The Modernist Project' precisely on their terms, taking their story largely as read. And although progress has been made towards a more balanced view by rehabilitating some forgotten figures, architects such as Mies and Le Corbusier have retained the dominant roles first ascribed to them, even growing in mythical status through the weight of attention from historians. In comparison talented and once influential architects like Bruno Taut and Erich Mendelsohn, to cite but two examples, have been largely left out in the cold.

[5] Ibid. p.242.

[6] See Marc Augé, *Non-Lieux: Introduction à une Anthropologie de la Surmodernité* (Paris: Editions du Seuil, 1992). Blundell Jones writes: "As the technical side of building and servicing has become more complicated, there has also been a tendency to separate the surface layer that is seen by the eye from the underlying substance, destroying the kind of integrity prized by most of the architects in this book [Blundell Jones, *Case Studies*]. Implicit in much of the practice of Interior Design, this tendency has moved increasingly also into the realm of façades – Exterior Design – leaving the real substance of the building marooned somewhere between as a mere frame and servicing system, an anonymous and purely technical provision [...] As the visible parts of buildings increasingly adopt the character of a stage set, they can of course quickly be changed for the next scene – the coming of the next business or the next fashion. Whether it be a shop, a restaurant, or the latest fashionable apartment, the fantasy of 'the look' has become the dominant force in the visual media, with ever more spectacular trade in virtual realities of every kind." Blundell Jones, *Case Studies*, p.244.

[7] Richard Rorty, *Philosophy and Social Hope* (Harmondsworth: Penguin, 1999), p.xxv.

[8] Ibid. p.xxv.

[9] 'Post-humanism' is, of course, K. Michael Hays's term. For the theme of disjunctions in architectural modernity, see Bernard Tschumi, *Architecture and Disjunction* (Cambridge, Mass: MIT, 1994).

[10] The most succint summary of this dichotomy is to be found in Michael Benedikt, *Deconstructing the Kimbell* (New York: Sites Books, 1992).

[11] Hitherto unpublished lecture of Posener's held at the Lions Club Berlin 7 October 1981. Published in Julius Posener, intr. Daniel Libeskind, *Was Architektur sein kann: neuere Aufsätze* (Basel: Birkhäuser, 1995). Libeskind's introduction shows an untypical humanism in his words: "Wenn es eine Lehre gibt, die wir aus Poseners Werk ziehen können, dann jene, daß Architektur nichts anderes ist als der Kampf des Menschen für Aufrichtigkeit, für Demokratie, für das Schöne." Ibid. p.8. That beauty should once again return to become a qualifier for architecture is a surprising Vitruvian turn, especially on Libeskind's part.

[12] Ibid. p.53. German text: "die Frage nach dem Sinn der Arbeit, dem Sinn alles dessen, was wir tun: und daß man Angst hat vor dem, was getan wird."

[13] Ibid. p.55. German text: "Worum handelt es sich bei der Architektur? Doch wohl um Form, und zwar um symbolische Form. Sind die technischen Formen symbolisch, können sie es jemals sein? Sind Kunstformen vergänglich?"

[14] Quoted from Tessenow, *Hausbau und dergleichen*. Translated by Wilfried Wang and published in 'House-building and such Things', *9H* (1989), no 8.

[15] Cited in Peter Collins, *Concrete: The Vision of a New Architecture* (New York: Horizon, 1959), p.163. French text: "L'architecture c'est ce qui fait les belles ruines".

[16] Evans, *The Projective Cast*, pp.70 – 71.

[17] See Ibid. p.100.

[18] Ibid. p.100:

> Posthumanism is a condition extrapolated from a pregnant statement at the end of [p.387] Foucault's *The Order of Things* (1966), where he predicts that man, as a subject of human knowledge, will be erased "like a face drawn in sand at the edge of the sea.[Bernard] Tschumi says that posthumanist architecture uses the decentered subject as a conceptual instrument to attack traditional architectural shibboleths such as coherence and unity. [Peter] Eisenman says that posthumanist architecture is also postfunctionalist, and exhibits modern man's inability to grasp rationality or perfection. [Anthony] Vidler is disturbed by the posthumanist body he discerns in the work of Coop Himmelblau, [Daniel] Libeskind, and Tschumi, a morselated, fragmented body, "contorted, deliberately torn apart and mutilated almost beyond recognition."

Evans, *The Projective Cast*, pp.102–103, also cites Hans Sedlmeyer's *Verlust der Mitte* who, taking his cue from W.B.Yeats's line "Things fall apart; the centre cannot hold", refers to our [Western] civilisation's "trans-humanist" stage. (Hans Sedlmayer, *Art in Crisis: The Lost Centre* [London, 1957], p.239.).

[19] Stanford Anderson, 'The Legacy of German Neoclaccicism and Biedermeier: Behrens, Tessenow, Loos, and Mies', pp. 63–87 in *Assemblage* (August 1991), no 15, p.73. (based on Tessenow, *Das Land in der Mitte*, p.34).

[20] According to Rorty, "[w]e [pragnatists] hope to replace the reality – appearance distinction with the distinction between the more useful and the less useful." Rorty, *Philosophy and Social Hope*, p.xxii.

[21] Evans, *The Projective Cast*, p.104. Implicit in Evans's writing is his distrust of easy armchair philosophising; in this he might be said to favour history as a reflective discipline over theory. It is a point of view that has much in common with Richard Rorty's pragamatist philosophy.

[22] Voltaire, *Candide* (1759).

APPENDIX A

'Plauderei über das Holz als Baumaterial', Heinrich Tessenow, *Zimmermanns-Arbeiten: Entwürfe für Holzbauten* (Freiburg i.Br: Paul Waetzel, 1907), reprinted edition, "libri rari" (Hannover: Schäfer, 1994).

Wenn man heute bei dem Bauen für das Hausäußere Holz, besonders Holzsachwert, verwendet, so ist weit in den meisten Fällen der Hauptgrund für die Wahl des Holzes: "Es sieht malerisch, oder es sieht sonstwie aus." Nun wird allgemein zugegeben werden, daß ein Tiroler Bauernhaus oder ein Moselfachwerkbau mit sehr vielem Holzwerk sehr lustig aussieht; aber ebensogut wird zugegeben werden, daß eigentlich alle norddeutschen Bauernhäuser mit ebensovielem Holzwerk sehr ernt aussehen. Können wir aber dann diese ganz entgegengesetzten Wirkungen dieser verschiedenen Bauwerke auf die Verwendung des Holzes zurückführen? Haben diese ganz verschiedenen Wirkungen nicht vielmehr ihren Grund darin, daß in beiden Fällen ganz verschiedene Bauaufgaben gelöst sind? Diese Lösungen wurden von den alten Baumeistern gesucht erst mal ganz ohne weitgehende Rücksichtnahme auf die äußere Erscheinung des Hauses. Die einfache – sozusagen vernünftige – Erfüllung eines bestimmten Bauprogramms hat auch überall in gewissem Maße einen ganz bestimmten Ausdruck zur Folge, und der Baumeister mit seinem Können oder Nichtkönnen, mit seinem Fühlen oder Nichtfühlen stärkt oder schwächt diesen besonderen Baucharakter. Bei dem Tiroler Bauernhaus galt es, übertragende Galerien, weit überstehende Dächer zu bauen; das Haus in dem Moselstädtchen wurde "malerisch", weil es galt, mehrere Stockwerke aufeinander zu bauen und gegeneinander zu versetzen. Und der norddeutsche Bauer wollte einen großen einfach rechteckigen Grundriß umbauen und wollte in dem großen Hause zu ebener Erde nur wenige Wohnräume haben.

Der Charakter eines Bauwerks wird durch die Materialmassen, durch deren Unordnung bestimmt, und es gibt das gleiche Material bei verschiedener Verwendung, Unordnung, dem Bauwerk in dem einen Fall vielleicht ein vorwiegend malerisches, in dem andern Fall ein mehr ernstes Aussehen. Und also selbst das Malerisch – oder Streng – Bauen als Ziel angenommen, so können uns die Materialeigenheiten doch nur wenig helfen, dieses Ziel zu erreichen. Soweit das gleiche Material auf unsere Sinne immer gleich wirkt, denken wir an bestimmte Feinheiten, die nur in unserer Nähe zur Geltung kommen, und die darum für den Gesamtausdruck eines Bauwerks feine oder nur ganz geringe Bedeutung haben. Es wird jedem Künstler ganz natürlich sein, daß er die Materialeigenheiten auch als Ausdrucksmittel bei seinem Arbeiten benutzt, und darum werden ihm die verschiedenen Materialwirkungen auch verschiedenwertig sein; aber je mehr er von diesem Standpunkt aus die Materialien aussucht, um so mehr sucht er Ausdrucksmittel für seine Empfindungen, um so weniger sucht er im eigentlichen Sinne Baumaterialien. Allerdings, je weniger eine Aufgabe sogenannt rein praktischer Natur ist, um so weniger hat auch für die Lösung der Aufgabe unser praktischer Sinn Bedeutung, um so weniger brauchen wir die Materialien als Praktiker zu wählen, und wir kommen schließlich mit Recht dahin, daß wir das Material nur nach seinem Aussehen bewerten. Es hat darum die mehr oder weniger praktische Verwendung und Unordnung des Materials für den künstlerischen Wert einer Arbeit seine Bedeutung; dieser Wert der Arbeit bestimmt sich vielmehr nach dem Verhältnis, in welchem Material und Zweck der Arbeit zueinander stehen.

Aber unsere heutigen Bauaufgaben und hier besonders wieder die Aufgabe, die Hauptmaterialmassen zu bestimmen, sind so rein praktischer Natur, daß wir hier auch erst mal rein als Praktiker die Materialien zu wählen und zu bearbeiten haben.

Es ist darum unserm heutigen Bauen wenig damit gedient, wenn wir z.B. bemüht sind, das Holz bei unserm Bauen so zu benutzen, wie es die alten Baumeister benutzten; wir denken dabei nicht so sehr an das eigentliche Bauen, sondern es ist uns mehr um das Aussehen, um "die Wirkung" zu tun. Sollen uns aber die alten Baumeister Lehrmeister sein, so wollen wir erkennen, daß sie weit in erster Linie Praktiker waren, daß ihnen bei der Wahl ihrer Materialien deren Aussehen gar nichts bedeutete, daß es ihnen fast allein darum zu tun war, das Material nach bestem Können rein praktisch zu verwenden und zu bearbeiten, und wenn sie auch für unsere heutigen Begriffe z. B. oft denkbar unpraktische Dachstühle bauten, für ihren Holzreichtum, für Werkzeuge, ihrer Meinung nach, usw. waren das eben die am meisten praktischen Dachstühle. Je mehr wir die alten Baumeister als Lehrmeister ansehen und je mehr dann unsere Werke äußerlich den alten Meisterstücken ähnlich sind, um so mehr zeigen wir, daß wir diese alten Praktiker nicht verstanden haben.

Die Ausnutzungsmöglichkeiten des Holzes sind durch die Einführung der vielen Holzschneidermühlen und auch besonders infolge der ganz neuen Transportverhältnisse gegen früher ganz und gar andere geworden; dazu kommen die Einrichtungen der Feuerversicherungen usw., so daß für die Wahl des Holzes als Baumaterial heute vollkommen neue Gesichtspunkte gegen früher bestehen.

Bei der Verwertung des Holzes als Baumaterial kommt es darauf an, zu bestimmen, wie weit das Holz rein praktisch für unser Bauen Bedeutung hat, und wenn es dann im Vergleich z. B. mit Stein oder Eisen minderwertig ist, warum wollen wir dann nicht Stein oder Eisen nehmen?

Wo wäre z. B. unsere heutige Kunst des Eisenbrückenbaues, wenn die Ingenieure dabei geblieben wären: "Wir bauen die Brücke aus Holz, koste es, was es wolle, es sieht fein aus"?

Für die Ausführung unserer Bauten, wie immer für die Lösung praktischer Aufgaben, kommt es in erster Linie auf die Tüchtigkeit der Mittel an, nicht auf deren Schein. Der angenehme Schein einer Wahrheit hat hauptsächlich insofern Wert, als er uns die Wahrheit schneller als solche annehmen läßt. Wir sollten aber gegenüber dem sympathischen Schein, den das Holz als Baumaterial so oft für uns hat, auf der Hut sein, weil sich ja schließlich unser Geschmack mit uns selbst fortwährend ändert und wir Bauleute später leicht bedauern, daß unsere Geschmacksäußerung so kostspielig geworden ist.

APPENDIX B: *Methode Jaques-Dalcroze: Rhythmische Gymnastik*
In 'Musik und Plastik', *Ring* (Neuchâtel/Paris/Leipzig, 1906), part 1, vol.1, pp. 8-9, emphasis in original.

The work of [Jaques-] Dalcroze breaks completely the mould within which music pedagogues had hitherto operated. What, for instance, should a music pedagogue, used to experiencing the greater part of his education via [musical] notes i.e. visually, make of the 8 elementary ground-rules, with which Dalcroze introduces his rhythmical gymnastics? They are given here in their literal form in order to aid comprehension:

1. Each rhythm is movement.
2. Each movement is material.
3. Each movement requires space and time.
4. Space and time are connected by matter, which impel them on to eternal rhythm.
5. The movements of very small children are purely physical and unconscious.
6. It is bodily experience which forms consciousness.
7. The coordination of physical means creates the clarity of intellectual perception.
8. Bringing order to bear on movement means educating the spirit in rhythm. In activating these elementary ground-rules I feel obliged to formulate the following conclusions:
   - I.) Ordering and **coordinating** movements is equivalent to educating the spirit in rhythm.
   - II.) **Coordinating muscular** power and **elegance**, where proportions and time are regulated, is known as the **sense for musical rhythm**; it concerns the feeling for the development of musical symmetry. In particular, complementing the muscles of the breathing tract implies the unrestricted freedom of the vocal chords, as well as the tone of mastered degrees of sound-volume; i.e. the sense of phrasing is the result of an intelligent mechanical power. ...
   - III.) Complementing the power and litheness of muscles whereby order is brought to the proportions of **space** (in the sense of combined movements and silent positions) is known as developing **the sense for plastic rhythm.**

Rhythmic gymnastics have as aim the coordination of muscular power and beauty according to the proportions of time and space.

German text:

Das Werk von Dalcroze sprengte total den Rahmen, in dem sich bisher die Musikerzieher bewegt hatten. Was soll beispielweise ein Musikerzieher, der den größten Teil seiner Ausbildung über die Noten, d.h. über das Auge erfährt, mit den 8 Elementargrundsätzen anfangen, mit denen Dalcroze seine rhythmische Gymnastik einleitet? Sie mögen hier zum besseren Verständnis im Wortlaut folgen:

1. Jeder Rhythmus ist Bewegung.
2. Jede Bewegung ist materiell.
3. Jede Bewegung braucht Raum und Zeit.
4. Raum und Zeit sind durch die Materie verbunden, welche sie in ewigem Rhythmus durchzieht
5. Die Bewegungen der ganz kleinen Kinder sind rein physisch und unbewußt.
6. Es ist die körperliche Erfahrung, welche das Bewußtsein bildet.
7. Die Vervollkommnung der physischen Mittel erzeugt die Klarheit der intellektuellen Wahrnehmung.
8. Ordnung bringen in die Bewegungen heißt den Geist zum Rhythmus erziehen. Indem ich nun diese Elementargrundsätze in die Tat umsetze, fühle ich mich veranlaßt, folgende Schlußfolgerungen zu formulieren:
   - I.) Die Bewegungen ordnen und vervollkommnen ist gleichbedeutend mit der Erziehung des Geistes zum Rhythmus.
   - II.) Die Kraft und die Geschmeidigkeit der Muskeln zu vervollkommnen, indem man die Proportionen der Zeit regelt, heißt den **Sinn für den musikalischen Rhythmus** und das Gefühl für die musikalische Symmetrie entwickeln. Die Muskeln des Atemapparates insbesondere zu vervollkommnen, bedeutet die unumschränkte Freiheit der Stimmbänder, sowie den Wohllaut der beherrschten Stärkegraden; d.h. dem Sinn für Phrasierung wird eine geschmeidige und intelligent wirkende, mechanische Kraft zur Verfügung gestellt.
   - III.) Das Vervollkommnen der Kraft und der Geschmeidigkeit der Muskeln, indem man Ordnung bringt in die Proportionen des **Raumes** (im Sinne von kombinierten Bewegungen und regungslosen Stellungen), das heißt den **Sinn für plastischen Rhythmus** entwickeln.

Die rhythmische Gymnastik hat zum Zweck: die Vervollkommnung der Kraft und der Geschmeidigkeit der Muskeln in den Proportionen von Zeit und Raum

APPENDIX C
Eulogy on the occasion of Tessenow's death

HEINRICH TESSENOW +

"Die Natur hat den Willen zur Meisterschaft in ihn gelegt, darum übersprang er gewissermaßen den Architekten." Karl Scheffler

Heinrich Tessenow ist gestorben – Heinrich Tessenow ist nicht tot!

Er kann und darf uns nicht verloren sein! Wenn wir heute in Verehrung und Trauer an seinem Grabe stehen, so müssen wir zunächst voll Beschämung gestehen, daß wir dem Lebenden unendlich viel schuldig geblieben sind. Wir alle, die um seinen hohen Wert wußten und zu wenig getan haben, ihn für die deutsche Baukunst fruchtbar zu machen. Was wir dem Lebenden gegenüber versäumt haben, wollen wir dem Toten gelobe – und Heinrich Tessenow wird es zufrieden sein. Denn er war kein Weltkind, bei aller Werktätigkeit, er war kein Architekt, er war ein Baumeister - in des Wortes edelster Bedeutung – ein Handwerker und ein Künstler – vor allem aber ein Mensch.

Im weiten Bereich des Bauens gibt es keinen, dessen Werk, Wort, Schrift und Wesen sich als eine so vollkommene, so harmonische Einheit darstellt, wie bei ihm. Der Inhalt dieses Lebens aber war Wahrhaftigkeit und Bescheidenheit, und deshalb hat ihm die Welt – wohl nicht die theoretische – aner die tätige Anerkennung versagt: Tessenow hat sehr wenig gebaut. Immer wieder hat irgendein widriges Geschick die Ausführung seiner großartigen Pläne verhindert. – Großartig? – Ganz gewiß nicht im heutigen Sinne dieses Wortes, sondern in dem, daß alle seine Werke, auch die kleinsten und bescheidensten, aus einer großen Art kamen. Wie bitter not tut uns solche Art gerade heute, da alles Tun auf den lauten Erfolg des Tages, auf die Wirkung nach außen eingestellt und der eingeborene Segen der Arbeit, die Frömmigkeit des Schaffens aus der Welt verschwunden scheinen. Heinrich Tessenow besaß sie im höchsten Grade, und deswegen hat ihn die Welt nicht erkannt.

Sie hat es zwar gewußt, aber es nicht bewußt werden lassen, daß Tessenow klar und eindeutig den Weg vorgezeichnet und vorgelebt hat, den die deutsche Architektur hätte gehen müssen, er, der schon zu einer Zeit, da die Schlagworte der literarischen Architektur noch nicht erfunden waren, wahrhaft modern gebaut hat, er, der der lauten Propheten des "Neuen Bauens" nicht achtete, weil er ihnen weit voraus war. Aber freilich auch, weil das Wort für ihn kein Mittel billiger Propaganda gewesen ist, die seinem wahrhaftigen und bescheidenen Wesen zutiefst zuwider war.

"Jede Art von Großmannssucht, auch der Idee ist ihm fremd. Wie ein Handwerker denkt er von der Sache aus und sucht das Vernünftige zu tun, so einfach und gründlich wie möglich" (Karl Scheffler).

Das, was wir heute (endlich) als das Allgemeingültige erkennen, hat Tessenow seinerzeit den Ruf eines Sonderlings, ja eines Revolutionärs eingetragen; denn er hat z.B. die "soziale Kleinwohnung" gebaut, längst ehe diese als Begriff

erfunden war, einfach aus seiner großen Menschlichkeit heraus, die tief sozial gerichtet war.

Sein Werk steht in der Brandung von Zerfahrenheit, Unverstand, Geltungsbedürfnis und Verwirrung wie ein klarer Kristall, so nach dem ersten Weltkrieg wie heute.

Unsere heilige Verpflichtung ist es, den Geist dieses Werkes uns zu eigen zu machen, ihm nachzuleben und nachzuwerken, diesem Geiste künstlerischer Bescheidenheit, handwerklicher Einfalt und menschlicher Wahrhaftigkeit. Dann wird Heinrich Tessenow doch nicht umsonst gelebt haben, obwohl die Zeit des Lebenden ihm die Gefolgschaft im Großen, die uns hätte gesund machen können, verweigert hat.

Rudolf Pfister, *Baumeister*, (December, 1950), 47th Year, vol.12, p.769.

APPENDIX D

Steen Eiler Rasmussen, 'Heinrich Tessenow und unsere Zeit', Gerda Wangerin and Gerhard Weiss, *Heinrich Tessenow: Ein Baumeister 1876-1950* (Essen: Verlag Richard Bacht, 1976), pp.152–153.

Eine kleine Begebenheit von 1917 steht noch ganz klar in meiner Erinnerung.

Ich war damals ein junger Schüler der Kunstakademie in Kopenhagen und arbeitete in der ersten Klasse der Architekturschule. Die täglichen Stunden mit Hochbaukonstruktionen fielen oft ein wenig langweilig aus. Alle Unterbrechungen waren daher sehr willkommen, und es war eine besondere Freude, wenn der alte Petersen mit einem Hauch von der Großen Welt kam. Verstehen Sie es wohl, Petersen selber war kein Weltmann, er kam aber als, darf ich sagen, ein Kolportör von Fachbüchern mit einer Auswahl von der neuesten deutschen, französischen und englischen Baukunst-Literatur. Alles Zeichnen hörte auf, während die Bücher über alle Tische ausgebreitet wurden. Sie zerfielen in zwei Gruppen. Einige waren verlockend mit ihren glänzenden Bildern von großen Luxushäusern, Andere waren sehr sachlich mit ziemlich häßlichen Linearzeichnungen von Konstruktionen und Installationen. Mein Gewissen sagte mir, daß ich diese Bücher eigentlich studieren sollte. Sie waren mir aber doch zu widerlich. Und auch in den schönen glänzenden Werken fand ich, nach dem ersten Durchblättern, keine Nahrung für meine junge, suchende Seele.

Die Begebeheit war nun, daß Petersen eines Tages ein Buch mitbrachte, das ganz anders war, weder elegant noch dürr und trocken. Sein Name lautete so einfach nund vertraulich: "Hausbau und dergleichen". Und so war seine ganze Erscheinung. Es schien mir ein Vertreter einer besseren Welt zu sein, Manna in der Wüste.

In Dänemark war die Zeit der Stilnachahmung schon seit langem vorbei. Sie war von einer Periode mit einer Morris-artigen Hervorhebung des rein Handwerklichen abgelöst worden, und wenn dieser Stil – oder Mangel an Stil – zu bunt wurde, schlug das Pendel in sein Gegenteil um: in ein überschwengliches Barock, etwa nach dem Muster von Messel. Wir ganz Jungen fühlten, daß beide Richtungen ohne Verbindung mit unserer Zeit waren. Wir lebten doch weder im italienischen Mittelalter noch im deutschen Absolutismus. Wir wollten lieber an die Prunklose, bürgerliche Baukunst um 1800 anknüpfen.

Unsere Ideen und Bestrebungen fand ich nun in diesem Buch in einer verklärten Form verkörpert.

Ich besaß schon einige Bücher über Hausbau, die aber absonderlich vitaminlos waren im Vergleich mit diesem Buch. Es war zu gleicher Zeit sachlich und voller Gefühl, ja mit einer verborgenen Poesie gefüllt. In seinem Kardusenpapier-Anzug kam es mir kameradschaftlich entgegen wie ein guter Fachmann. Ich kaufte sofort das Buch, und in den folgended Jahren hatte ich immer diesen Tessenow bei mir. Er wurde mir – unbekannterweise – ein wahrer Freund. Ich las seine sauberen Worte und nahm seine Lehre an. Er bedeutete viel mehr für meine Entwicklung als mein alter Lehrer in der Architektur-Schule. Mit

Kopfschütteln bemerkte er, daß ich einige sehr puritanische Projekte freihändig in Tusche zu zeichnen begann. Es wurde mir doch gestattet, obwohl er fand, daß es nicht ganz richtig war.

Alle anderen Bücher aus dieser Schulzeit sind längst verschwunden. Aber "Hausbau und dergleichen" hat standgehalten, und obwohl sein Rücken nach dem vielen Benutzen äußerst armselig aussieht, nimmt das alte Buch immer noch einen Ehrenplatz unter meinen beliebtesten Büchern ein.

Aus meiner ersten Bekanntschaft mit Tessenows Buch erinnere ich mich, daß man auf mehreren Illustrationen, sowohl auf Zeichnungen als auf Photographien, vor einem Fallrohr von der Dachrinne eine Regentonne sah. Ich verstand das damals als eine billige Form von Entwässerung der Dachflächen statt kostspieliger, unterirdischer Kanalisierung, ein Verfahrung, das unter ländlichen Verhältnissen möglich war, aber zum Beispiel in dänischen Villenvorstädten nicht erlaubt war. Als ich mein eigenes Haus baute, mußte ich an allen vier Ecken Kloakbrunnen haben. Unter dem Haus wurde das Regenwasser mit allerlei Unreinheiten des Hauses gemischt, sowohl von Aborten als von der Küche und zusammen mit Schmutzwasser von Tausenden anderer Häuser in den schönen Öresund ausgegossen. Ein anderes ebenso hochentwickeltes System brachte gleichzeitig gereinigtes Wasser von fernen Seen zu dem Hause. Dies konnten wir trinken und auch zur Begießung der Blumen im Garten brauchen. (Doch war diese letztere Benutzung in Perioden von Dürre nicht gestattet.) So war der ganze Boden Dänemarks von Wasserröhren und Abwasserleitungen durchlöchert. Das Regenwasser wurde sofort weggebracht und neues Wasser zugeführt. Ein wahrer Triumph des menschlichen Könnens.

Später hat man herausgefunden, daß es nicht so klug ist, den Öresund als eine riesige Kloake, eine wahre Cloaca Maxima, zu benutzen. Und wir haben gelernt, daß die Blumen, besonders die Rhododendren, das gereinigte Wasser der Wasserversorgung nicht gut vertragen. Es ist zu kalkhaltig. Dann sah ich plötzlich vor meinem inneren Auge die Tonne Tessenows. Meine Frau verschaffte uns ein großes, schönes Cognacfaß, das mit dem Fallrohr von der Dachrinne in Verbindung gesetzt wurde. Es wurde bald voll des segenreichen Wassers, von dem Himmel gesandt, schönes weiches Wasser, das wir in Perioden der Trockenheit unseren guten Rhododendren schenken konnten. Ich sah nun Tessenows Tonne mit neuen Augen an. Sie war nicht ein billiger Ersatz für einen unterirdischen Ablauf, denn sie konnte während eines kräftigen Regenschauers bald vollaufen, so daß der Überfluß anderswo hinweggeschafft werden mußte. Die Tonne war ein Reservoir, ein wichtiges Glied in einem natürlichen Kreislauf. Ich verstand plötzlich, wie unsere hochentwickelte Technik der organischen Welt gegenüber feindlich sein konnte.

In meiner Jugend glaubte ich tatsächlich, daß ich eine große Befreiung der Menschen erleben sollte. Die Maschinen konnten uns mehr Freizeit geben. Gleichzeitig sollte eine geistige Entwicklung uns von einer Menge Zwangsvorstellungen befreien, so daß wir weniger Bedürfnisse haben sollten. Die alte Zeit mit allen ihren Forderungen an materieller Pracht sollte endlich vorbei sein. Eine neue Zeit stand bevor, eine Zeit, in der eine reiche Lebensentfaltung wichtiger wäre als großes Besitztum. Ich stellte mir eine Welt

vor, in der alle Familien ihre eigenen Häuser mit Gärten besaßen, glückliche, geschlossene Plätze, wo sowohl die Pflanzen als die Menschen gedeihen konnten.

Ach, alles ist ganz anders geworden! Die Technik hat sich allerdings hoch entwickelt, die Größe der Produktion hat alle Prophezeiungen übertroffen. Das hat aber nicht die Befreiung der Menschen bedeutet, sondern eher eine größere Abhängigkeit.

Das stete Wachsen der Produktion ist in dem westlichen Kulturkreis ein Selbstzweck geworden. Es scheint heute weniger wichtig, *was* produziert wird. In Ländern mit einer Überproduktion findet man an vielen Stellen eine wirkliche Wohnungsnot. Dort leben Menschen, die keine Anständigen Wohnungen bekommen können, aber doch eine Menge überflüssige Sachen besitzen. Statt eines Hauses mit einem Garten, wo sich die Familie entfalten könnte, haben sie einen Fernsehapparat, der in farbigen Bildern zeigen kann, wie andere Menschen sich entfalten. Sie können auch ein Auto haben, das sie ohne irgendeinen Zweck wegbefördern kann. So leben wir alle mehr und mehr in einer Scheinwelt, wo das einzig Sichere ein Katzenjammer ist, der vom Verbrauch und von der Verunreinigung hervorgerufen wird.

Welche Rolle haben nun die Architekten und Planer in diesem Hexentanz gespielt? Die Architekten haben den Bauten der Verbraucher-Gesellschaft Form gegeben, und zwar eine sehr wirkungsvolle Form. Nach dem Kriege hieß es in England, daß die Architektur nun beweisen sollte, daß sie eine wahre, visuelle Kunst sei. Man muß gestehen: Das ist gelungen. Wie waren die schönen, lockenden Bilder meiner Jugend unschuldig im Vergleich mit den sehr professionellen Photographien riesenhafter Wohnblöcke, die wir heute aus allen Ländern der Welt erhalten. Die großen Architekten-Firmen wetteifern darum, die sensationellsten Bildwirkungen zu erzeugen. So scheinen unsere neuen Städte mehr für eine illustrierte, internationelle Architektur-Presse geschaffen zu werden, als für die Menschen, die ihr Leben in den modernen Mietskasernen fristen müssen.

Wir sehen nun viele Zeichen, daß diese Entwicklung sich nicht endlos fortsetzen kann. Wir nähern uns einer Grenze der sinnlosen Steigerung der Produktion. Die Verunreinigung kann auch nicht weitergehen. Und das wichtige ist: Die jungen Leute sind nicht mit der synthetischen Welt zufrieden. Sie wollen nicht Sklaven einer Überproduktion sein. Sie wollen lieber leben als produzieren.

Wie kann man dann weiterkommen?

In einem Buch über "Nordische Baukunst" schrieb ich vor dem letzten Weltkrieg: Bescheidenheit *ist* eine Zier. Und ich fügte hinzu, daß wir in Dänemark eingesehen haben, daß man überhaupt nicht weiterkommen könne "ohne ihr". Hier glaube ich, daß Heinrich Tessenow uns den Weg zeigen kann.

Heinrich Tessenow war sicherlich an dem Aussehen der Bauten interessiert. Er hat kluge Betrachtungen über Regelmäßigkeit und Symmetrie angestellt, über das Teilen und Verbinden und über das Ornament. Die äußere Erscheinung der Bauten ist aber nicht das Wesentliche. Ein Haus ist nicht eine farbige Skulptur,

die man von außen erlebt. Ein Haus soll den Rahmen für menschliches Leben bilden, und das Wesentliche ist, wie gut es diese Aufgabe löst. Die Architektur ist die Kunst der Aufteilung des Raumes, die Kunst, mit Baumaterialien Räume zu schaffen und diese Räume in eine sinnvolle Ordnung zu bringen.

Wenn wir die Architektur als einen Rahmen des Lebens betrachten, folgt daraus, daß dieser Rahmen nicht zu aufdringlich sein darf. Eine zu sensationelle Baukunst kann in das Leben störend eingreifen, ganz wie der zu geschickte Bühnenbildner das Interesse für den Schauspieler ablenken kann.

Tessenow zeigt uns, wie eine äußerst zurückhaltende Baukunst doch sehr persönlich wirken kann.

In früheren Zeiten arbeitete der Architekt nur mit den Monumentalbauten, mit den Dominanten der Stadt. Die gewöhnlichen Wohnhäuser konnten anonymen Baumeistern überlassen werden. Sie lösten ihre Aufgabe gut und zuverlässig in einer selbständigen Weise, auf Handwerkstraditionen begründet. Heute sind alle Aufgaben viel mehr kompliziert und können nicht traditionell gelöst werden. Der Architekt kommt auch auf ganz einfaches Bauen zu. Das bedeutet nicht, daß alles nun originell und künstlich aussehen muß. Im Gegenteil. Wir müssen erstreben, wieder ganz selbstverständliche Formen für moderne Aufgaben zu finden, gerade so natürlich und ökonomisch wie die Bauten von Heinrich Tessenow.

Wir müssen lernen, daß der Architekt nicht nur ein Formgeber ist. Er muß ein Organisator sein, der den Menschen in seine richtigen Umgebungen einstellen kann. Und wie sollen dann diese Umgebungen sein?

Auf allen Projekten, auf allen seinen Zeichnungen von Häusern hat Tessenow Bäume angebracht, und zwar nicht unwirkliche Architekten-Bäume, sondern botanisch richtige Bäume, die er als lebendige, organische Schöpfungen studiert hat und die er so schön wiedergeben konnte. Sie wurden nicht benutzt, um die Bauten zu verschönern, sondern um das Leben der Bewohner zu verschönern. Die Menschen sollen in einer lebendig organischen Welt leben, wo Pflanzen den Stickstoff verwenden, der von den Menschen ausgeatmet wird. Wir müssen wieder Städte schaffen, die einfach sind, geräumige Städte, wo die Verunreinigung in natürlicher Weise aufgenommen wird und in einem vernünftigen Kreislauf zum Nutzen gelangen kann. Der Garten wird jedermanns Besitz, ein Ort für aktives Leben und Spielen.

Wenn einmal viele extrem-moderne Bauten altmodisch wirken, glaube ich, daß man finden wird, daß Tessenows unscheinbare Baukunst von gestern den Weg zu einer gesunden Architektur von morgen zeigt.

APPENDIX E *On Universality*

The thesis advanced by Padovan in his book *Towards Universality* is that the universal, which became such a byword for modernism in the twentieth century, may fruitfully be contrasted with its converse, the individual. For him, the De Stijl movement, together with its Dutch structuralist descendants (one thinks of the work of Aldo van Eyck and of Hermann Hertzberger) best represents universality, while Le Corbusier stands for individualism in architectural design. (Mies van der Rohe represents a position which fluctuates between the individual and the universal). Padovan terms this posited dualism 'The Open and the Closed', where the indeterminism of De Stijl (its 'openness') contrasts with the 'closed', compositional thrust of Le Corbusier's architecture. At the close of his book, Padovan restates this dualism in terms of Isaiah Berlin's famous borrowing from the Greek writer Archilochus, "The Hedgehog and the Fox", which *pace* Berlin, accounts for the psychological differences between the writers Tolstoy and Dostoyevsky. (Isaiah Berlin, 'The Hedgehog and the Fox', Isaiah Berlin, *Russian Thinkers* [London: The Hogarth Press, 1979].) 'The fox knows many things, but the hedgehog knows one big thing.' Greek text: "πόλλ' οϊδ' άλωπηξ, αλλ' έχίνος έν μέγα" Archilocus frag. 201 in M.L.West (ed.) *Iambi et Elegi Graeci*, vol.1, Oxford, 1971.) Hedgehogs, so it goes, have one governing idea, whereas foxes, being wily, have a plethora of strategies. Clearly, universality is an aspect of the hedgehog, whereas individualism lies in the realm of the fox. Berlin's point in his essay is not to argue obstinately for the dualistic classification of artistic and intellectual temperaments into 'foxes' and 'hedgehogs', but rather to account for the difficulty in ascribing either type to Tolstoy. The conclusion Berlin arrives at is that

> Tolstoy was by nature a fox, but believed in being a hedgehog; that his gifts and achievement are one thing, and his beliefs, and consequently his interpretation of his own achievement, another; and that consequently his ideals have led him, and those whom his genius for persuasion has taken in, into a systematic misinterpretation of what he and others were doing or should be doing. (Berlin, *Russian Thinkers*, p.24).

As Archilochus was appropriated by Berlin, so he in turn was interpreted by Colin Rowe and Fred Koetter, and put to use in order to unravel various strands of twentieth-century architectural history. In their book *Collage City*, Rowe and Koetter suggest a parallel between Tolstoy and Le Corbusier; in the case of the latter, 'the fox who believed he was a hedgehog' manifests himself as an architect designing buildings delighting in complexity and a multiplicity of readings; whereas Le Corbusier as urbanist favours the simple, grand vision. Padovan interprets this dualism differently. He talks about 'The Open and the Closed' as characteristics of De Stijl and Le Corbusier. The art of De Stijl is to further 'break the box' initiated by Frank Lloyd Wright; Le Corbusier works within a strict compositional framework. Even in his proportional studies his analyses of historic architecture (for instance, Michelangelo's Capitol, Rome) and of his own work (most notably, the 1927 Villa Stein, Garches), Le Corbusier aims to break a compositional unity (a façade, a plan) down into its constituent parts. However, the other aspects of proportional systems is their propensity to (active) generation of form, the production of 'the next in the series' of geometrical forms

which is the concrete expression of the 'following number' in the Fibonacci sequence.

APPENDIX F: Karl Scheffler, 'Architekturzeichnungen', Karl Scheffler, *Eine Auswahl seiner Essays aus Kunst und Leben 1905-1950* (Hamburg: Hauswedell & Co., 1969), Carl Georg Heise and Johannes Langner (eds)

Bei der Betrachtung von Tessenows Architekturzeichnungen kommt es einem zum Bewußtsein, wie sehr die Fähigkeit, Architekturen zeichnerisch reizvoll zur Anschauung zu bringen, wie sehr die Kunst des Zeichnens überhaupt unseren Baukünstlern abhanden gekommen ist. Ich wüßte keinen Baumeister von Ruf zu nennen, der heute imstande wäre, seine Entwürfe und Pläne so sachlich und zugleich so persönlich künstlerisch zu zeichnen wie Tessenow. Daraus ist nicht der Schluß zu ziehen, Tessenow wäre für die zeichnerische Darstellung ausnahmsweise begabt; er zeichnet vielmehr besser, klarer, empfindungsvoller, künstlerischer als andere, weil er klarer und empfindungsvoller baut. Beides, die Kunst des Bauens und die Kunst, architektonische Vorstellungen zeichnerisch auszudrücken, gehört zusammen und steht in Wechselwirkung.

Sein Zeichnen ist nicht nur eine Tätigkeit für den Augenblick, zur Überredung des Bauherrn, er zeichnet vielmehr, möchte man sagen, für die Nachwelt, er zeichnet für die Baukunst. Seine Zeichnungen sind abgerundete kleine Meisterwerke, denen kein Strich hinzugefügt und keiner genommen werden dürfte. Und weil die Kunst der Architekturzeichnung in diesen Arbeiten nach langer Zeit wieder selbständig geworden ist, hängt sie eng auch zusammen mit den Zeichnungen der guten, der klassischen modernen Maler. Dann wieder scheint die kultivierte Darstellungsweise unserer Baukünstler aus der ersten Hälfte des 19. Jahrhunderts lebendig, geschmeidig, flüssig, ja impressionistisch geworden. Einiges erinnert in der stilistischen Zuspitzung an Beardsley. Denn bei aller eisernen Sachlichkeit sind die Zeichnungen Tessenows unendlich graziös. In einer bewundernswürdigen Weise beherrscht diese Zeichenkunst, die das Lineal überhaupt nicht kennt, das Geheimnis, mit einem Nichts die Materialwirkungen hervorzubringen. Tessenow arbeitet nur mit Strichen und Punkten. Damit aber weiß er in überzeugender Weise Putzflächen und Mauersteinflächen, Ziegel oder Holz, Stoff und Metall zu veranschaulichen. Er deutet nur mit spielender Feder Bäume und Rasenflächen an und gibt doch immer Extrakte. Seine Zeichnungen sind empfindungsvoll bis zum Idyllischen, aber nie sentimental, sie sind stimmungsvoll, aber auch so sachlich, daß man danach bauen könnte. Man kann von den klaren Blättern die Maße und Verhältnisse ablesen, und doch sind sie auch wie Gedichte voller Reim und Klang. Wer vor den Bauten Tessenows das Rhythmische und Melodische, das diesem Architekten endlich wieder gelingt, noch nicht erfassen kann, der spürt es bei der Betrachtung der Zeichnungen. Sie sind musikalisch beschwingt, es lebt darin etwas von der goldenen Klarheit des Mozartischen Geistes. Sie sind aufs äußerste persönlich und doch ist das Gesetz der Darstellung ganz vom Objekt abgeleitet, sie sind durchaus Arbeiten eines Architekten, aber auch sehr malerisch. Sie wirken wie Organismen, weil alles zueinander paßt, weil die Persönlichkeit, die dahinter steht, ausgeglichen ist und weil die Empfindung einer Präzisionswaage gleicht. Die Ökonomie dieser Arbeiten ist etwas einziges; die Bescheidenheit darin weist auf großes künstlerisches Selbstgefühl. Die Zeichnungen sind voller Zartheiten, aber nie schwach, sie sind knapp, aber dabei erschöpfend, sie sind ganz räumlich gedacht, doch erstreben sie niemals eine naturalistische Illusion. Mit sparsamen Schwarzweißandeutungen sind Luft, Licht und Farbe gegeben. Nicht eine Spur von Schwindel ist vorhanden,

vielmehr spricht eine fast fanatische Redlichkeit der Berufsgesinnung. Es gibt nicht unklare Stellen, alles geht organisch auseinander hervor, jede Form bedingt die nächste Form, und das Ganze ist das Endergebnis einer auf ein einziges Ziel gerichteten Lebensarbeit. Und in allem, im ganzen und in den kleinsten Einzelheiten, kommt die schönste männliche Liebe für das Leben zum Ausdruck. Diese Liebe, die nicht rechts und links blickt, sondern nur auf die Sache, die nur für die Kunst meint und die im höheren Sinne zweckfrei ist, adelt Tessenows Arbeiten überhaupt. Sie macht aus dem stillen Baumeister, von dem die Zeit noch nicht viel wissen will, einen Lehrer und Erzieher seiner Nation, auch ohne daß er ehrgeizig Einfluß und Wirkung sucht.

APPENDIX G: Correspondence

1. Typescript letter from Karl Schmidt to Richard Riemerschmid 11/08/1908
2. Typescript letter from Richard Riemerschmid to Herr Klose 12/07/10
3. Typescript letter from Richard Riemerschmid to Herr Klose 29/07/10
4. Handwritten letter from Wolf Dohrn to Richard Riemerschmid 03/08/1910
5. Handwritten letter from F Klose to Richard Riemerschmid 08/08/1910
6. Typescript letter from Richard Riemerschmidt to Wolf Dohrn 08/08/1910
7. Typescript letter from RR (Richard Riemerschmid) to W[olf] Dohrn 8/08/10
8. Handwritten letter from Heinrich Tessenow to Richard Riemerschmid 10/10/1910
9. Handwritten letter from Heinrich Tessenow to Richard Riemerschmid 16/02/1911

Riemerschmid Archive, Deutsches Nationalmuseum, Nuremberg
B 142 1910-1913

1. Typescript letter from Karl Schmidt to Richard Riemerschmid 11/08/1908

Lieber Herr Riemerschmid!

Ich habe folgende Idee, die ich doch für sehr gut halte, dass ich sie Ihnen mitteilen möchte und vor allen Dingen deshalb mitteile, weil Sie oft um Rat gefragt werden:

Ich will in Anschluss an meine Lehrwerkstätten eine weitere Lehranstalt angliedern, in der junge Damen und Herren in der Art wie sie jetzt zu Debschütz gehen, Aufnahme finden. Gehen Sie bei Debschütz weg, so wissen die armen Menschen gewöhnlich nicht, was sie dann anfangen sollen. Ich will sie in allen Gewerben, die wir betreiben, gründlich und gewissenhaft anlernen lassen. Zeichnen kann nur ein Teil der Lehre sein. Den jungen Leuten ist dann weiter Gelegenheit gegeben, je nach Neigung bei uns in den Werkstätten weiter zu arbeiten, als Verkäufer oder Verkäuferin bei uns einzutreten oder, was ich für das Beste halte, die jungen Damen und Herren, die dann fachlich auch etwas können, sollen nach ihrer Heimat zurückgehen und in allen deutschen Städten sowie alle kleinen Orten sollen schliesslich solche junge Leute sitzen, sollen uns

an diesen Plätzen vertreten, an uns gelangte Zeitschriften dort direkt verhandeln und den Leuten mit Rat und Tat an die Hand gehen. Sie sollen sich nennen: "Werkstatt und Vertretung zur Beratung und Einrichtung von Wohnung und Häusern".

Auf diese Weise käme, wie ich annehme, eine neue Art von Handwerk wieder heraus und durch die Verbindung mit dem Mutterhaus, könnten alle diese Leute Existenz finden und für die Gesamtheit wäre allen diesen jungen Leute eine nützliche Arbeit gestellt, Sie sollen sich natürlich auch an ihrem Ort, wenn sie tüchtig genug sind, selbst kleine Werkstätten einrichten.

Beste Grüsse
Ihr K.Schmidt

2. Typescript letter from Richard Riemerschmid to Herr Klose 12/07/10

Richard Riemerschmid asks Klose (Munich General-musikdirektor) to outline Jaques-Dalcroze's pedagogy.

...Denn wer kennt denn die Form, die sich zukünftige Werke aus ihrem innersten Wesen heraus bilden werden? Man darf nicht zuerst das Haus bauen, um dann die Werke zu schaffen, denen das Haus dienen soll, gerade dann nicht, wenn alle Tradition auf dem Gebiet für unbrauchbar erklärt werden muß.

3. Typescript letter from Richard Riemerschmid to Herr Klose 29/07/10

Riemerschmid enquires about the Dalcroze 'Method' and in particular its consequences for stage design.

Sehr geehrter Herr Klose!

Darf ich Sie plagen mit einer Frage? Sie können mir gewiss gute Auskunft geben, nachdem ich gehört habe, dass freundschaftliche Beziehungen Sie mit Herrn Jacques-Dalcroze [sic] verbinden. An der Gartenstadt-Gründung in Hellerau hat Herrn Jacques-Dalcroze Manches so gut gefallen, dass er (wie Sie wohl schon gehört haben) sich entschlossen hat, sein ganzes Institut dorthin zu verlegen. In Verbindung mit diesem Plan ist in letzter Zeit auch von dem Bau eines Festspielhauses und andere damit zusammenhängenden, ziemlich grossartigen Plänen vielfach die Rede gewesen, und nachdem ich dort auf solche Pläne ein wenig (freilich keinen entscheidenden) Einfluss habe, und vor allem mich dafür im höchsten Grad interessiere, liegt mir sehr daran, auch in den jetzt geplanten Dingen möglichst klar zu sehen, und deshalb möchte ich Sie bitten, mir nur mit ein paar kurzen Worten mitzuteilen, wie hoch Ihrer Meinung nach die Lehrtätigkeit von Jacques-Dalcroze einzuschätzen ist, und dann noch besonders: was zu halten ist von seinen Reformversuchen inbezug auf die Inszenierung, und von seinen eigenen musikalischen, schöpferischen Leistungen. –

Mir kommt mein Verlangen jetzt, nachdem ich es ausgesprochen habe, selber eigentlich zu gross vor; denn ich weiss, es ist unangenehm, ein solches Urteil abzugeben, besonders in einem Brief, und ich hätte ja auch viel lieber Sie aufgesucht, um mit Ihnen über die Sache zu sprechen. Aber das lässt sich jetzt nicht machen; so bleibt mir kein anderer Weg. Ich bitte wirklich nur um eine ganz kurze Auskunft, und selbstverständlich, wenn Sie's wünschen, werde ich sie als ganz vertraulich behandeln und gar keine Erwähnung davon tun, und sie nur dazu benützen, mir selber eine sichere Meinung zu bilden.
Nehmen Sie mir meine Bitte nicht übel; wenn sie Ihnen lästig fällt, dann schreiben Sie mir bitte nur eine Karte, dass es eben nicht gut.

Mit den höflichsten und ergebensten Grüssen

Ihr

Richard Riemerschmid

4. Handwritten letter from Wolf Dohrn to Richard Riemerschmid 03/08/1910.

Dohrn writes to Riemerschmid, the 'injured party', presumably since Tessenow has 'supplanted' him as architect for the Festspielhaus.

Lieber Herr Riemerschmid!

Von Hellerau erhalten Sie eine Denkschrift, die alles enthält, was zur Begründung meines Standpunktes in der Dalcroze-Angelegenheit zu sagen ist. Ich habe mich bemüht, so unpersönlich als möglich zu denken und zu schreiben und ich denke, Sie werden auch finden, daß ich das Ganze von Hellerau aus betrachte und mir klar zu werden suche, was es für Hellerau bedeutet. Kurz vor meiner Abreise habe ich Schmidt ein Exemplar gegeben und hoffe, daß Ihnen eine inzwischen angefertigte Abschrift zugegangen ist. Wenn ja – so wäre es mir lieb zu erfahren, ob oder inwieweit ich überzeugt habe. So merkwürdig das klingen mag – ich habe in diesem Punkte mehr Hoffnung auf Sie als auf Schmidt, obwohl Sie doch eher der Geschädigte sind, als er. Ich fürchte Schmidt hat über der starken Entwicklung seines Machtwillens in den letzten Jahren ein wenig die Fähigkeit verkümmern lassen, einen anderen Standpunkt zu verstehen, auch wenn er so gewissenhaft und gründlich vorgetragen wird, wie ich mich bemüht habe. Daraus kann noch großes Unheil erwachsen und wenn ich mit dem Vergleich von Herrscher und Tyrann auf diese Gefahr hingewiesen habe, so geschah es nicht nur deshalb, weil Schmidt mit mir öfters dies Problem besprach und ich weiß, daß es ihn beschäftigt, sondern weil fast alle die mit ihm dauernd zu thun haben genau fühlen, daß er an diesem Punkt seiner Entwicklung steht, daß er der "alte Schmidt" zur Zeit nicht ist, es vielleicht wieder werden kann, vielleicht aber auch nicht. So hat diese Entscheidung über

Hellerau hinaus auch für Schmidt eine verhängnisvolle Bedeutung und nichts beklage ich mehr, als daß ich in diesem Fall auf Ihre Hilfe deshalb schwer werde rechnen können, weil Sie selbst in die Sache verwickelt sind und Schmidt gewissermaßen Ihre Sache verteidigt. Vielleicht werden Sie deshalb diese persönliche Seite der Sache für Schmidt gar nicht sehen und ich setzt mich indem ich so offen darauf hinweise nin dem Verdacht aus, die Fragestellung verwirren zu wollen, im nur mein Ziel zu erreichen. Was ich Ihnen da schreibe, ist also zum mindesten unvorsichtig. Aber es hilft nichts. Ich kann in dieser Sache nichts anderes thun, als sie immer wieder von neuem durchzudenken, durch alle Stimmungen hindurch zu prüfen, dann aber meine gewonnene Überzeugung zu vertreten und durch größtmögliche Klarheit in der Vertretung meiner Überzeugung andere zu der gleichen Klarheit und Strenge gegen sich selbst zu veranlassen. Das wird bei Ihnen ohne weiteres der Fall sein. Ob auch bei Schmidt? Das ist's was ich fürchte und wozu ich – merkwürdig genug Ihre Mithilfe erbitte.

Es grüßt Sie herzlich
Ihr
Wolf Dohrn

5. Handwritten letter from F Klose to Richard Riemerschmid 08/08/1910

Klose responds to Riemerschmid about the Dalcroze 'Method'.

Sehr geehrter Herr Professor,

Es ist in der Tat nicht leicht, ja vielleicht überhaupt nicht möglich, ein endgültiges Urteil über die Bedeutung der Jaques Dalcrozeschen Methode abzugeben, dazu ist die Sache noch zu neu, noch zu sehr im Werden begriffen. Auch habe ich zu wenig Gelegenheit gehabt, in die Art und Weise, wie Jaques seinem Ziele nahe zu kommen sucht, Einblick zu tun, vielmehr nur vereinzelte Resultate, allerdings geradezu verblüffende gesehen, sodass ich nachdrücklichst bitten möchte, in dem Folgenden nur eine Mitteilung rein persönlicher Eindrücke erkennen zu wollen. Diese Eindrücke haben mir allerdings die Überzeugung erbracht, dass Jaques ein ganz hervorragender Pädagoge ist u. dass seine Bestrebungen insofern eine Reform in der Erziehung des Menschen bedeuten, als durch sie schon im Kinde Formensinn und künstlerisches Empfinden geweckt werden. Ich halte es für eine geniale Idee, dass Jaques als Ausgangspunkt seiner Unterweisung den Rhythmus nimmt, den Rhythmus, der ja im weitesten Sinne des Wortes nicht nur ein wesentliches Ingredienz aller Kunst, sondern des Lebens überhaupt ist. Dadurch nun, dass die Kinder den Rhythmus, u. zwar in einer bisher kaum dagewesenen Vielgestaltigkeit durch [?] schöne Körperbewegungen wiederzugeben haben, geht er ihnen nicht nur als solcher in Fleisch und Blut über, sondern verschaulicht sich ihnen auch als künstlerisches Bild, u. da Jaques diese Rhythmen jeweils in feinster musikalischer Form angiebt, so werden schon von den ersten Unterrichtsstunden an Auge u. Ohr zugleich geschult. Auf dieser Grundlage findet die rein musikalische Ausbildung

in den sogenannten [Kollegien ?], die musisch dramatische in besonderen "musico-plastischen" Uebungen ihre Fortsetzung. Von den Wundern der Gehörschulung, die das Ergebnis des Jaqueschen Solfeggienunterrichtes waren, habe ich schon mancher Probe beigewohnt. Darnach erscheint mir seine allgemeine Einführung geeignet, eine Reform des gesamten Musikstudiums herbeizuführen, deren Tragweite vielleicht die kühnsten Erwartungen übertreffen wird.

Von den musischdramatischen Bestrebungen Jaques' habe ich zu wenig, von seinen Inscenierungsideen noch nichts kennen gelernt, so dass ich mich hierüber lieber einer Meinungsäußerung enthalte. Ich möchte hier nur noch beifügen, dass Jaques als überaus feinfühliger Künstler, als welcher er sich in seinen eigenen Schöpfungen in gleicher Weise wie in seinen pädagogischen Leistungen erwiesen hat, auch in Bezug auf das Theater geschmackbildend und somit erfreulich reformierend zu wirken im Stande sein dürfte, nachdem er zu Allem in reichstem Maße jene Eigenschaften besitzt, deren der genialste Neuerer nicht wohl entraten kann: Energie, Arbeitsfreudigkeit u. Unermüdlichkeit.

Habe ich mit den obigen Zeilen versucht, in kurzen Umrissen ein Programm der Jaqueschen Bestrebungen zu entwerfen, so bitte ich nochmals, in allen meinen Äußerungen der Wertschätzung nur ein persönliches Glaubensbekenntnis erkennen u. sie lediglich als solches in Betracht ziehen zu wollen. Sollten Sie sich des Näheren über die Sache zu informieren wünschen, so wird Ihnen auf ein Ersuchen hin Herr Concertsänger Paul Boepple/ Basel, Mittlererstr. Der langjährige Freund u. Mitarbeiter Jaques Dalcrozes sicherlich mit Vergnügen die wichtigsten einschlägigen Aufsätze zustellen.
Sehr erfreut, dass Sie, verehrtester Herr Professor, an Jaques und seinen Plänen so lebhaftes Interesse nehmen, bin ich Mit höflichen Grüssen

Ihr sehr ergebener F.Klose

6. Typescript letter from Richard Riemerschmid to Wolf Dohrn 08/08/1910

Riemerschmid writes to Dohrn concerning the appropriateness of Tessenow's appointment as architect of the Festspielhaus. He queries whether the deep stage required now by Appia and Dalcroze, and designed by Tessenow, corresponds to Dalcroze's previously stated desire for a flat stage à la Künstlertheater Munich.

Lieber Herrr Dohrn!

Ihre Denkschrift habe ich vor drei Tagen bekommen und Ihren Brief heute. Nun hätte ich mit meiner Antwort gern noch so lange gewartet, bis ich von Schmidt näheres erfahren hätte; er hat mir nähmlich [sic] in einem Brief, den ich vor einigen Tagen bekommen habe, geschrieben er sei sich jetzt vollständig klar, wie er am richtigsten in der Sache vorgehe, ohne sich aber weiter darüber zu aüssern [sic]. Da ich nun aber morgen wegfahren muss, möchte ich Ihnen doch heute gleich noch antworten und ich bitte Sie, (wenn's schon Ihnen gegenüber

überflüssig ist und nur um eben nicht zu unhöflich zu erscheinen,) es mir ja nicht übel zu nehmen wenn ich ganz rückhaltlos und offen mich ausspreche.
Dass die bevorstehenden Entscheidungen in dieser Sache wirklich sehr grosse Bedeutung für Hellerau haben werden, das ist uns allen gleichmässig bewusst und wir entnehmen gleichmässig daraus die Veranlassung gründlich vorzugehen und uns nach Möglichkeit klar zu werden. Da muss ich nun aber gleich sagen dass dieses Streben nach Klarheit, das Sie auch wiederholt betonen, mir aus Ihrer Denkschrift und auch aus Ihrem Brief nicht hat deutlich werden können; und zwar vor allem deshalb, weil Sie einige von den Fragen, die mir besonders wichtig erscheinen, gar nicht berühren.

Ich gebe Ihnen zu: "Es ist nicht die Frage, ob die Architektur von Tessenow zu den jetzigen Bauten von Hellerau passt, oder nicht" aber Sie fahren dann fort: "Sondern die erste Frage lautet ob die Architektur den Wünschen Jacques-Dalcroze's [sic] entspricht und ob sie ein ebenbürtiger Ausdruck seiner rythmischen Kunst sein kann." Dem kann ich aber nicht beistimmen; jetzt lautet die erste Frage: Sind die Bedürfnisse von Jacques-Dalcroze [sic] und seinen Freunden für die nächste Zeit und für die nächste Zukunft genügend klargestellt ist die Angelegenheit überhaupt reif? Bei aller Verehrung für die Leistungen und die Ideen von Jacques-Dalcroze [sic] möchte ich eben auch in diesem Falle, wie in jedem möglichen ähnlichen, nicht mich ohne weiteres unterwerfen und unterordnen, sondern ich möchte zu verstehen, in die Gedankenwelt des andern einzudringen suchen; nicht als Diener, sondern wirksamer als Gleichstrebender möchte ich mithelfen. Diese Möglichkeit, in die Absichten, die Dalcroze verfolgt, in noch vollem Umfang einzudringen, ist aber meiner Ansicht nach von ihm noch nicht gegeben worden.

Bei meiner Besprechung mit Dalcroze und Appia in München ist es mir nicht gelungen, aus einen [sic] von den Herrn herauszukriegen, wie denn die Verwendung der Festspielbühne gedacht ist; welche Werke vor allem vorzuführen und was im Bezug auf ihre Wiedergabe geplant ist. Herr Dalcroze hat nur einmal kurz vor seinem Prometheus gesprochen, von dem mir wohl alle zunächst noch nicht wissen können welche Bedeutung ihm zukommt. Ausserdem ist die Bemerkung gefallen, er wolle sich an Klose, Schillings, Hoffmannsthal wenden, um sie zu veranlassen dass sie für ihn und im Zusammenhang mit seinen Bestrebungen Werke verfassen. Die Frage also: Sind Werke von überragender Bedeutung für diese Bühne da, ist zunächst im Unklaren gelassen. Ob es berechtigt ist und möglich ist für neue, wenn auch ganz umwälzende Versuche in Bezug auf die Inscenierung eine eigene Bühne zu schaffen, wenn nicht zugleich die Sicherheit geschaffen werden kann, ein ständiges gedecktes Zuschauerhaus zu bieten, das ist ebenfalls eine Frage von grosser Wichtigkeit, die nicht ungeklärt geblieben ist. Eine weitere Frage, auf die ich schon in Hellerau nachdrücklich hingewiesen habe und die doch geradezu von entscheidender Bedeutung ist in dem Augenblick, wo man an einen Bühnenbau herangeht, die aber trotzdem für mich geradezu unbegreiflicherweise weder in Ihrer Denkschrift noch in dem Brief von Dalcroze erwähnt ist, betrifft die tiefe Bühne oder flache Bühne. Die tiefe Bühne, die Herr Appia und Dalcroze fordern und die Tessenow gemacht hat, ist nicht zu vereinbaren mit der Forderung, die von Dalcroze als vollständig berechtigt zugestanden worden ist, dass einer grossen Anzahl von Zuschauern die Möglichkeit geboten wird, den ganzen Bühnenraum vollständig zu übersehen.

Dass zwei solche wiedersprechende Dinge von so einschneidender Wichtigkeit nebeneinander aufrecht erhalten werden können, dass sogar Dalcroze, ehe solche Fragen geklärt sind, schreiben kann, er finde alle Raumverhältnisse so verwirklicht, wie er sie wünsche, das beweist für mich deutlich, dass die Klarheit und Reife der Angelegenheit, die notwendig ist, ehe so wichtige Entscheidung getroffen wird, bisher noch nicht erreicht ist.

Sie schreiben auch einmal dass in der ganzen Diskussion keine Forderung genannt worden sei, die Tessenow nicht erfüllt hätte; das gehört auch hierher; denn die sehr berechtigte Forderung dass man die ganze Bühne von einem grossen Zuschauerraum aus übersieht, hat Tessenow nicht erfüllen können, weil sie eben nicht erfüllbar ist. Allerdings ist in Hellerau am ersten Tag von einer möglichst tiefen, am zweiten von einer nicht zu tiefen Bühne die Rede gewesen; und dass die Anforderungen damals von einem Tag auf den andern so stark abgeändert worden sind, ohne dass dabei scheinbar von dem beteiligten die Tragweite dieser Abänderung hoch eingeschätzt worden wäre, das hat mir auch die Unreife der ganzen Angelegenheit gezeigt. Sie schreiben ja auch jetzt noch: "Der Bühnenraum bietet für jede Art von Zuschauerraum der später einzubauen wäre, jegliche Möglichkeit."

Ich denke wenn man Klarheit schaffen, muss man grundlegenden Fragen, von denen ich einiges anzudeuten versucht habe, zuerst anpacken; und da kaum zu hoffen ist dass sie im Laufe von wenigen Monaten vollständig klargestellt werden können, so geht meine Meinung durchaus darauf hinaus, dass es für Hellerau eine grosse Gefahr bedeutet, wenn man mit allzuviel Begeisterung und mut zuwenig Ueberlegung (ich meine eine Ueberlegung, die sich auch nicht durch die Reize köstlicher Ideen bestechen lässt.) dran ginge. Dieser Bau und diese Unternehmung darf nicht missglücken, es könnte verhängnisvoll für Hellerau werden; darum darf aber auch nicht ehe die notwendige Klarheit und Reife herbeigeführt ist, in einer so feierlichen und grossartigen Weise an das Unternehmen herangegangen werden, der solche Bezeichnungen, wie "National-Heiligtum" gerade passend erscheinen. Das ist, (so gut ich's in der Eile habe andeuten können) die Gesinnung, mit der ich der Sache gegenüberstehe; dass sie nicht beeinflusst ist durch rein persönliche Erwägungen, das glauben Sie mir wohl auch ohne Versicherung. Es ist ja auch ganz selbstverständlich, dass ich jetzt nachdem Herr Dalcroze auch nach langer Ueberlegung und Besprechung mit seinen Freunden sich so uneingeschränkt sich für Tessenows Pläne ausgesprochen hat, als Architekt für Dalcroze auf keinen Fall mehr in Betracht komme, sondern dass es selbstverständlich bleibt, dass Tessenow für Dalcroze bauen muss.
Viele andere Einzelheiten in Ihrer Denkschrift scheinen mir ganz unhaltbar (ich denke an solche Stellen wie "Die Ausführung dass man über diese Sache niemands Urteil mehr einhole, weil die Gutachter nur entweder schweiholen[?], oder respektvoll schweigen, oder unsachlich verurteilen können," oder die Stelle "Den Kontrast wie[?] nur der waren, der eine grosse Monumentalsache will, die Anpassung nur der suchen, der etwas als bestätigend einfügen will".
Ich lass es lieber darauf einzugehen, sonst wird der Brief endlos; aber eins kann ich nicht verschweigen, was sich auch auf das Ganze bezieht; gefallen hat mir die Denkschrift aus zwei Gründen, vor allem hab ich mich des Eindrucks nicht erwehren können dass Sie sich selbst immer wieder laut und mit vielen Worten die Versicherung geben, dass das was Sie gesagt haben und was Sie wieder

sagen durchaus nicht zuviel gesagt ist und dass Sie sich eben in diesem Fall wirklich selbst täuschen, wenn Sie von der Absicht sprechen "Durch grösst mögliche Klarheit in der Vertretung Ihrer Ueberzeugung andere zu der gleichen Klarheit und Strenge gegen sich selbst zu veranlassen" und dann der zweite Punkt ist dass der Ton in den Sie vieles geschrieben haben sicher nicht der rechte ist.

Ich glaube es wird Ihnen das selbst so scheinen, wenn Sie sich solche Stellen nocheinmal anschauen: wie die "Sich selbst unbewusst und verständlich genug bei seiner Natur" oder dann "Schmidt wird sonst sich selbst untreu und wirft mir vor ich sei der Schwärmer". Dann die ganze Stelle "Schmidt sagt es sei zu ästetisch" und Ihre höhnische Wiederlegung dann wieder "Fühlt man denn nicht wie man äusserlich [sic] herumirrt und sich selbst wiederspricht" "Verzweifelte Aehnlichkeit" u.s.w. Ich glaube Sie hätten wirklich fühlen müssen dass dieser belehrende Ton von oben herab der Ihnen doch wirklich auch gar nicht zusteht unwirksam sein muss und gewiss nicht überzeugend wirkt.
Ich habe jetzt nur versucht, im grossen ganzen meine Stellungnahme Ihnen klar zu machen. Es wird ja gewiss nicht das letztemal sein, dass wir über diese Sache sprechen; denn wenn ich auch persönlich und mit meiner Arbeit gar nichtmehr dabei beteiligt sein werde, so glaube ich doch mir das Recht nehmen zu dürfen, mit lebhaftem Interresse [sic] an allem teizunehmen [sic] was für Hellerau von Wichtigkeit ist und speziell in dem Fall meine Freude an den Ideen und Bestrebungen von Herrn Dalcroze immer noch wachsen und nicht beeinträchtigen zu lassen.

Mit herzlichem Gruss und dem Wunsch dass Sie sich recht gut ausruhen und erholen

7. Typescript letter from RR (Richard Riemerschmid) to W[olf] Dohrn 8/08/10

Riemerschmid reiterates his previous point, and emphasises that the deep stage designed by Tessenow limits the numbers in the audience who will gain a clear view of the entire stage area.

Die tiefe Bühne, die Hr Appia und Dalcroze fordern und die Tessenow gemacht hat, ist nicht zu vereinbaren mit der Förderung, die von D. als vollständig berechtigt zugestanden worden ist, dass einer grossen Anzahl von Zuschauern die Möglichkeit geboten wird, den ganzen Bühnenraum vollständig zu übersehen.

8. Handwritten letter from Heinrich Tessenow to Richard Riemerschmid 10/10/1910.

Sehr geehrter Herr Professor, ich las Ihr Schreiben vom 7. ds. Monats. Sie haben mit den Einwänden, die Sie dort machen, schon recht. Ich habe nun Herrn Martsch (?) gebeten, daß er Ihnen eine Abschrift giebt von den

Erklärungen, die ich für das Bauerlaubnisgesuch geschrieben habe. Das giebt Ihnen dann noch nähere Erklärungen über meinen Plan, und ich würde mich dann sehr freuen, wenn Sie mein Projekt recht fänden. Es ist richtig, das vorhandene Gelände ist "von Haus aus" meinem Projekt nicht besonders günstig, aber ich bekomme jetzt durch Erdanschüttung um die Erscheinung (?) der Dalcrozehäuser eine sehr günstige Höhenlage, die noch wieder durch die seitlich vorgelagerten kleinen Häuser betont wird und meines Erachtens die Mehrkosten rechtfertigt, die durch die Terrainregulierung entstehen, besonders auch, da ich doch durch diese kleinen Häuser wirklich die Grenzmauer der Dalcrozehäuser einigermaßen praktisch ausnutze. Ich denke mir, daß die von der Dresdener Straße her nach den Dalcrozehäusern zu ansteigenden und diesen vorgelagerten Baumassen mit dem hochliegenden Dalcrozehause zusammen ein bestes Bild geben werden.

Daß Sie sich so freundlich mit den von mir gemachten Straßenänderungen einverstanden erklären, danke ich Ihnen noch besonders. Es ist nur natürlich, daß ich nur sehr ungern Ihren fertigen Straßenplan zu ändern suchte.
Nehmen Sie meinen herzlichen Gruß

Ihr sehr ergebener

Heinrich Tessenow

9. Handwritten letter from Heinrich Tessenow to Richard Riemerschmid 16/02/1911

Lieber Herr Riemerschmidt, nehmen Sie meinen herzlichen Dank für Ihren heutigen freundlichen Brief; ich werde selbstverständlich mein Projekt nicht weiter empfehlen.

Ich habe s.Zt. [seinerzeit ?] Herrn (?) gesagt, ich möchte am liebsten selbst an Sie schreiben; ich werde ihm jetzt sagen, daß das geschehen ist und daß Sie mir geantwortet hätten, Sie beständen auf Ihr Projekt. Ich werde dann suchen (?), daß ich die nächsten Häuser, die ich bauen soll, auf die nördliche Straßenseite zwischen meiner ersten fertigen Gruppe und Ihrer neuen Gruppe stelle.

Nehmen Sie meinen herzlichen Gruß

Ihr sehr ergebener

Heinrich Tessenow

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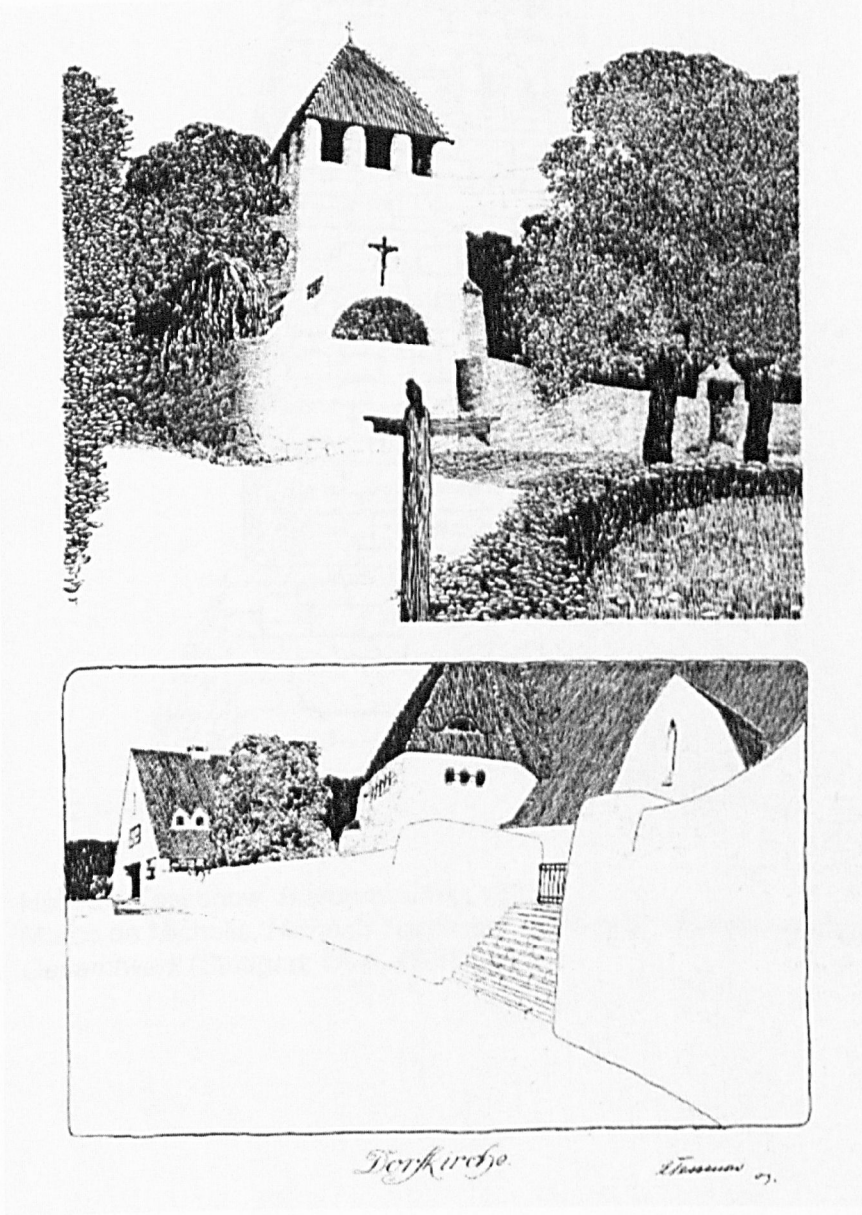
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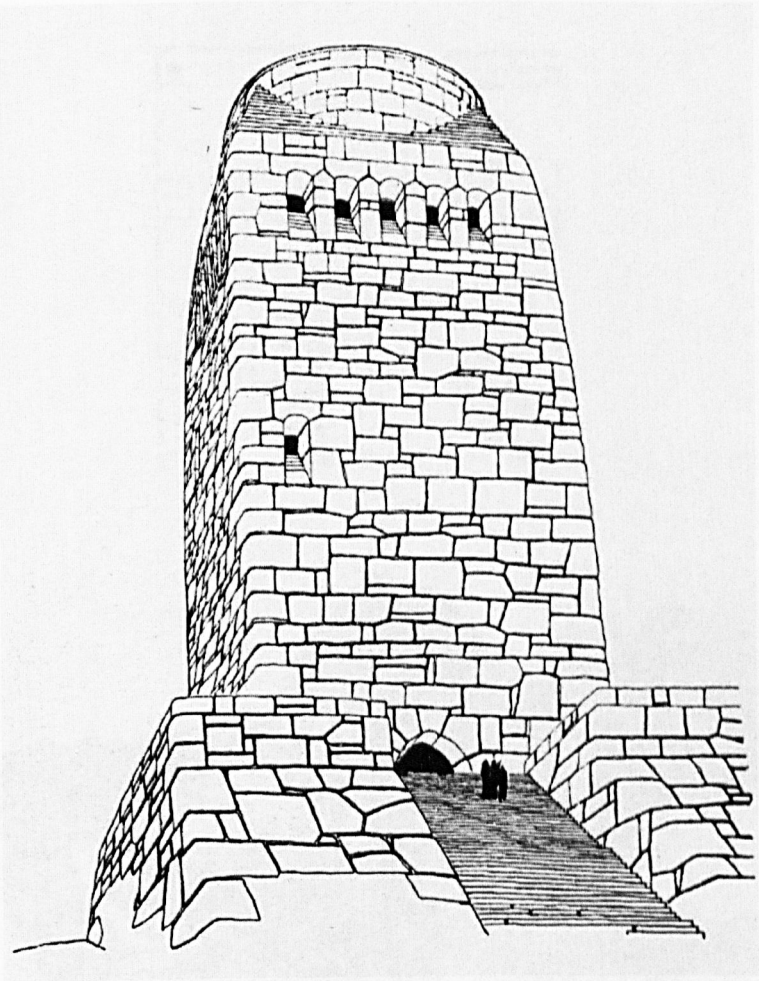
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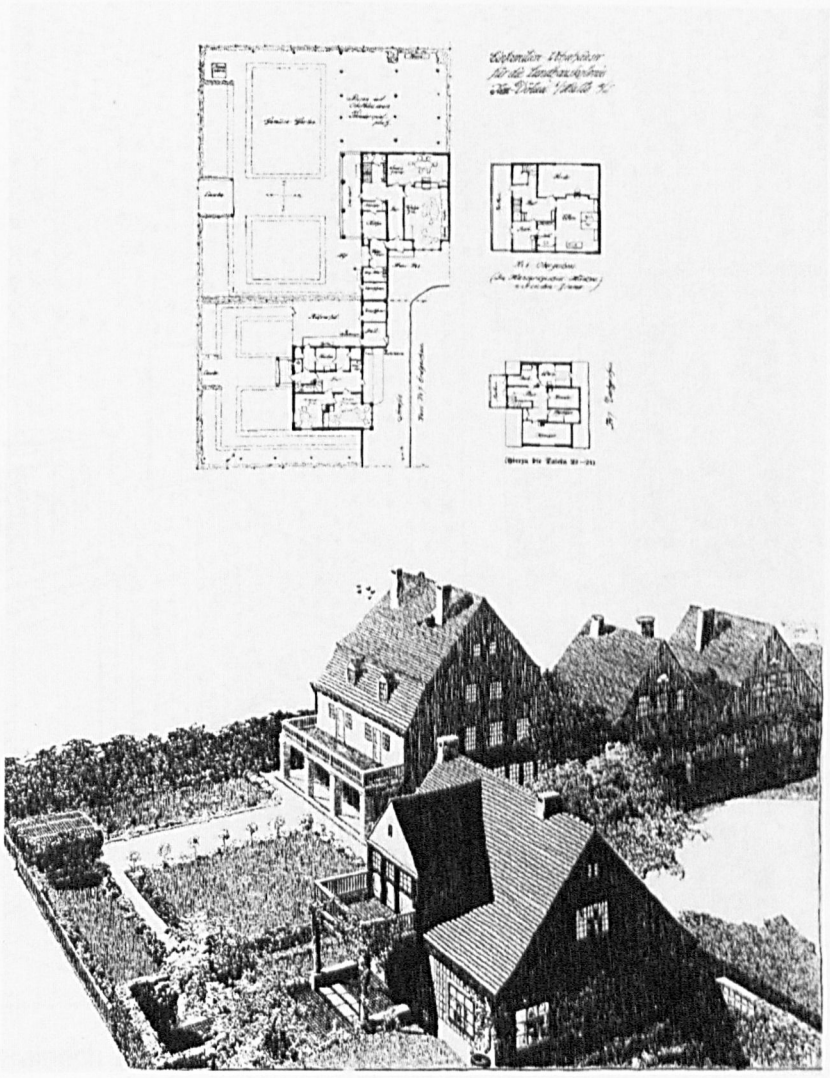
CHAPTER ONE



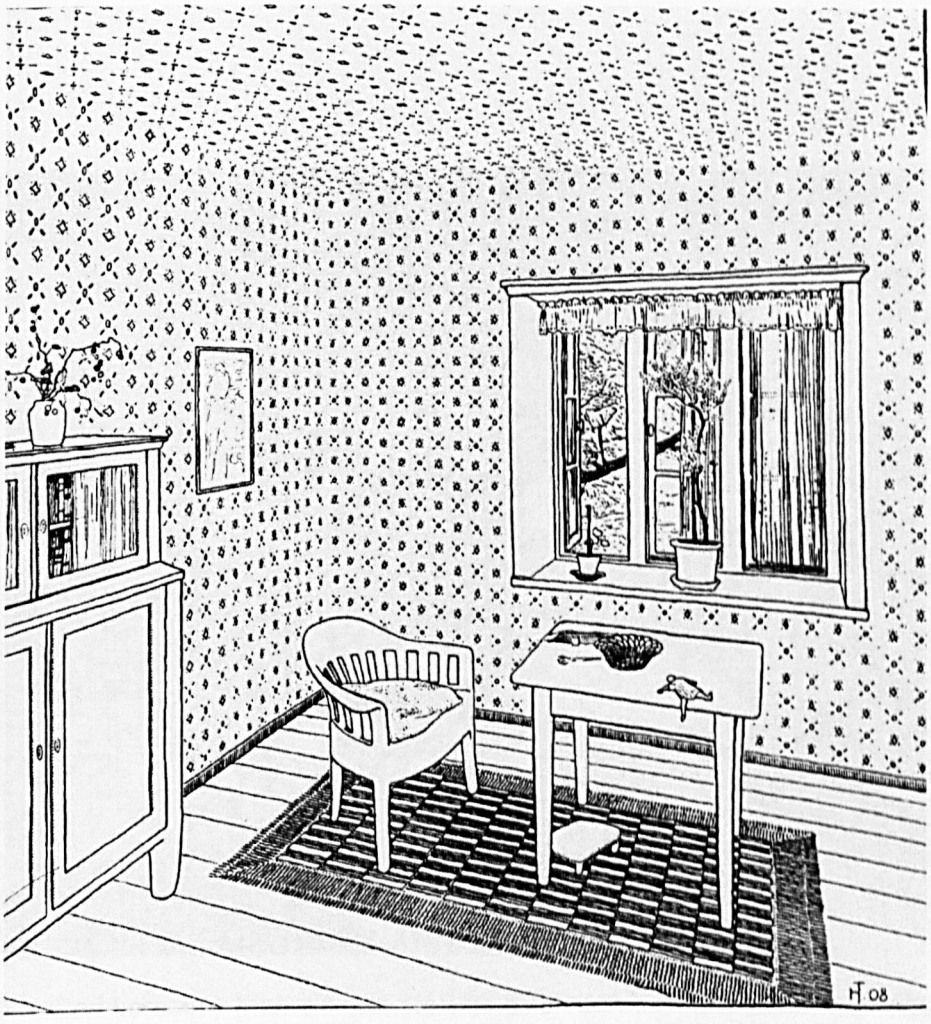
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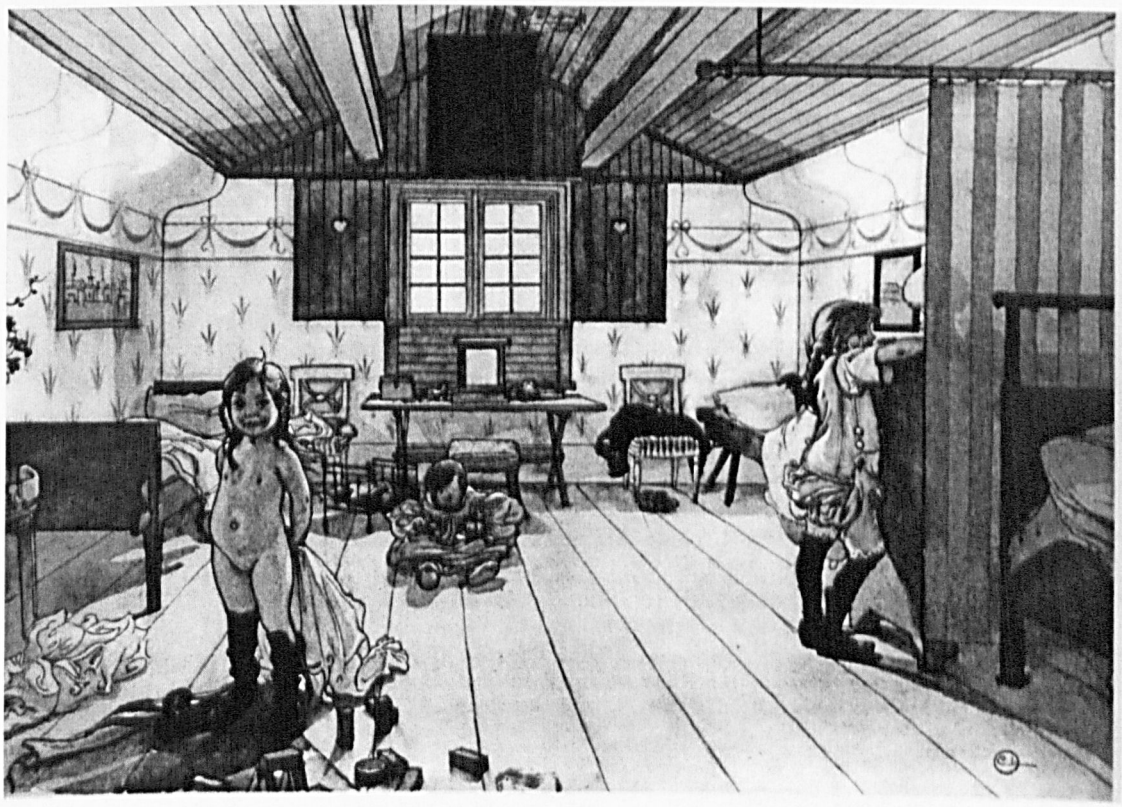
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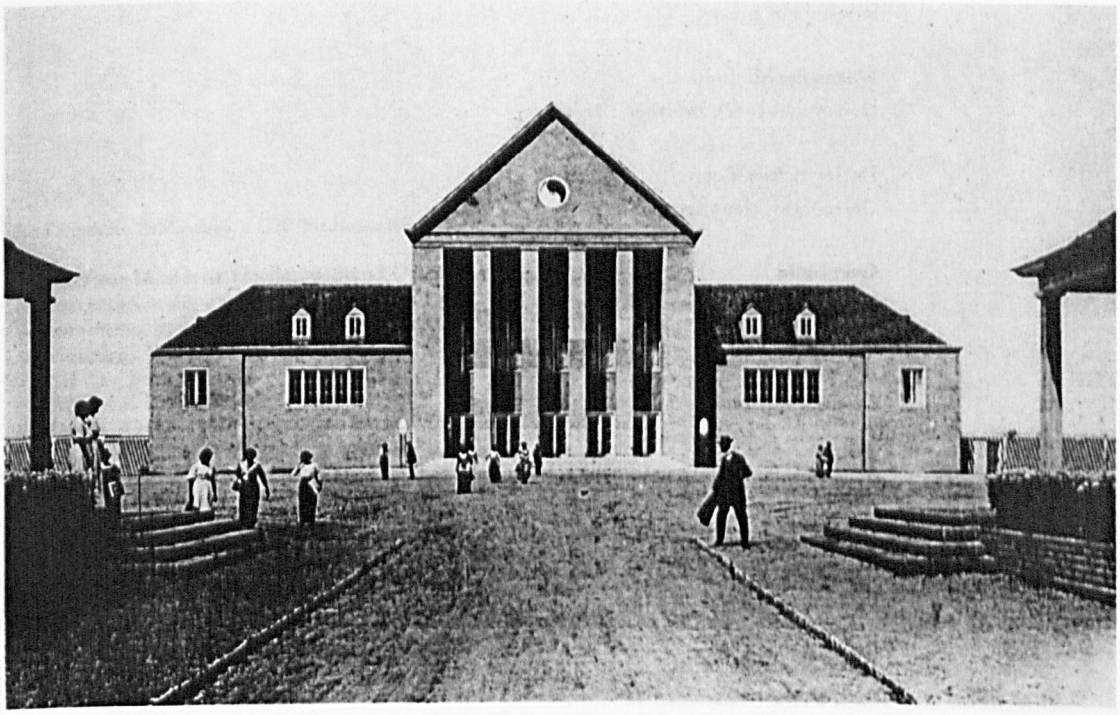
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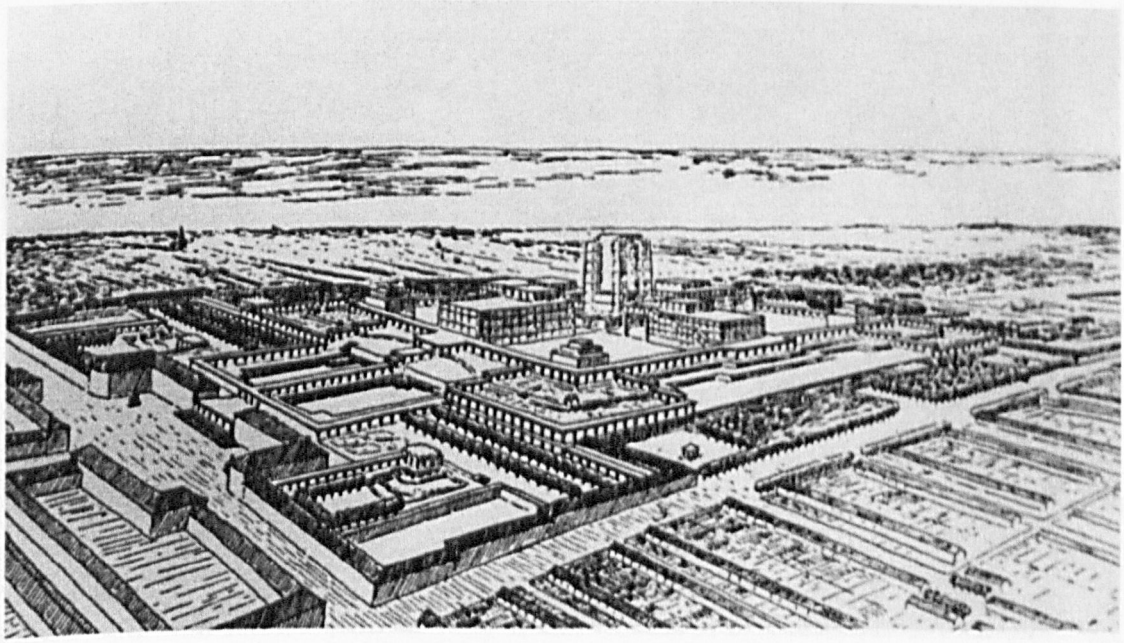
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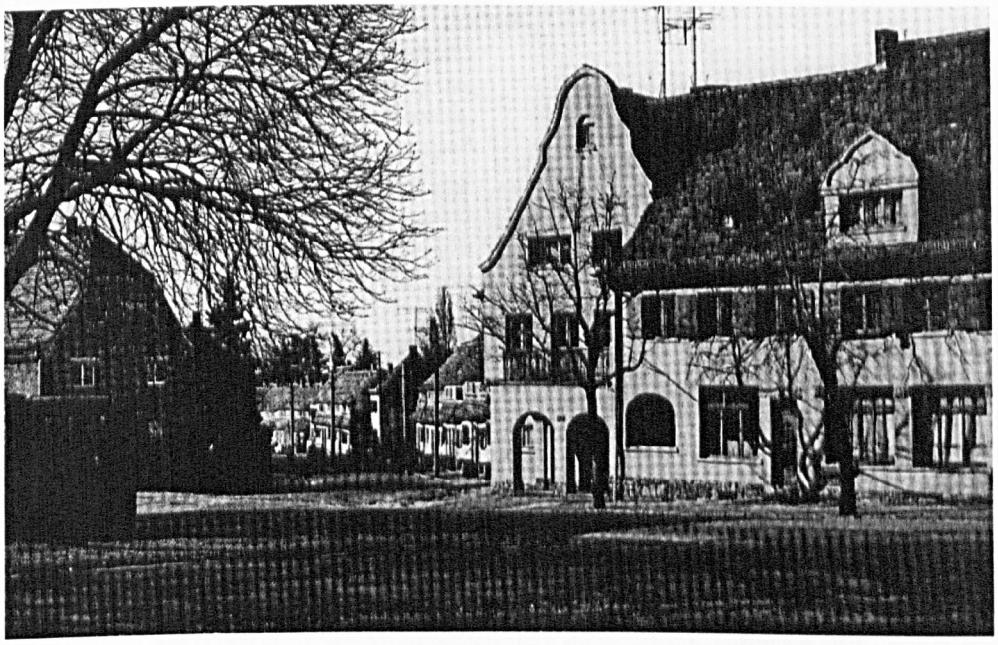
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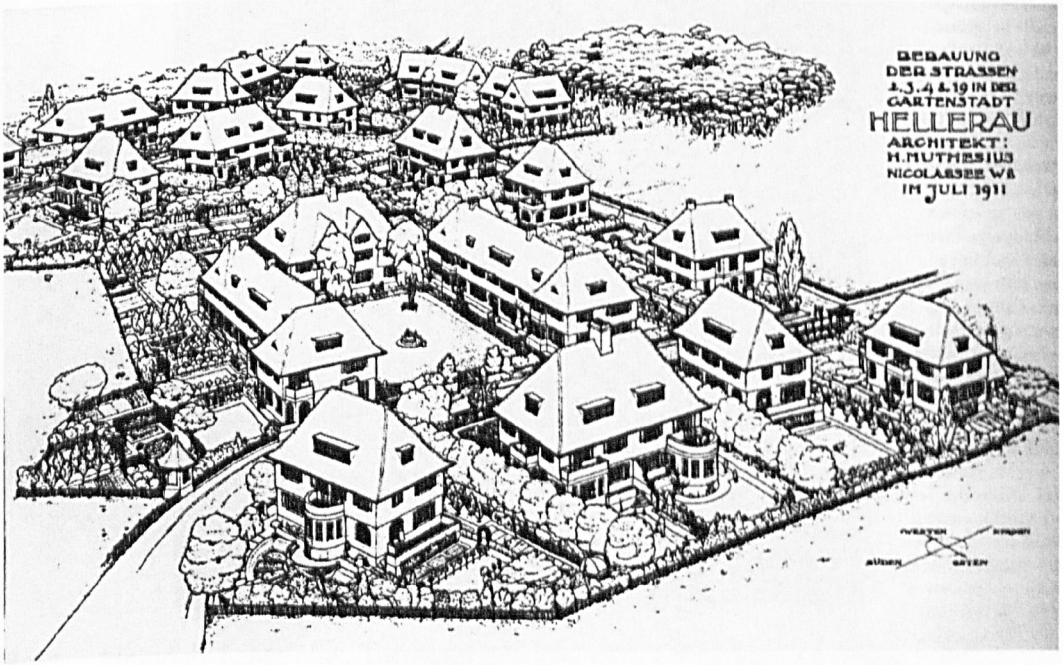
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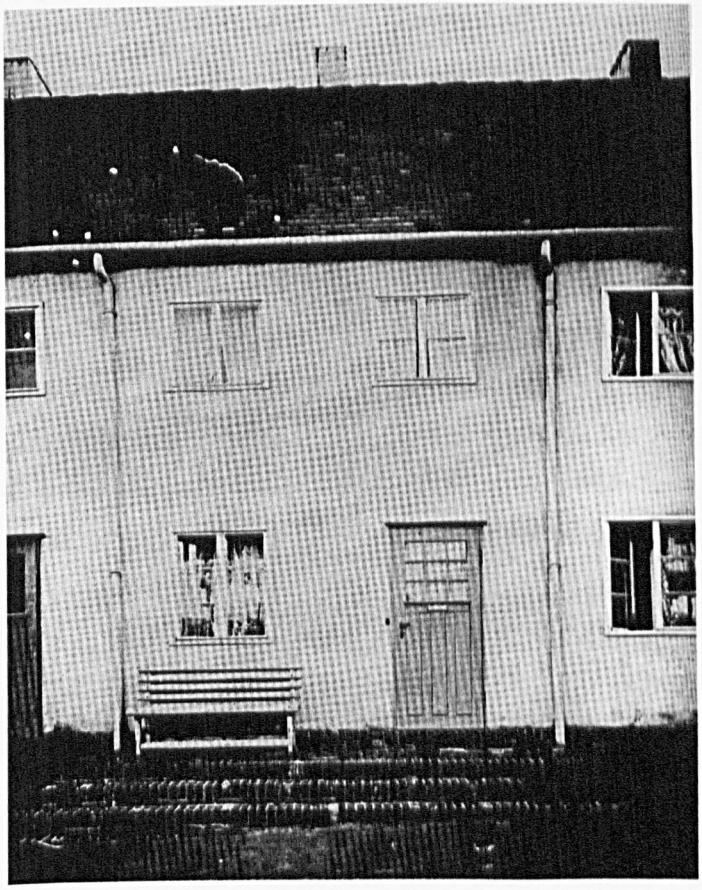
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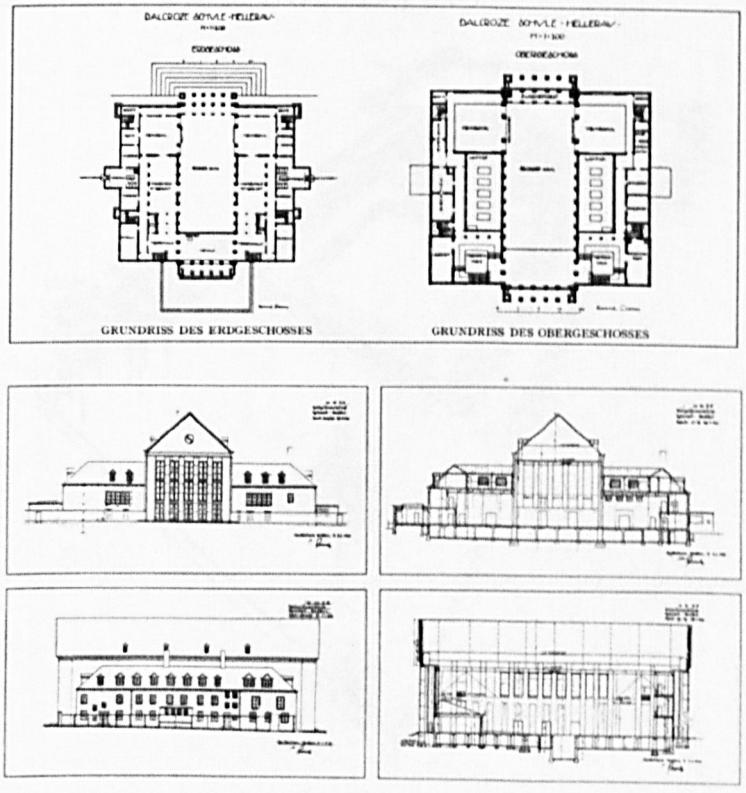
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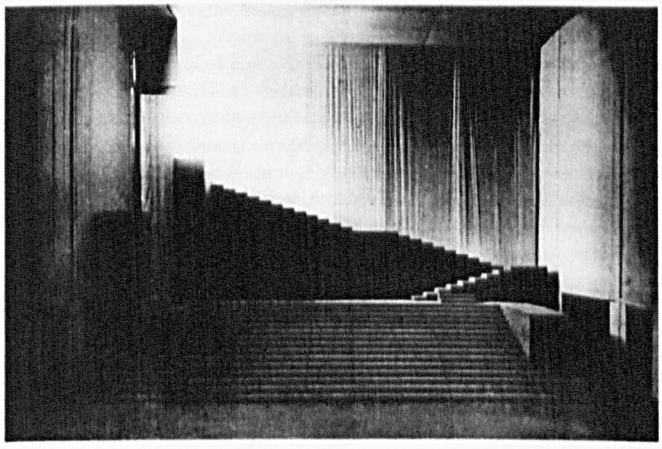
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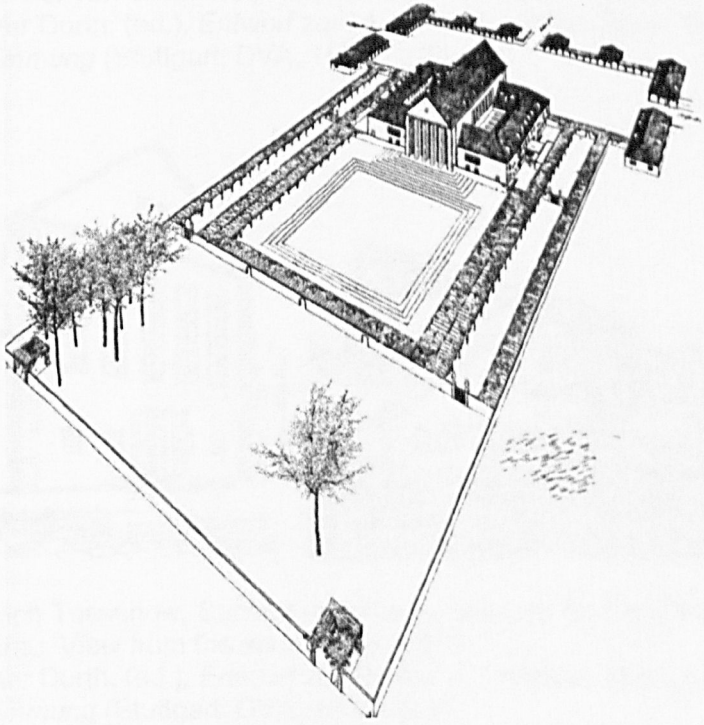
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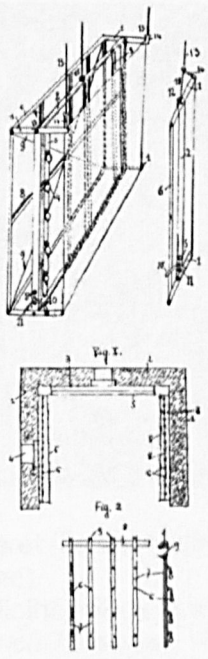
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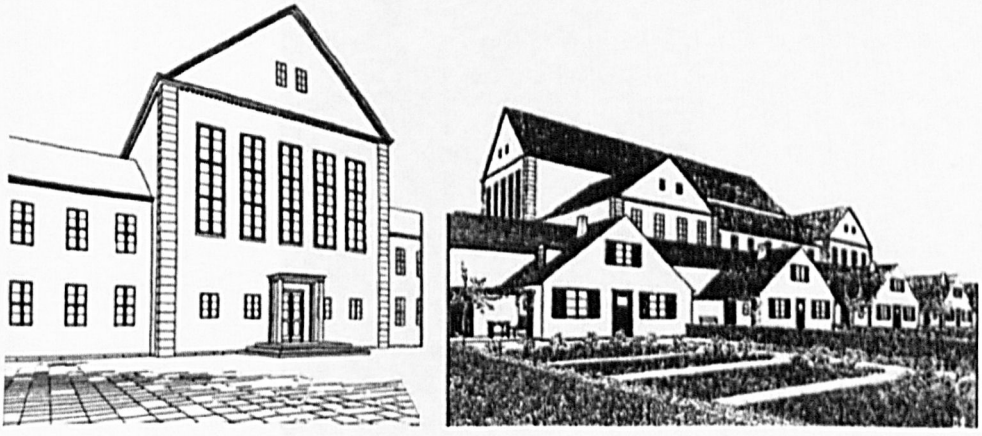
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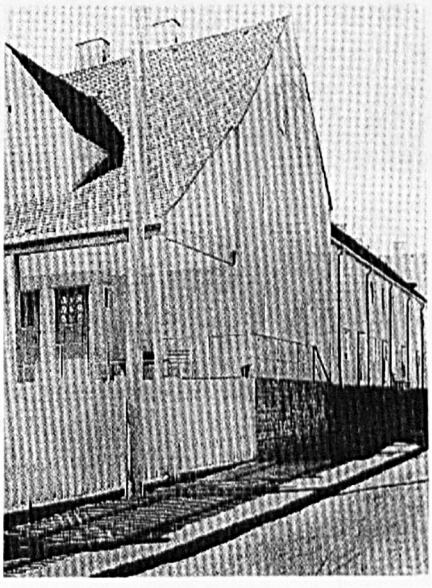
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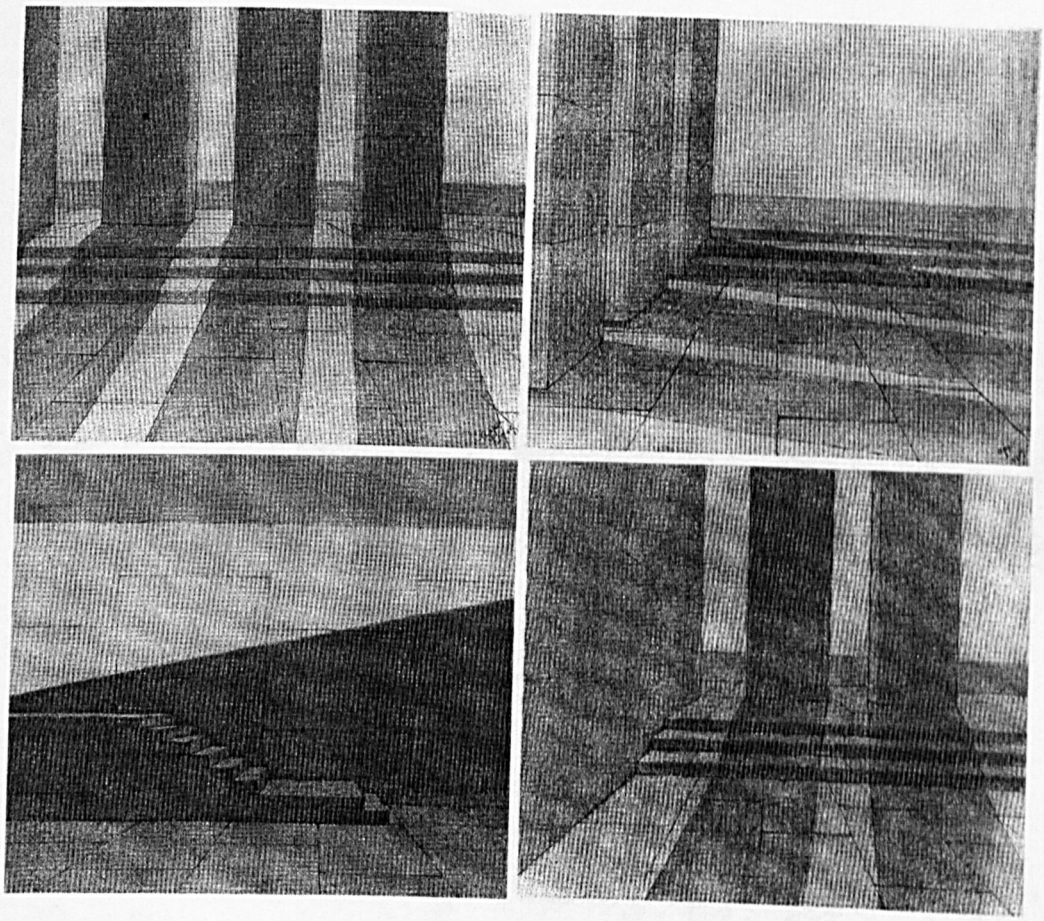
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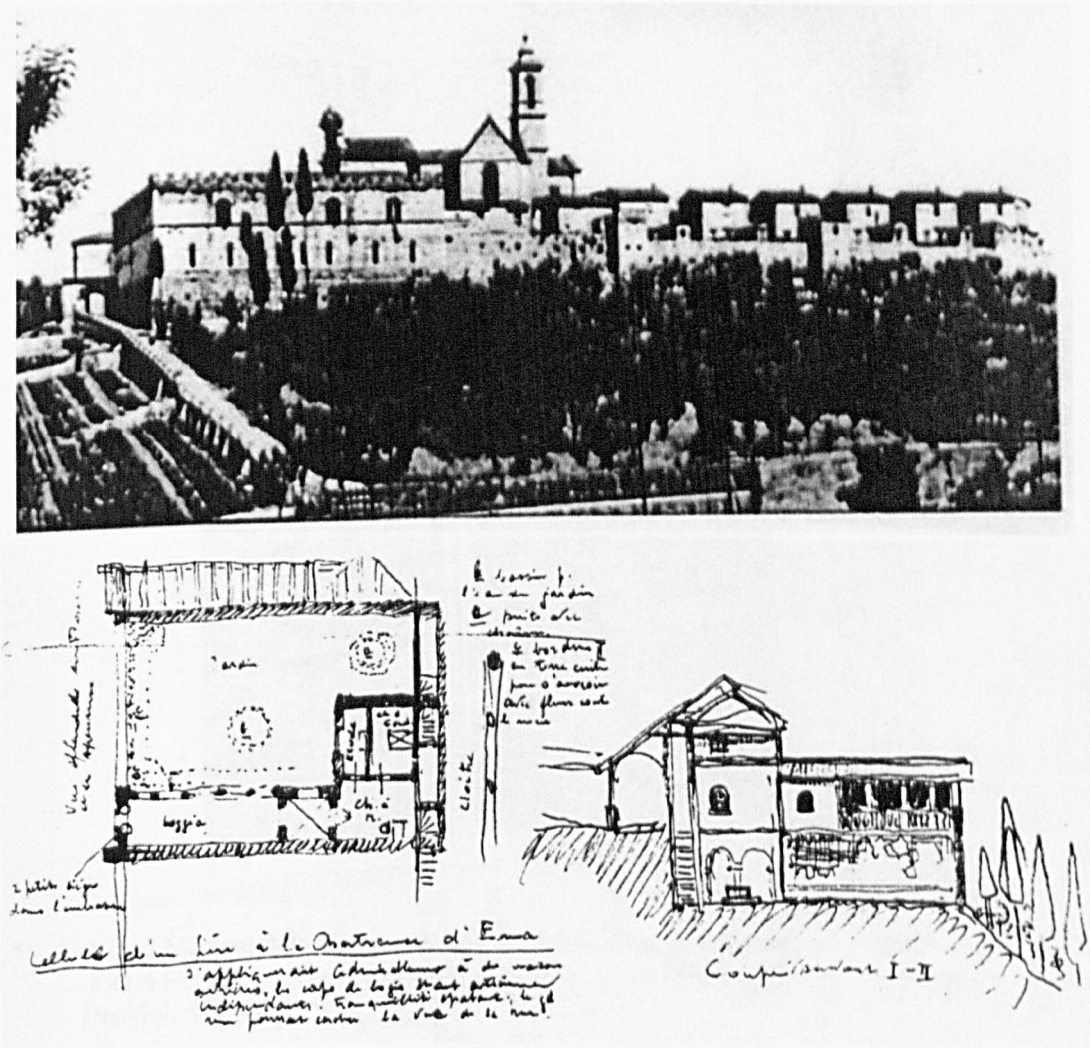
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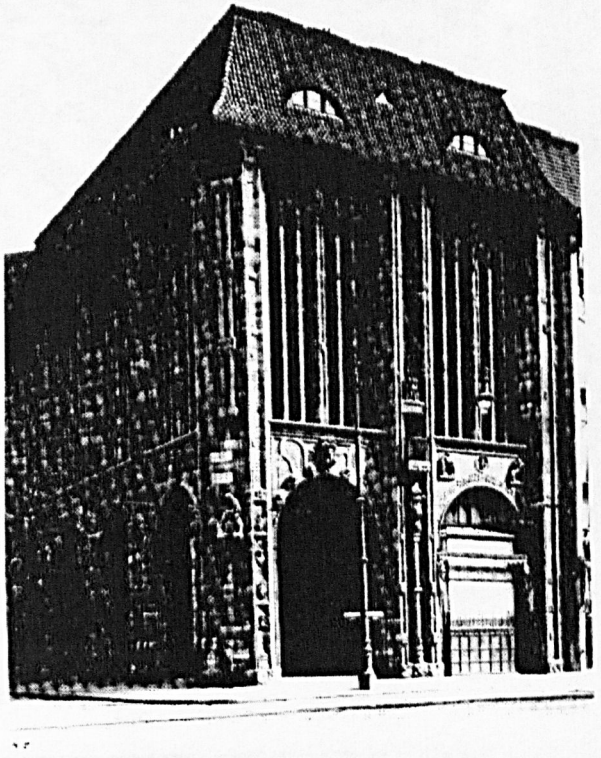
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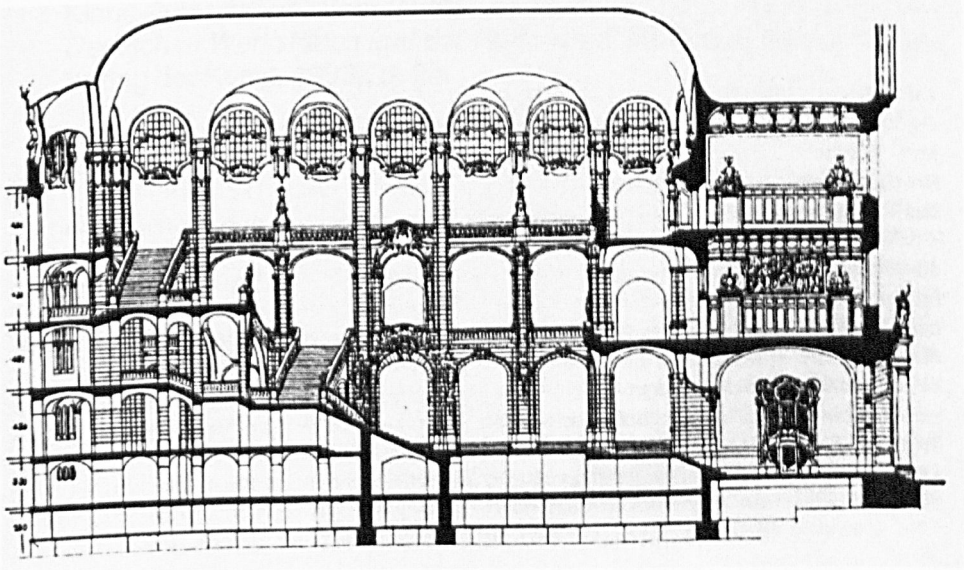
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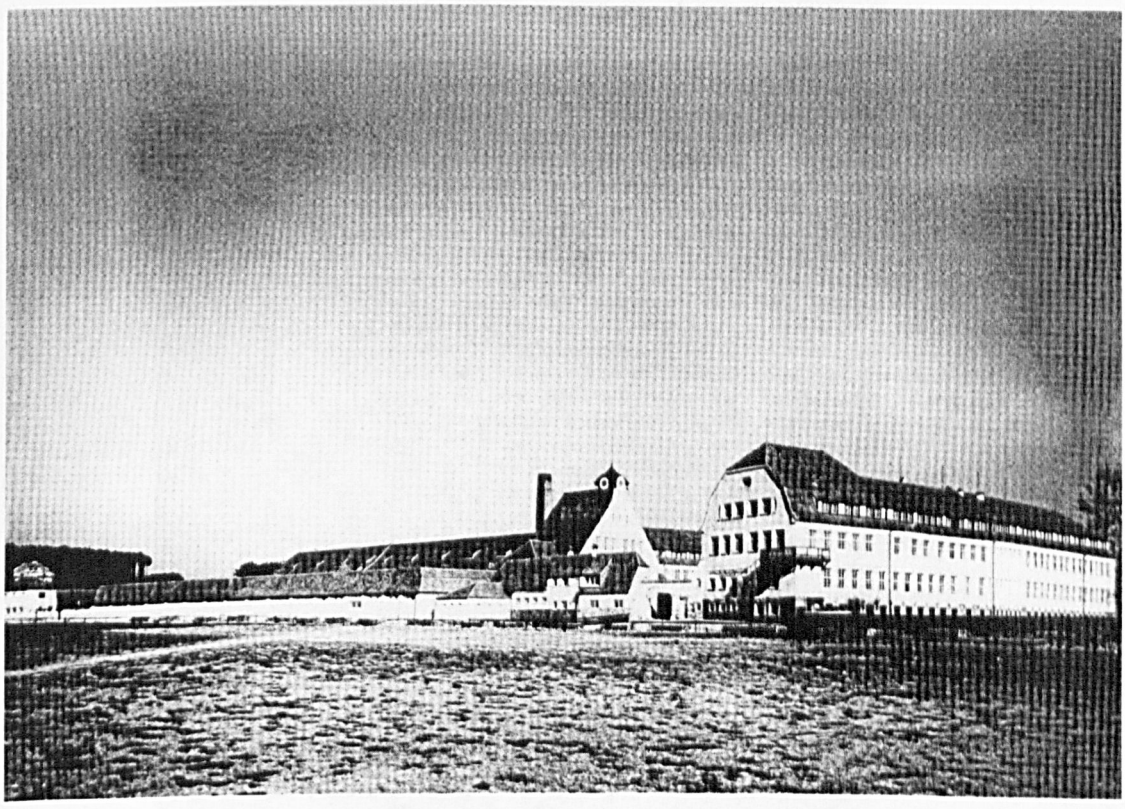
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Julius Posener, *Berlin auf dem Wege zu einer neuen Architektur* (Munich: Prestel, 1979), p.25.



2.2 Rudolph Mönnich and Carl Vohl, Moabit Criminal Court, Berlin, (1902-1906), staircase.
Julius Posener, *Berlin auf dem Wege zu einer neuen Architektur* (Munich: Prestel, 1979), p.85.



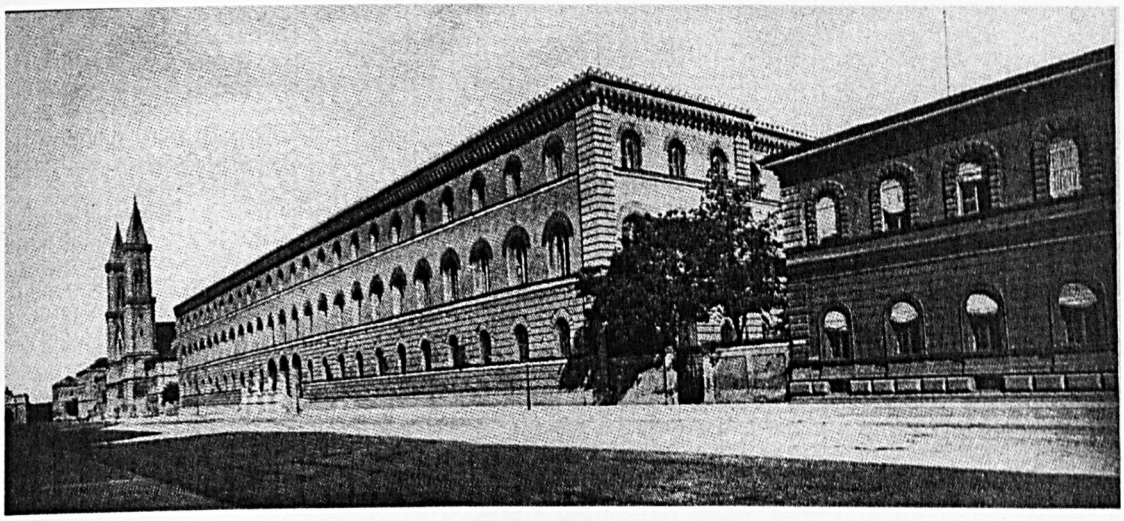
2.3 Rudolph Mönnich and Carl Vohl, Moabit Criminal Court, Berlin, (1902-1906), section through stairhall.
Julius Posener, *Berlin auf dem Wege zu einer neuen Architektur* (Munich: Prestel, 1979), p.85.



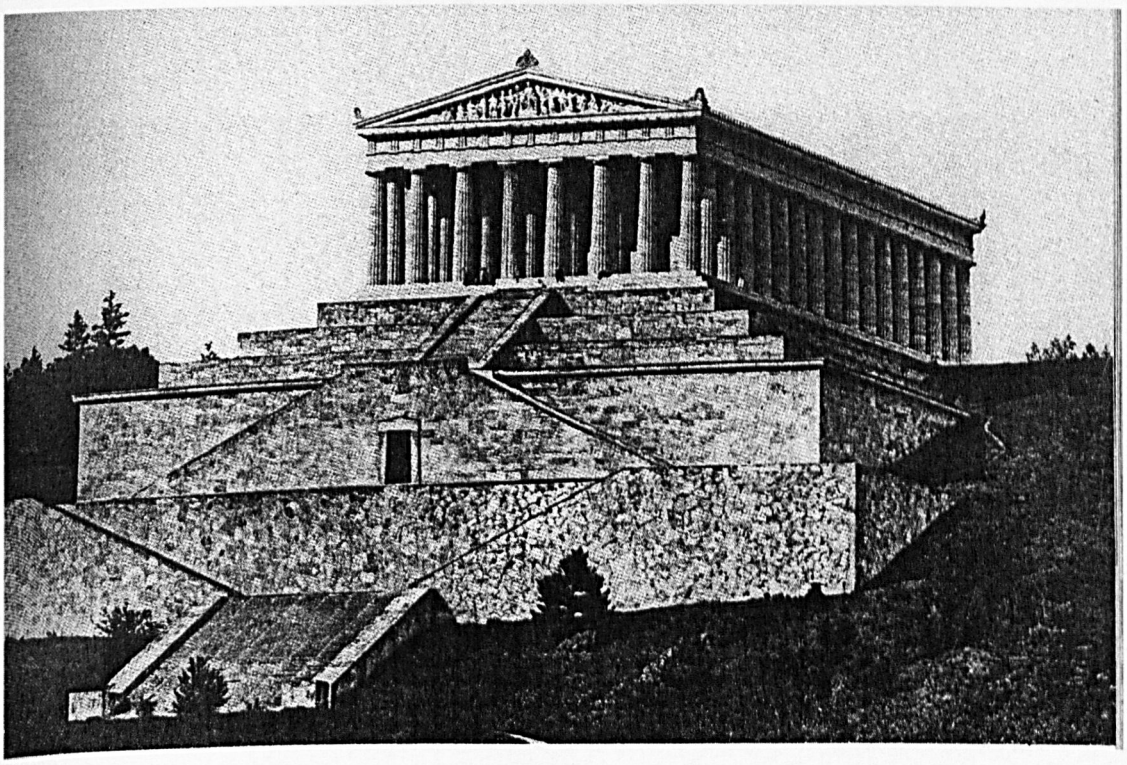
2.4 Richard Riemerschmid, Deutsche Werkstätten, Hellerau. View from south, (1909-1910).
Klaus-Peter Arnold, *Vom Sofakissen zum Städtebau: Die Geschichte der Deutschen Werkstätten und der Gartenstadt Hellerau* (Dresden/ Basel: Verlag der Kunst, 1993), p. 94.



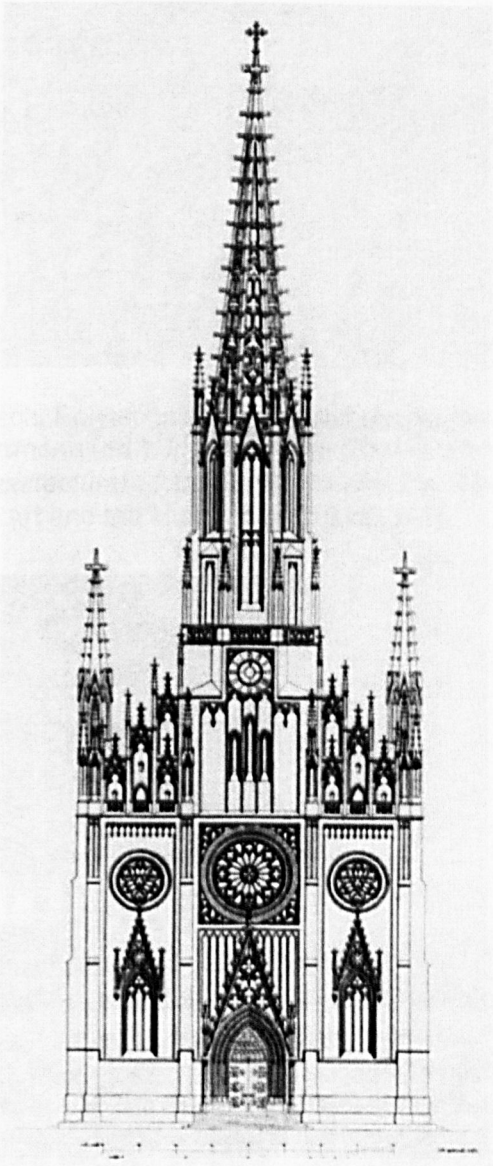
2.5 Abbé Laugier, Frontispiece to *Essai sur l'Architecture*, (Paris, 1755).
Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames and Hudson, 2000), p.223.



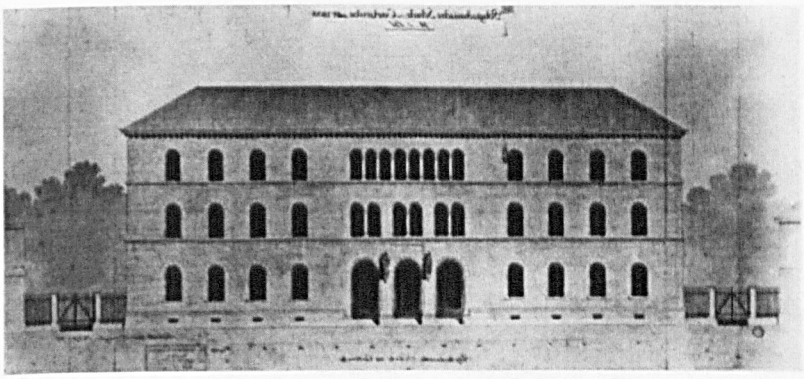
2.6 Friedrich von Gärtner, *Staatsbibliothek*, Munich, (1831-1842).
David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal 1740-1840* (London: Thames and Hudson, 1987), p.191.



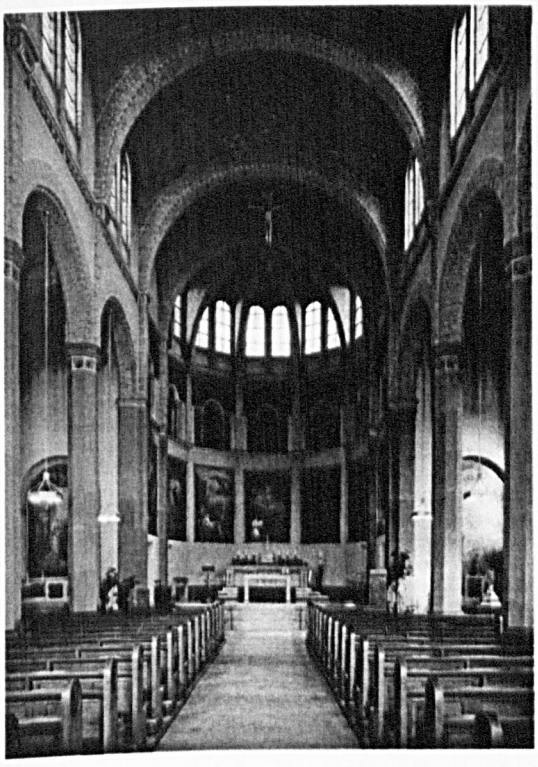
2.7 Leo von Klenze, Walhalla,near Regensburg, (1830-1842).
David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal 1740-1840* (London: Thames and Hudson, 1987), p.159.

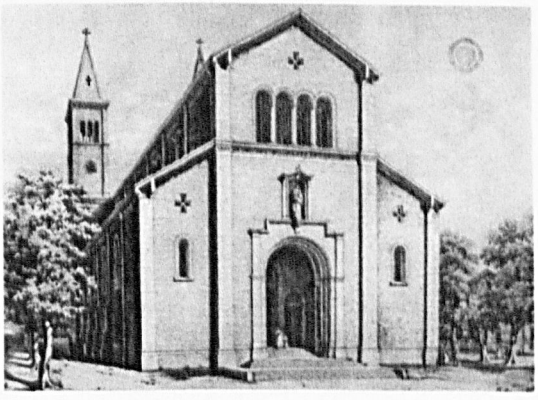


2.8 Daniel Joseph Ohlmüller, Maria-Hilfskirche, Munich, (1831-1839). Wolfgang Herrmann (ed.), *In What Style Should We Build?: The German Debate on Architectural Style* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities: 1992), p. 32.

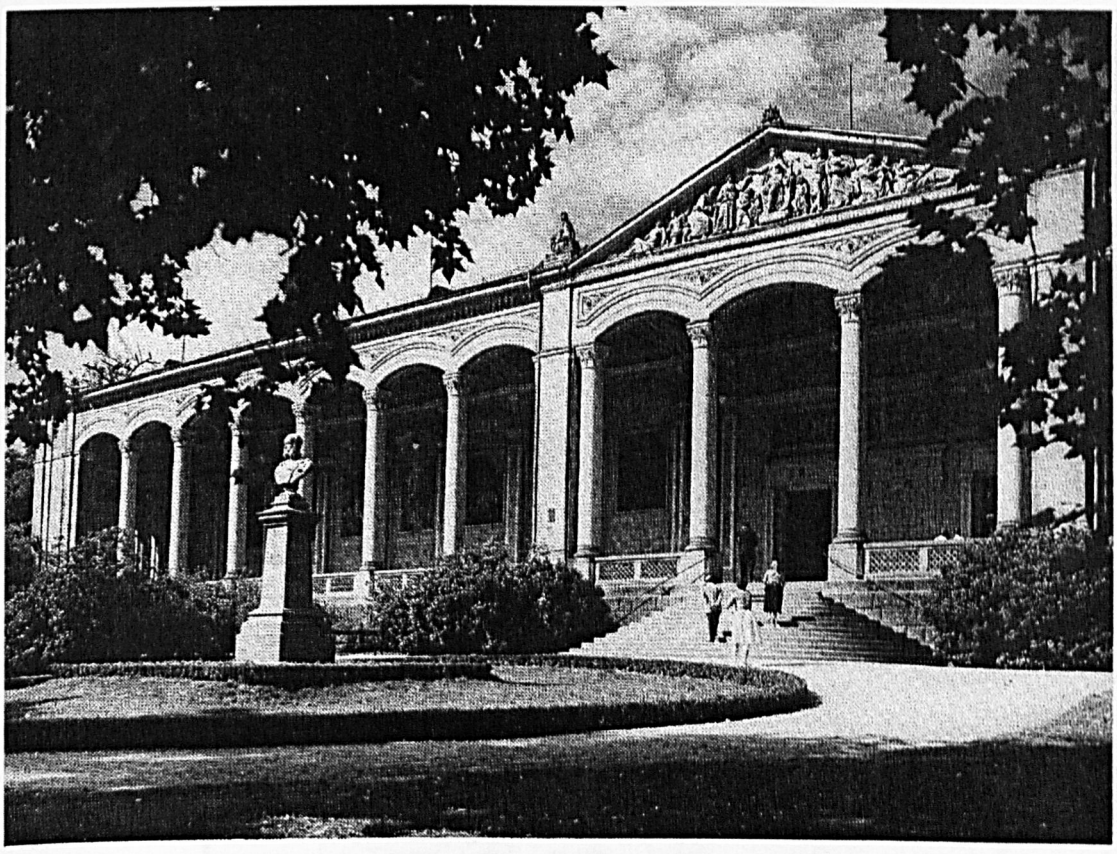


2.9 Heinrich Hübsch, Polytechnische Hochschule, Karlsruhe, (1833-1835). Wolfgang Herrmann (ed.), *In What Style Should We Build?: The German Debate on Architectural Style* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities: 1992), p.19.

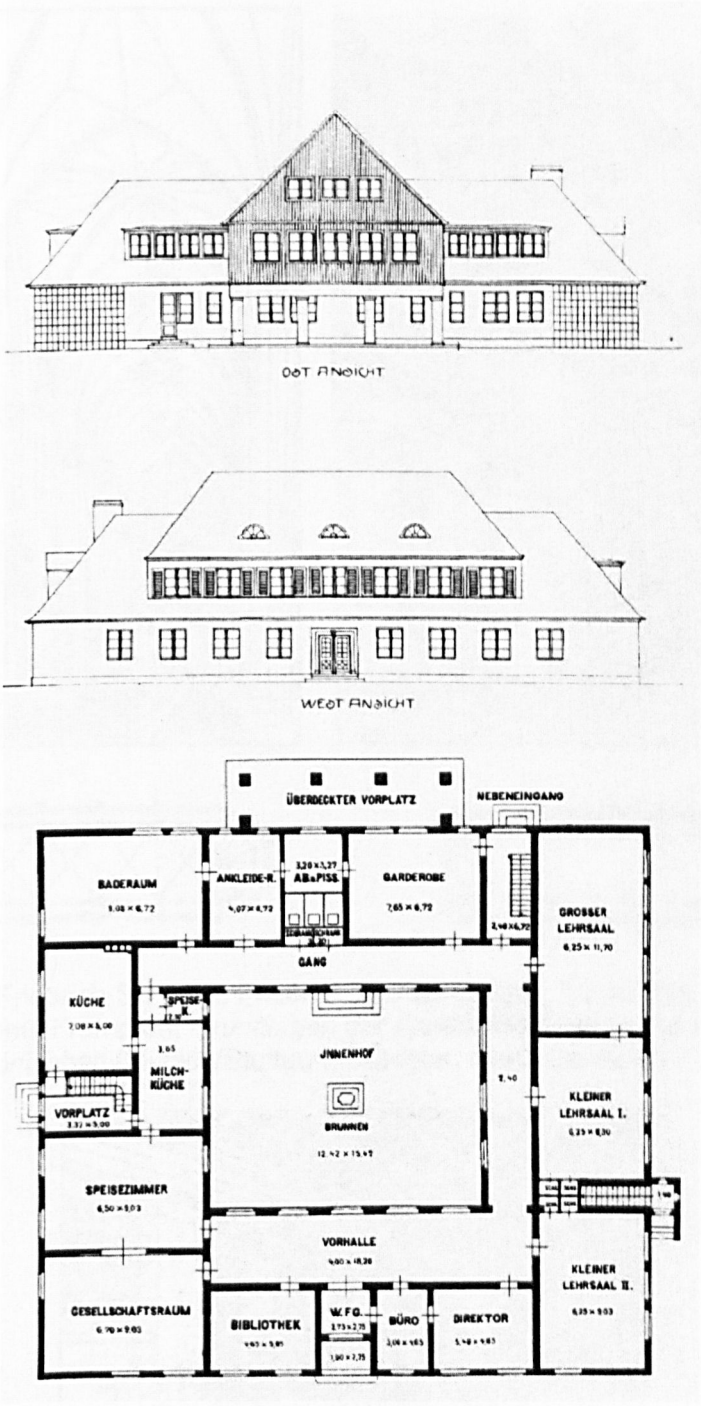




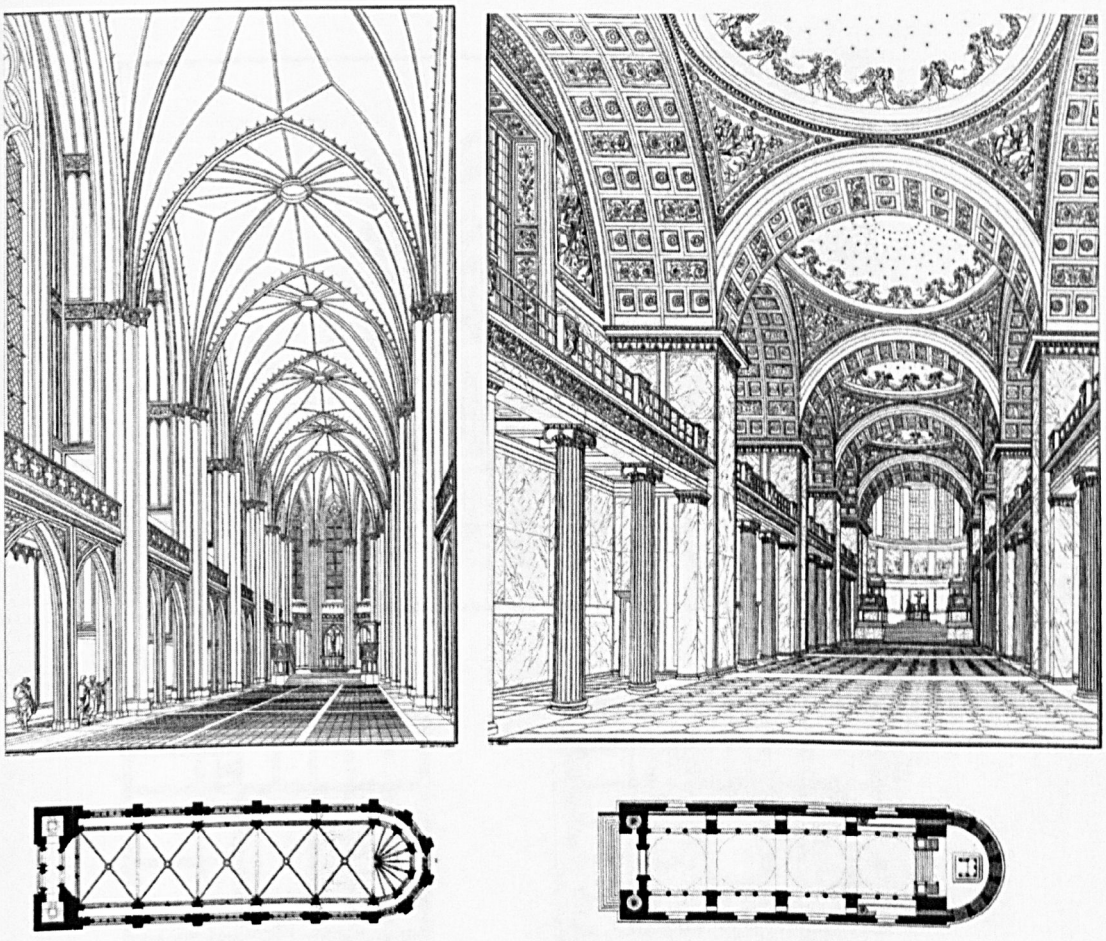
2.10 Heinrich Hübsch, St Cyriacus, Bulach, (1834-1837). Wolfgang Herrmann (ed.), *In What Style Should We Build?: The German Debate on Architectural Style* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities: 1992), pp. 17-18.



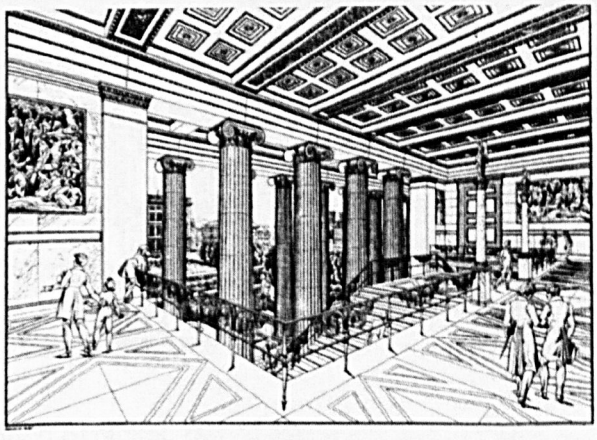
2.11 Heinrich Hübsch, *Trinkhalle*, Baden-Baden, (1837-1840).
David Watkin and Tilman Mellinghoff, *German Architecture and the Classical Ideal 1740-1840* (London: Thames and Hudson, 1987), p.179.



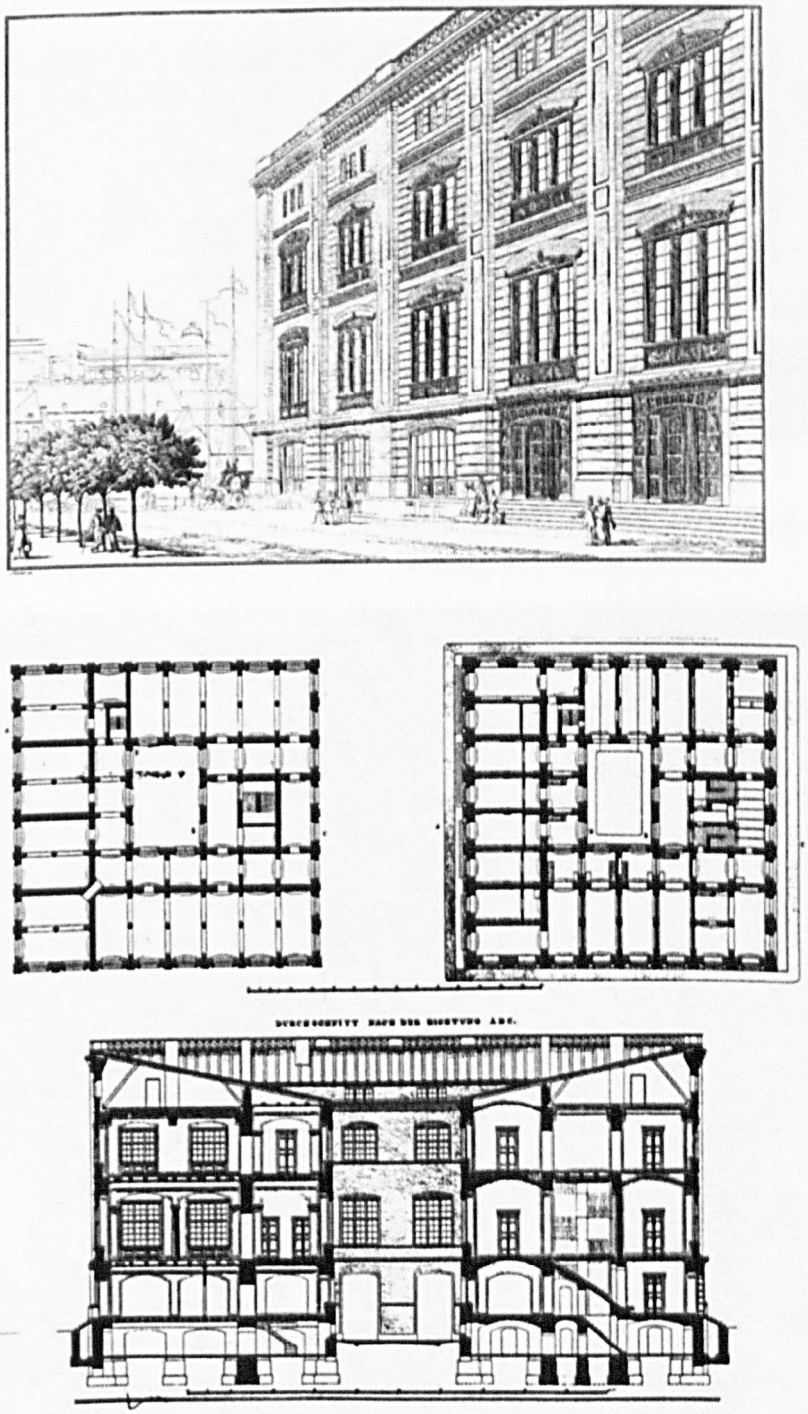
2.12 Heinrich Tessenow, *Lehrerbildungsanstalt*, Peine, nr Hannover, (1912). Marco De Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart: DVA, 1991), p. 224.



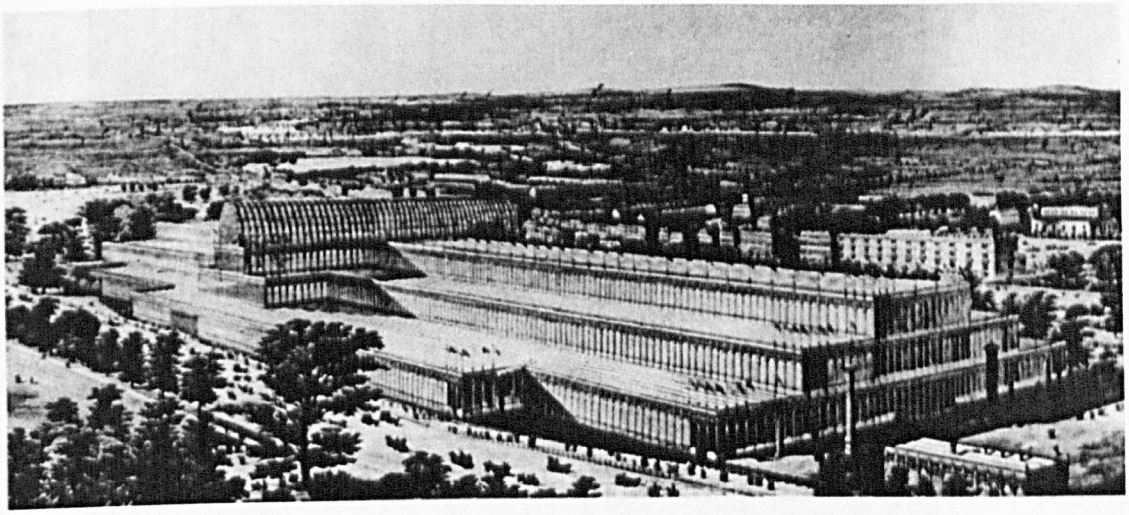
2.13 Karl Friedrich Schinkel, Friedrich Werder Church, Berlin, (1830).
Kenneth Frampton, *Grundlagen der Architektur: studien zur Kultur des Tektonischen* (Munich/Stuttgart, Oktagon, 1993), pp.82-85.



2.14 Karl Friedrich Schinkel, Altes Museum, Berlin, (1830).
Kenneth Frampton, *Grundlagen der Architektur: studien zur Kultur des Tektonischen* (Munich/Stuttgart, Oktagon, 1993), p. 89.



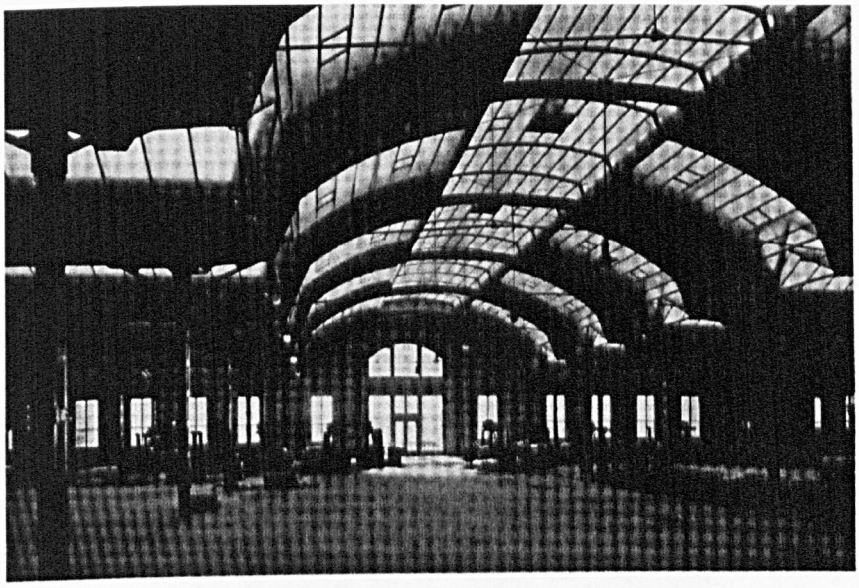
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2.16 Joseph Paxton, Crystal Palace, London, (1851).
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2.17 Henri Labrouste, *Bibliothèque Ste Geneviève*, Paris, (1843-1850).
Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth: Penguin, 1958), p. 182.



2.18 Hermann Muthesius, Silk Facory, Nowawes, Potsdam, (1912-1913).
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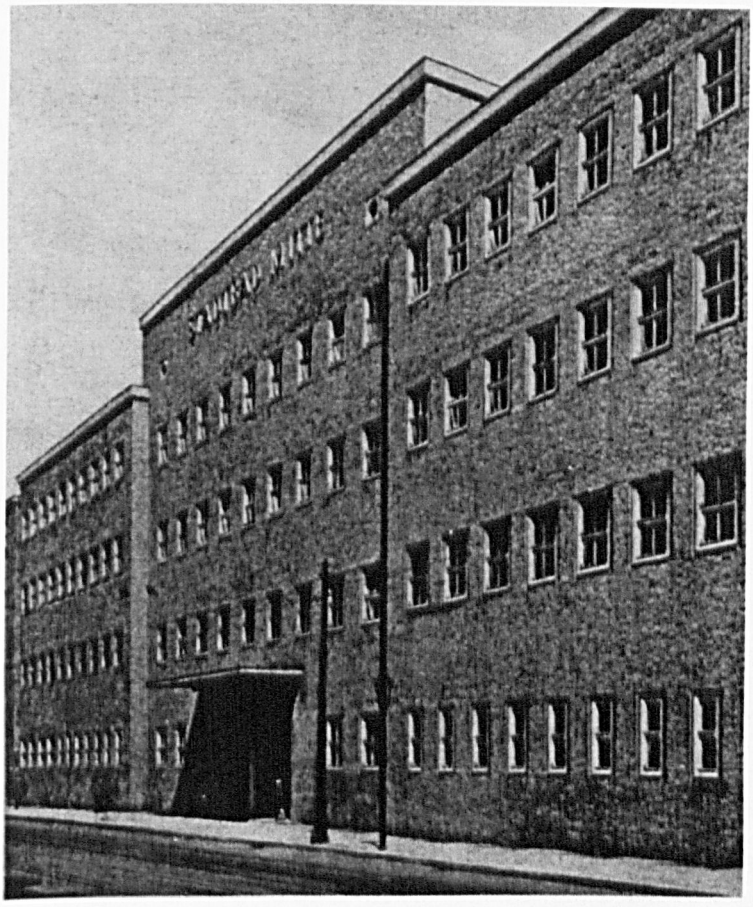
2.19 Martin Elsäßer, Market Hall, Stuttgart, (1913).
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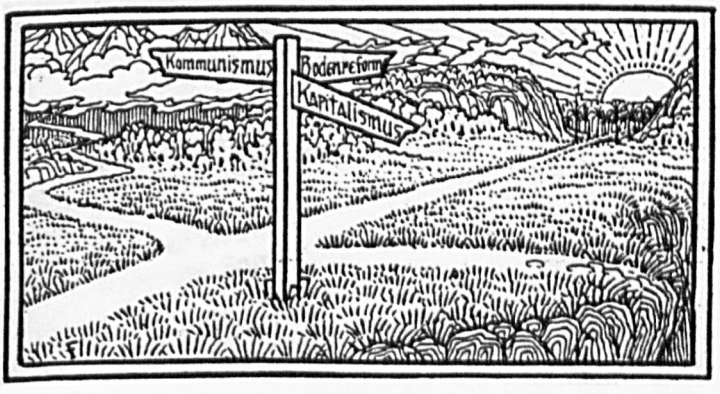
2.20 William Barlow and George Gilbert Scott, St Pancras Station and Midland Hotel.
Roger Dixon and Stefan Muthesius, *Victorian Architecture* (London: Thames and Hudson, 1978), p.103.



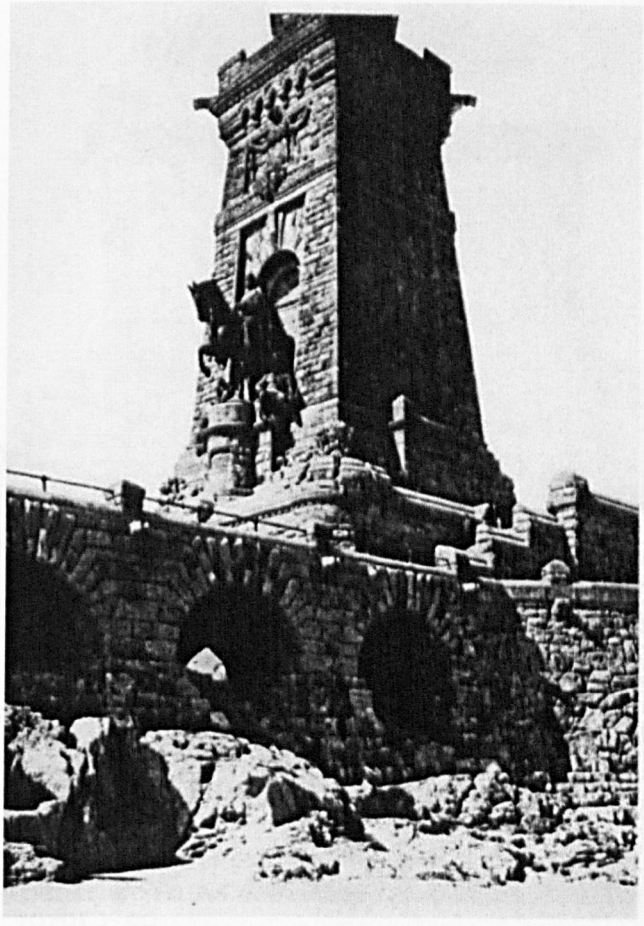
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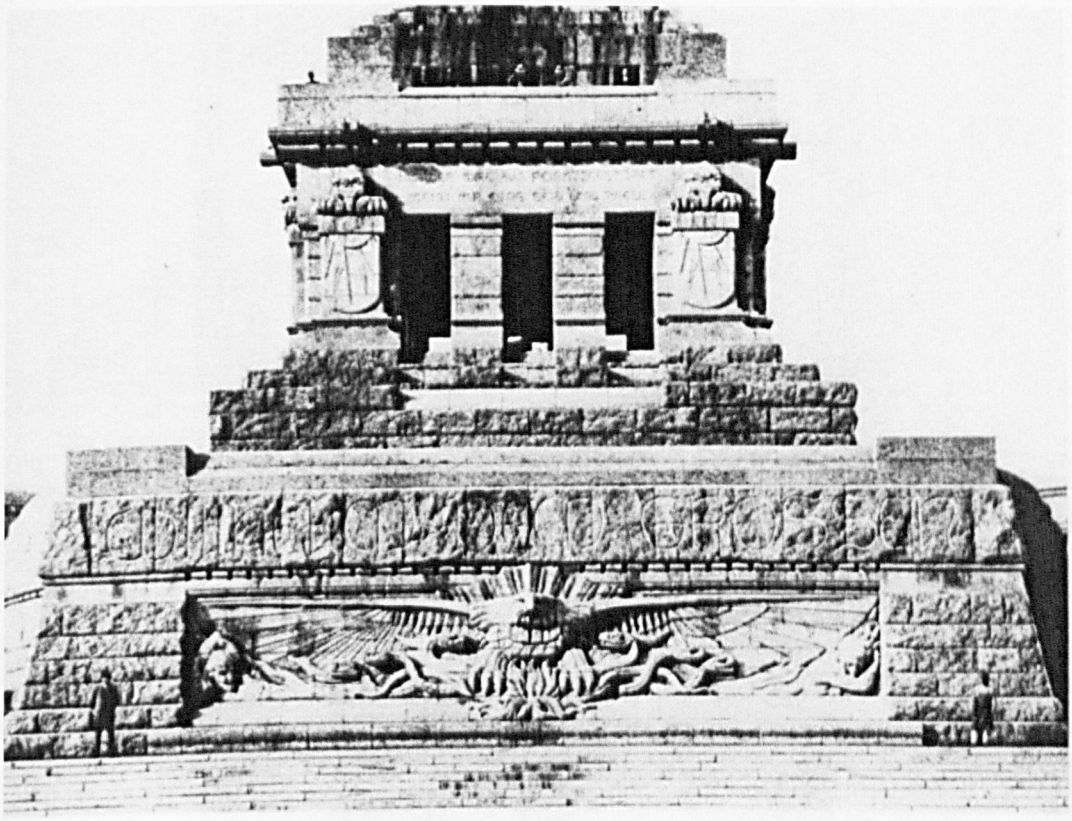
2.22 Heinrich Tessenow, Swimming Pool, Berlin-Mitte, (1927).
Gerda Wangerin and Gerda Weiss, *Heinrich Tessenow: Ein Baumeister 1876-1950. Leben. Lehre. Werk* (Essen, Bacht, 1976), p. 241.



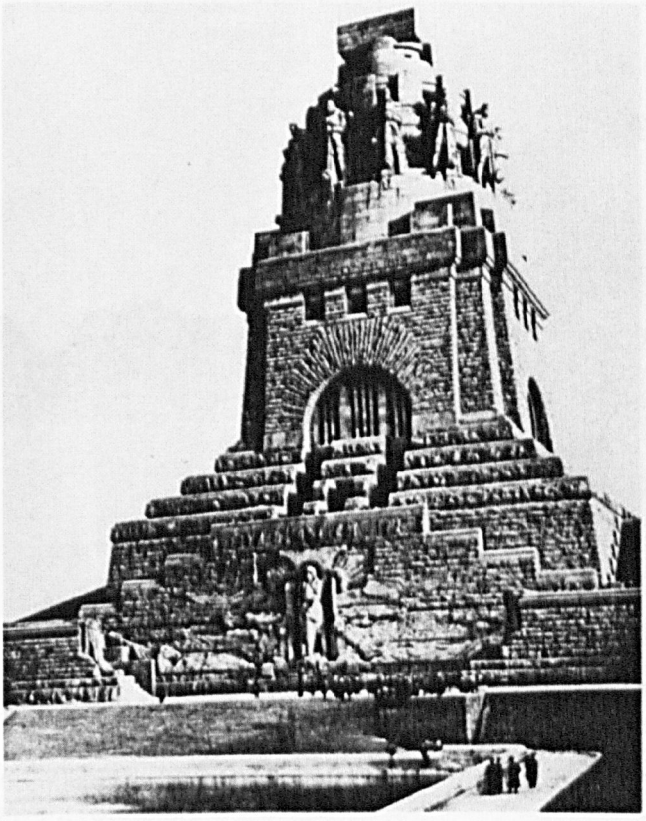
2.23 Hugo Höppener ('Fidus'), 'Communism, Land Reform, Capitalism', drawing.
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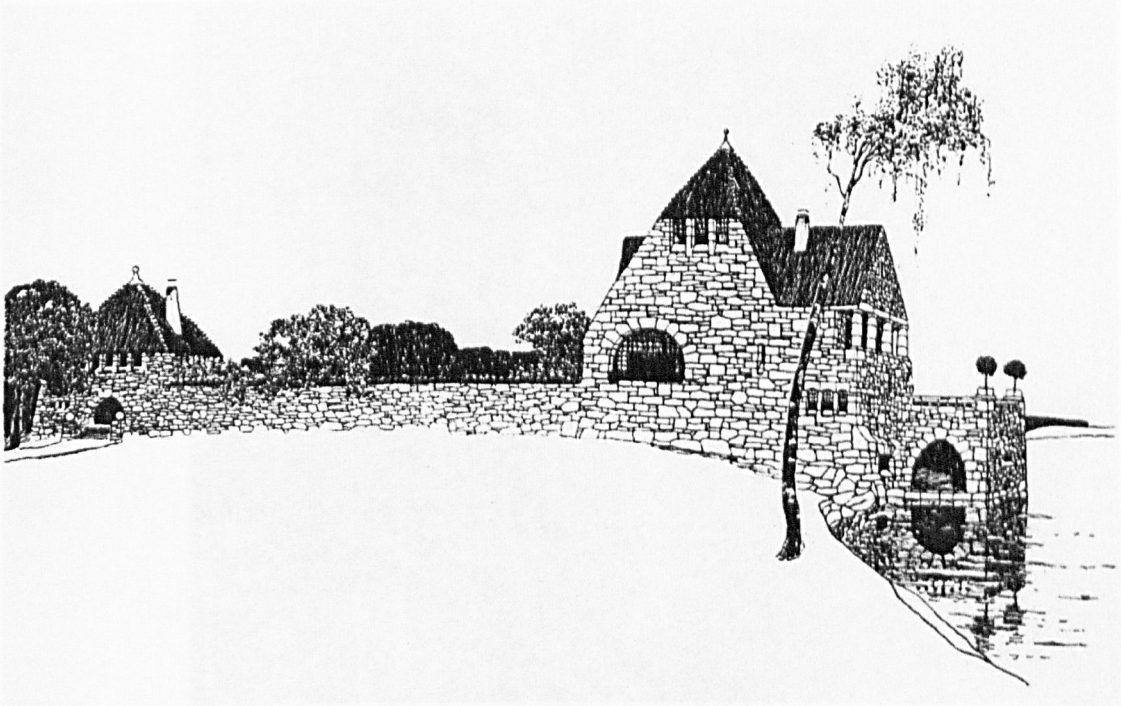
2.24 Bruno Schmitz, Kyffhäuser Monument, (1896).
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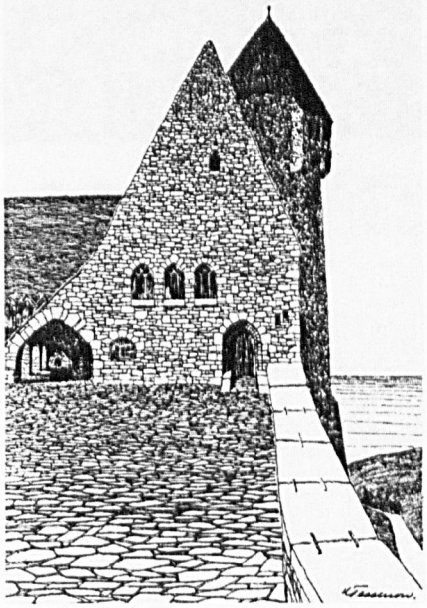
2.25 Bruno Schmitz, Kaiser Monument, Deutsches Eck, (1897).
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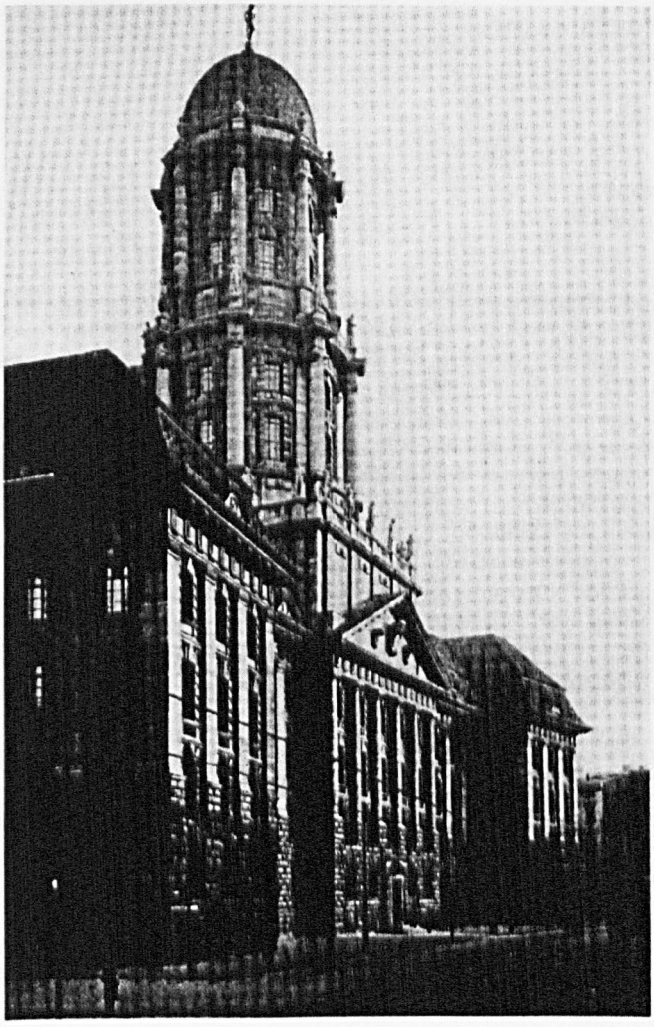
2.26 Bruno Schmitz, *Völkerschlacht* Monument, Leipzig, (1898-1913).
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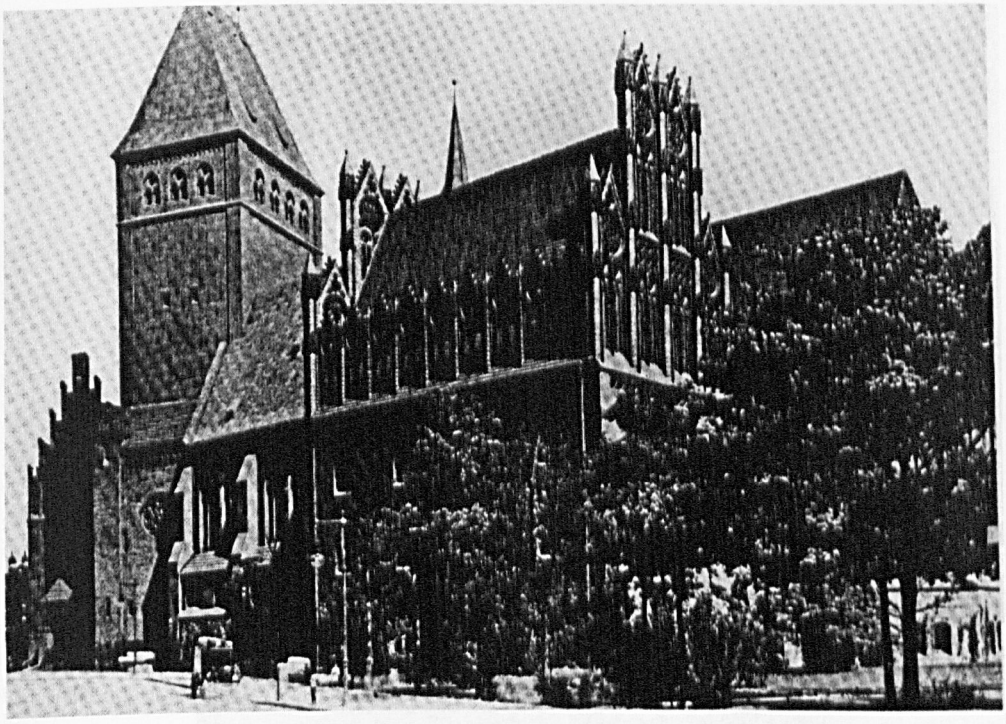
2.27 Heinrich Tessenow, *Haus am See*, (1903).
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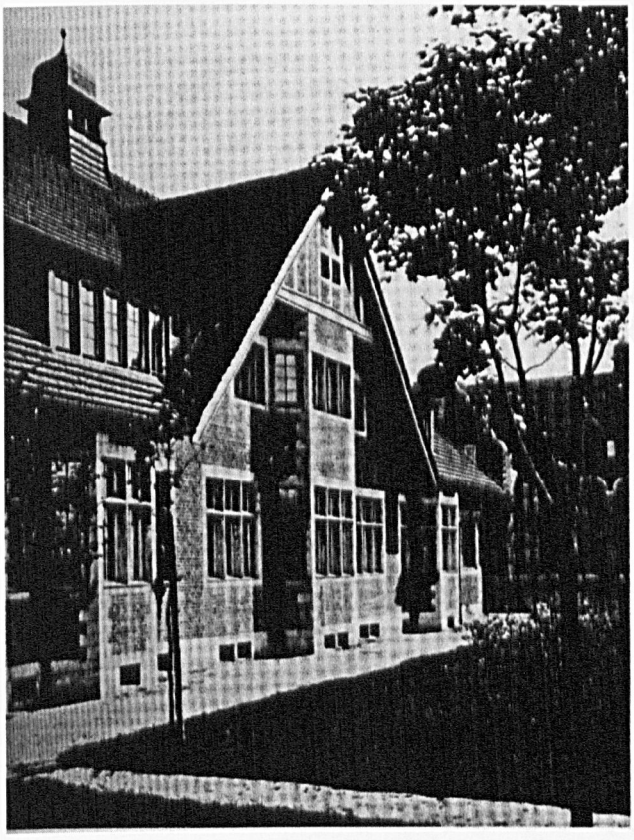
2.28 Heinrich Tessenow, *Studie für ein Haus im Gebirge*, (1903).
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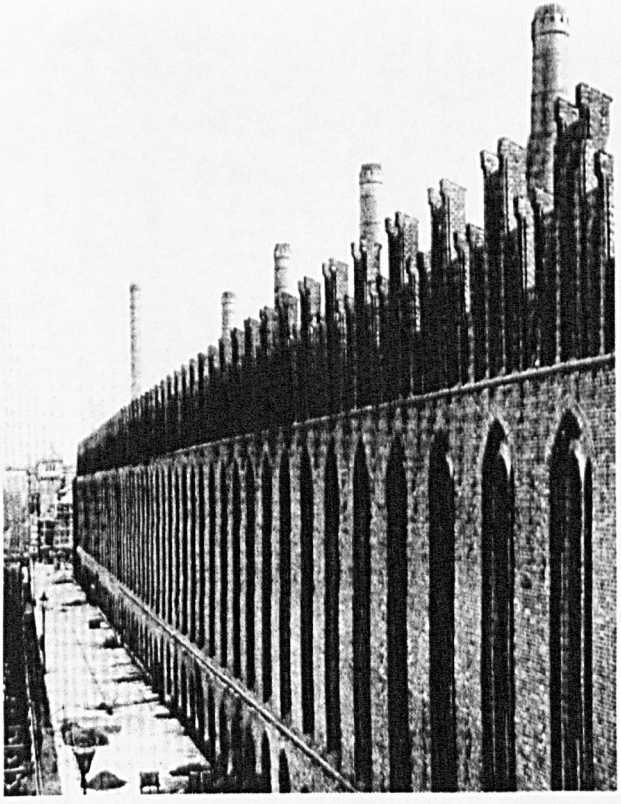
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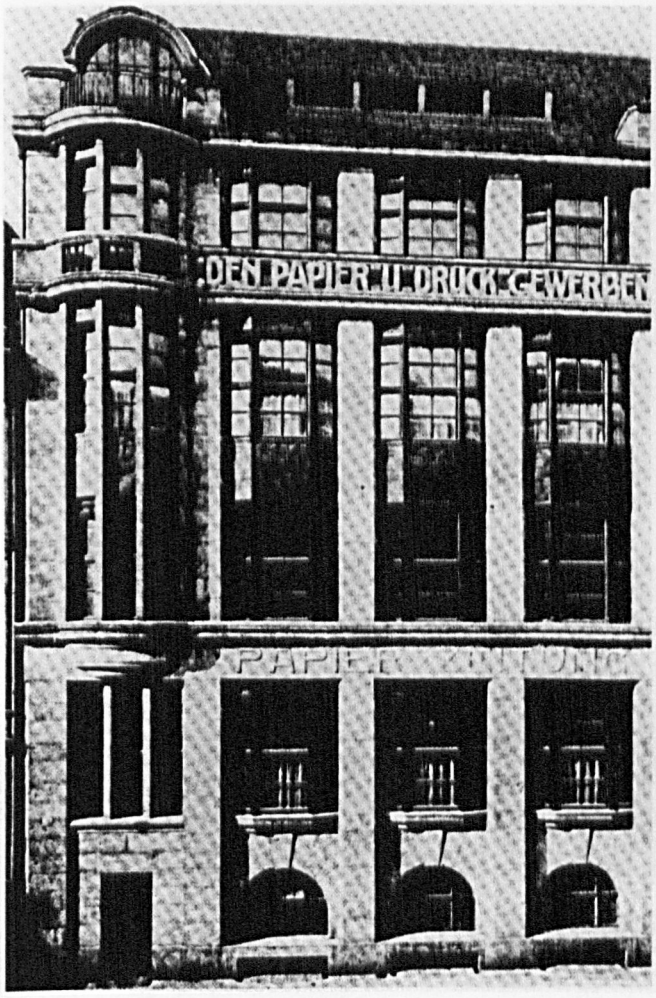
2.30 Ludwig Hoffmann, *Märkisches Museum*, Berlin, (1898-1908).
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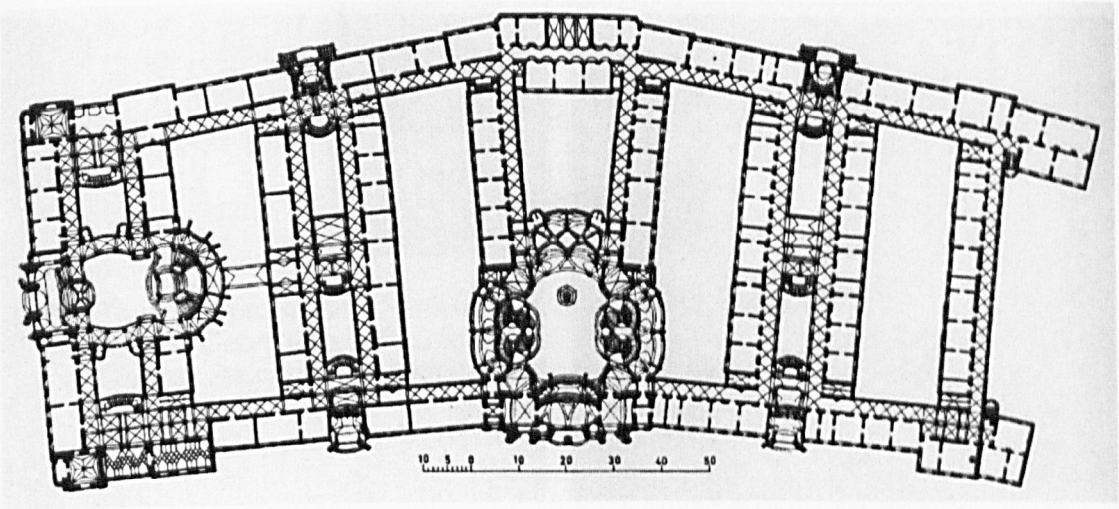
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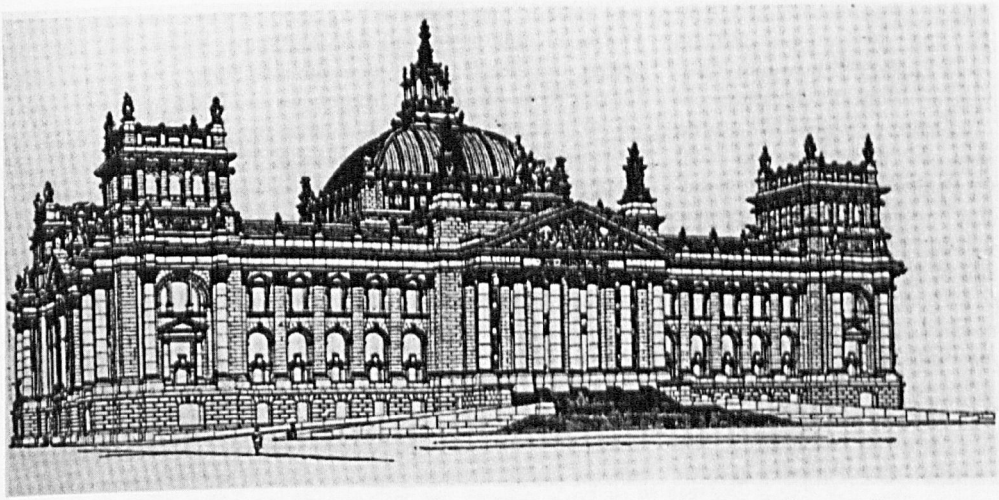
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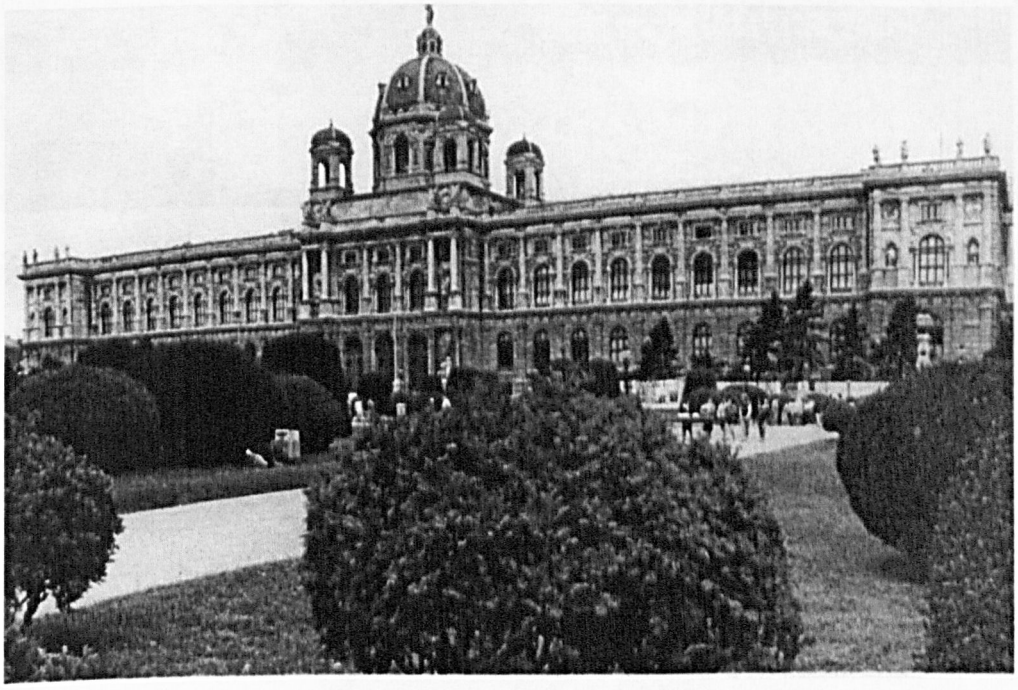
2.34 Otto Schmalz, *Land- und Amtsgericht*, Berlin, (1896-1905).
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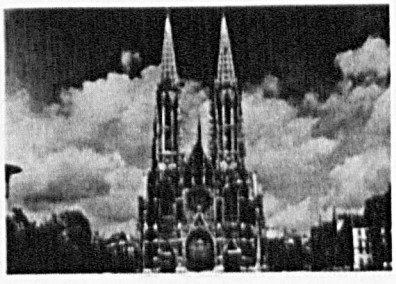
2.36 Theophil von Hansen, Parliament, Vienna, (1874-1883).
Johann Georg Gsteu, Otto Kapfinger, Ernst Mateovics, Wilfried Richter, Dietmar Steiner (eds), *Architecture in Vienna* (Vienna: Wiener Verlag, 1990), p.66.



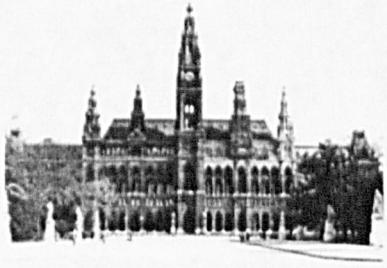
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Johann Georg Gsteu, Otto Kapfinger, Ernst Mateovics, Wilfried Richter, Dietmar Steiner (eds), *Architecture in Vienna* (Vienna: Wiener Verlag, 1990), p.67.



2.38 Gottfried Semper and Karl von Hasenauer, *Burgtheater*, Vienna, (1874-1888).
Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth: Penguin, 1958), p.216.



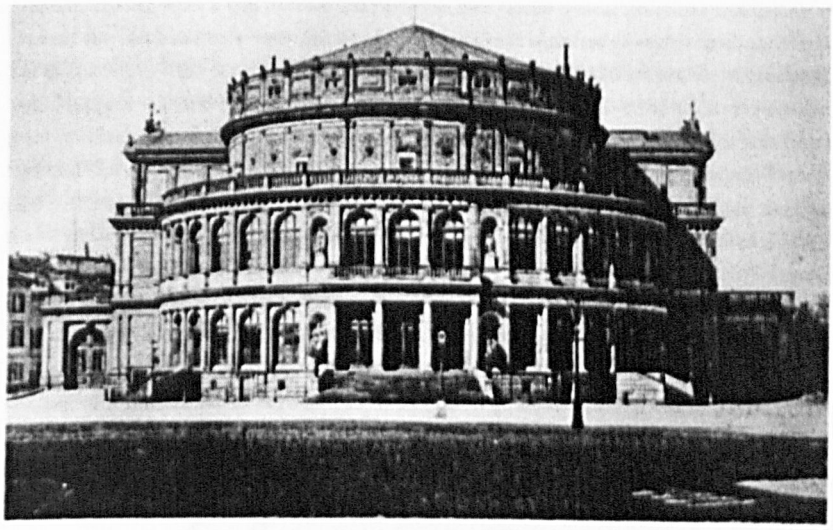
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Johann Georg Gsteu, Otto Kapfinger, Ernst Mateovics, Wilfried Richter, Dietmar Steiner (eds), *Architecture in Vienna* (Vienna: Wiener Verlag, 1990), p.61.



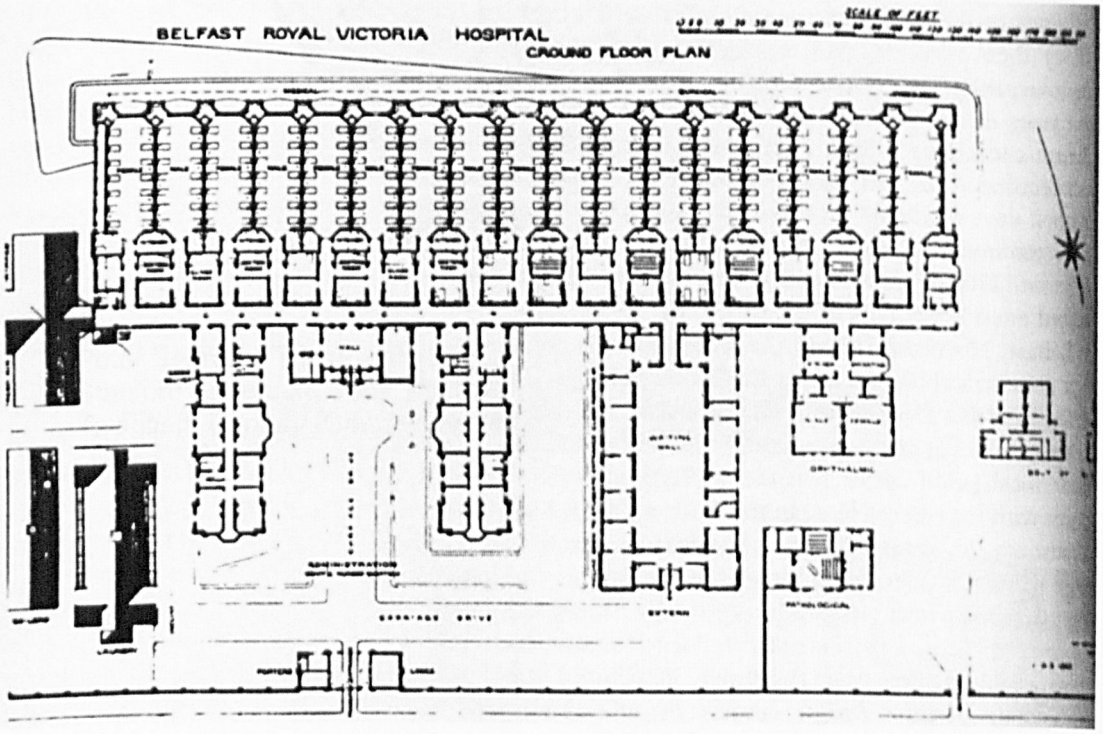
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Johann Georg Gsteu, Otto Kapfinger, Ernst Mateovics, Wilfried Richter, Dietmar Steiner (eds), *Architecture in Vienna* (Vienna: Wiener Verlag, 1990), p.67.



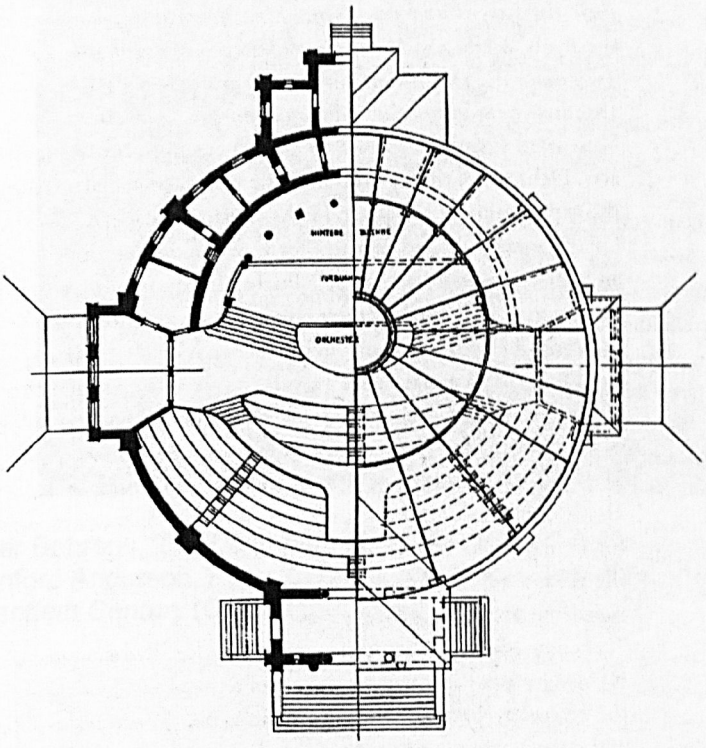
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Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries* (Harmondsworth: Penguin, 1958), p.469.



2.42 Gottfried Semper, Opera House, Dresden.
Wolfgang Herrmann (ed.), *In What Style Should We Build?: The German Debate on Architectural Style* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities: 1992), p.49.



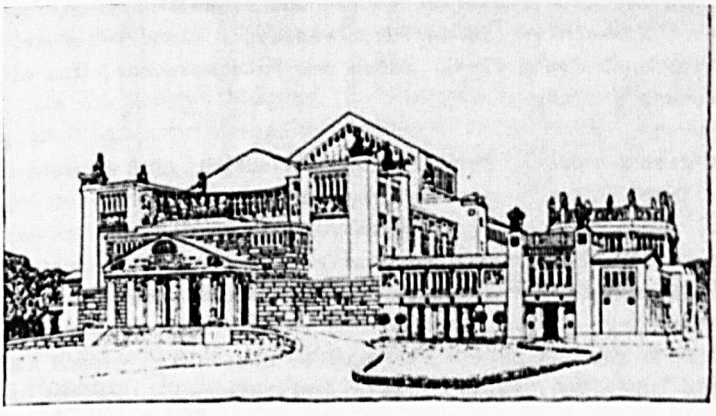
2.43 Henman and Cooper, Royal Victoria Hospital, Belfast, (1903).
Reyner Banham, *The Architecture of the Well-Tempered Environment* (London: Harmondsworth, 1969), p.76.



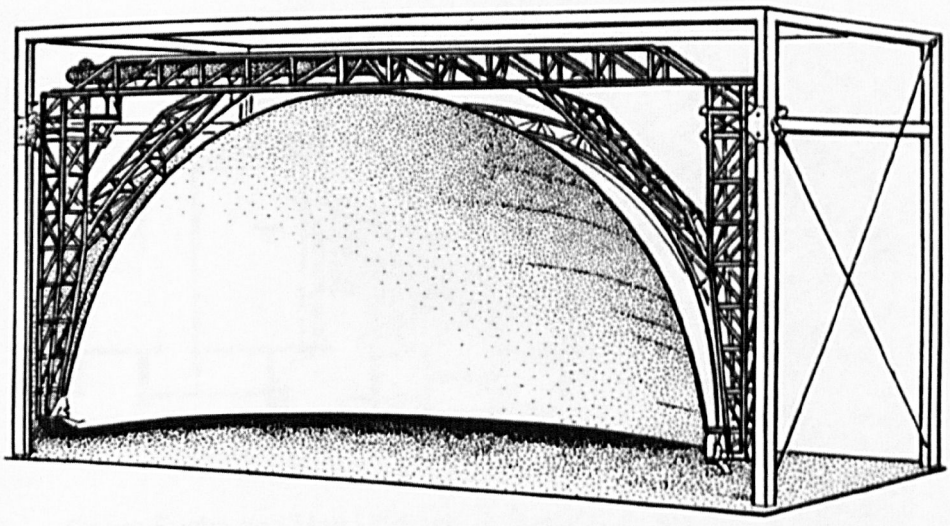
3.1 Peter Behrens, Theatre project, Darmstadt, (1900).
Stanford Anderson, *Peter Behrens and a New Architecture for the Twentieth Century* (Cambridge, Mass: MIT, 2000), p.58.



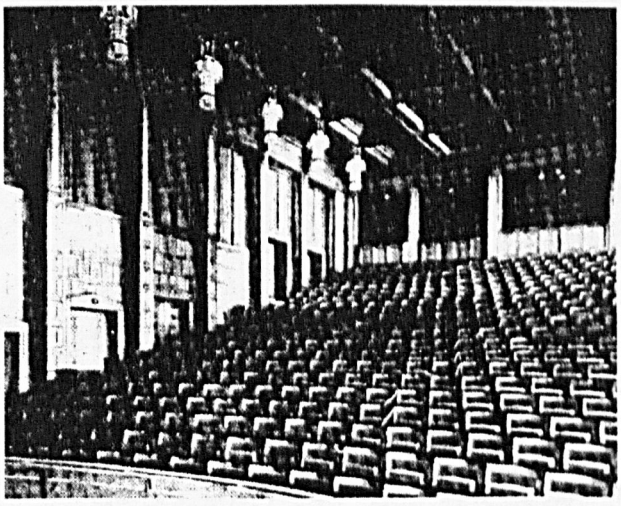
3.2 Peter Behrens, '*Ein Dokument deutscher Kunst*', Darmstadt, (1901).
Stanford Anderson, *Peter Behrens and a New Architecture for the Twentieth Century* (Cambridge, Mass: MIT, 2000), p.51.



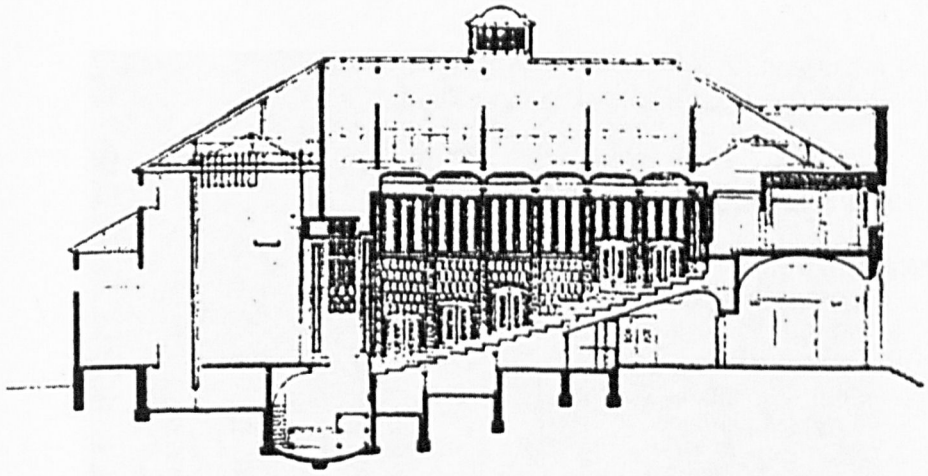
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Valentin Hammerschmidt, *Anspruch und Ausdruck in der Architektur des späten Historismus in Deutschland (1860-1914)* (Frankfurt/Main: Peter Lang, 1985), p.467.



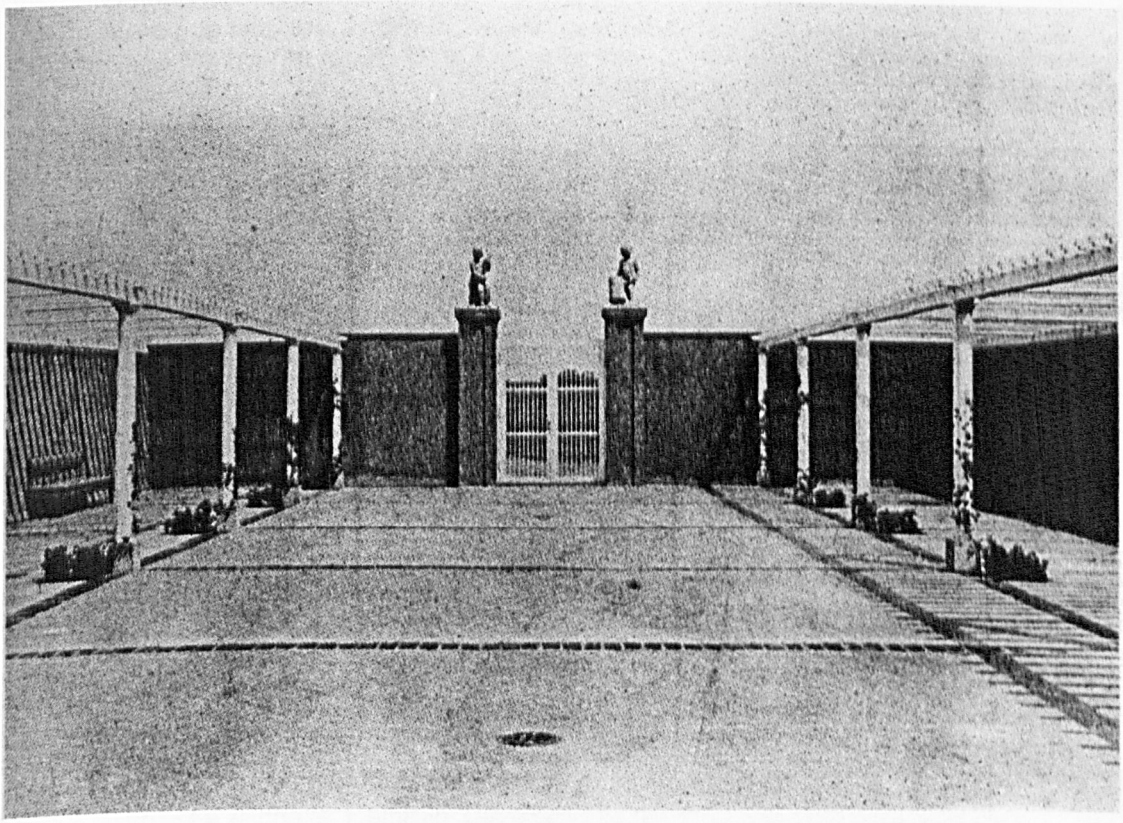
3.4 Cyclorama, Richard and Helen Leacroft, *Theatre and Playhouse: An illustrated survey of theatre building from Ancient Greece to the present day* (London and New York: Methuen), p125.



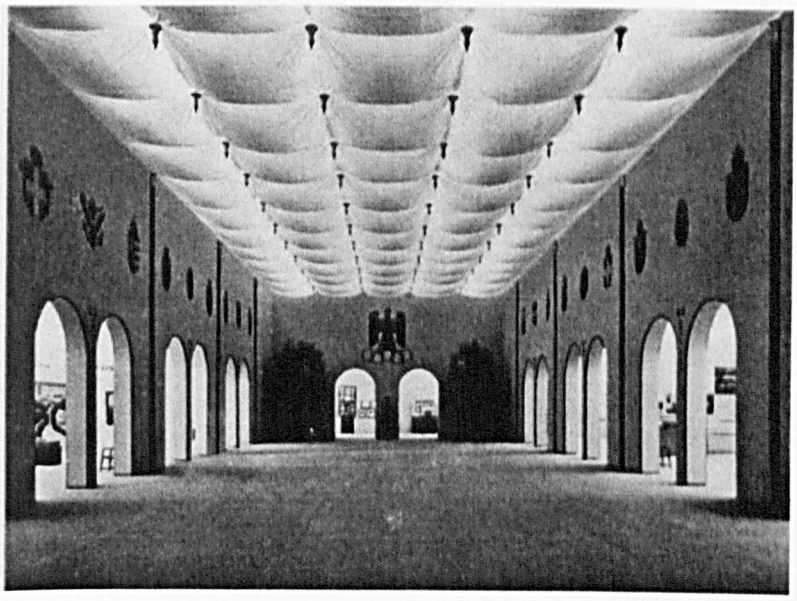
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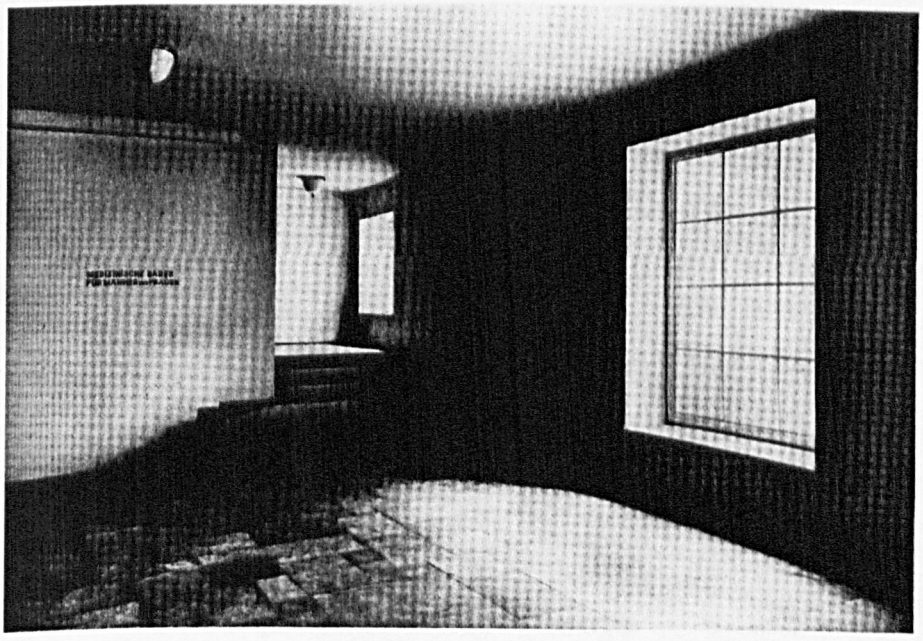
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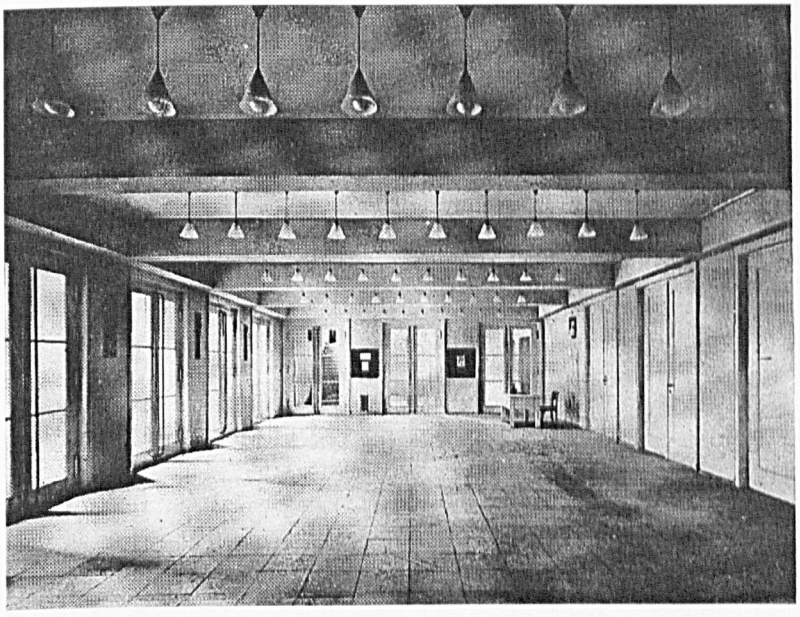
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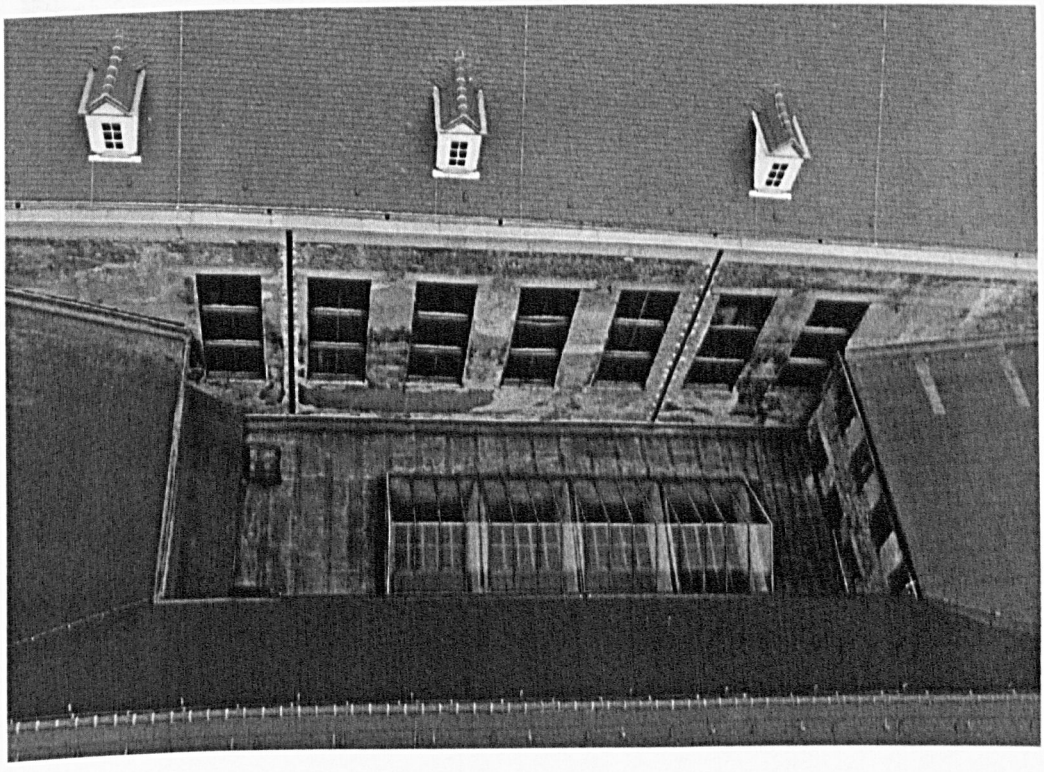
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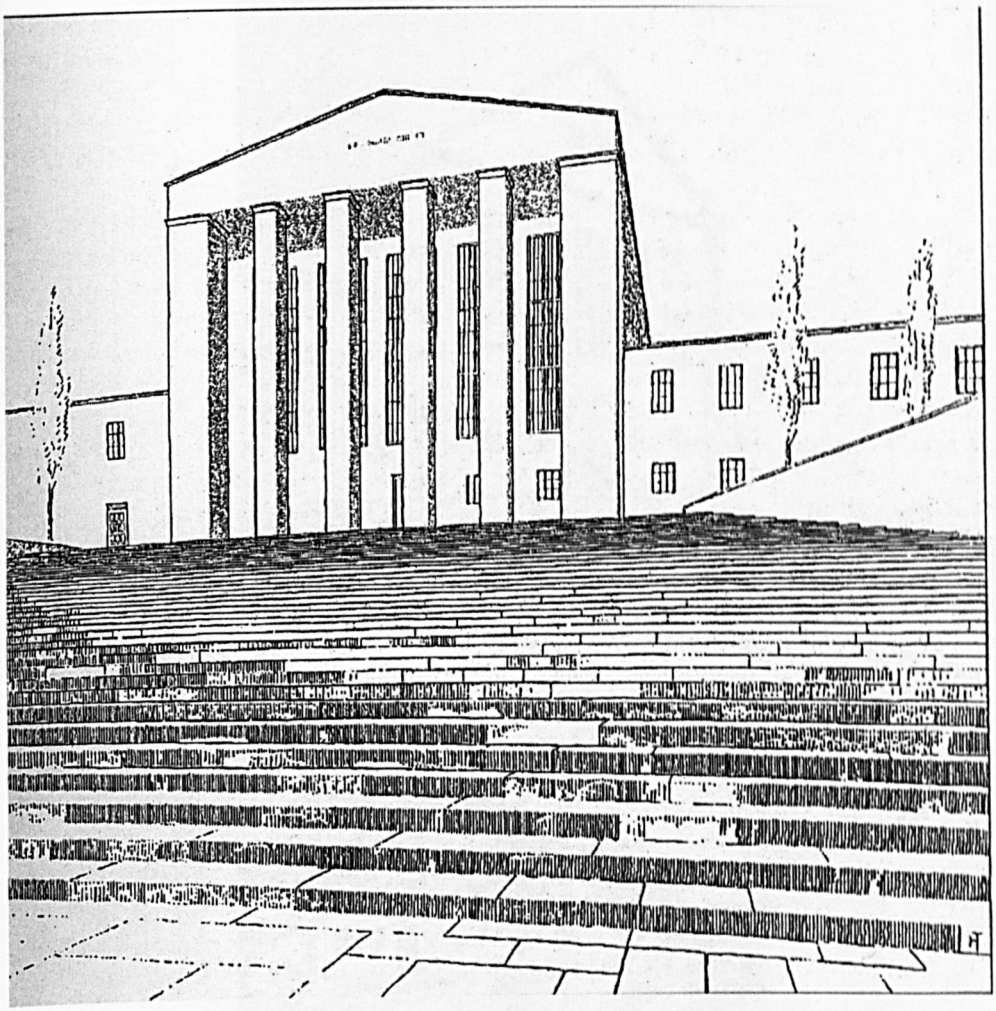
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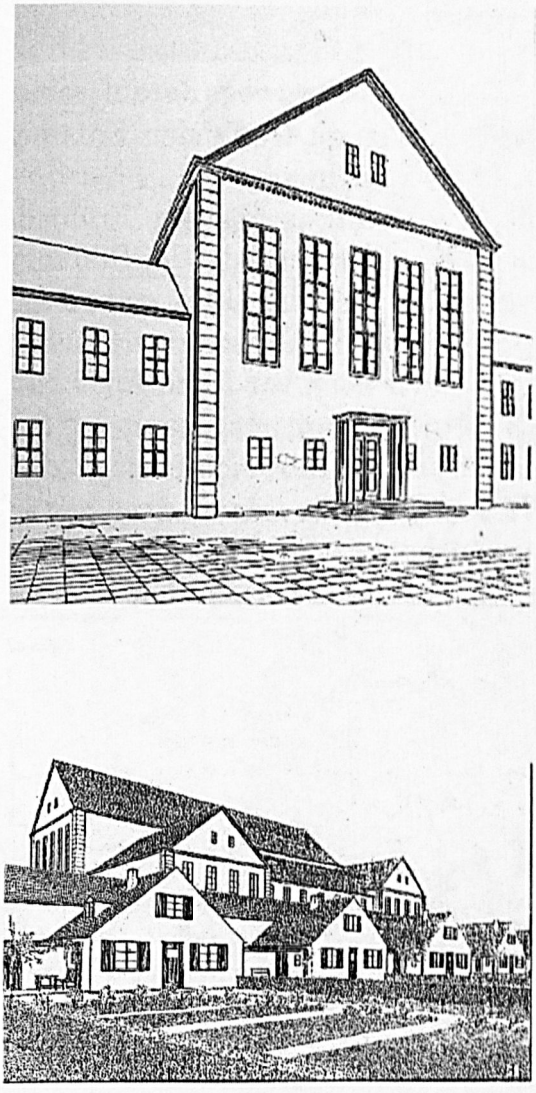
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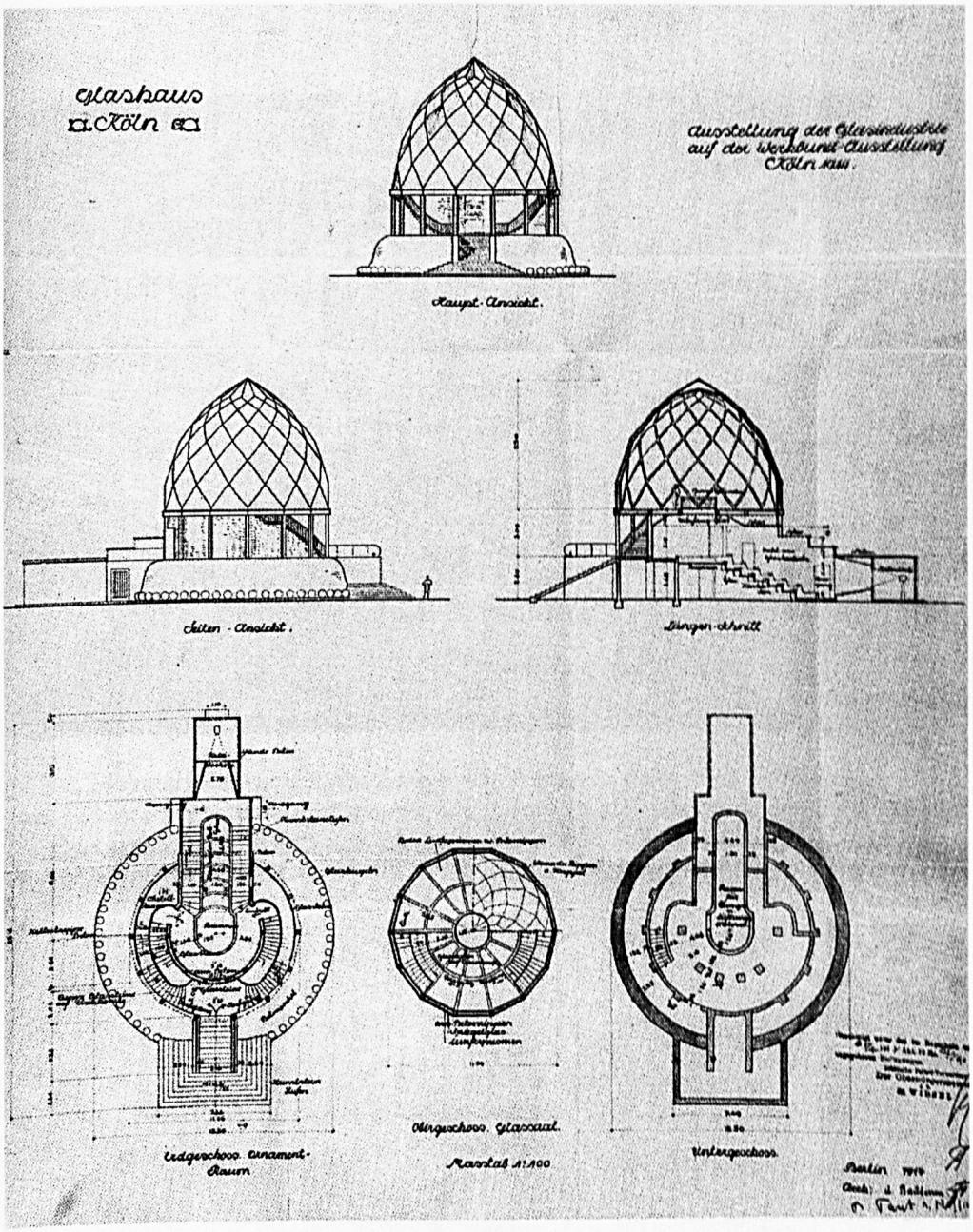
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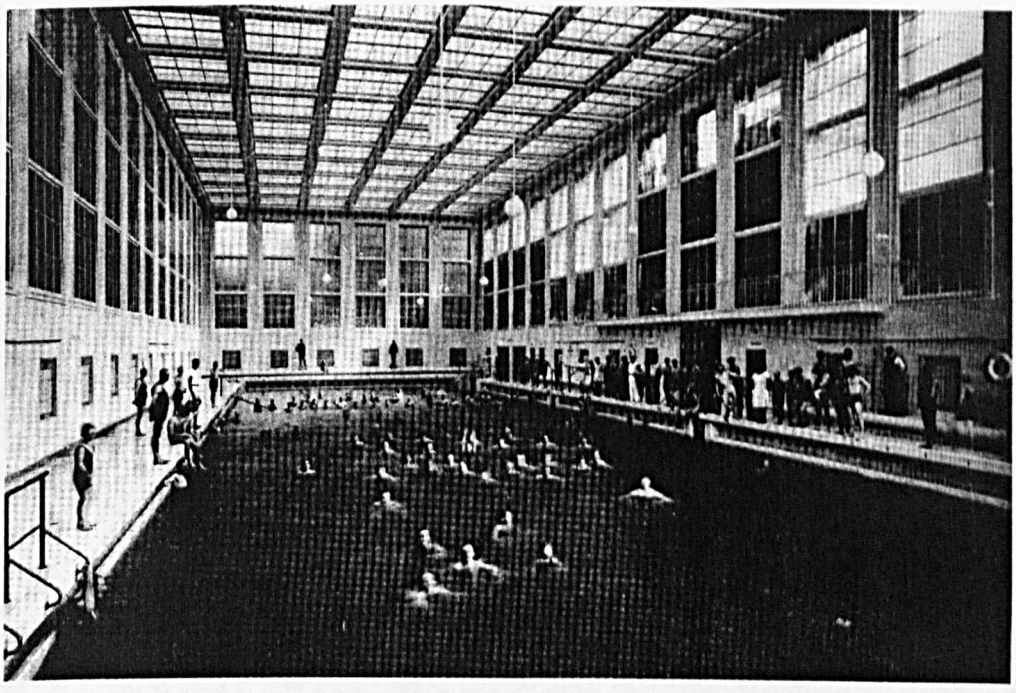
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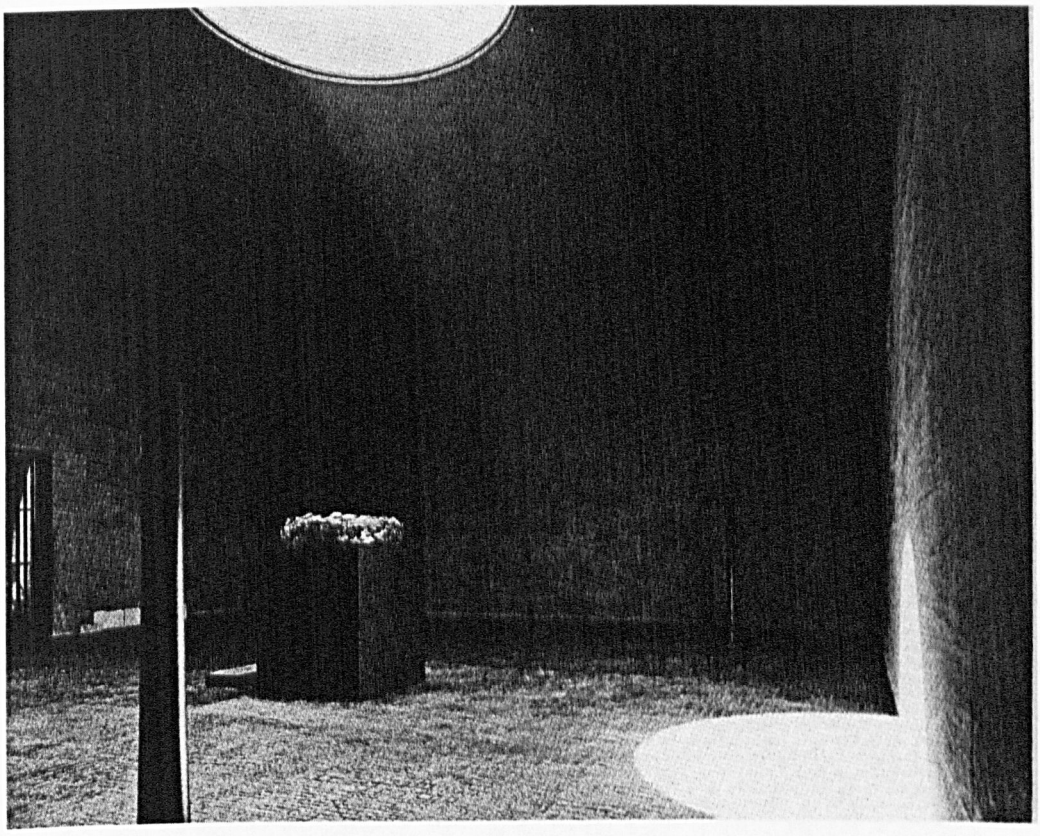
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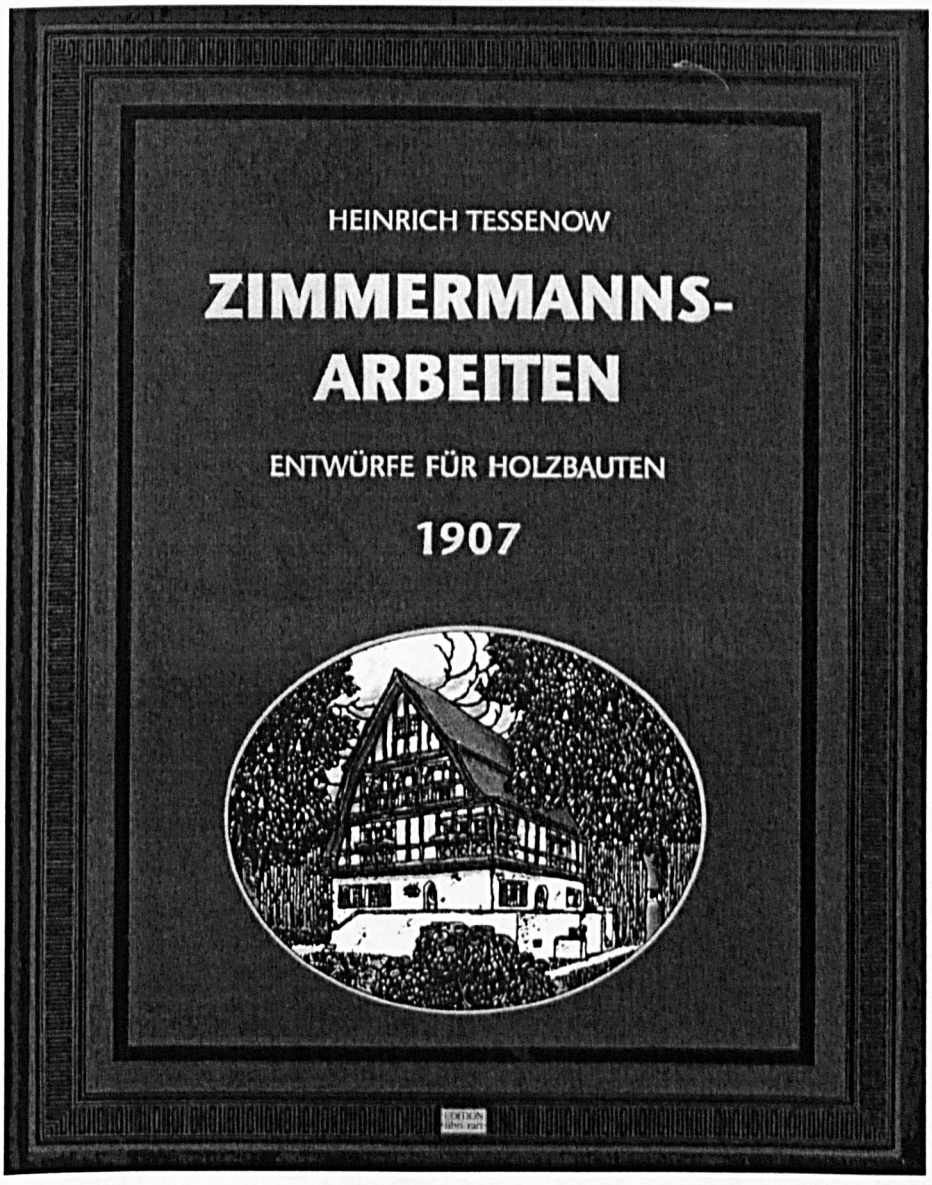
3.14 Bruno Taut, Glass House, Deutscher Werkbund Exhibition, Cologne, (1914).
Angelika Thiekötter *et al.*, *Kristallisationen, Splitterungen: Bruno Tauts Glashaus* (Berlin: Birkhäuser, 1993), p.163.



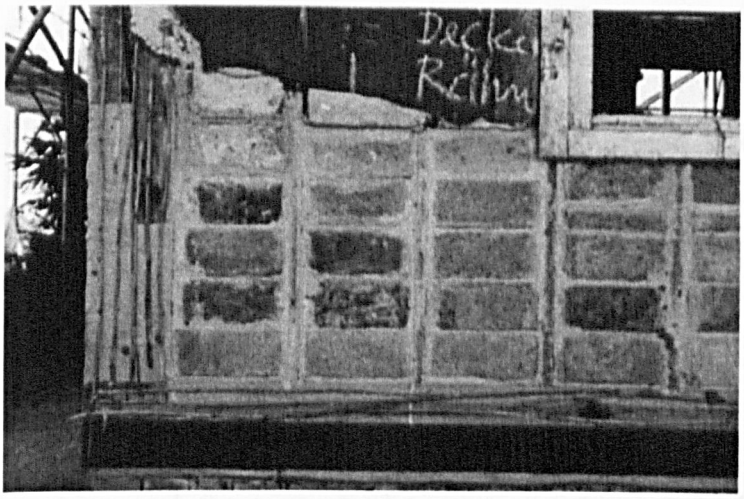
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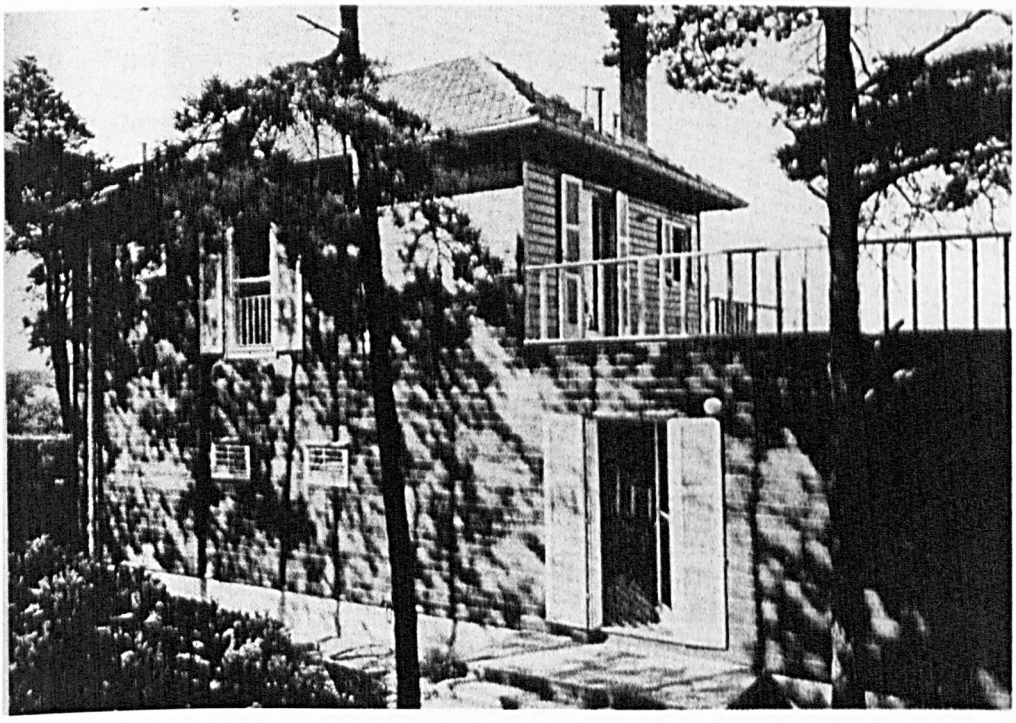
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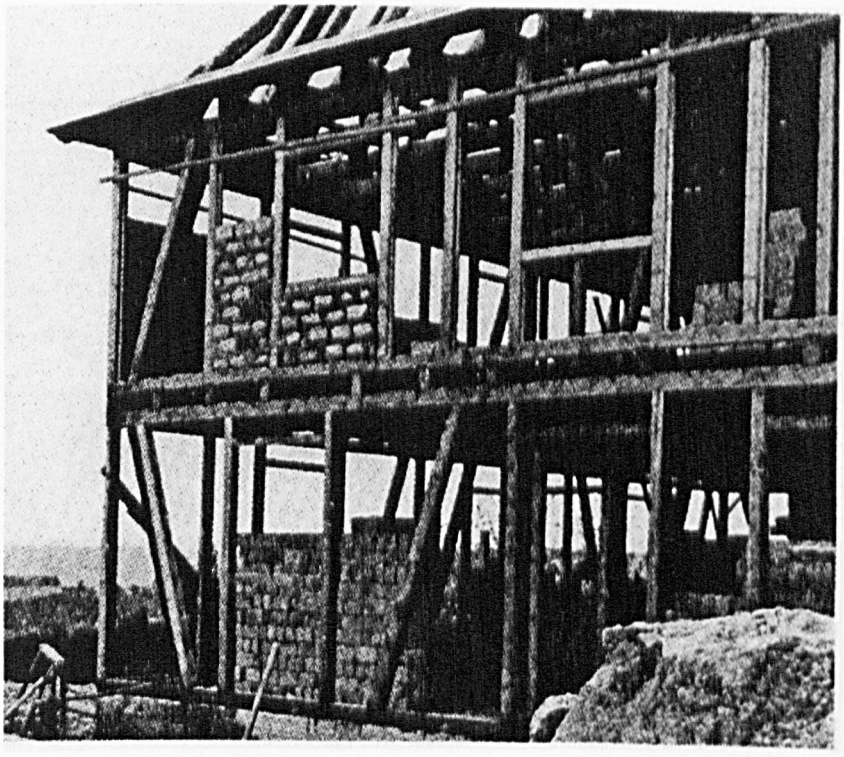
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Heinrich Tessenow, *Zimmermannsarbeiten* (Hannover: Schäfer, 1907).



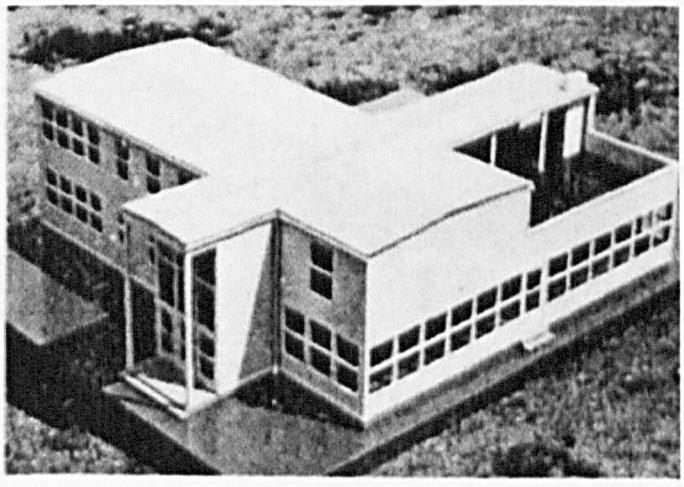
3.18.1 Heinrich Tessenow, *Patentwand, Pensionshäuser*, Dalcroze Institute, Hellerau. Photograph showing wall construction prior to renovation in 2000.
Peter Guth, Ute Starosta, Bernd Sikora, Michael Haselbach, *Hellerau: Festspielhaus-Ensemble* (Ludwigsburg: Wüstenrot Stiftung, 2002), p.43.



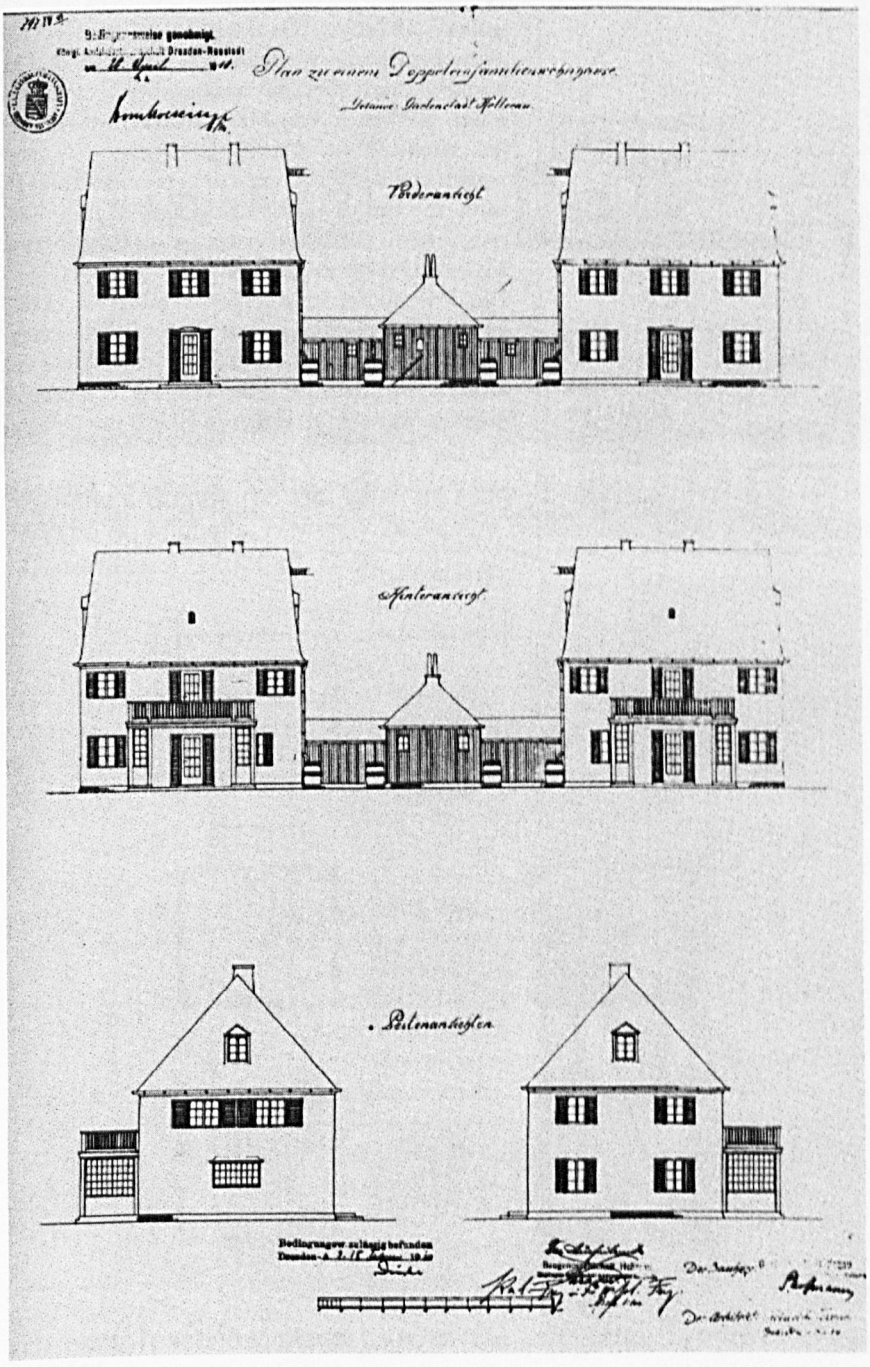
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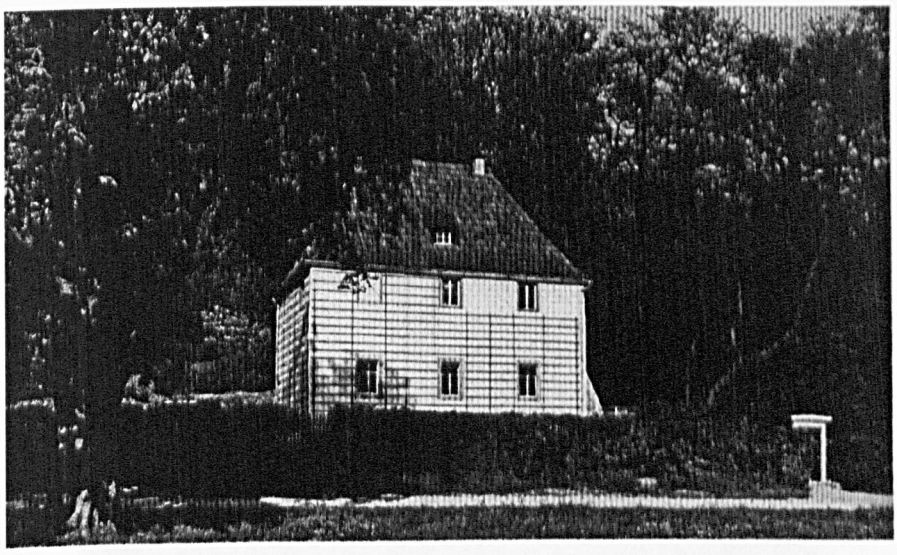
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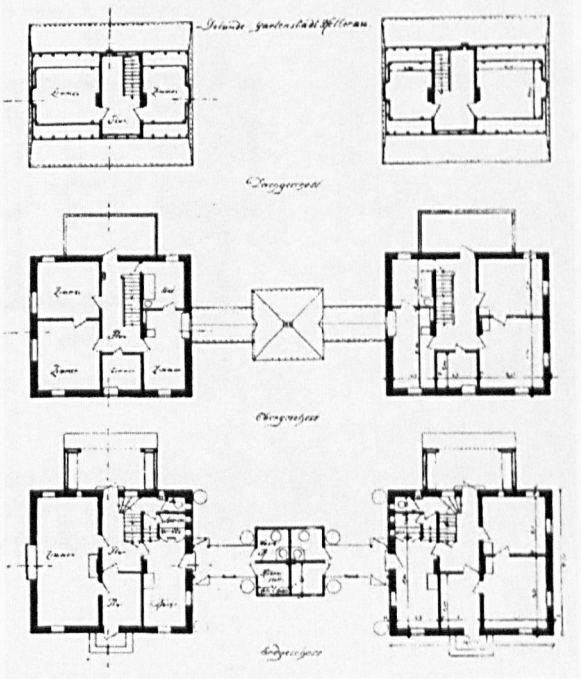
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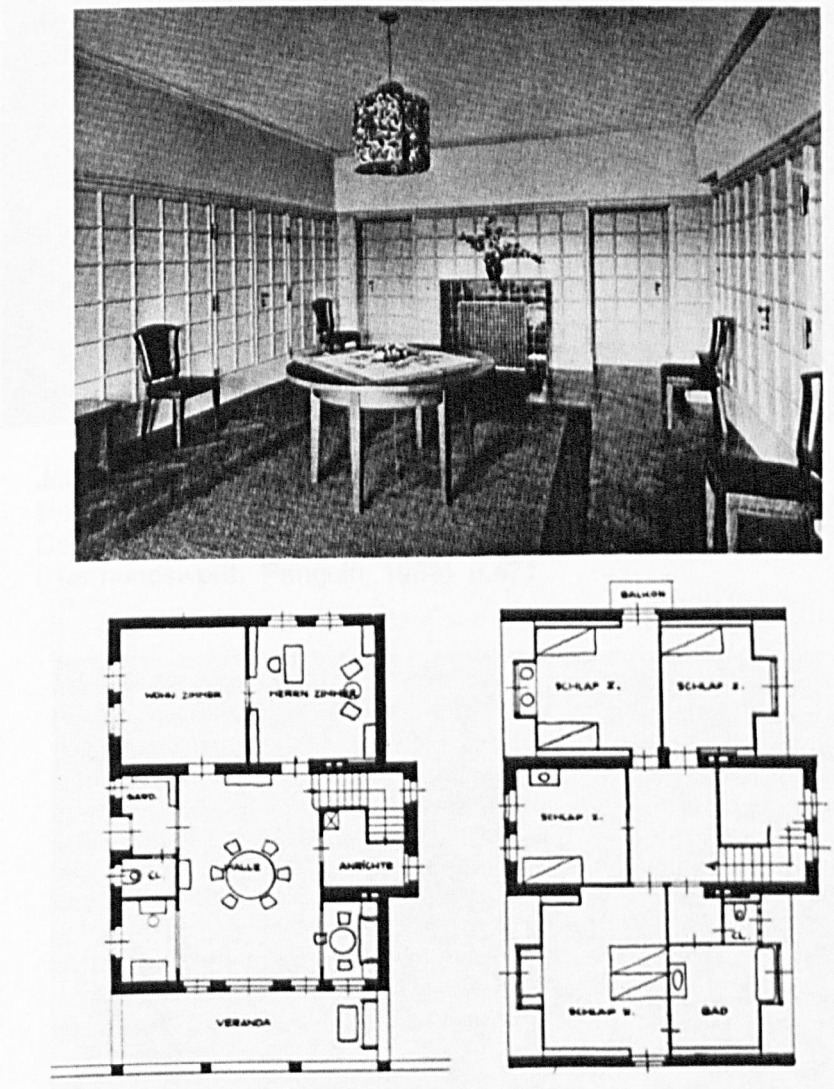
3.22 Heinrich Tessenow, twin houses, Heideweg 4 and 6, Hellerau, (1910). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart, DVA, 1991), p.61.



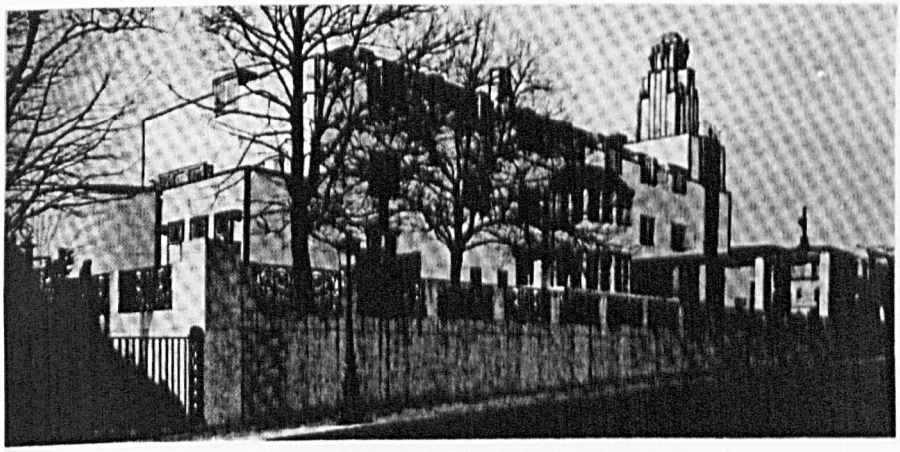
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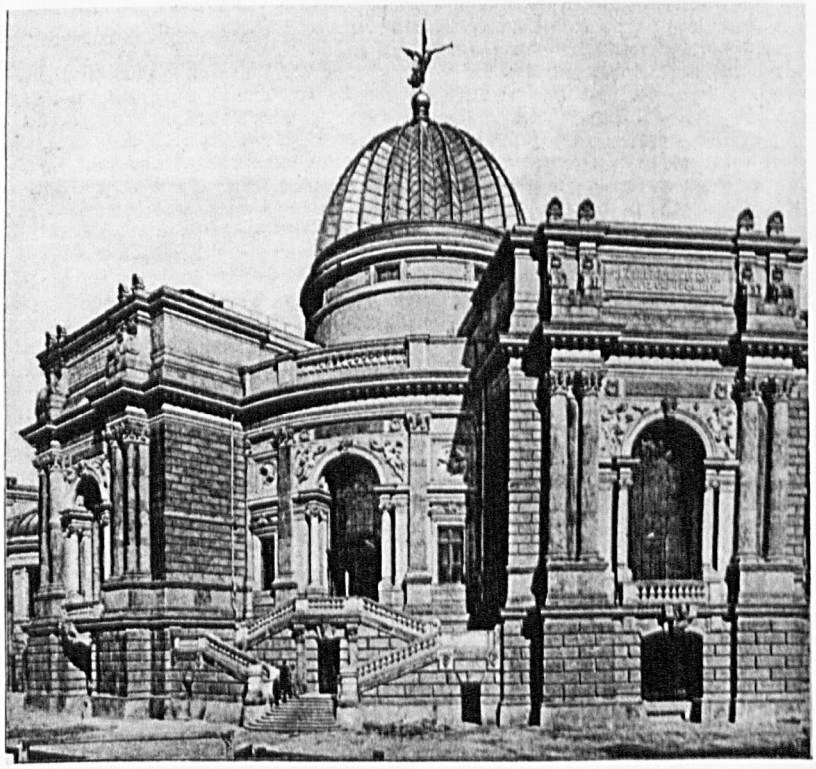
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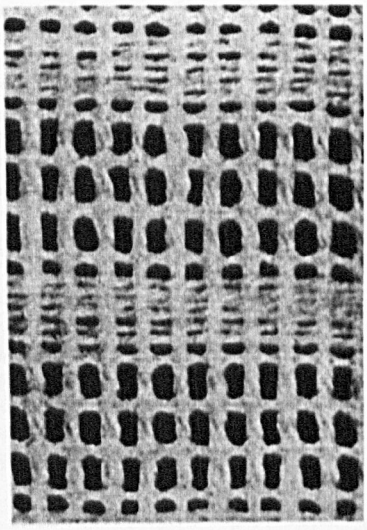
3.25 Ludwig Mies van der Rohe, Plans and entrance hall, Riehl House, Neubabelsberg, (1907). *Franz Schulze, Mies van der Rohe: A Critical Biography* (Chicago/London: University of Chicago Press, 1985), pp.28-29.



3.26 Josef Hoffmann, Stoclet House, Brusssels, (1904-1911).
Henry-Russell Hitchcock, *Architecture: Nineteenth and Twentieth Centuries*
(Harmondsworth: Penguin, 1958), p.471.



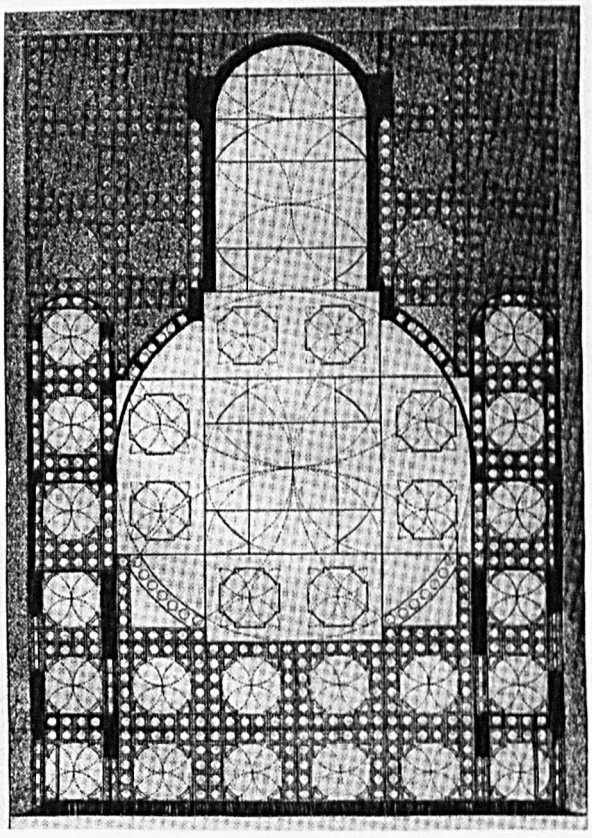
3.27 Constantin Lipsius, Art Academy and Exhibition Buildings, Dresden, (1887-1894).
Harry F.Mallgrave (ed.), *Otto Wagner: Reflections on the Raiment of Modernity* (Santa Monica, California: The Getty Center for the History of Art and the Humanities, 1993),



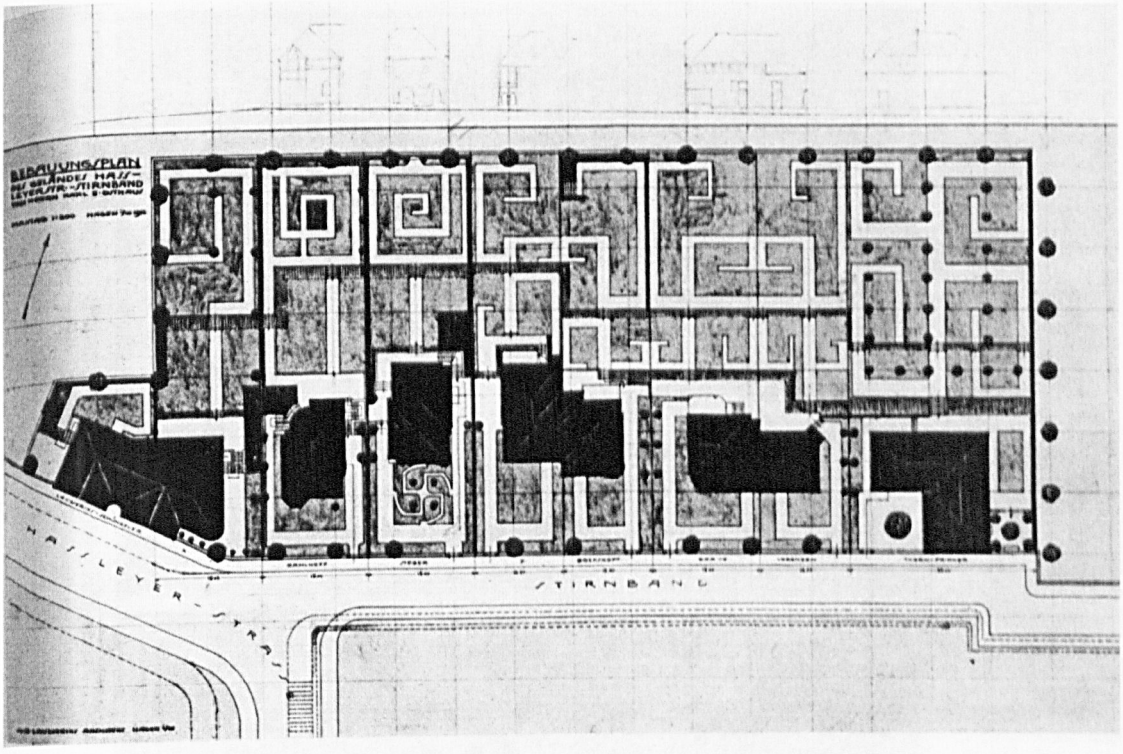
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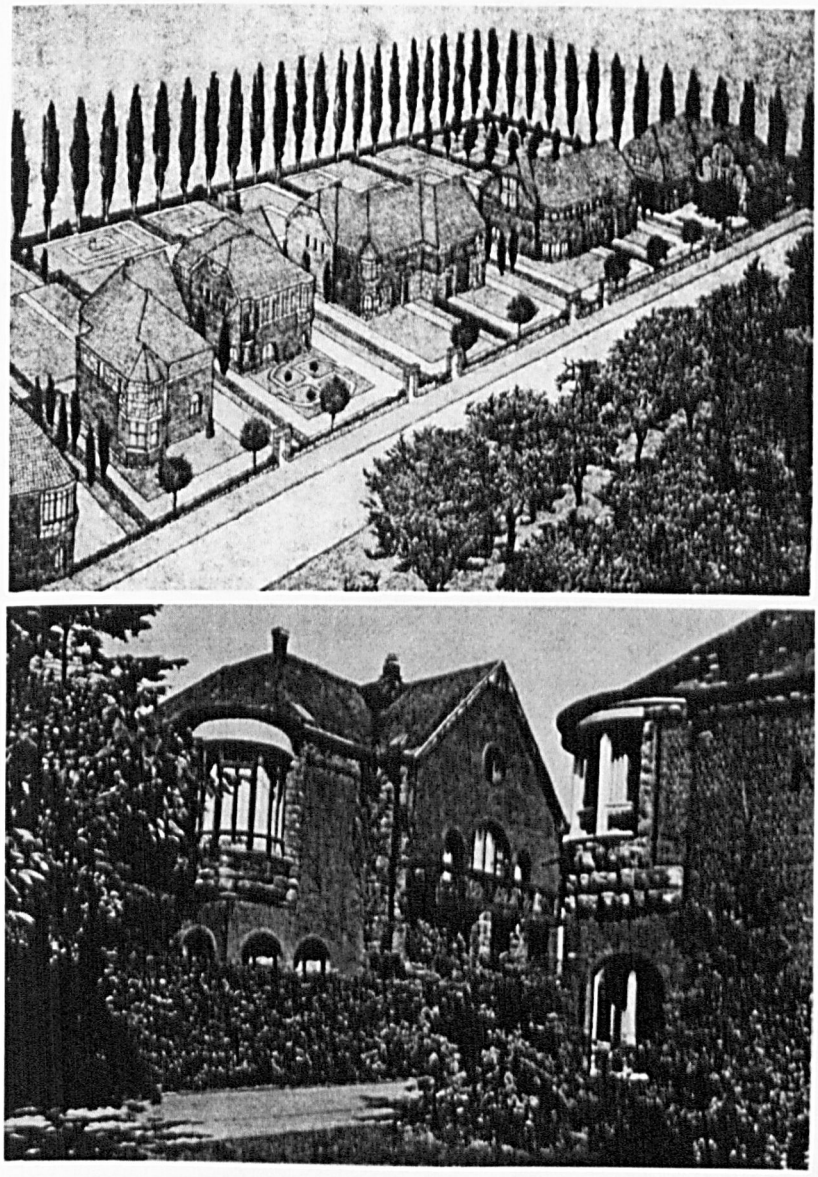
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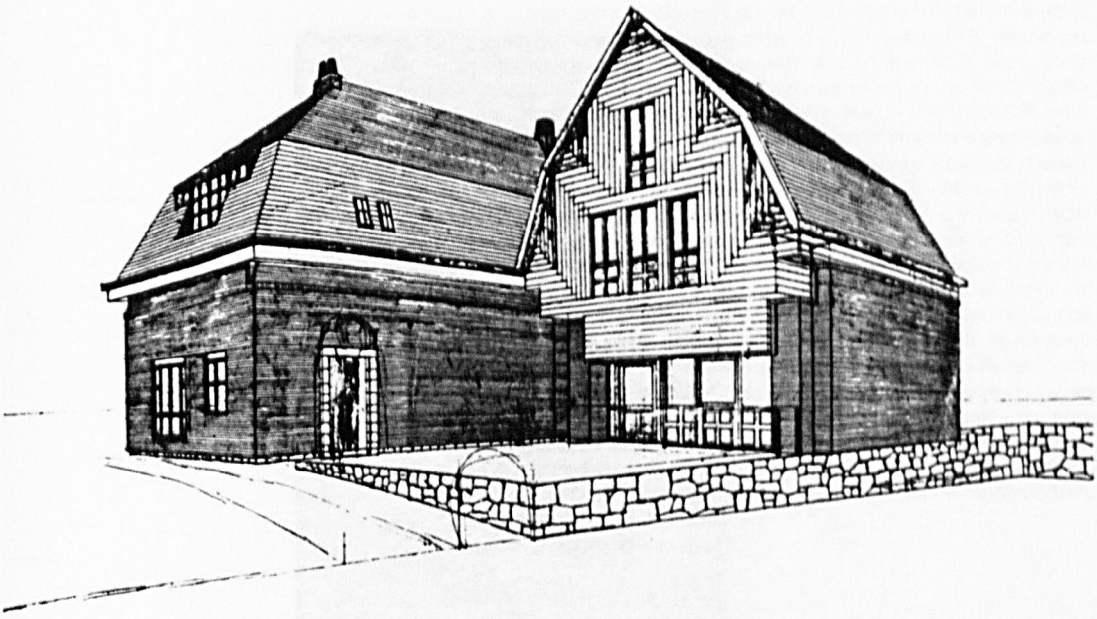
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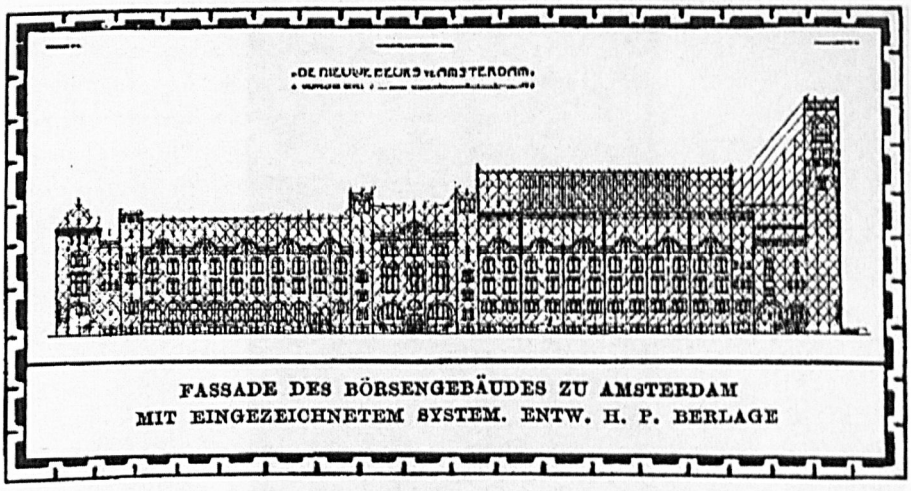
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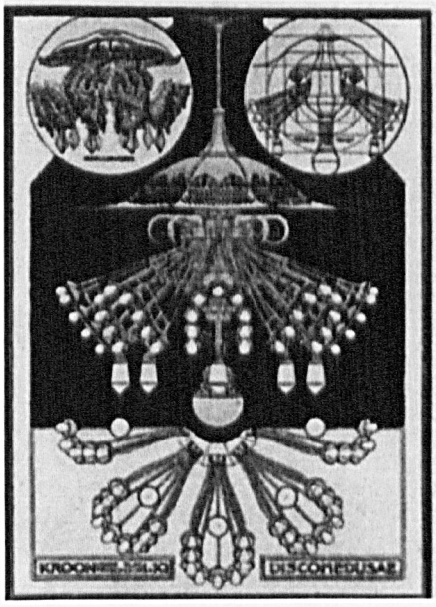
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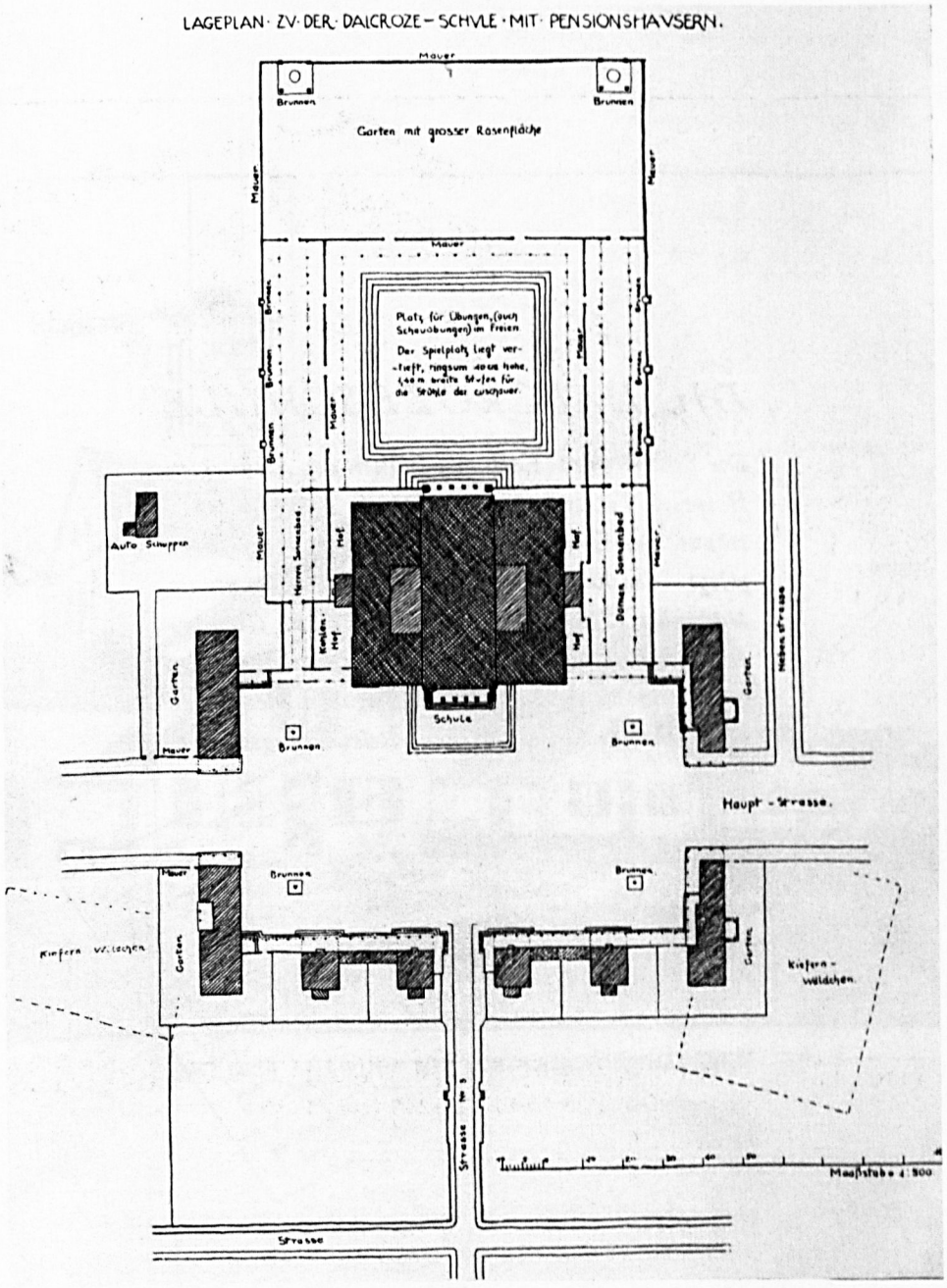
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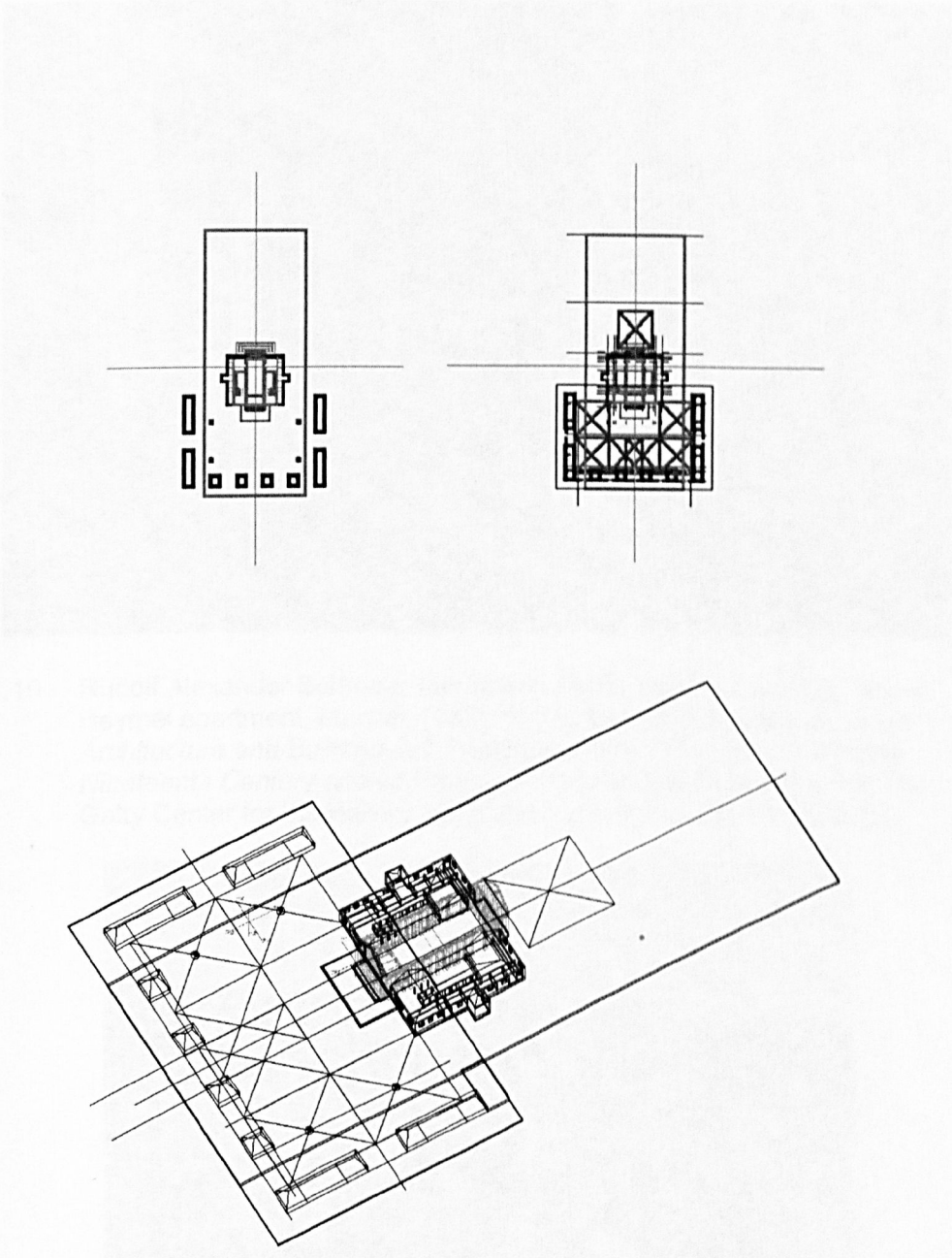
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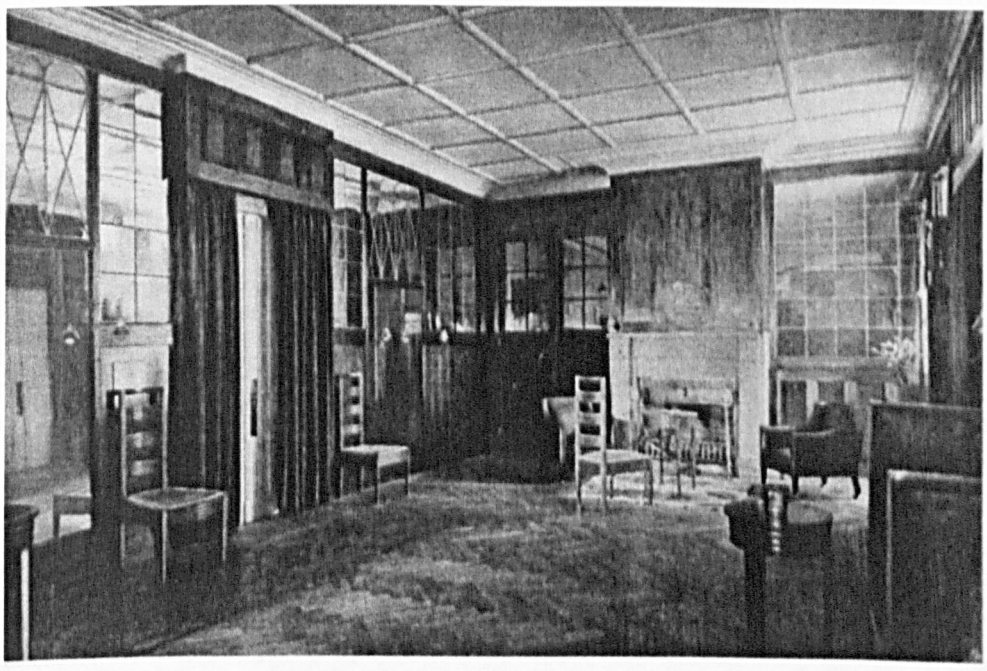
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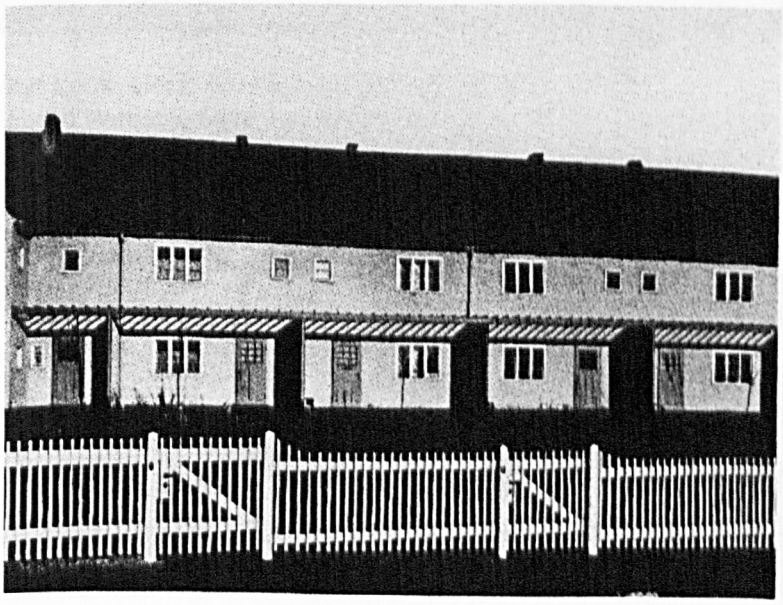
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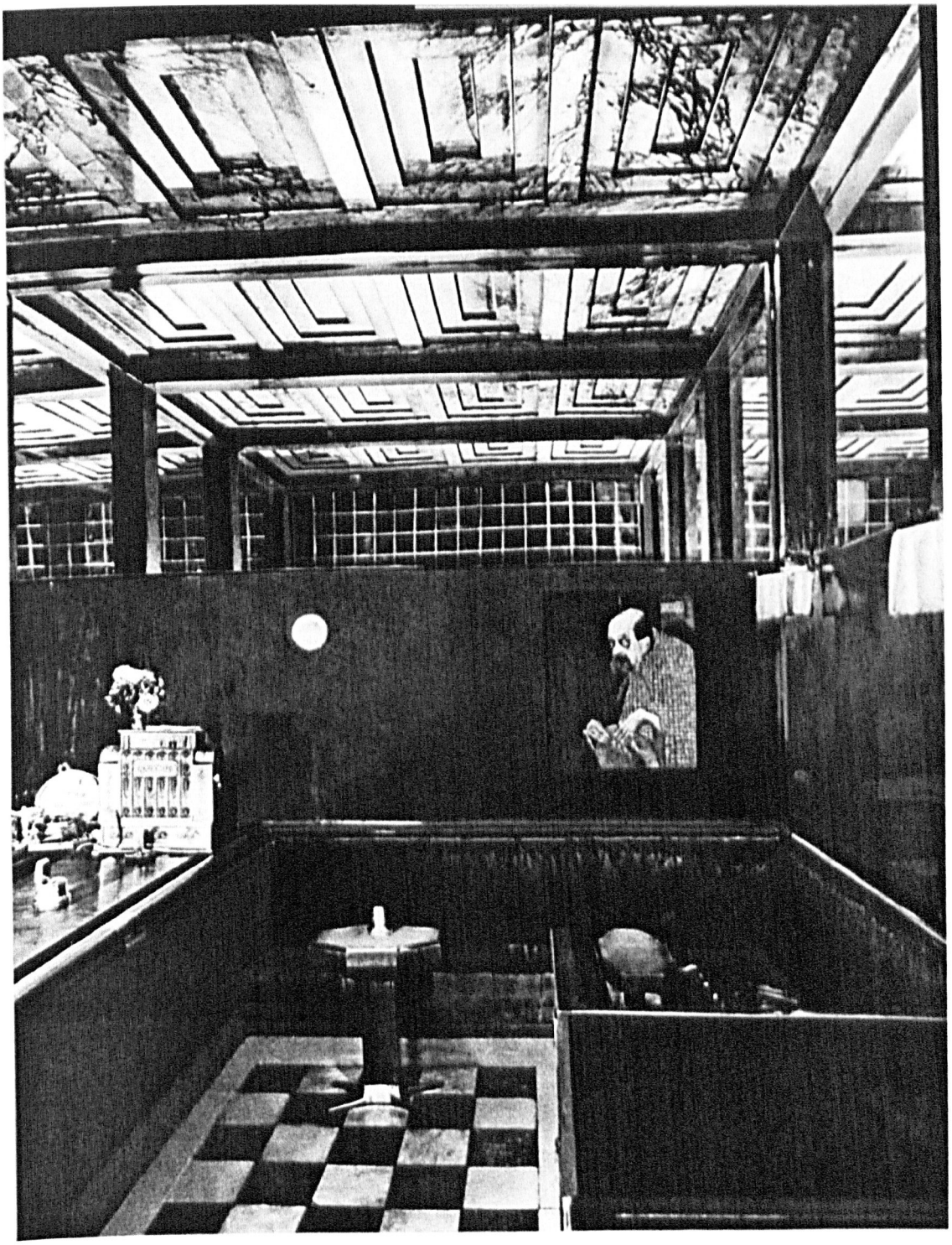
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4.11 Heinrich Tessenow, Terraced houses '*Am Schänkenberg*, Hellerau, (1910).
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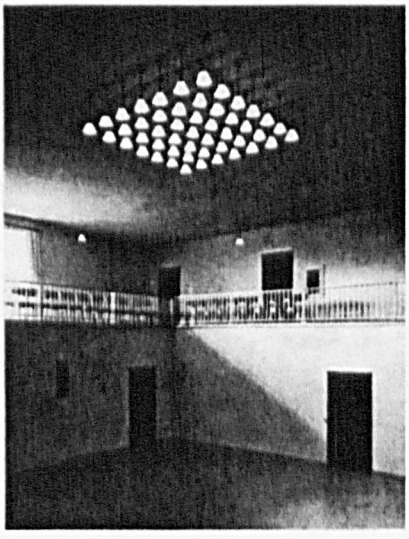
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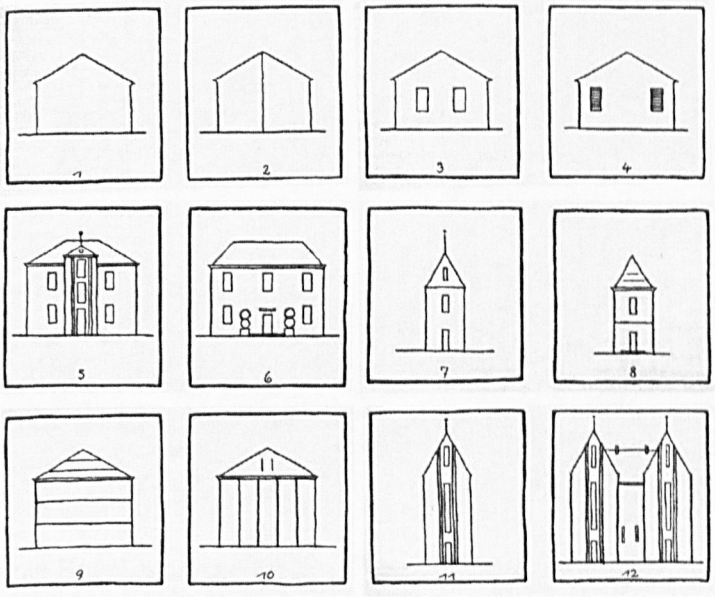
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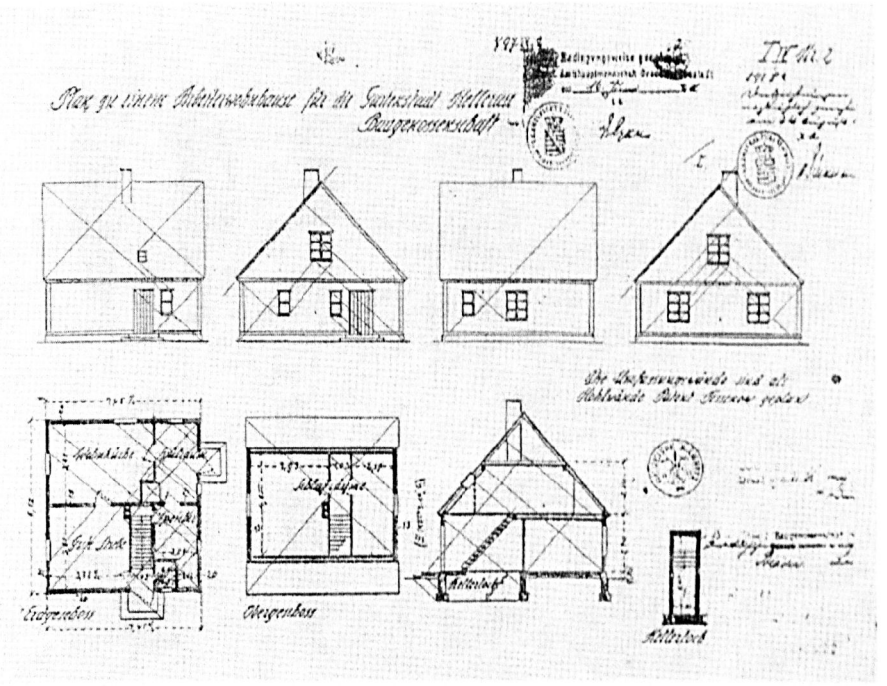
4.15 Heinrich Tessenow, Stairwell, *Festspielhaus*, Hellerau, (1910-1912).
Werner Durth (ed.), *Entwurf zur Moderne Hellerau: Stand Ort Bestimmung* (Stuttgart: DVA, 1996), p.52.

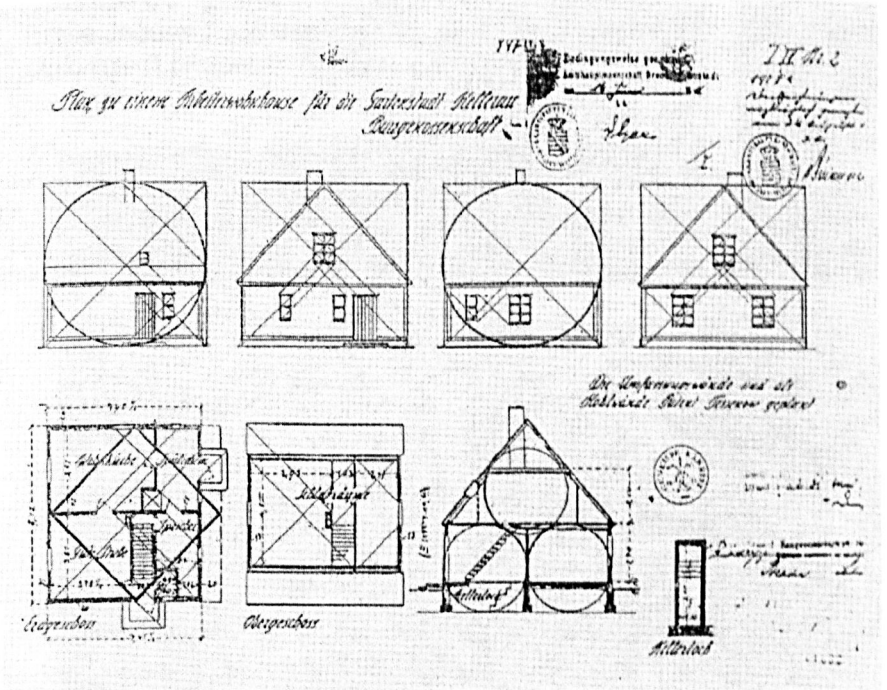


4.16 Daniel Burnham, *Selfridges*, London, (1908). Kristen Schaffer, *Daniel H. Burnham: Visionary Architect and Planner* (New York: Rizzoli, 2003), p.168.

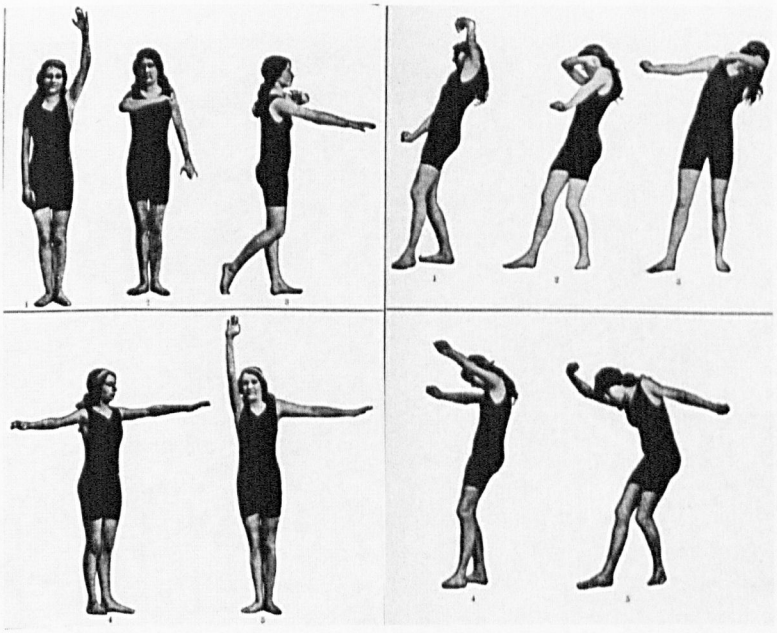


4.17 Heinrich Tessenow, 'Regularity and Symmetry in particular' Heinrich Tessenow, *Hausbau und dergleichen*, (Braunschweig: Vieweg, 1986), pp. 26-28.





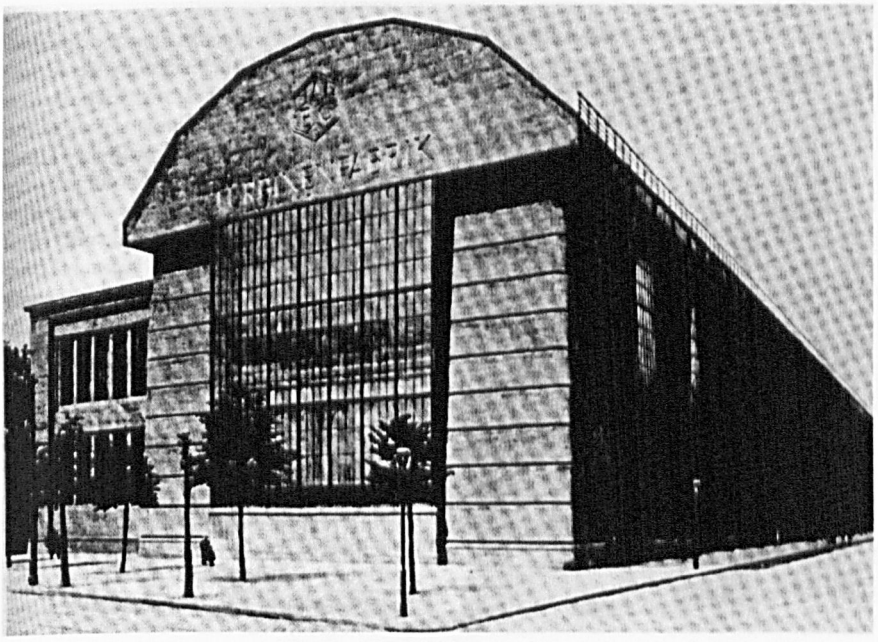
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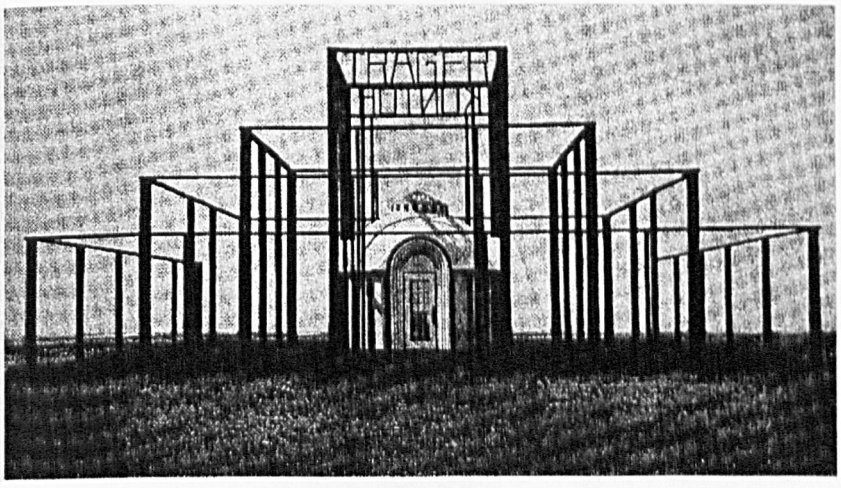
4.19 Dalcroze eurhythmic exercises
Emile Jaques-Dalcroze, (intr. M. E. Sadler), *The Eurhythmics of Jaques-Dalcroze* (London: Constable, 1917), p.50.



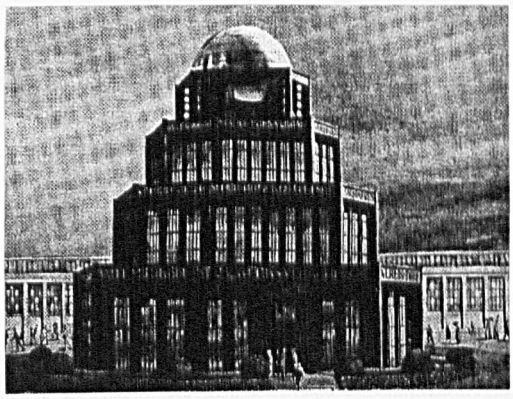
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Emile Jaques-Dalcroze, (intr. M. E. Sadler), *The Eurhythmics of Jaques-Dalcroze* (London: Constable, 1917), p.65.



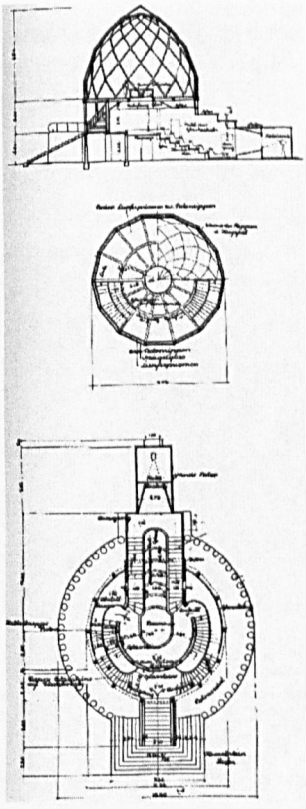
4.21 Peter Behrens, AEG Turbine Hall, Berlin, (1909-1910).
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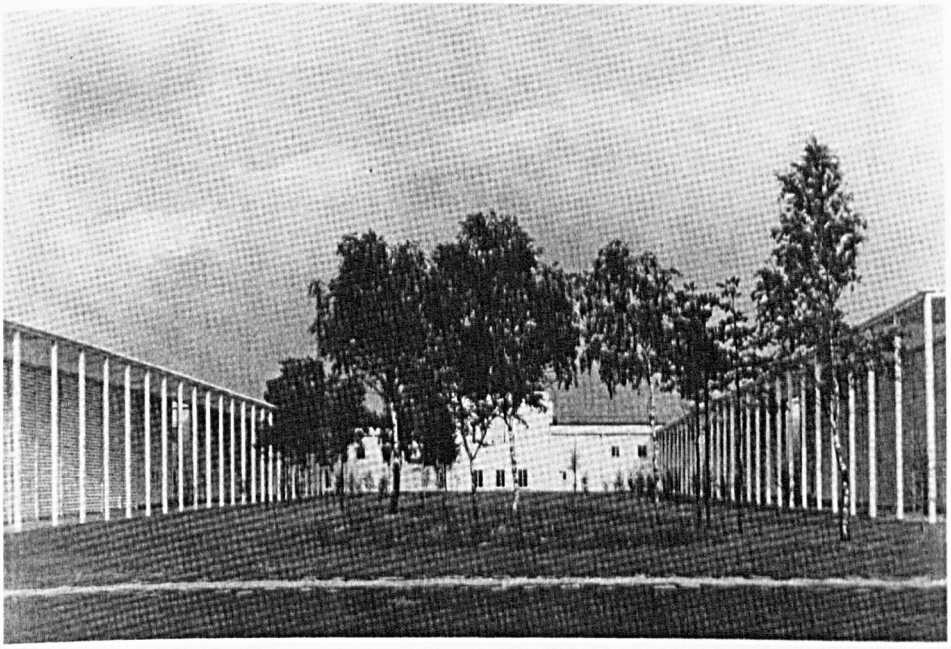
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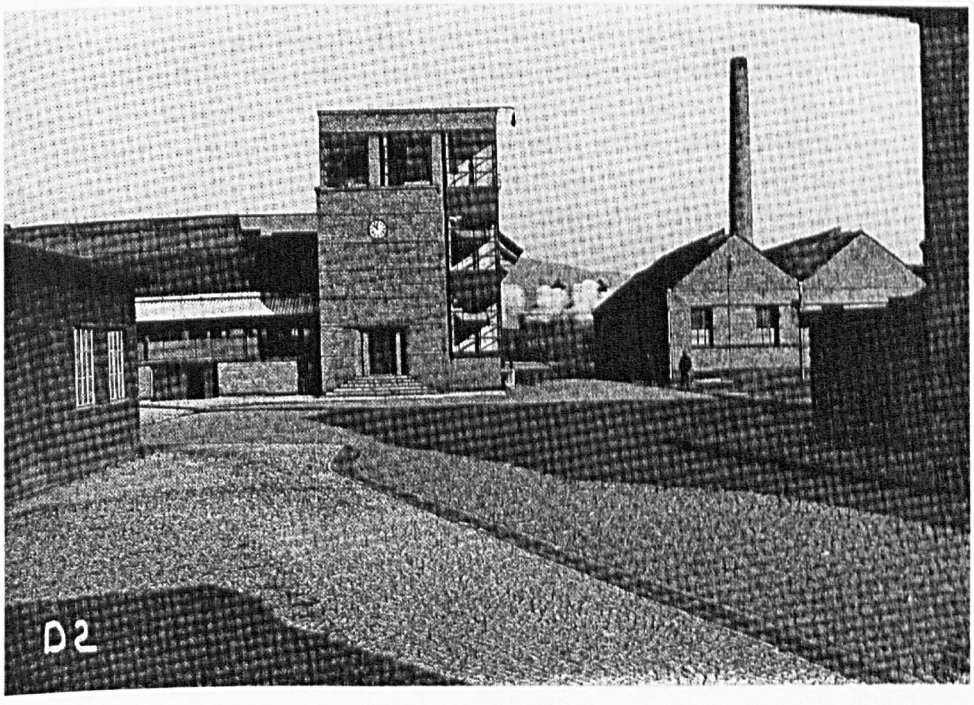
4.23 Bruno Taut, Monument to Iron, exhibition pavilion, Leipzig, (1913). Angelika Thiekötter *et al*, *Kristallisationen, Splitterungen: Bruno Tauts Glashaus* (Basel: Birkhäuser, 1993), p.128.



4.24 Bruno Taut, Glass House, Werkbund Exhibition, Cologne, (1914). Angelika Thiekötter *et al*, *Kristallisationen, Splitterungen: Bruno Tauts Glashaus* (Basel: Birkhäuser, 1993), p.57.



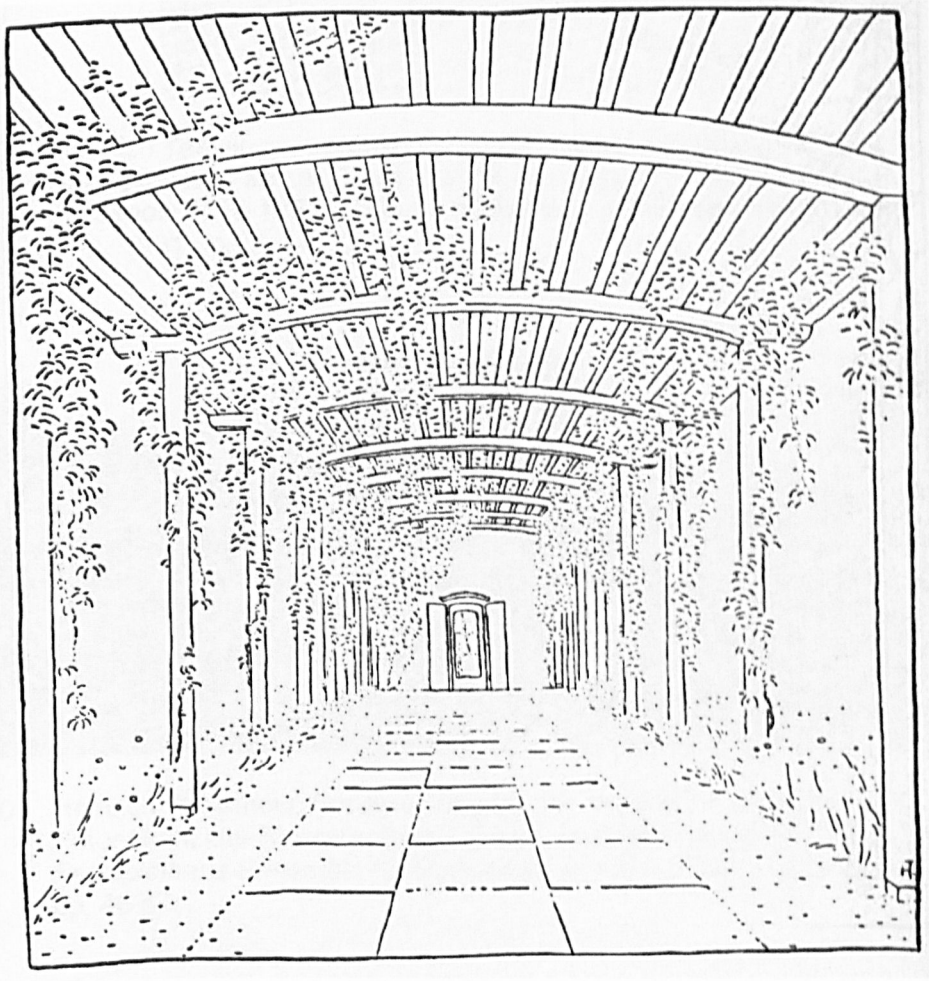
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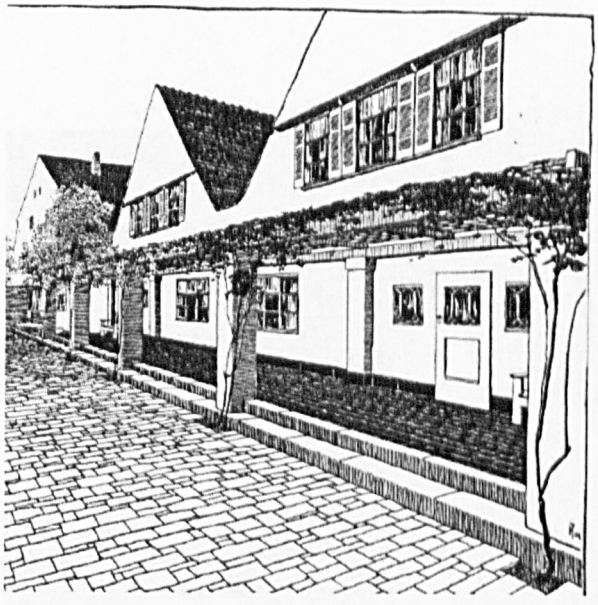
4.26 Walter Gropius and Adolf Meyer, Fagus Works, Alfeld an der Leine, (1911-1914).
Annemarie Jaeggi, *Fagus: Industrial Culture from Werkbund to Bauhaus* (New York: Princeton Architectural Press, 2000), p.45.



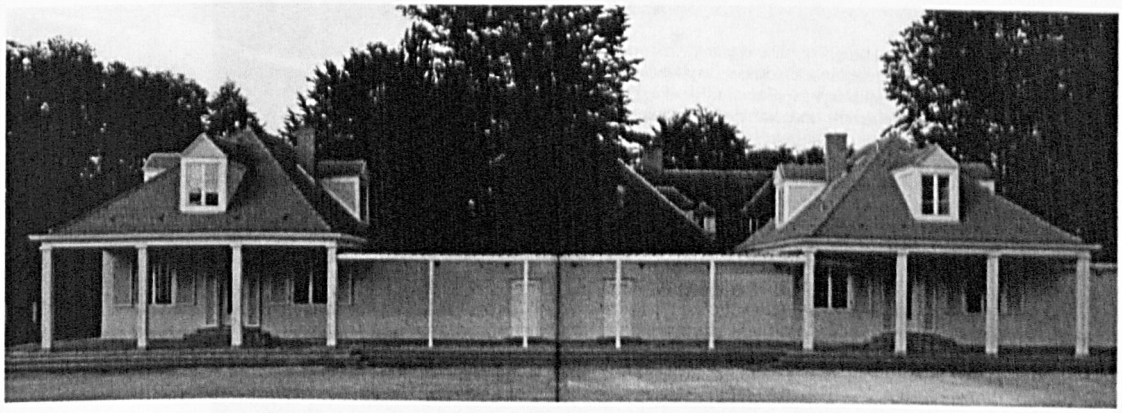
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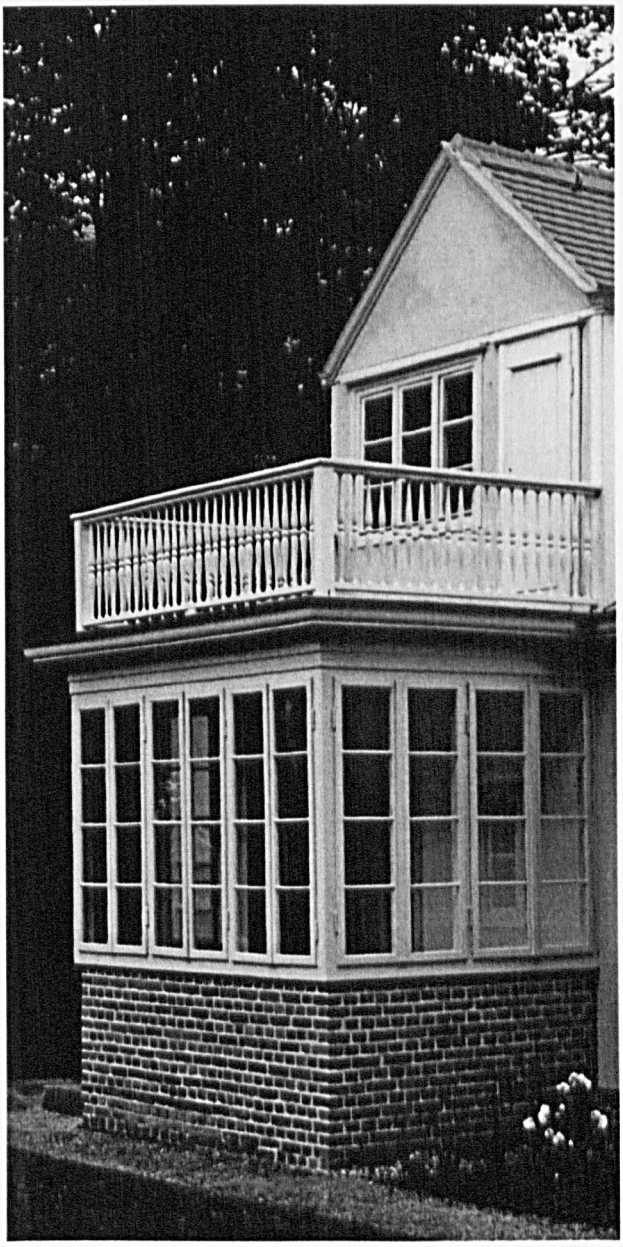
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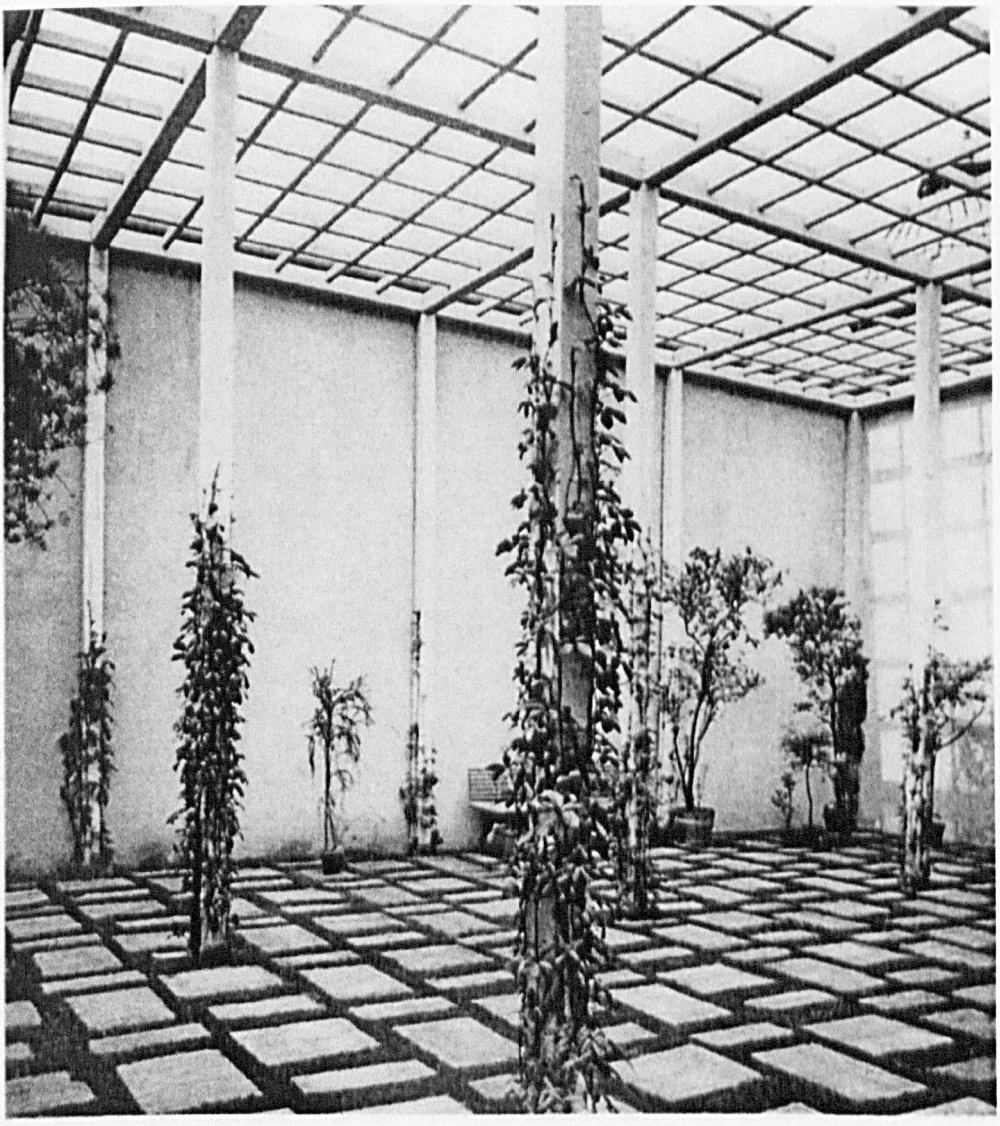
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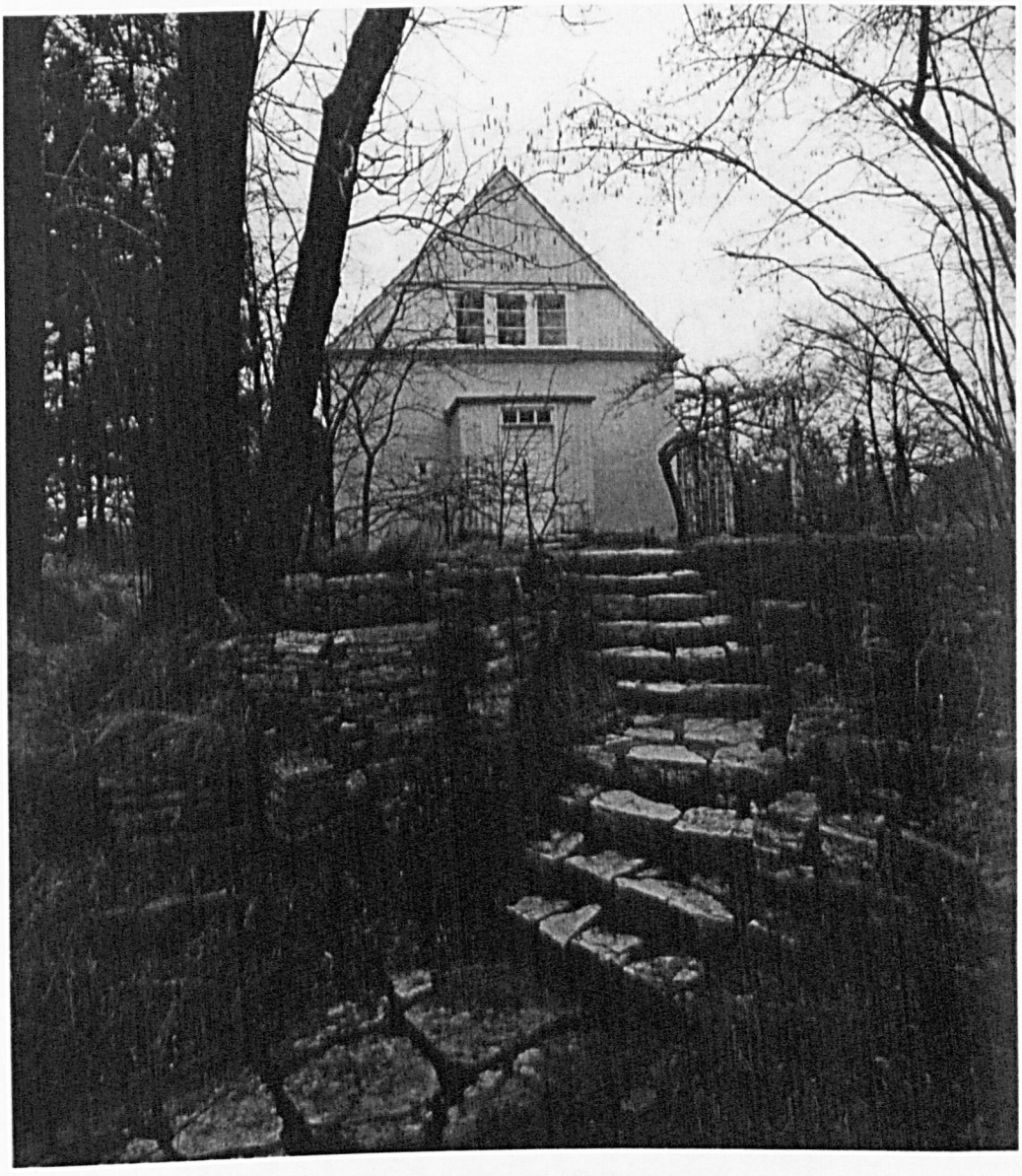
4.31 Heinrich Tessenow, *Pensionshäuser,* Wintergarden and veranda after restoration (2002), Hellerau. Peter Guth, Ute Starosta, Bernd Sikora, Michael Haselbach, *Hellerau: Festspielhaus-Ensemble* (Ludwigsburg: Wüstenrot Stiftung, 2002), p.63.



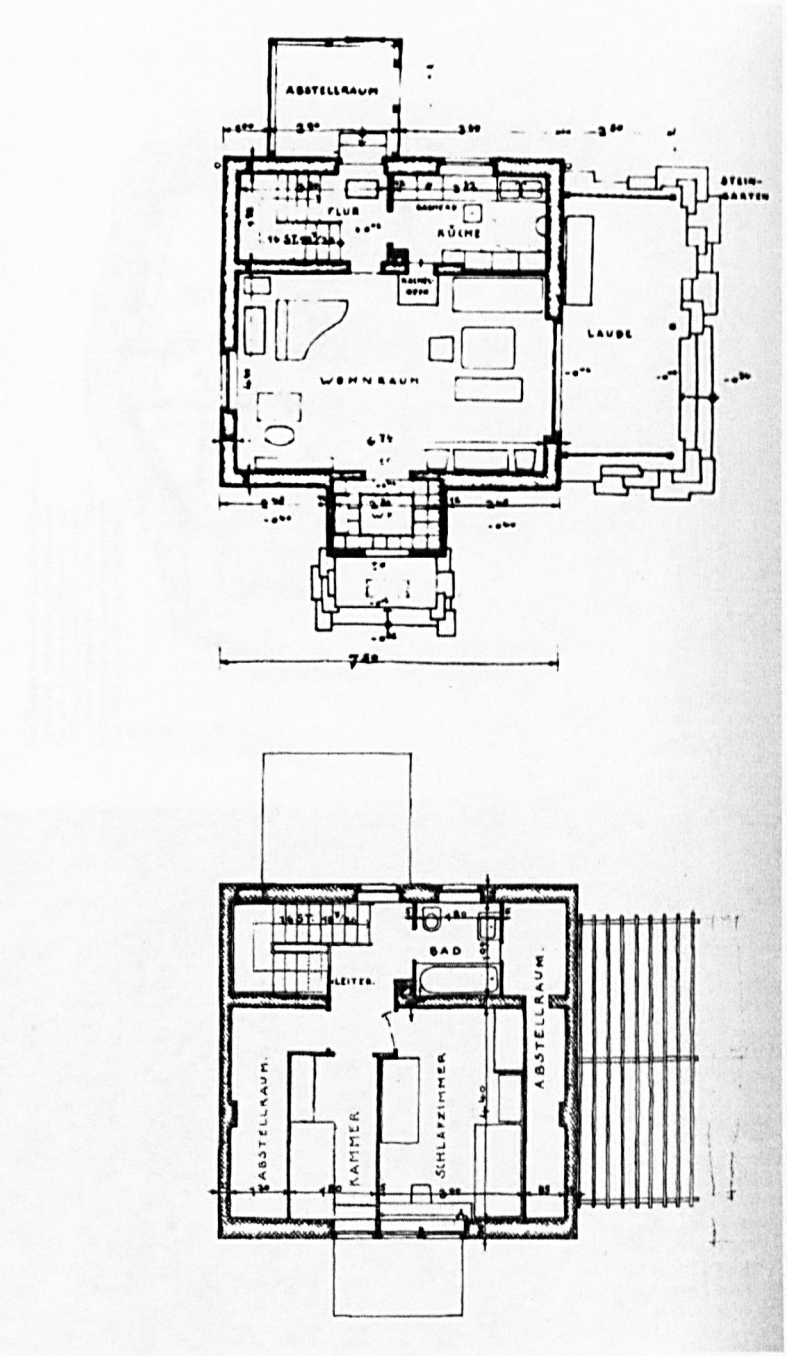
4.32 Heinrich Tessenow, *Internationale Kunstausstellung*, Dresden, (1926). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart, DVA, 1991), p.279.



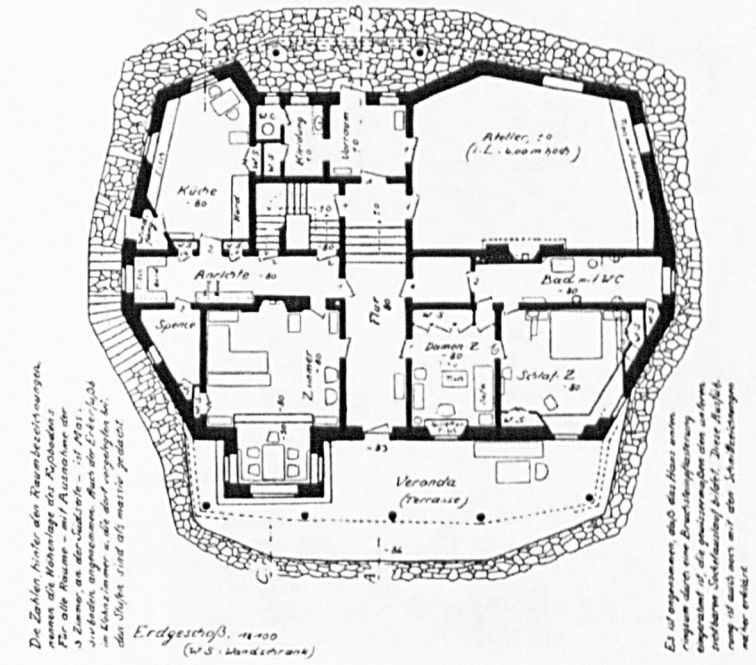
4.33 Heinrich Tessenow, *Zierhof*, *Internationale Kunstausstellung*, Dresden, (1926). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart, DVA, 1991), p.114.



4.34 Heinrich Tessenow, Architect's own house, Berlin-Zehlendorf, (1930). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart, DVA, 1991), p.122.

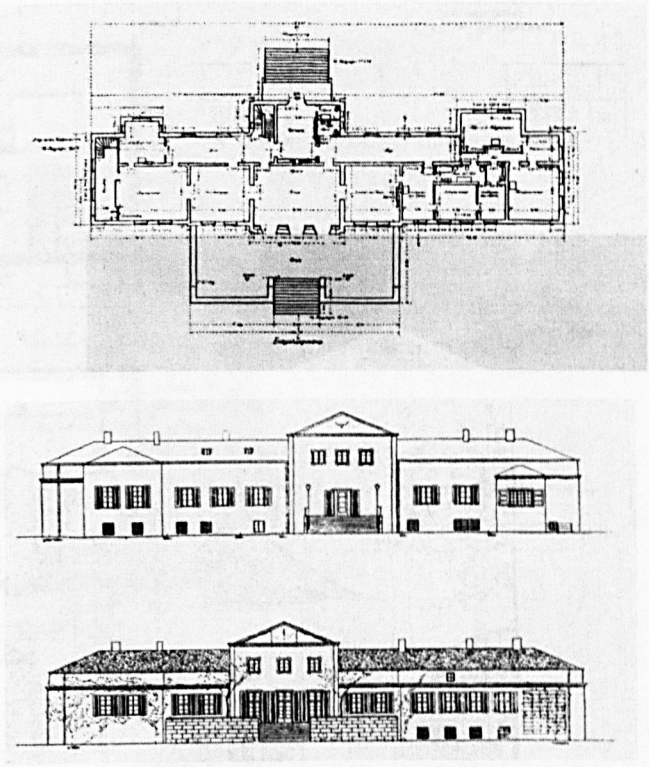


4.35 Heinrich Tessenow, Architect's own house, Berlin-Zehlendorf, (1930), plan.
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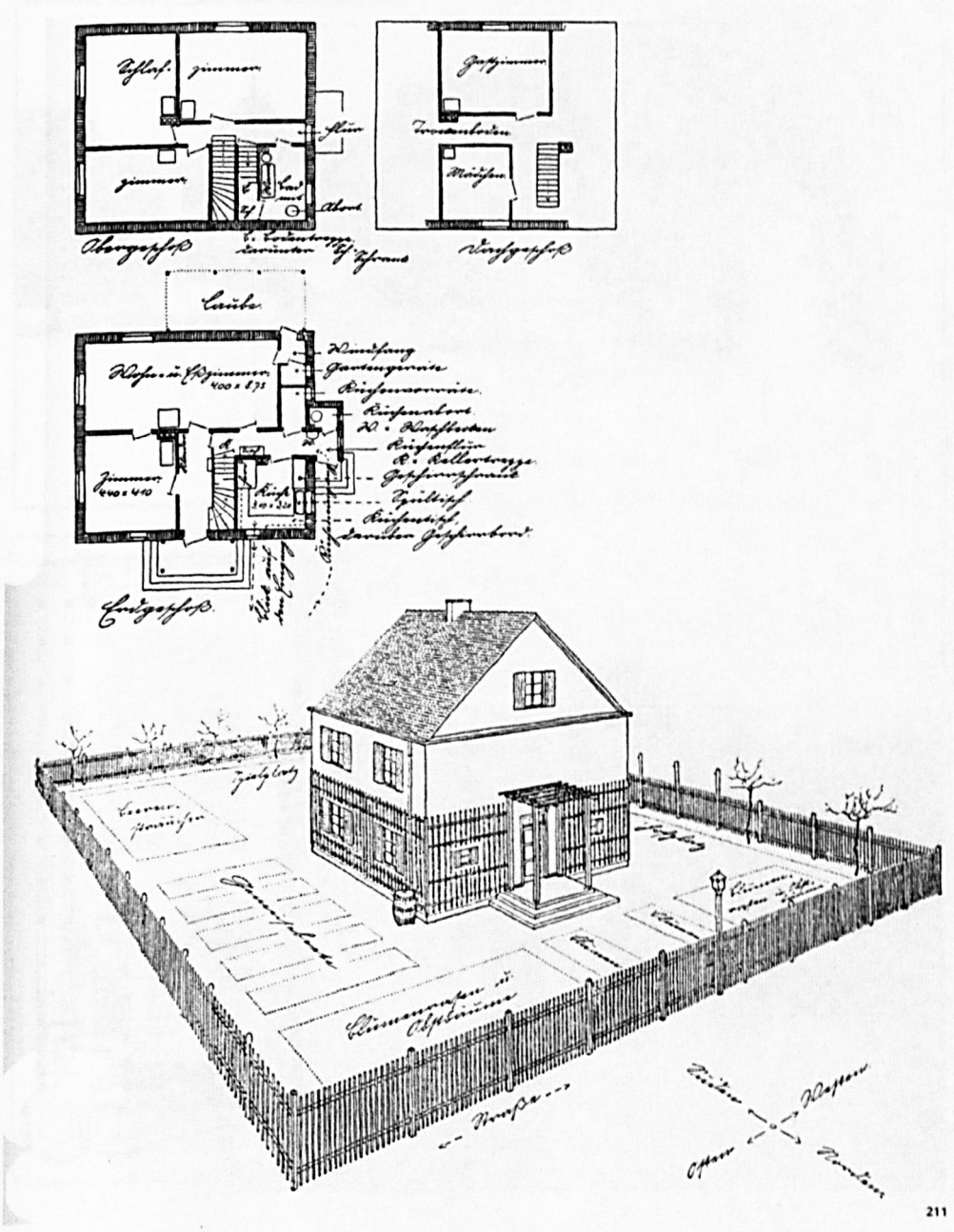




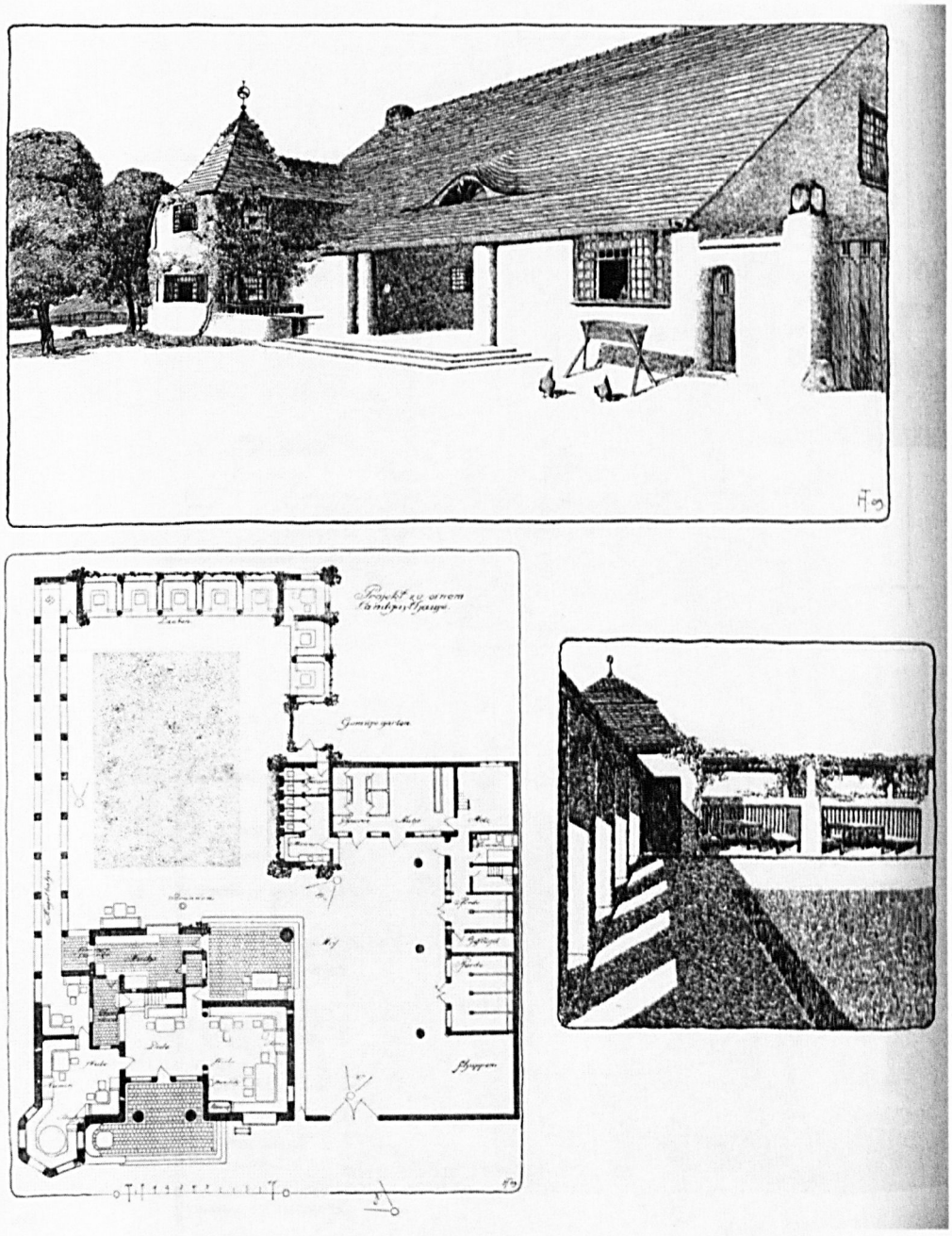
4.36 Heinrich Tessenow, Böhler House, St Moritz, (1916).
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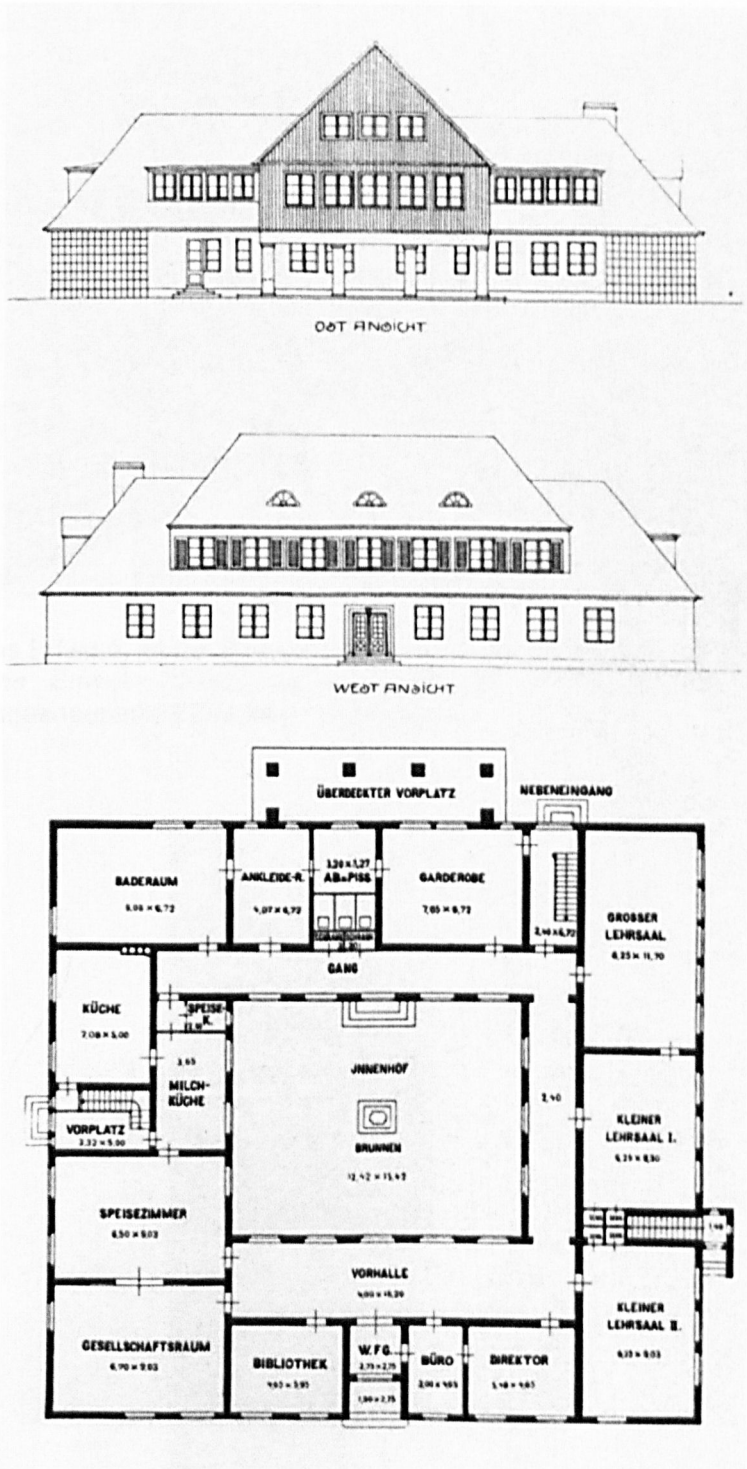
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4.38 Heinrich Tessenow, Design for a Single-Family House, Czomahaya, (1913).
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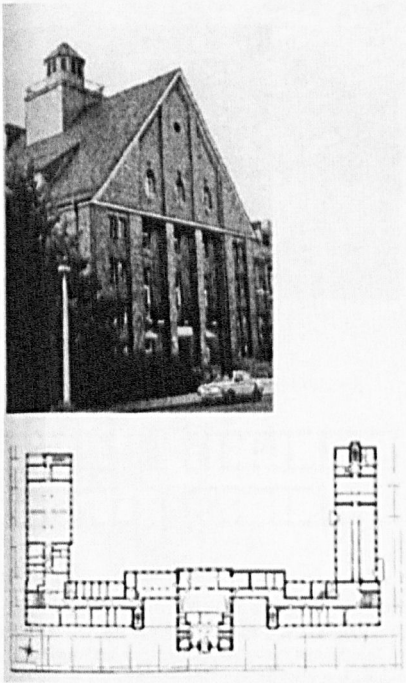
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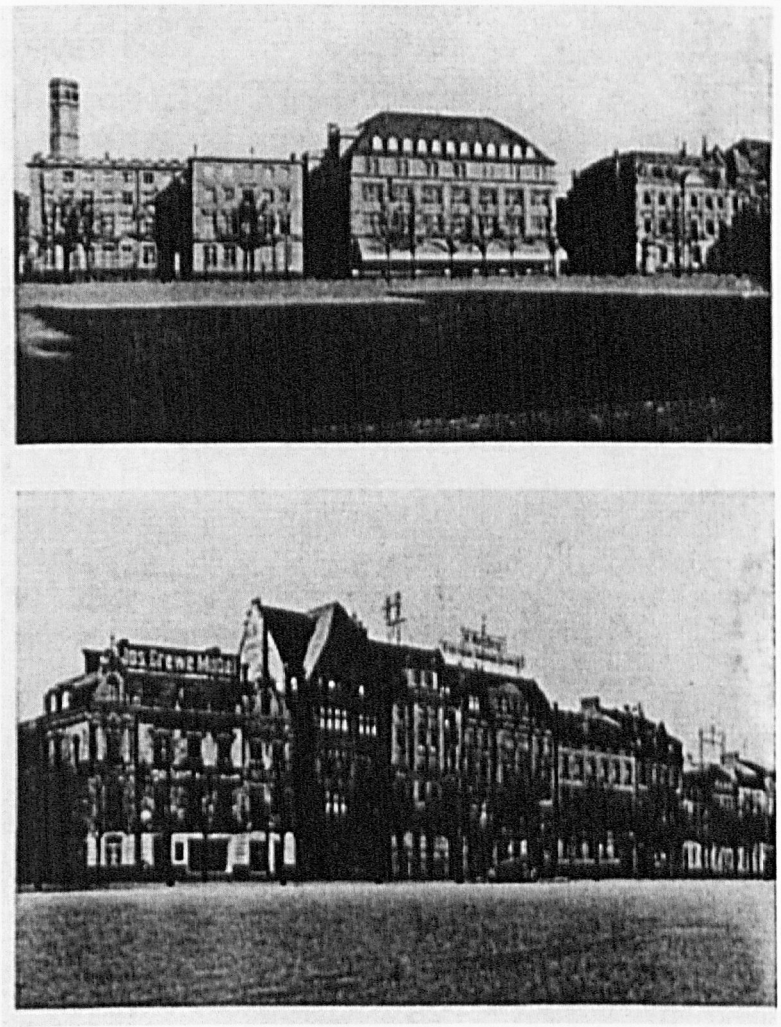
4.40 Heinrich Tessenow, Teachers' Training College, Peine, (1911-1912). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart, DVA, 1991), p. 223.



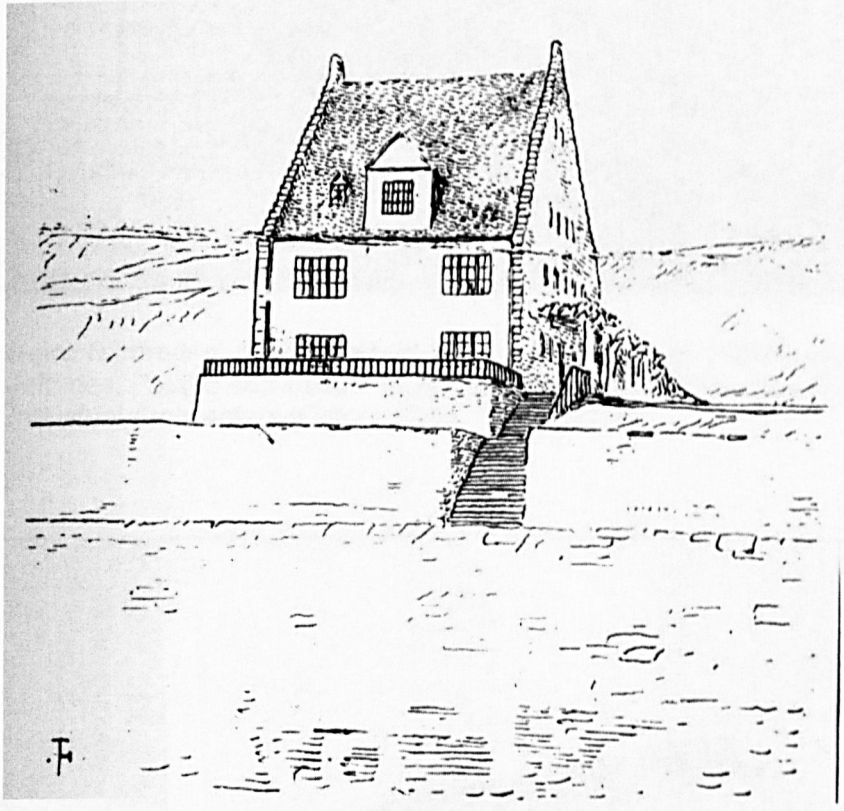
4.41 Hans Erlwein, Italian Village, Dresden, (1911-1913). Volker Helas (ed.) *Hans Erlwein: Stadtbaurat in Dresden 1905–1914* (Dresden: Kulturamt Landeshauptstadt Dresden, 1997), p.57.



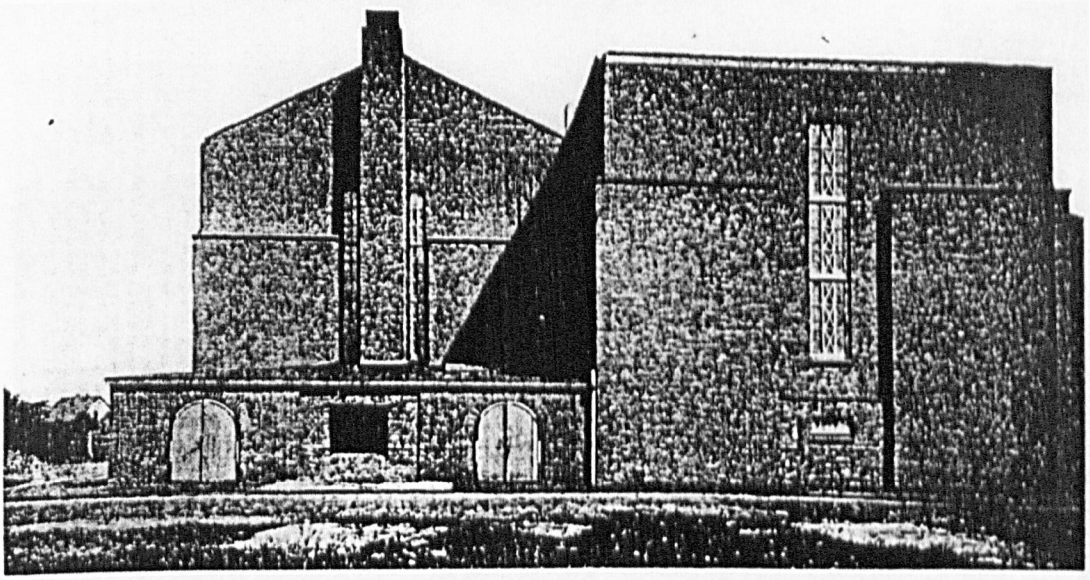
4.42 Martin Dülfer, Fritz-Förster Building, Technical University, Dresden (1917-1926), Gilbert Lupfer, Bernhard Sterra, Martin Wörner (eds), *Architekturführer Dresden* (Berlin: Reimer, 1997), p.71.



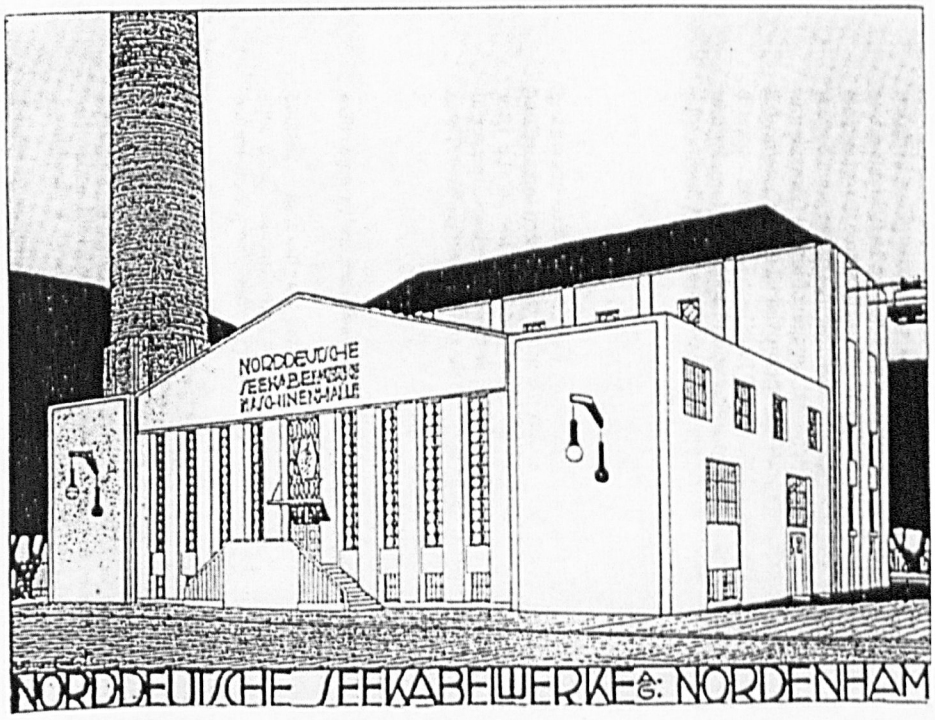
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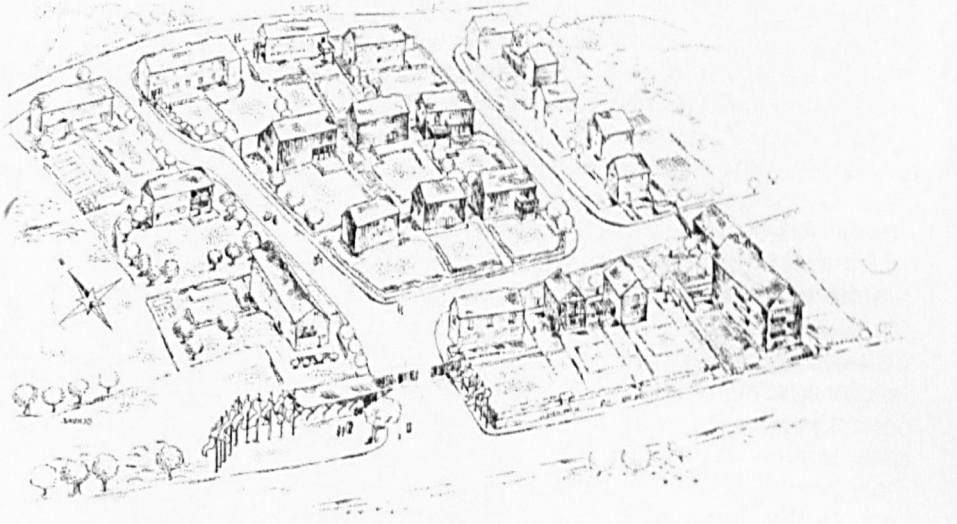
5.2 Heinz Stoffregen, Anker linoleum factory, Delmenhorst, (1910). Matthew Jefferies, *Politics and Culture in Wilhelmine Germany: The Case of Industrial Architecture* (Oxford: Berg, 1995), p.278.



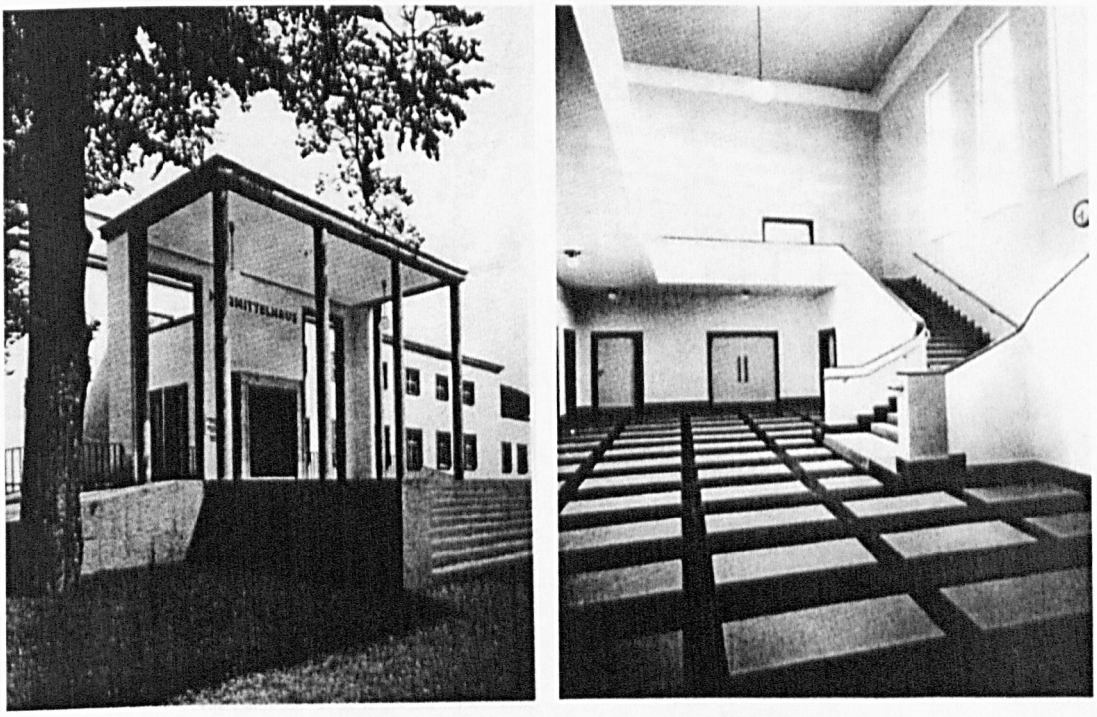
5.3 Heinz Stoffregen, *Norddeutsche Seekabelwerke AG*, machine hall, Nordenham, (1913). Matthew Jefferies, *Politics and Culture in Wilhelmine Germany: The Case of Industrial Architecture* (Oxford: Berg, 1995), p.281.



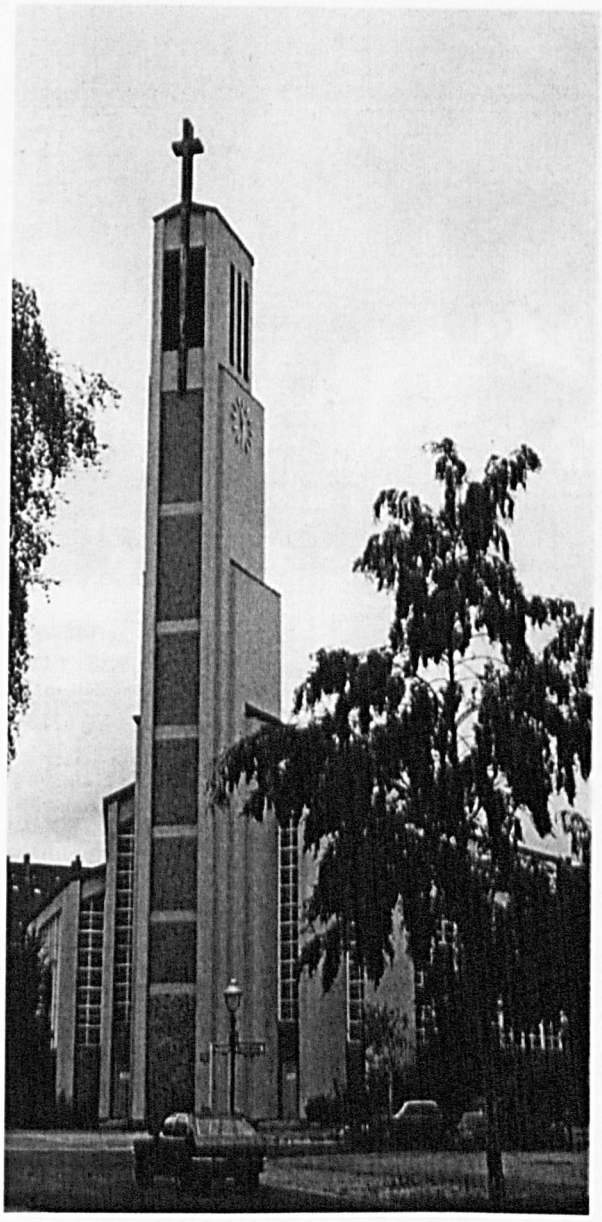
5.4 Mies van der Rohe *et al*, *Weißenhofsiedlung*, Stuttgart, (1927-1928). Helmut Heißenbüttel (ed.), *Stuttgarter Kunst im 20. Jahrhundert* (Stuttgart: DVA, 1979), p.195.



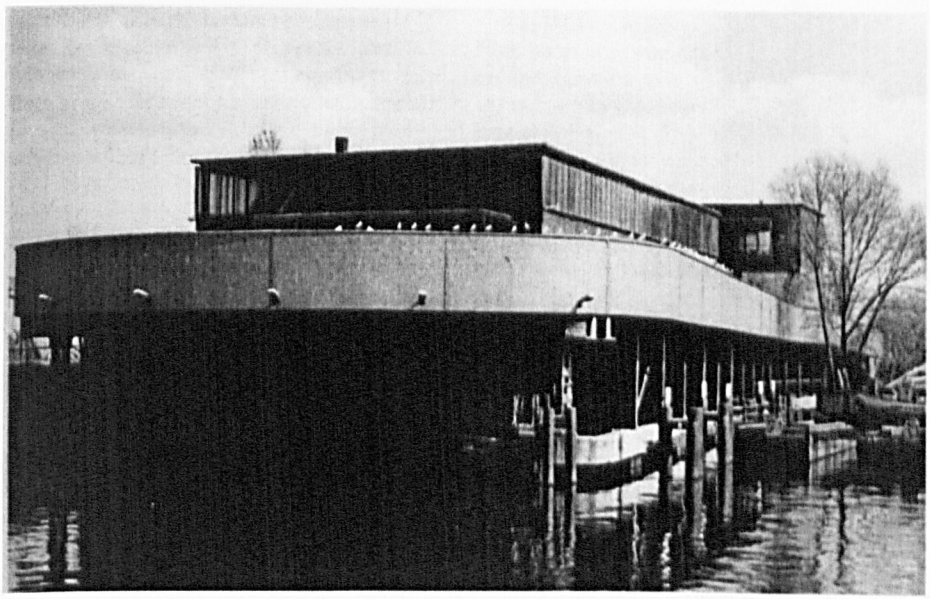
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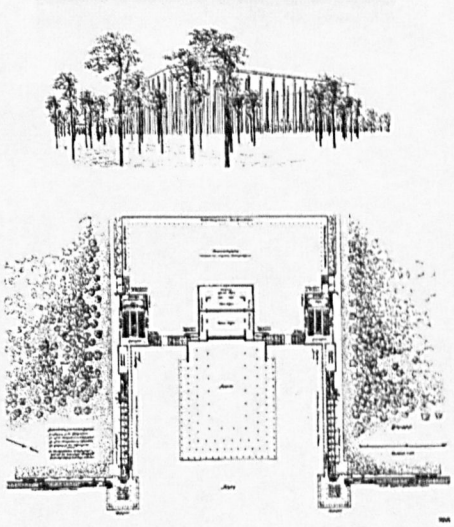
5.6 Clemens Holzmeister, *Kurmittelhaus*, Bad Ischl, (1927-1931). Georg Rigele and Georg Loewit (eds), *Clemens Holzmeister* (Innsbruck: Haymon, 2000), pp.173-174.



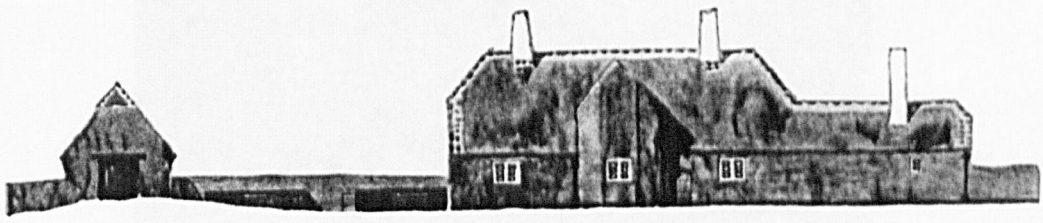
5.7 Otto Bartning, Gustav-Adolf Church, Berlin-Charlottenburg, (1934). John Zukofsky (ed.), *The Many Faces of Modern Architecture: Building in Germany between the World Wars* (Munich: Prestel, 1994), p.42.



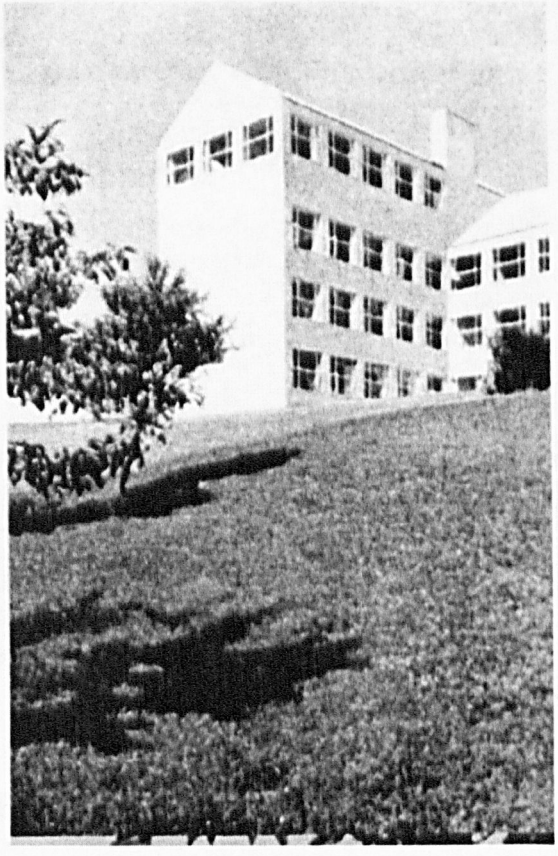
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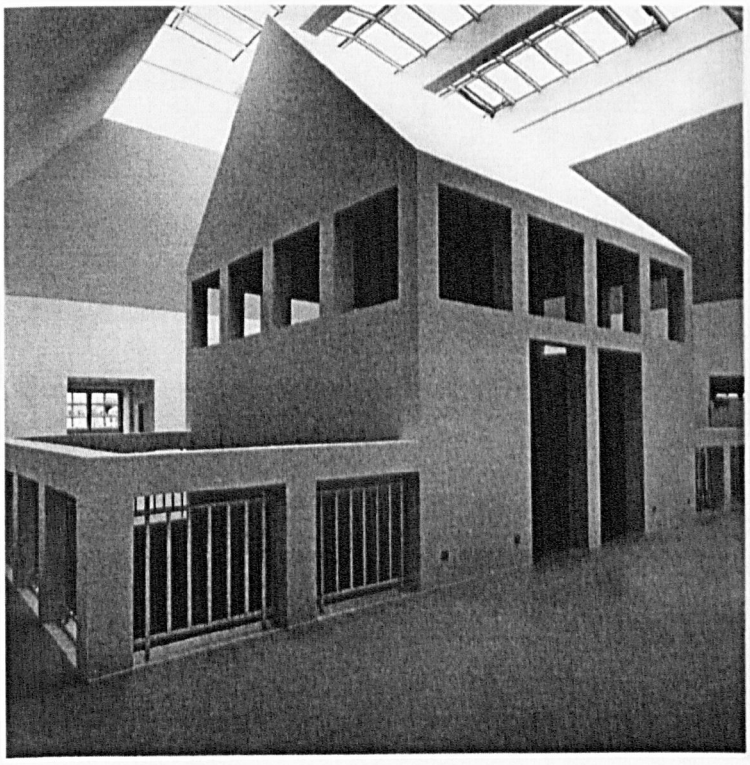
5.9 Heinrich Tessenow, KdF Bathing Establishment, Rügen, (1936). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart: DVA, 1991), p.139.



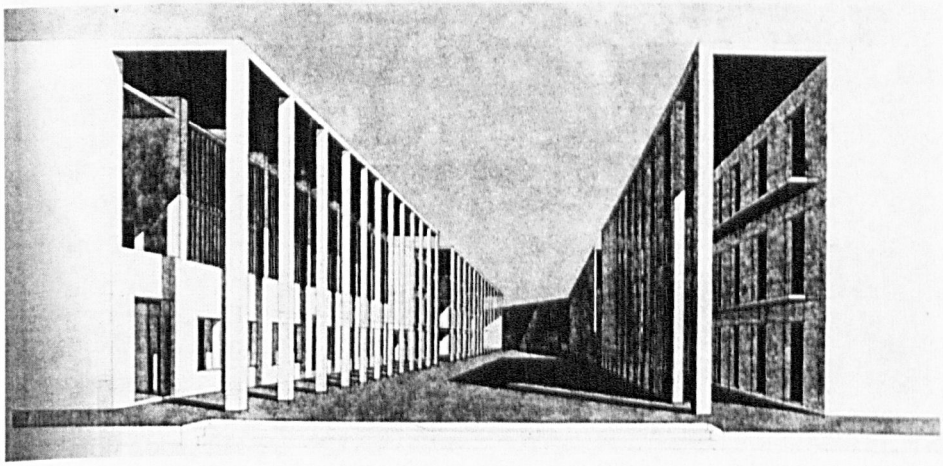
5.10 Kay Fisker, Østerlars Station, Bornholm, Denmark, (1914-1916). Hans Erling Langkilde, *Arkitekten Kay Fisker*, (Copenhagen: Arkitektens Forlag, 1990), p.11.



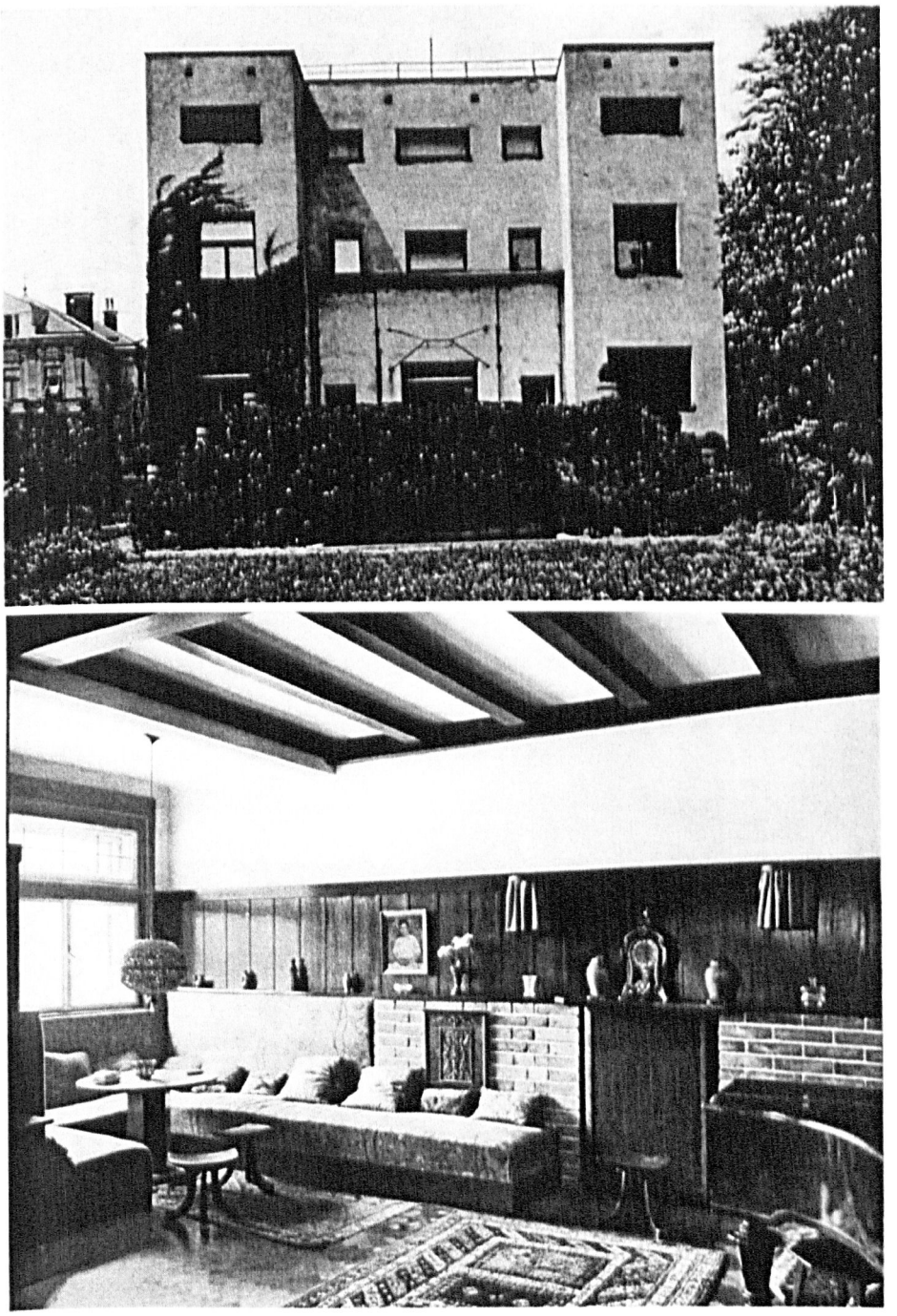
5.11 Kay Fisker, Aarhus University, Denmark, (1931-1942). Hartmut Frank (intr.), *Bauen im Geiste Heinrich Tessenows: Für eine moderne Baukultur der Einfachheit* (Hamburg: Heinrich-Tessenow-Gesellschaft, 2003), p.57.



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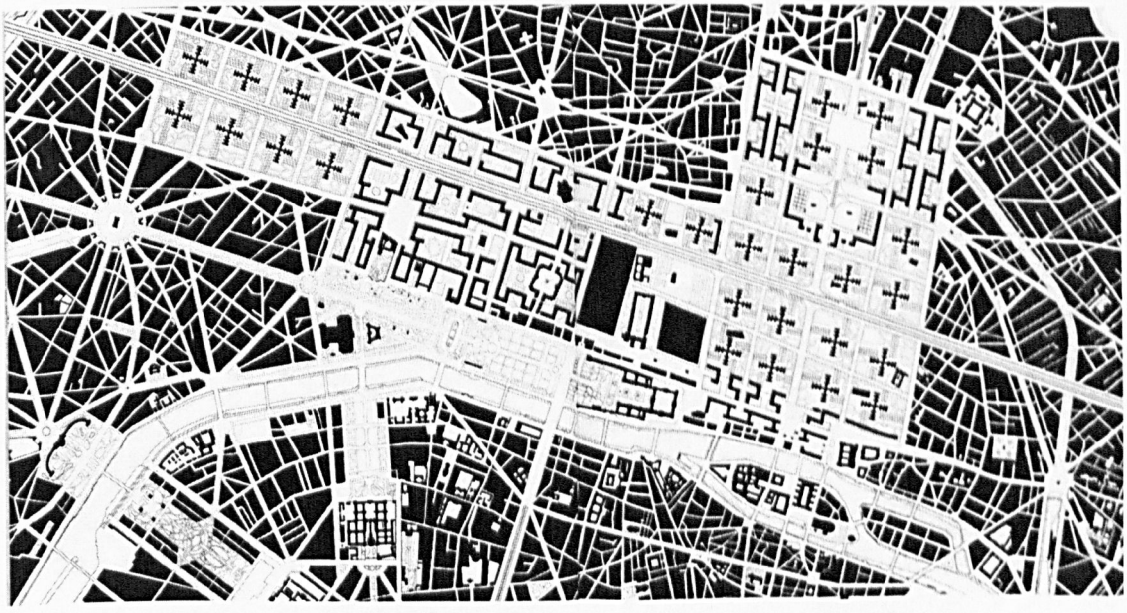
5.13 Giorgio Grassi, Student Housing, Chieti, Italy, (19xx). Giovanni Crespi and Simona Pierni (eds), *Giorgio Grassi: I progetti, le opere e gli scritti*, (Milan: Electa, 1996), p.85.



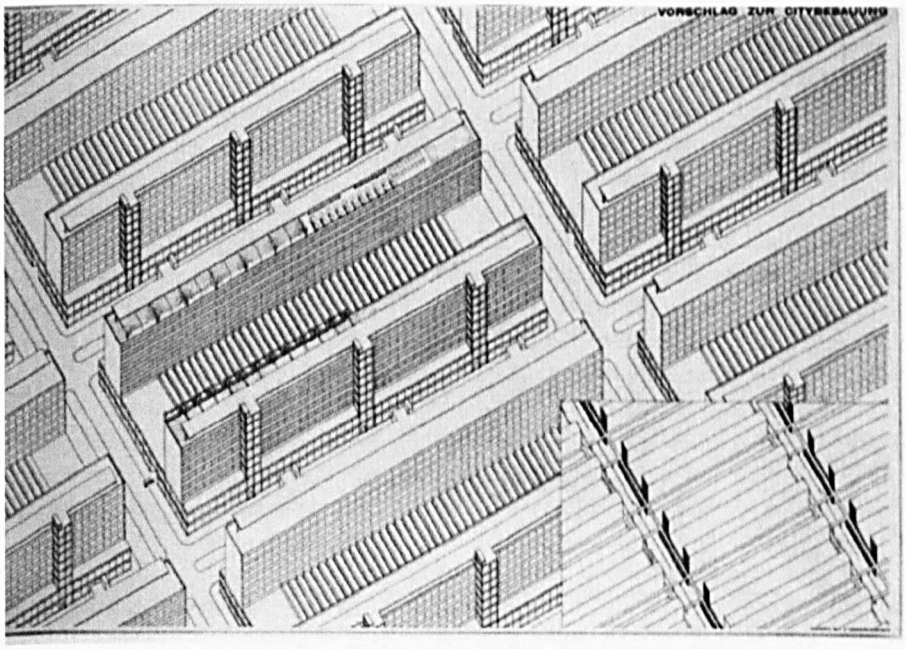
5.14 Adolf Loos, Steiner House, (1910), *Wohnhalle* and exterior view. Ludwig Münz and Gustav Künstler, *Der Architekt Adolf Loos* (Vienna/Munich: Schroll, 1964), pp.77-78.



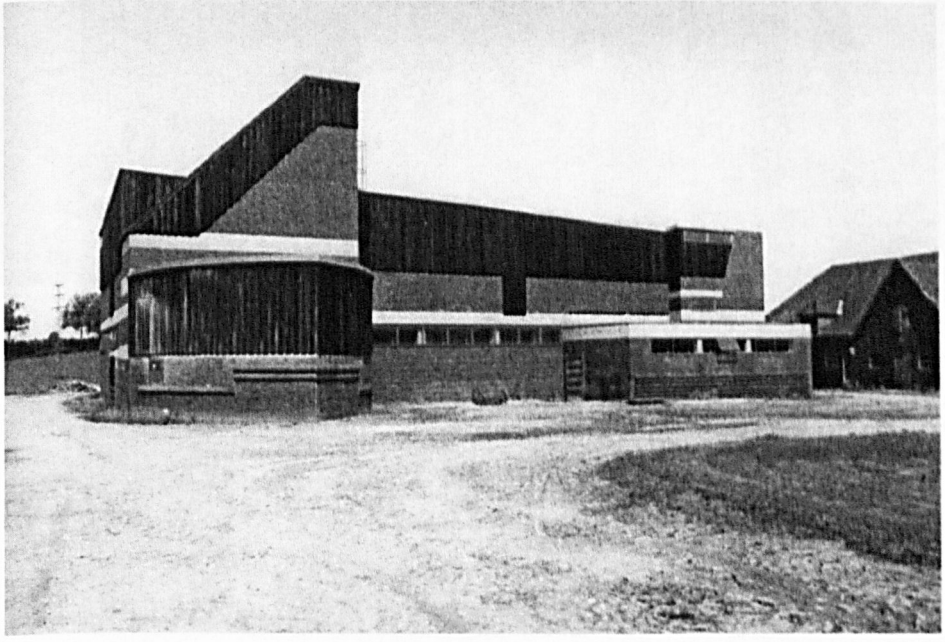
5.15 Karl Ehn, *Karl Marx Hof*, Vienna. Eve Blau, *The Architecture of Red Vienna: 1919-1934* (Cambridge, Mass: MIT, 1999), p.325.



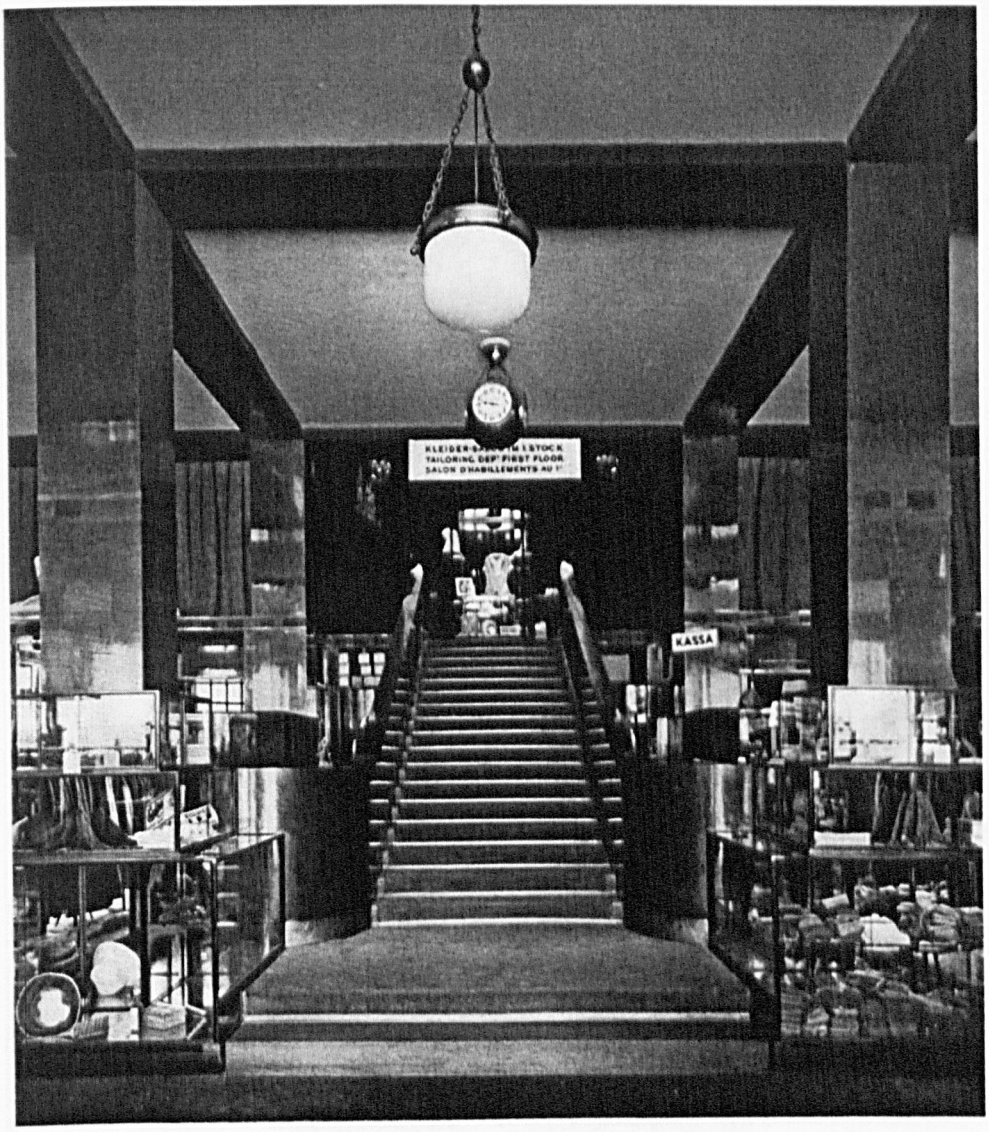
5.16 Le Corbusier, *Plan Voisin*, Paris. Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass: MIT, 1978), pp.74-75.



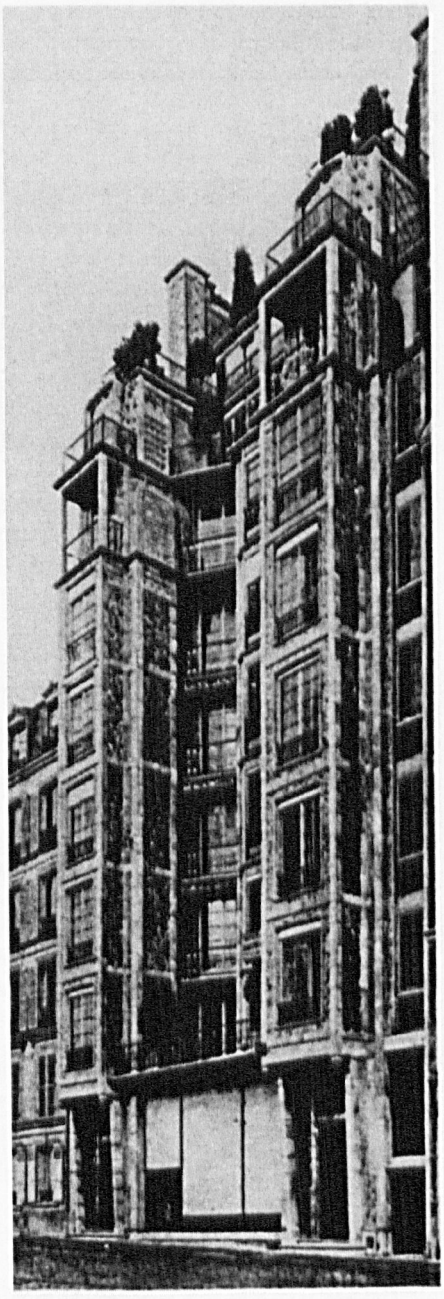
5.17 Ludwig Hilberseimer, housing proposal, Berlin-Mitte. Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass: MIT, 1978), p.57.



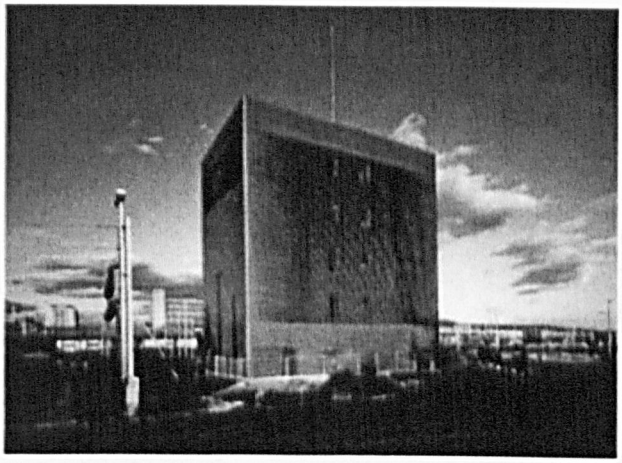
5.18 Hugo Häring, farm buildings, *Gut Garkau*, (1922-1925). Adrian Forty, *Words and Buildings* (London: Thames and Hudson, 2000), p.185.



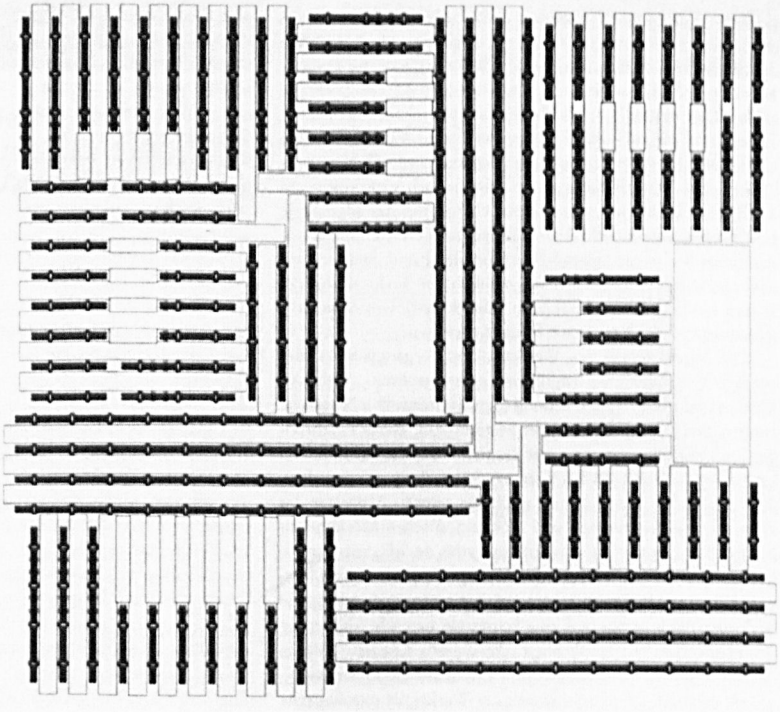
5.19 Adolf Loos, *Haus am Michaelerplatz*, *Goldman und Salatsch* outfitters, staircase, (1910). Ludwig Münz and Gustav Künstler, *Der Architekt Adolf Loos* (Vienna/Munich: Schroll, 1964), p.99.



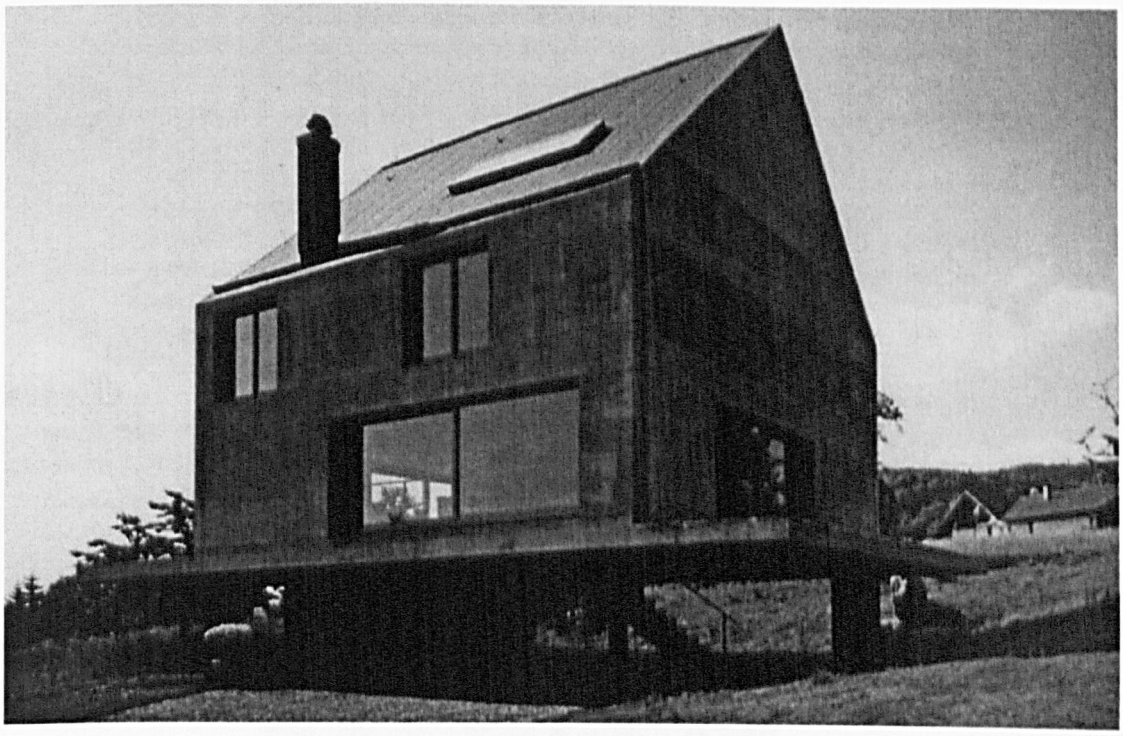
5.20 Auguste Perret, Apartment Building, Rue Franklin, Paris, (1902-1903).Sigfried Giedion, *Building in France, Building in Iron, Building in Ferro-Concrete* (Santa Monica, Ca: The Getty Center for the History of Art and the Humanities, 1995), p.154.



5.21 Herzog de Meuron, Signal Box, Basel (1995), *Werk, Bauen + Wohnen* No 3, 2000, p.25.



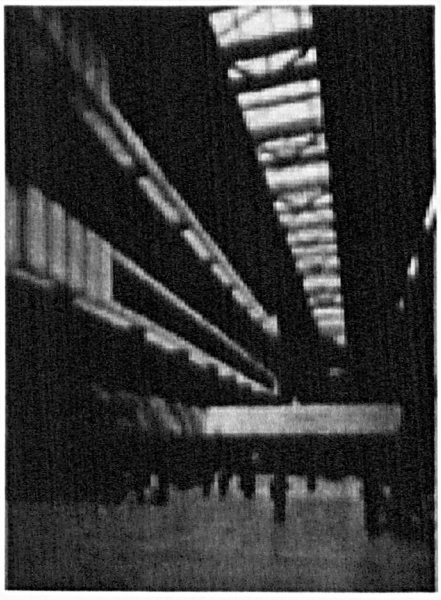
5.22 Peter Zumthor, Swiss Pavillion, Expo 2000, Hannover, plan, *Werk, Bauen + Wohnen* No 5, 1999, p.24.



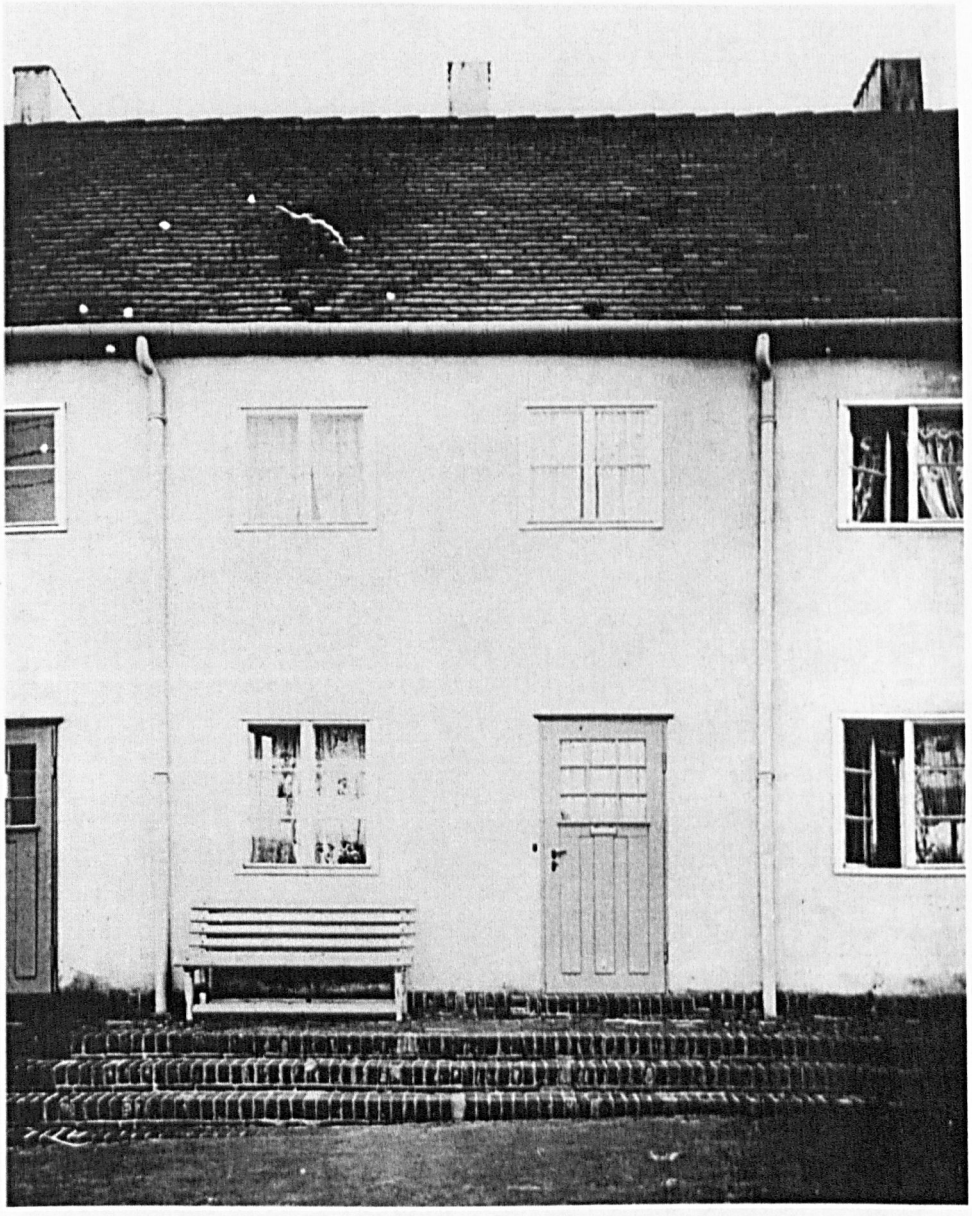
5.23 Herzog de Meuron, Rudin House, Leyman, Switzerland. Margit Ulama, *Architektur als Antinomie: Aktuelle Tendenzen und Positionen* (Vienna/Bozen, Folio, 2002), p.94.



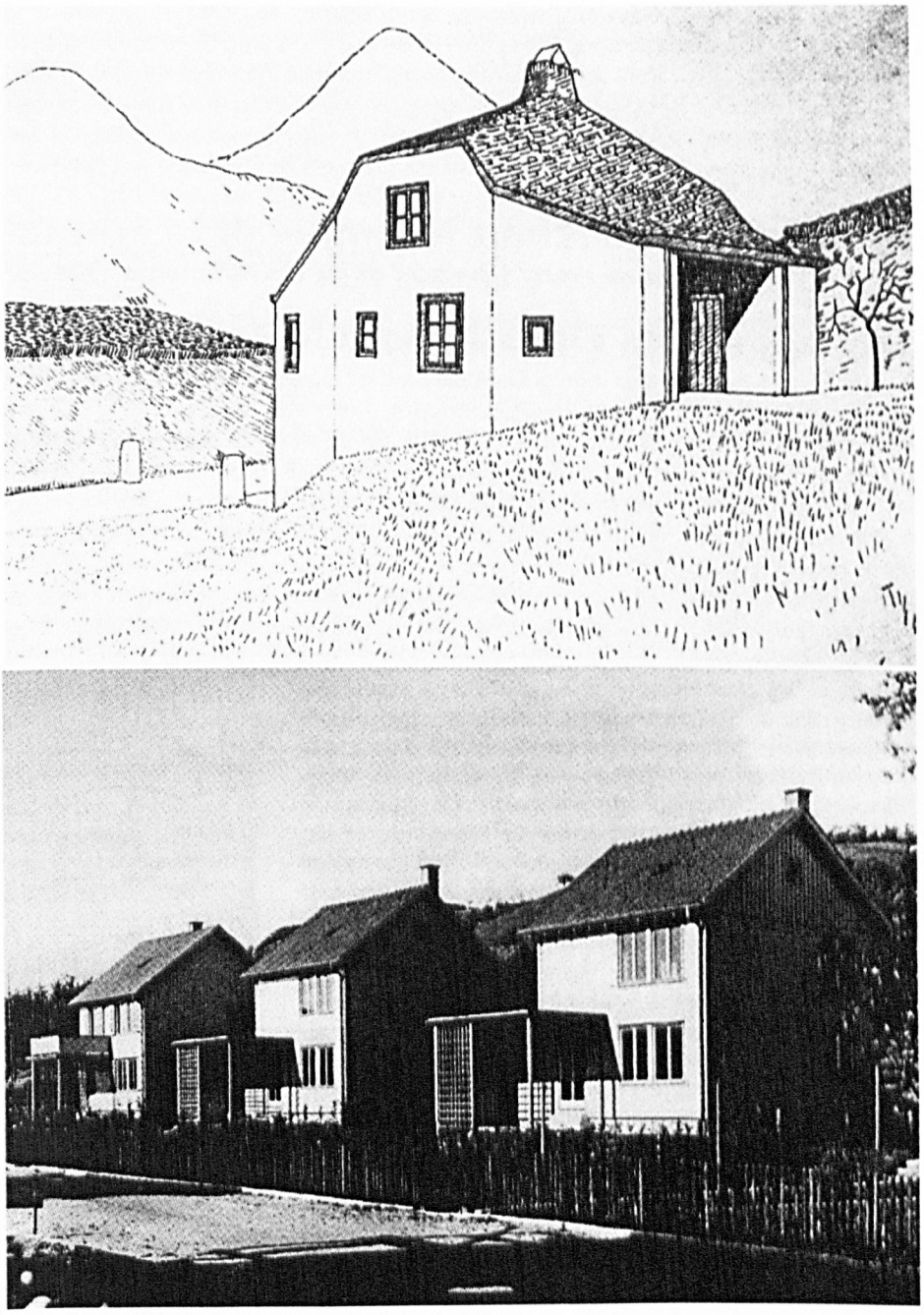
5.24 Klaus Staeck, satirical poster, West German parliamentary elections (1972), Haus der Geschichte, Bonn.



5.25 Herzog de Meuron, Tate Modern, London. Naomi Stungo, *Herzog & de Meuron* (London: Carlton, 2002), p.74.



5.26 Heinrich Tessenow, terraced housing, *Am Schänkenberg*, Hellerau, (1910). Marco de Michelis, *Heinrich Tessenow 1876-1950: Das architektonische Gesamtwerk* (Stuttgart: DVA, 1991), p.216.



5.27 Franz Scheibler, Blacksmith's in the Mountains (1923) and timber houses, Winterthur (1934), Martin Steinmann, *Forme forte: Ecrits/Schriften 1972-2002* (Basel: Birkhäuser, 2003), p.30 and p.43.

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