

## **CHAPTER 4**

### **THE DEVELOPMENT OF FUNCTIONALISM IN THE NEW CZECHOSLOVAK REPUBLIC 1924-1939**

- 1. Prague – The Trade Fair Palace 1926-28**
- 2. Brno – The Exhibition of Contemporary Culture in the  
Czechoslovakian Republic (10<sup>th</sup> Anniversary)**
- 3. Brno – The Czechoslovak Werkbund *Nový Dům* (New House)  
1928**
- 4. Zlin – ‘Factories in Gardens’ 1914-27 and ‘Cities in Gardens’  
1927-39**
- 5. Prague, Brno and beyond – Private Villas**
- 6. Prague – Baba, the Werkbund Housing Estate 1932**

## Chapter 4

### 1. Prague – The Trade Fair Palace

A constituent part in the development of modern capitalist economies was the function of trade fairs. With the increase in trade and commerce throughout the Czech lands these were essential. Initially these cultural displays staged in Prague were the Prague Jubilee Exhibition (1891) and the Chamber of Commerce Exhibition (1908). However, these exhibitions were not annual as there was no permanent organised exhibition ground. Czech entrepreneurs and industrialists travelled to fairs in neighbouring countries, particularly in Leipzig in Germany.

The absence of trade fair grounds became an embarrassment to Czech politicians who saw the Czech Lands becoming one of the most developed and prosperous nations. The high Gross National Product (GNP) and income per capita of the land of the Slavs demanded that a permanent Trade Fair site be established. In 1912 Václav Boháč had founded the Association of Czech Trade Exhibitors and the National Economic Union. The 1<sup>st</sup> November 1912 edition of *Národní obec*, where Boháč was the editor in chief, published the following exultation:

There is no need to justify the idea that Prague is best suited to host a Slavic Exhibition – it is after all, the future Slav Mecca, and it is up to Prague's leaders to make it the richest city of the Slavs.

The Panslavism exhibited by Boháč was resisted by the Vienna-based government, which gave no support to this idea. The realisation of the Prague Trade Fair project would have to wait for the fall of the Austro-Hungarian Empire. By 1919, with the support of the National Socialist Party who numbered the ministers Klofac, Benes and Hotowitz as his friends, Boháč became the president of the Prague Trade Fair Committee. It was incorporated as a cooperative stock company, with the city of Prague being the major shareholder in 1920. The Fair was established on an exhibition site alongside the Stromovka Park in the Bubeneč district, housed within Bedřich Muzberger's Industrial Palace, a Beaux Arts confection of iron and glass. The first Trade Fair was held in September 1920 with others in May and September 1921.

Boháč popularised the Prague Trade Fair throughout the world in magazine articles, billboards were erected along many railway lines and roads, and a Trade Fair propaganda train toured Europe in 1922. With the support of the President Thomas Mazaryk and other foreign dignitaries including the French Prime Minister, [Boháč was

awarded the French Legion of Honour in 1924 in addition to being an Officer of the Tunisian Order from 1923], he clearly was a highly regarded man with many contacts and supporters. By the end of 1923 the deficiencies of the Bubeneč site were apparent. A new site was sought that would take full advantage of the emergent transport and social infrastructure while being linked to Prague's older city centre and the newly developed commercial area of Dejvice. According to some, including Boháč's daughter Vera Beladova, Boháč invested his life savings in purchasing the defunct Melichar and Umrath factory which was located across the railway adjacent to the old Bubeneč site. A payment of seven million Czech crowns was paid to buy the site.

Boháč envisaged a group of four buildings (4.1) composed of two exhibition houses, A and B, providing year-round displays of industrial products. Building C was to provide offices for the Trade Fair administration and apartments for employees; building D was designed as a hotel for foreign visitors and honoured guests. This configuration of four buildings was said to be an allusion to the four continents of Europe, Asia, Africa and America with which Prague had forged trading links – as yet the city had not reached out to Australasia. The Prague Trade Fair Building Co-operative was formed in 1924 with invitations to six selected architects to submit plans. The six, Alois Dryák, František Roith, Josef Fuchs, Miloš Vaněček, Oldřich Tyl and E. Koteck (who was hardly known) entered the fray. Although they were being asked to design a Functional Modern building their respective architectural trainings were very different.

Alois Dryák, the oldest of the group, began his architectural career in the twilight of Historicism which was being replaced by Beaux Arts and Art Nouveau, although as a mature architect he was minded to respond to and work with modern ideas. František Roith, like many, began his architectural studies under Otto Wagner. Jože Plečnik trained Josef Fuchs at the Prague School of Applied Arts where Plečnik, as Wagner's student and confidante, was also erroneously labelled as a classicist and monumentalist in retrospect. Like Wagner, Plečnik's modern aspirations were often evidenced in the work of his students. Miloš Vaněček and Oldřich Tyl, both having been trained at the newer Prague Technical University, had experimented with Cubist and Expressionist forms but had now moved on to Functionalist and Constructivist styles. So it was that the judging panel could pass the six architects off as being from six differing architectural styles, although this was far from the truth.

4.1 Bohuslav Fuchs and Oldřich Tyl, the Trade Fair Palace, Prague 1924-28



Reconstruction by SIAL 1986-95



© National Gallery Prague 1995

No such difference or individuality was demonstrated in the selection of the members of the jury who actively supported Functionalism and the architectural avant-garde. A number of the jury were friends and colleagues of Tyl and Fuchs. Oldřich Starý served on the editorial board of *Stavba* (Building) while Oldřich Tyl, Josef Štěpánek and Josef Fuchs as fellow students of Jože Plečnik shared their views in the architectural review *Stavitel* (The Builder), one of the first publications to bring Functionalism to a wider public.

The history of the competition is well documented in *Stavba* and *Stavitel* from 1924 with a commentary provided on the intention and purpose of the Trade Fair Palace by V. Louda who was Boháč's secretary. The entries by winners Dryák, Fuchs and Tyl were fully documented in *Mezinárodní obchod a průmysl* (International Trade and Industry), the Trade Fair magazine of 1924 where all entries were of Boháč's four building arrangement. The competition requirements were that the main buildings be situated on Belskeho Avenue separated by Rudolfova Street. Both main buildings had to have space for offices, warehouses and restaurants as well as exhibition spaces. Building A would also contain a large internal courtyard for heavy machinery exhibits with administrative offices in the galleries. Building B would house public baths while building C had residential floors and office spaces. Building D was planned as a hotel of sixty rooms with ten top floor suites. The jury recommended that the contract could not be awarded to any of the prize winners individually preferring to award one competitive entry to Alois Dryák and a second to the team of Josef Fuchs and Oldřich Tyl, as they now were paired, to produce new designs for the second Prague Trade Fair competition with the results seen late November to early December 1924.

A comparison between the first entries and second entries shows how Dryák, Fuchs and Tyl adjusted their designs from their initial plans. The most radical re-design was that of Alois Dryák moving from a playful Art Deco style with towers on the corners of the structures. The building's silhouette revealed vases and sharp gables topping a planar composition of unending bevelled windows providing both ornament and function. The other major issue was that as a totem of the commercial city the advertising tower was in the opinion of the Functionalists critically flawed.

Dryák's second design eschewed all playful references and ornamentation in favour of a functional design replete with ribbon windows in a plain façade with a clearly separated administrative block. It was clear from this second entry that Alois Dryák had learned many lessons from Fuchs and Tyl, however his adherence to axial composition meant that space was sacrificed in favour of materials within a traditional syntax. In other

words, despite the absence of internal supporting walls that previously would have dictated the necessity of corridors in controlling traffic flow within this plan there was no such restriction. Dryák was unable to comprehend these changes from the normal conventions and as a consequence the freedom of space usage that the building demanded was lost. Therefore Dryák was unsuccessful in the competition.

Fuchs' and Tyl's design had no such drawbacks and the design when built was the first Modern Functionalist building in the Czech Republic for a number of reasons – the design was a bespoke solution to meet the specific needs of twentieth century commerce and, unlike some of the functional factories, the enormous size of the four-building complex was designed to allow functional usage for many decades to come. The four buildings had to be constructed within an extant street plan where Fuchs and Tyl had to overcome the odd shaped plot of land. Tyl ignored the diagonal slant of Strojnícka Street by fracturing the central wings of the building with parallel fractures in the side façade. The immense size of the footprint of the four buildings was echoed in the size of the exhibition halls A and B. Although only building A was ever constructed the sheer size of the Palace and the total of materials used in this construction established this one structure, composed of the three utopian materials equally; ferro-concrete, steel and glass, as one of the very first Modern Functionalist buildings. The Palace could at any time accommodate 10,000 visitors and 4,000 exhibitors in a building 140 x 75 x 37 metres where nine floors totalled 24,000 square metres above an exhibition hall of 400 cubic metres.

To achieve this structure work began on site on 19 March 1926. The year 1927 saw the pouring and construction of the reinforced concrete framework with the whole building being opened to the public on 21 September 1928 – just thirty months from start to finish – completing the largest Modern Functional Building anywhere. This would be remarkable given twenty first century technology, but for the time it was truly impressive. The necessary site management and control to allow for 249 loads of timber to construct the scaffolding and 48,000 cubic metres of sand was only matched by the raising of a 26 million crowns loan from the Czechoslovak Legions Bank with the Berlin Victoria Savings Bank lending a further 36 million. The total cost of construction had reached 81 million Czech crowns by the time of opening.

Some recent observers would argue all manner of influences and references for this building from the Turin Fiat Factory 1915–1921 by Giacomo Matte Trucco, a truly impressive work, to drawings by Mies Van der Rohe, Mart Stam and from Le Corbusier whose Swiss College in Paris 1930 fed from ideas of Czech Modernism discussed with

him by Karel Teige at the time. The essential difference is that with the exception of the Turin Factory, which will be considered further, all of the other works were drawings, ideas and plans which were never built. If all of these ideas are to be included then the work of one of the greatest architectural design draughtsmen and seers of the Modern Movement, Antonio Sant'Elia, needs also to be considered. Reyner Banham puts it so succinctly:

The drawings entitled *Dinamismo Architettonico* (Dynamic Architectonics) makes it clear that 'movement' as a quality of individual buildings has a very special meaning in his hands... The *Citta Futurista* (The City of the Future) 1914 drawings suggest that far from trying to introduce movement (as Giedion states in *Space, Time and Architecture*) Sant'Elia is basing his whole design on recognition of the fact that in the mechanised city one must circulate or perish.<sup>1</sup>

There can be no doubt that this one factor, although perhaps not expressed in words, was central to the Czech Modern Movement as a whole and Central European modernism as a whole. In the words of Bernard Tschumi:

when Sant'Elia reintroduced the Viennese motifs of the influential Otto Wagner in the Futurist drawings, it was not the result of passéist weakness. On the contrary, the self transgression explored by Sant'Elia announced an obsession particular to the twentieth century. Namely, each time a law – economical or technical – is verified by implementation the architect will try to break it. He will do so either by alteration through foreign elements, for example, or by exaggeration, insisting on its extreme severity, experimenting with symmetry and repetition, for orthodoxy provides only ephemeral guidelines.<sup>2</sup>

In looking at the Trades Fair Palace this definition fits extremely well and, even though Sant'Elia left behind no finished buildings, his pronouncements on the technological cities presaged the developments of the 1950s and 1960s.

This understanding of Modern architecture was expounded in *Messaggio* (Message), May 1914, by Sant'Elia and his apparent collaborator, Ugo Nebbia:

to raise the new-built structure on a sane plan, gleaning every benefit of science and technology, setting nobly every demand of our habits and our spirits, rejecting all that is heavy, grotesque and unsympathetic to us (tradition, style, aesthetics, proportion) establishing new forms, new lines, new reasons for existence, solely out of the special conditions of Modern living, and its projection as aesthetic value in our sensibilities.<sup>3</sup>

Again this is clearly stated in the architecture of the Trades Fair Palace but how does this aesthetic work in relation to the Turin Fiat Factory?

Although Giacomo Matte Trucco was never a Rationalist he exhibited at the 1928 Exhibition of Rationalist Architecture in Rome, this being the only project of this exhibition ever realised. It can be argued whether this is truly a building of the Modern Movement or a modern reinterpretation of Roman classical tradition in accordance with Fascist dogma and the wishes of Mussolini. Despite the fact of the works extending over a 40 hectare (100 acre) site the shape of the building and the test track on the roof echo an enormous circus maximus constructed in mega-structural, reinforced concrete framing with hundreds of 'punched through' windows devoid of the elegance of the Trade Fairs Palace ribbon windows that are accomplished in a façade of balanced harmony.

Reyner Banham presents one other group of buildings, The Dessau Bauhaus as being of superior character:

The Bauhaus remains a masterpiece of the new architecture. Indeed it was the first really great work in the style.<sup>4</sup>

This is Banham's view of the Dessau Bauhaus Buildings, 1925-26, Walter Gropius. Although these buildings are in the vanguard of the Modern Movement, it can be argued that they are not the first masterpiece by examination of the evidence. From Medgyaszay's Budapest Department Store, 1902, through Poelzig's Milch Chemical Factory, Posen (Poznan) 1912, and Max Berg's, Hala Ludowa, Wroclaw 1913, and then to the second decade with Häring's Gut Garkau Farm Buildings, Lubeck 1924, to Kahn's Glass Plant, Ford Motor Company, River Rouge, Michigan 1922, it can be seen that other architects had been creating masterworks. Indeed if the focus of this work were American advances one could easily cite the Ford Plant at River Rouge through sheer scale and advanced use of materials as being one of the first masterpieces.

Banham's view is questionable for the following reasons. In being able to select a green-field site bordered only by Friedrichsallee and the old hospital, Gropius was able to determine the configuration of the Bauhaus buildings, as there was no pre-existing architecture or roads. Within this complete freedom Gropius built three buildings all of which with their interconnections constituted an L shape arranged around the central point (4.2). This 'masterpiece' viewed from the air (as Gropius intended) does not inspire reverence as the mixed heights of the blocks and their relative interpenetration leave the whole as an unresolved work. Despite all of the architectural adulation offered

in support of these structures today, a differing view of the facade was offered by contemporaneous critics.

The ordering of the openings in the wall surface is quite as important as the avoidance of apparent reveals in the presentation of the integrity of the wall plane... Contemporary buildings often have entire walls of transparent glass constituting one enormous window even though the independent supporting skeleton is perfectly clearly seen behind. Such altogether transparent walls are not by any means the easiest for the architect to handle.<sup>5</sup>

This lack of ease and discomfort is clearly visible in the handling of the façade of the Bauhaus School Workshops, where we progress from the recessed ground floor with its poorly weighted supports, to the first floor banding and on upwards to the base of an impossibly heavy over-hanging glass box. This box was composed of thousands of standard glass windowpanes [it is suggested by Reyner Banham and others, that perhaps Gropius was given these as a cheap job lot] rising to a rather unfortunate roof cap. This lack of ease in execution is remarked upon further as:

the supports of the centre section are awkward in shape.<sup>6</sup>

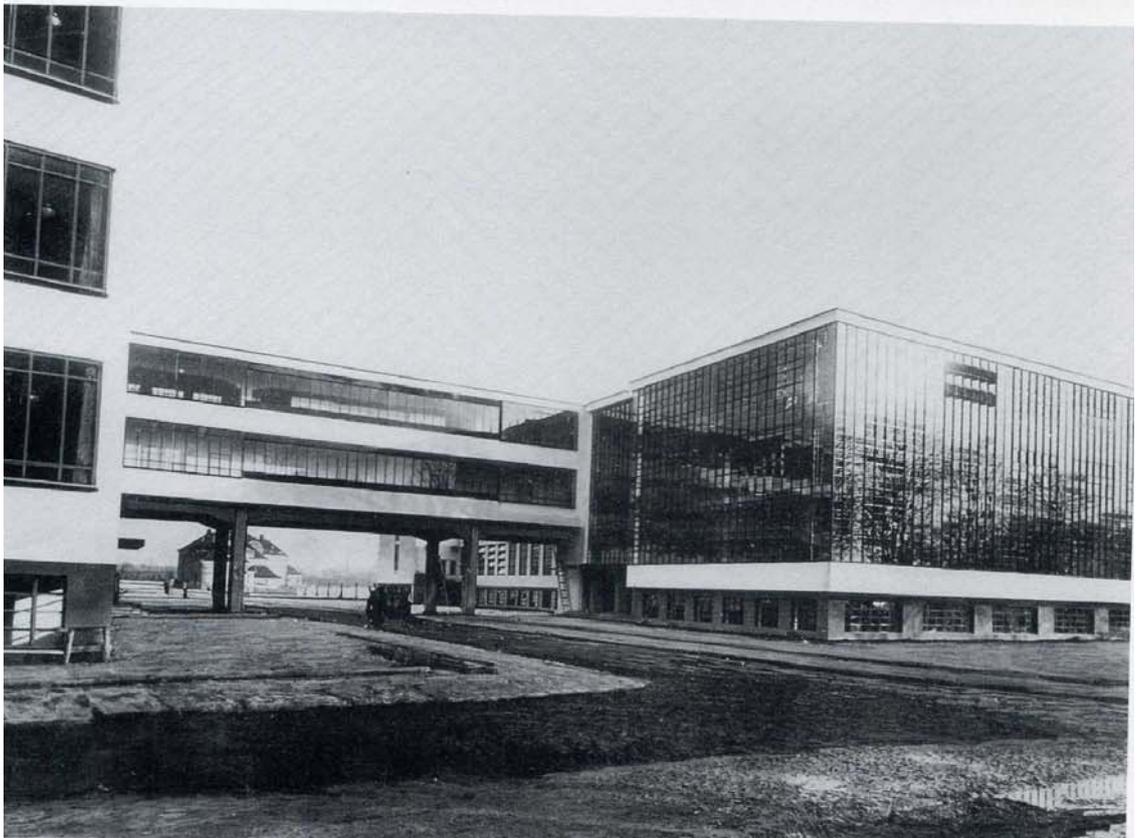
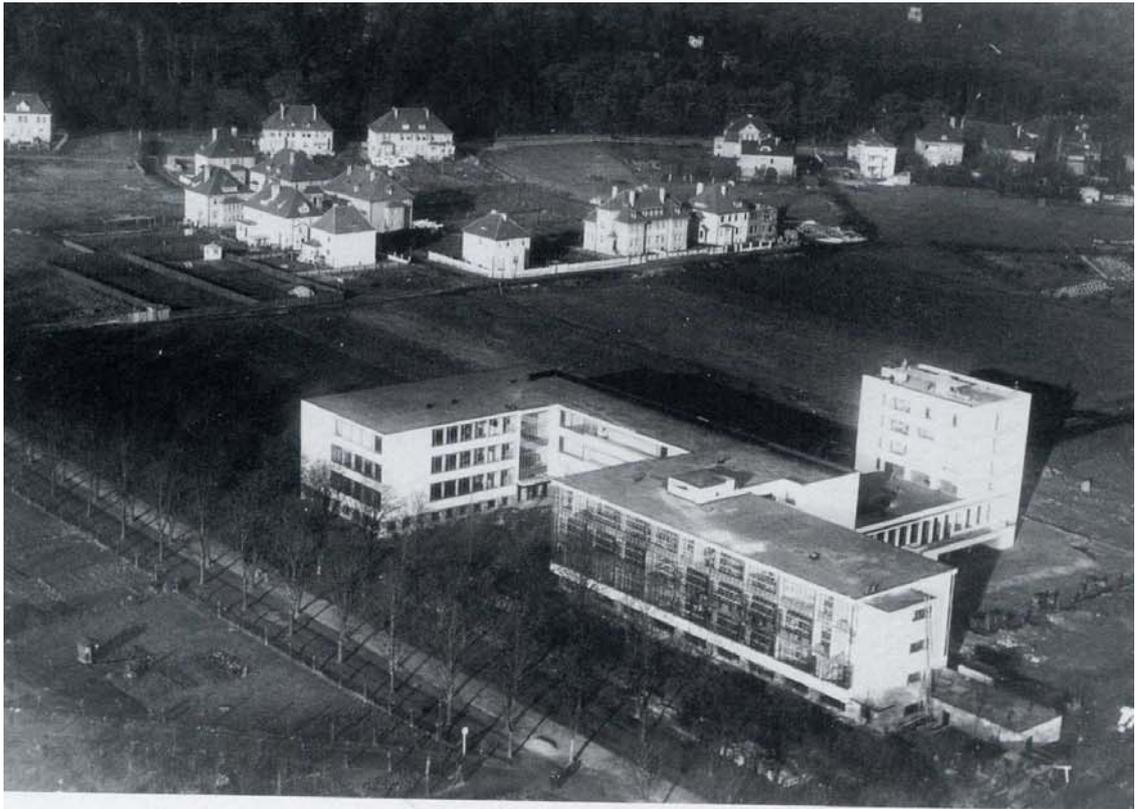
These observations are often overlooked and as such the Dessau buildings cannot be seen as a fully resolved plan. These deficiencies were compensated for in the far better handled masters' and directors' houses both of which from without and within were works of great function and beauty. This may have been because Frau Gropius, Ise Frank, made sure that her husband's ambition:

to live in a pine tree forest.<sup>7</sup>

was fulfilled. It is clear that the intervention of Frau Gropius, Klee, Muechler, Kandinsky and Schlemmer in helping to design the masters' houses composed an idyllic modern grouping of three semi-detached duplexes.

If the Dessau Bauhaus Buildings were not the first works of the Modern Movement there were a considerable number of other buildings contesting that honour? One was the Trade Fair Palace which despite its clearly stated Modernity and fitness for purpose, was doomed to failure in Western European commentary. This Czechoslovak

4.2 Walter Gropius, the Dessau Bauhaus Building with Workshop 1925-26



© Isaacs/Bullfinch, 1986

anomaly is dealt with rather curiously as even Banham cannot define the Czech contribution to the Modern Movement except by citing,

several Czech architects who failed to establish themselves but were highly regarded in Germany at the time.<sup>8</sup>

This ignorance of Central European Modernism denies not only the Trades Fair Palace but many other individual buildings, town and city plans and developments through these lands. These omissions are all the more amazing as the Club of Architects, through the review *Stavba*, organised a series of lectures entitled 'For New Architecture' in Prague and Brno across the new year from 1924–25. Among the contributors were J.J.P. Oud, Walter Gropius, Amédée Ozenfant, Le Corbusier and Adolf Loos – all of whom were highly respected architects. With cross pollination of ideas from the graduates of the School of Architecture at the Czech Technical University in Prague, Oldřich Tyl, Oldřich Starý and Ludvik Kysela in particular, they all helped fire the cause of the Modern Movement. The Trade Fair Palace was extremely important in the opinion of Le Corbusier as this observation reveals.

When I first saw the Trades Fair Building [Palace] I felt totally depressed, although I did not approve of the building whole-heartedly. However I did realize that the large and convergent structures I had been dreaming of really existed somewhere.<sup>9</sup>

In addition to the Trades Fair Palace Le Corbusier would have been made aware of a number of architects and their buildings throughout Prague. In the most recent comprehensive publication on Prague 20<sup>th</sup> Century Architecture there are 225 entries from 18 Prague architects with a further 74 entries in a supplement – 'other interesting buildings', all of which exclude work other than by Czechoslovak -born architects.<sup>10</sup> Within Czechoslovakian Republic Prague was not the only city with architectural ambitions and drive, as Brno from 1925 would begin to rival Prague's supremacy.

Perhaps it is appropriate to let Le Corbusier close this section with another comment on the Trade Fair Palace taken from an article in *Architectural Review*, August, 1975

It is very instructive for me to see architecture on this scale in actual reality. I, who have so far built only a few relatively small buildings, understand now how I must design big buildings.

Although the author, Frank Arneil Walker laments the tragedy of the fire in August 1974, which destroyed much of the fabric of the building, reducing the whole to skeletal frame and ruptured concrete, his despondency did not last.<sup>11</sup> Rather than the building being

lost, a complex set of negotiations between 1979 and 1995, and a new patron in the form of the Trade Fair Palace for the National Gallery, allowed this truly Functionalist Modern Movement work to re-emerge from the ashes.

The reconstruction was undertaken by SIAL *Sdružení inženýrů a architektů Liberecká* (Association of Liberec Architects and Engineers) between 1985 and 1990. All parts of the reconstruction process have taken careful note of the original and apart from some changes of use the whole is as faithful as possible.

It may appear as if nothing happened at all. At first a structure the size of a residential block was built here. It was simple and unobtrusive. After it was destroyed by fire, the building was reconstructed in a slightly different manner [allowing for new health and safety and building regulations] but with the same simplicity. It is beautiful, and once more it is going to age well.<sup>12</sup>

## **2. Brno – The Exhibition of Contemporary Culture in the Czechoslovakian Republic (10<sup>th</sup> Anniversary)**

The 10<sup>th</sup> anniversary of the republic was to be celebrated in Brno on a purpose-built exhibition site. Brno was chosen as since the 1890s the Moravian capital had developed a very strong commercial and industrial base through textiles and engineering. An equal part of this was the development of a planned and zoned city. The birthplace of Adolf Loos in 1870 and Jan Kotěra in 1871 had developed as the home of Czech modernist architecture.

To begin the development of Czech modernism a robust system to train architects was required. This started with the founding of The School of Building in 1886 where many innovative architects would study. Among these were Josef Hoffman, Jindřich Kumpošt, Hubert and Franz Gessner and, most importantly, Bohuslav Fuchs. This development of architectural education continued apace after the First World War with the founding of the University of Brno and the Technical University of Brno, both in 1919.

One other component of the birth of Czech modernism and the later Modern Movement was the publication of a large number of theoretical treatises and architectural design publications. One of the greatest figures in all of this activity was Karel Teige. Unfortunately because he became a persona-non-grata on both fronts at once, marginalized by apparatchiks and by transatlantic historians alike, he is better known for his disagreement with Le Corbusier's 1929 proposal for Paul Otlet's Mundaneum. This was one of the last and most complex critiques on Le Corbusier's Modernism, earlier in

the 1924 *Stavba* article *Knove architekture* (Toward a New Architecture) Karel Teige had taunted Le Corbusier by saying he was:

too much of a Frenchman [albeit he was Swiss born] not to betray his traditional roots in classicist harmony, and not to refer to historical examples.<sup>13</sup>

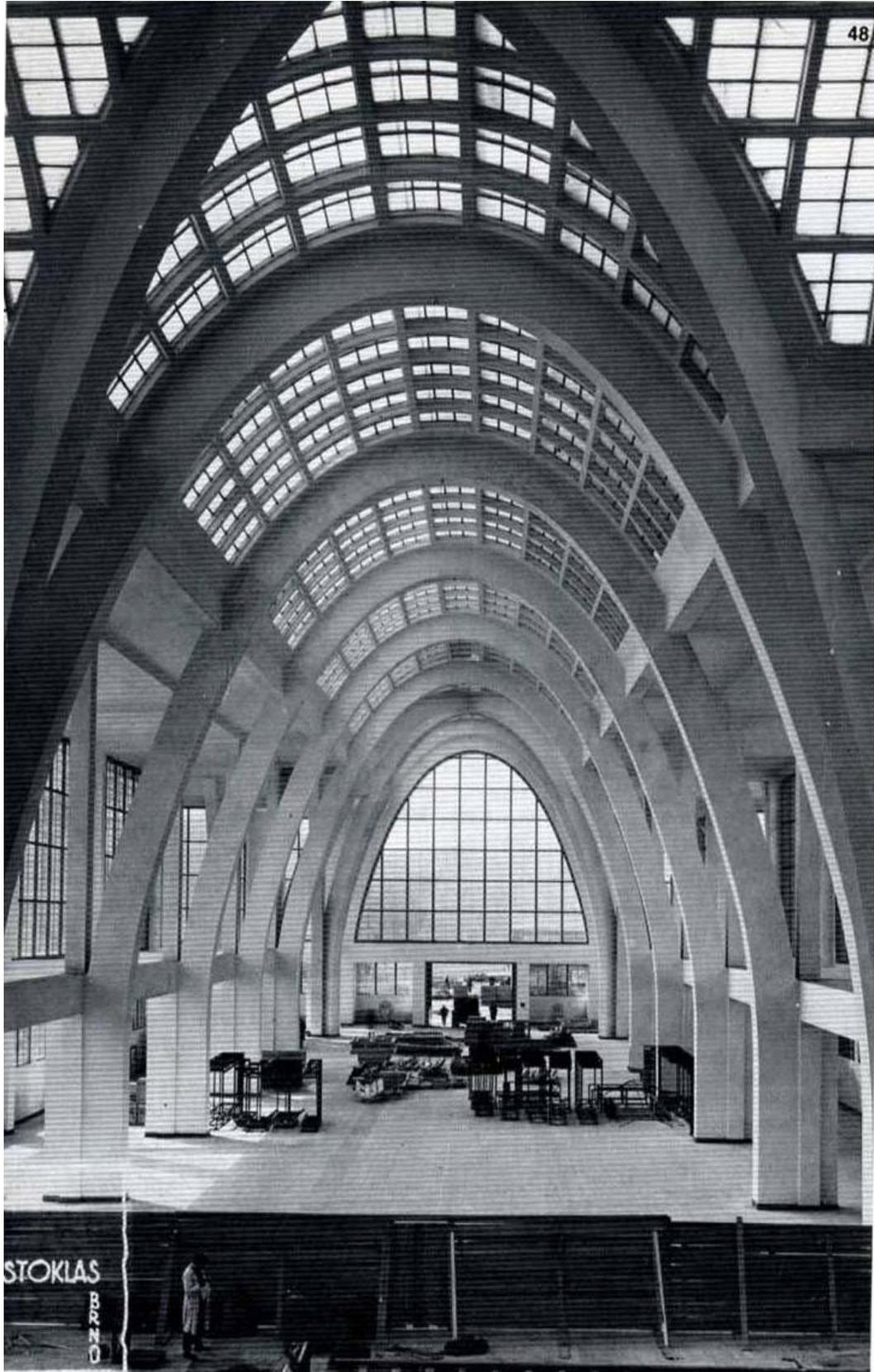
Teige was well placed to make comment on avant-garde architecture as from 1924 he travelled to Vienna, Milan, Lyon, Paris, Strasbourg and Stuttgart with visits to Moscow and Leningrad in 1925. Pronouncements of this type were offered further in a *Stavba* editorial of 1924, *Náš názor na novou architekturu* (Our view of the new architecture) where the architects of *Stavba* would use scientific principle to achieve a unity of form as opposed to Le Corbusier's view of abstract geometrical order to achieve the same outcome. So it was that throughout the three years 1924 to 1926 enormous debate led to a revolution in the development of design and build. Private and public partnership became a growing part of Brno's architectural practice with a number of architects taking a leading role.

Jindřich Kumpošt, Bohuslav Fuchs and Karel Teige added to their number and Arnost Wiesner, who's Brno Crematorium which gave great consideration to the buildings' setting within a balanced complex of structures, contained the first roof garden in Brno, which Le Corbusier admired during his stay in town.<sup>14</sup>

The approach to the maturing of Brno Modernism is best seen in three cafés, Fuch's Zeman Café, Kumpošt's Savoy Café and Weisner's Esplanade Café 1926-27. All three buildings had a particular label applied to them. The Zeman Café in Na Kolišti Park was a work of White functionalism with an implicit free space plan. Jindřich Kumpošt developed a bold space plan with interplay of angular and circular forms on several levels. In the Esplanade Café Weisner used a low glass cupola in the central dining room replete with mirrors to increase apparent space.

Josef Kalous and Jaroslav Valenta won the competition for the main pavilion of the 10<sup>th</sup> Anniversary Exhibition. *The Teollisuuden Palatsi* (The Palace of Industry) (4.3) within the *Aikaume Kutuurin nayttelly* (The Exhibition of Contemporary Culture) 1927–28. The complex of buildings was composed of massive glass and reinforced concrete parabolic arches as the centrepiece dominating the exhibition site. In addition to this

4.3 Josef Kalous and Jaroslav Valenta, Main Pavilion for the Exhibition for Contemporary Culture, Brno 1927-28



© Alvar Aalto Museum, 1983

main pavilion many other pavilions were designed by leading Prague architects and the outstanding Modernists of Brno: Jiri Kroha – the Man and Mankind Pavilion; Emil Kralik – the Exhibition Theatre; Bohumir Cermák – the Tradesmen’s Pavilion; and Bohuslav Fuchs – the Pavilion of the City of Brno. The impact of this exhibition is incalculable as the focus that had been on Prague was now trained fully on Brno.

### **3. Brno – The Czechoslovak Werkbund *Nový Dům* (New House) 1928**

One of the challenges which faced architects the world over post First World War was developing a system for building the new collective house which would contain all modern advances. As before, one of the major influences within this debate was Karel Teige who continued to exert enormous influence on European Modernism via the publications *Stavba, Stavitel and Devetsil Re D*. To answer this question Czechoslovak Architects from diverse trainings converged in 1928 on Brno to take part in the Czechoslovak Werkbund, *Nový Dům* (New House).

In many ways *Nový Dům* echoed the Weissenhof Siedlung in Stuttgart one year earlier, but there was one vital difference. Rather than the official state patronage the financing came from the construction company, Uherha and Ruller, who constructed sixteen detached houses. Zdeněk Rossman and Bedřich Václavek expressed the intent of the *Nový Dům* Exhibition in 1928:

The ground-plan of the modern flat is the ground-plan of modern life, which is now more dynamic, open and hygienic than ever before. The new plan has necessitated new methods of construction and new structural materials. No longer are there load bearing walls; the modern house is built on concrete or iron piers and the thick outer walls have been replaced by thin breeze blocks with a high insulation capacity. The pier-based construction system allows a maximum width of windows, which are mostly framed in iron, moveable and double-glazed to allow 100 per cent of the light to pass through, and sunshine means health. An important contribution to modern architecture is the flat roof converted into a garden-terrace. The focal point of the modern house plan is today’s democratic man, whose vital needs are light and air.<sup>15</sup>

These ideas were resolved in what became known as ‘White Architecture’. Eight architects from Brno and one from Prague were selected to work as a collaborative unit at the Exhibition Colony of the Czechoslovak Werkbund in ‘The New House’ 1928 – Hugo Foltýn, Miroslav Putna, Bohuslav Fuchs, Josef Štěpánek, Jiri Kroha, Jaroslav Grunt, Jan Visek, Jaroslav Syříšřě and Arnost Wiesner. Jiri Kroha in his one-family

house (4.4) demonstrates a mastery of lightness of touch. House Nr. 9 reveals a beautifully articulated structure of plain façade with windows of varied size according to their function and relative layout. The double house, Houses Nr 10/11 by Hugo Foltýn and Miroslav Putna, demonstrate in the elevations that the fenestration can be varied to a large degree without destroying the unity of the whole.

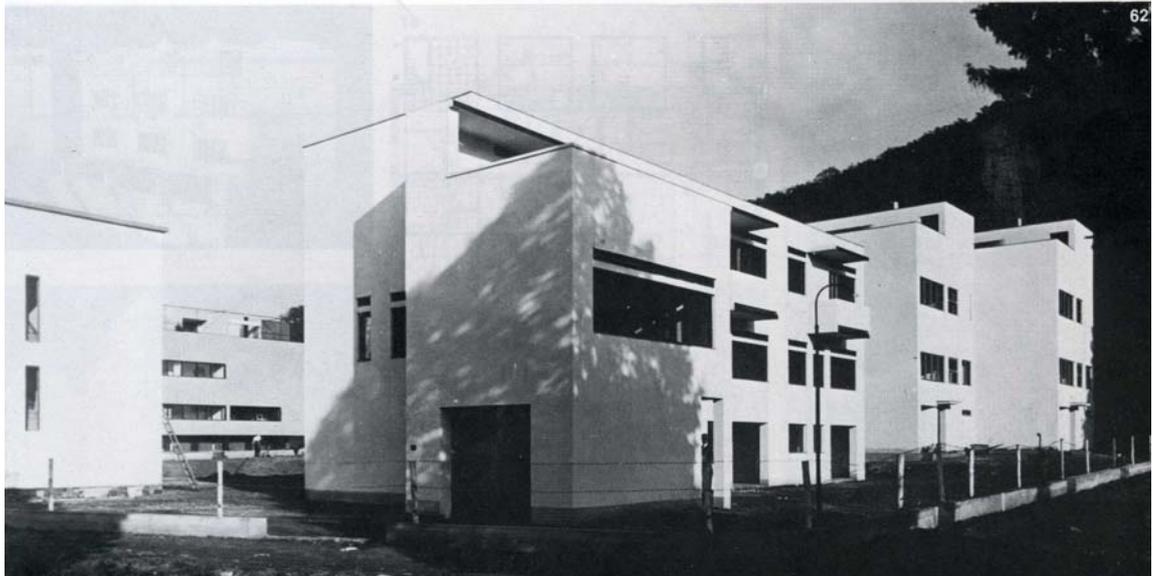
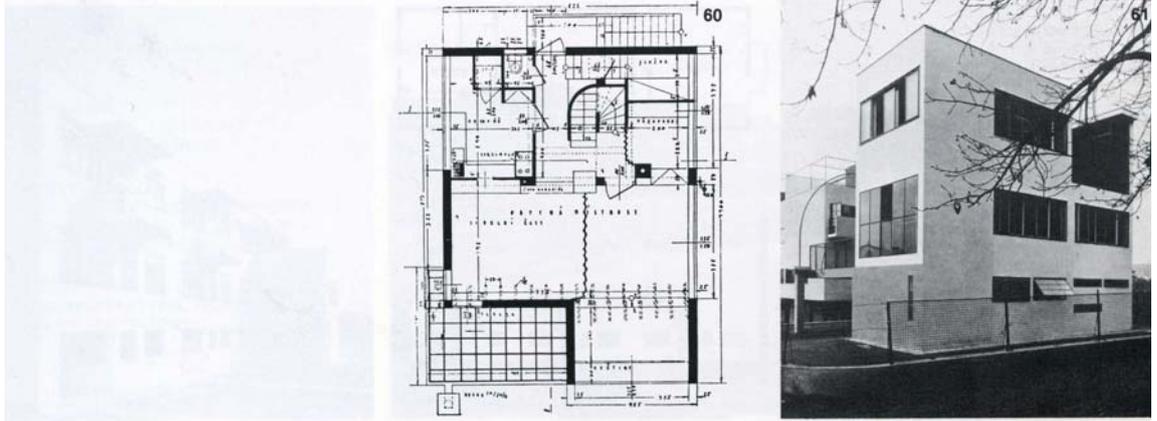
Of all the houses, House Nr. 1/2/3 and 8/7/6 by Bohuslav Fuchs and Jaroslav Grunt respectively are indicators of what was known as the *Nejmensi byt* (the Minimum Dwelling). Within this idea of the minimum dwelling Teige envisaged a new way of living where the floor plan was not dictated by the institution of marriage or families.

Each adult should live independently in a small but architecturally well-designed residential cell. Women, who in the era of industrial production were to join men in the labour force, would not be burdened with a second shift of household chores and cooking, functions to be taken up by collective canteens and laundries. The upbringing and education of children were to be handled by professional caretakers in nurseries and kindergarten, rather than by the parents themselves.<sup>16</sup>

In Tiege's world, a Marxist approach to living, dictated that a new housing type was a sociological necessity governed by rationalization and industrialization of construction, standardization, and mass production. This approach led to architects expanding the forms of White Architecture to encompass far greater tenement houses; two buildings in particular, *Vuokrataloryhma* 1926–27 by Josef Polášek and *Osuuskuntavhokrataloja* 1928–29 by Jindřich Kumpošt for the Blahobyt and Stavog Cooperatives, reveal this approach. Despite the vast size of the blocks and all their multiples, both cuboid forms retain a dignity and sense of purpose which does not dominate the individual inhabitants.

In response to the needs of workers living in the *Zábrdovice* quarter with old housing without bathrooms, Bohuslav Fuchs built the *Zábrdovicen Klypylä* (town baths of Zábrdovice), an enormous complex of baths and wash rooms as a social and functional arena supporting Teige's mantra of light and air in hygienic surroundings. Although Fuchs clearly understood some of the Marxist views expressed by his colleagues he

4.4 Jiří Kroha, House No. 9, The Exhibition Colony of the Czechoslovak Werkbund, 'The New House' 1928



© Alvar Aalto Museum, 1983

had no intention of living himself in a minimal-sized apartment. The Villa Fuchs, Brno 1927-28 (4.5), is a Modernist five-storey block with attached studio on the exclusive Kraví Hill set within its own grounds. A double-height living room with galleried library is illuminated by light penetrating the interior from the moveable glass dividers of the glazed conservatory that is separated from the rest of the villa. In this villa we have a clear statement of the developing principles of the Czech Modern Movement.

Fuchs clearly demonstrates an ability of form and space with few limitations in a villa setting but he was also adept when it came to building on extremely difficult plots. The Avion Hotel 1927-28 was constructed between two earlier facades limiting the site to 8.5 metres wide by 34 metres deep. The solution to this restricted site was to design a hotel distributed between the floors and half floors allowing particularly interesting views, the feeling of spaciousness being multiplied by lateral light fittings and a number of mirrored walls throughout the public rooms. Josef Kranz, 1927-29, also employed this aspect of light and space with illumination and reflections in the Era Café. The resultant elemental space was created by a considered disposition of large windows kept in balance by small louvres providing necessary ventilation.

The concerns over the nature of public health, education and welfare led to an enormous upsurge in the building of schools, swimming baths, tenement houses, hospitals, theatres and sanatoriums. Particularly in Brno, the Modern Movement began to enjoy a high point when the master plan for the *Pod Vodojencen* (villa quarter) was created in 1933-35. This was so that the individual advances of Czech villa building were made available to clients other than the wealthy. To select some building types from the above: Vesna School for Girls Brno, 1929-30, Bohuslav Fuchs and Josef Polasek; Koldom Small Flat Competition, 1930-31, Prague, Ladislav Zak, Josef Havlíček and Karel Honzik; Machnáč Sanatorium, 1930-32, Trečianské Teplice and Jaromír Krejcar; French Schools, 1931-34, Prague, Jan Gillar Theatre, 1934-35, Ústí nad Orlicí. The Apartment Buildings by Eugen Rosberg 1935-38 and Josef Stolc 1937-38 are worth special mention. In producing modern mass housing that worked within a city context, Richard Podzemny in the Provincial Bank Apartment House, Liberty Square, Prague-Dejvice 1936-38, had clearly progressed from the rather stultifying arguments over Form Follows Function to progress to Czech Functionalism and *Forma Sleduje Vědu* (Form Follows Science), 2000, as advanced by Rostislav Švácha and others in the book of the same name.<sup>17</sup>

4.5 Bohuslav Fuchs, The Villa Fuchs, Brno 1927-28



© Architectural Association/Peichl 1987

The maturing of this idea through the 20s and 30s was based on three precepts:

Standardization – raising the quality of housing and life to the optimum by a process of gradual improvement through a standardized mass building programme. The mass produced components coming from factories, which also adopted this standardization of construction.

Typification – relating to a free space floor plan from a scientific formula which would preclude having to invent and reinvent apartments, schools and office buildings.

Normalization – making all parts mutually compatible in a unified harmonious whole regardless of who created them.

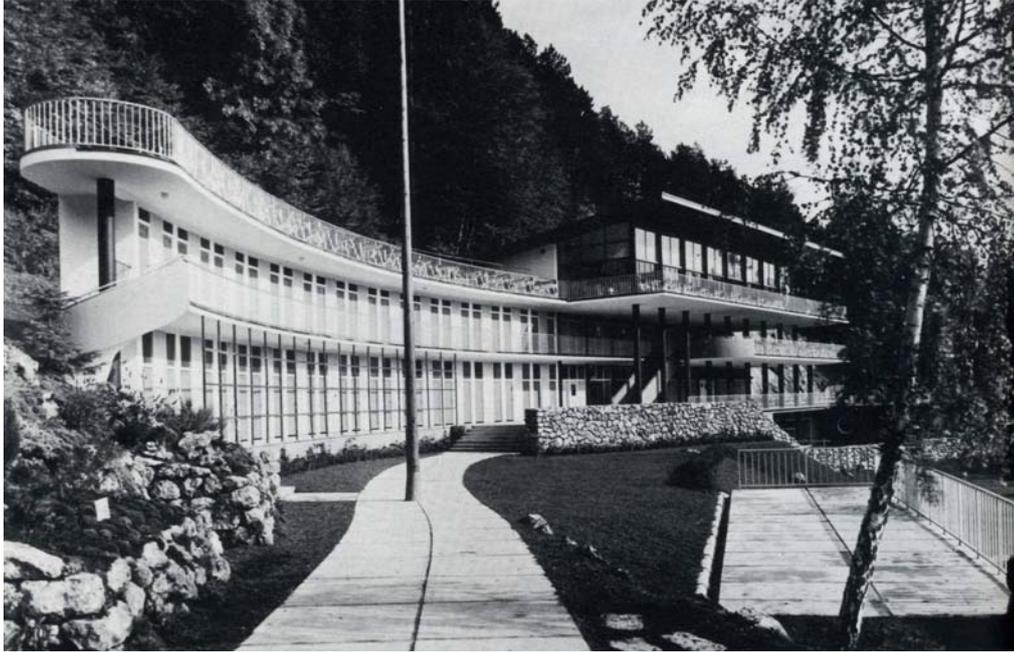
This approach to building was seen outside of the city in the sanatoriums and spas. The Morava Sanatorium, 1930-31, Tatranská Lomnica, (Slovakia) by Bohuslav Fuchs or, one of the finest buildings of Fuch's career, the sinuously arranged *Zelena Žaba Baths* (Green Frog Thermal Baths), 1936-37, Trečianské Teplice (4.6) where the bath took full advantage of its setting, Fuchs intended that:

The thermal baths are situated within a natural forest with cafes, a wine cellar, an open air swimming pool, terraces, a bowling room, playgrounds, sun-lit areas and a children's playground with a special swimming pool. This has all been done in a very natural way so that the surroundings and structure are in harmony. The main structure is light and plastically rich, using colour for emphasis. The garden links the structure and its surrounding buildings.<sup>18</sup>

#### **4. Zlin – 'Factories in Gardens' 1914-27 and 'Cities in Gardens' 1927-39**

Zlin was to be the epitome of Czech Modern Movement. The architectural and pictorial representation of the changes in Czech Society 1914-39 was first made flesh by Jiri Kroha in Tomáš Bat'a's industrial city. When Tomáš Bat'a founded his business in Zlin in 1894 he changed Zlin from a rural market town with 2,834 inhabitants to a bustling town with a population of 40,000 by 1935. To accommodate a great influx of people the number of houses being built increased from 499 per year to 2,676 per year over this period. Zlin was created as the Garden City for a new era, an unapologetic modern functional arrangement of workers and production centres to allow batch production, growing to mass production as markets grew. Bat'a turned the art of the cobbler, as a home-based craft production, into an organised, factory-based production

4.6 Bohuslav Fuchs, *Zelena Žaba Baths* (Green Frog Thermal Baths), Trečianské Teplice 1936-37



© Architectural Association/Peichl 1987

of lightweight fashionable shoes. In establishing Zlin, architects, town planners, factory workers, municipal officers, landscape gardeners and many other professionals created a unique cultural statement as a modern urban society that lost none of its humanistic scale or values as realised in 'factories in gardens'. The original formative years were from the First World War, when military orders from the Austro-Hungarian Empire were bolstered by the exclusion from military service for 2,000 of Bat'a's workforce.

As the First World War developed workers and prisoners of war were assigned to producing 10,000 pairs of shoes per day by 4,000 workers. Following the World War Bat'a began to lose markets in neighbouring countries torn by inflation. Bat'a, ever a pragmatist, cut prices by 50%, reducing wages by 40%, having first provided for his employees' needs. This brutally honest paternalistic approach to management was a Bat'a hallmark. The first architect of Zlin was František Lydie Gahura who was charged with building the 'factories in gardens'. Gahura's solution was to use the natural geography of the valley placing the factory complex in the Drevnice river valley, above which the green slopes were furnished with standard homes for two and four families in the newly created towns of *Letna* and *Zalesna*; this arrangement being an illustration of Bat'a's views that people should work collectively but live individually. Bat'a hoped that with this understanding of his workforces' needs they would be able to use the most modern materials and techniques without feeling alienation from the advanced technologies. Equally workers housing was available at the rate of one crown per week with everything designed to be a part of the equivalence of one year's average salary

By 1928 12,000 employees made 75,000 pairs daily; to be able to sell this number of shoes Bat'a used the newly emergent art of advertising to promote his products. Standardised building methods were required to expand the Bat'a Empire. Arnost Sehnal, the builder, designed a reinforced concrete skeleton filled with 6.15 metre blocks, this being the metric translation of the 20 foot unit as used in the United States which Tomáš had brought back with him in 1927. The evolution of this module led to what became known as the Bat'a Standard. A reinforced concrete block 6.15 metre length by 3 metre in width which was used universally as a starting point for all Bat'a buildings, benefiting from being inexpensive and very flexible in construction this block advanced the building process considerably

The architects, engineers and building workers established a great modern city where they as individuals remained anonymous. The development of Zlin was paralleled with the creation of Bat'a stores throughout the land and abroad. Large footwear stores *Domy Služby* (Service Houses) were built to the Bat'a standard in Prague, Brno,

Ostrava, Liberec, Bratislava and Olumuc. These stores were the houses of all foot care; internally they were an oasis of calm and light based on the latest technology. Pavel Halik, speaking at a conference in Zlin in 1991, recalled buying shoes as a young boy at a Bat'a store.

Even here the presence of Zlin radiated through Bat'a's salerooms, all glazed, with lightweight armchairs from metal tubes, full of light and airy, pleasantly smelling of rubber.<sup>19</sup>

The standardised light green interior confirmed an impression of competence and professionalism that was added to further by the glazed façade, above which was the ubiquitous "Bat'a" electric sign – an ultra modern symbol (4.7) in contrast to the surrounding historicist and classicist buildings.

As with these external developments Zlin needed to expand its production base but Tomáš Bat'a had a very clear view of architects and 'their' work.

I get the impression that the majority of architects are mostly interested in building monuments to themselves. We aren't interested in that: a building should serve us and our people. There are other factors as well: time, science and technology and of these the most valuable to us is time. The success of this venture is attested to in Zlin being recognised by CIAM as the most complete example of Modern Functionalism without all of the ideological baggage of CIAM.<sup>20</sup>

So it was that 'factories in gardens' were replaced by 'cities in gardens'. F.L. Gahura began this process of change from 1927 with the Mašaryk School and monument. This was followed by a nine-story department store built on the standard skeleton. The zenith of Gahura's architectural work was designed to hold 2,270 moviegoers, built on steel supporting pillars above which was a plastered lattice structure. Gahura's most poignant work was the Bat'a Monument Building dedicated to Tomáš Bat'a after his untimely death in an aeroplane accident in 1932. As with all Bat'a buildings this was the standard frame with circular reinforced concrete pillars, the whole structure being clad in glass through which could be seen Tomáš Bat'a's aeroplane suspended in mid air. Tomáš was succeeded by Jan Bat'a, his half brother, who took up the challenge of expanding the business.

4.7 Ludvík Kysela, Baťa Department Store, Prague 1928-29



© Architectural Association /Peichl 1987

Antonin Vitek, one of Pavel Janak's students of the Art and Crafts school of Prague, met this challenge. Vitek designed numerous projects for housing and several large department stores as well as master plans for a number of satellite industrial cities: Best in Holland, Ottmuth in Germany, Mohlin in Switzerland, Borovo in Croatia, Chemilek in Poland, Hellocourt and Vernon in France and Martfu in Hungary. At the same time Bat'a hired Vladimir Karfik who was working in Chicago at the time, having been in practice with Frank Lloyd Wright in Wisconsin and Arizona, Holabird and Root in Chicago, and in Le Corbusier's studio in Paris in 1925.

As the prosperity of individuals in Zlin grew there was a desire to replace the need for perennial cheap housing with privately owned, higher quality homes. Miroslav Lorenc who came to Zlin in 1930 was allowed to build private houses and shops for patrons as the town became a self-confident, self-propelled community, dominated by the Bat'a company, but no longer entirely dependent on it. Lorenc also built the first business school to complete the original school district in 1931. This was added to by the building of the Corporate House, an 11-storey complex, containing restaurants, a café and gambling rooms with a 300-bed hotel complete with all the latest en-suite facilities. The top floor was used as a viewing platform and as a terrace for parties where dancers might survey all of Zlin.

Two years later the Zlin cinema was built as an enormous rectangular building that departed from reinforced concrete in using a large steel framework to support the largest single span roof in the country. The seating for this capacious space was to hold 2,270 people. Lorenc also built the Technological Study Institute which was intended to have four large rectangular buildings dedicated to science, technology, art and social science but of these only the technology block was built in 1935. All of this new building added to the previously constructed House of Social Care 1925 and the Hospital in 1926. The success of this configuration of buildings in Zlin meant that it was emulated in other centres in Czechoslovakia: *Sezimovo, Ústí-Velky Dvur, Batovany (Partizanske,) Zruc nad Sazavou.*

Vladimir Karfik's major work was the Bat'a Administration Building 1937-38, seventeen floors built on 6.15 metre x 6.15 metre reinforced concrete skeleton, filled with air-bricks and clothed in ceramic tiles. Within this building Jan Bat'a installed his office in one of the 6.15 metre x 6.15 metre lifts complete with air conditioning, communication and a sink. A door on both sides allowed him to survey his empire at all times keeping in direct contact with all departments at the touch of a button. Jan Bat'a continued to develop the ideal of the industrial city by proposing a work environment with housing for

10-20,000 people. Josef Gocar was charged with the idea of elaborating a plan based on zones. These would extend from the factories to social, commercial, administrative and recreational areas surrounded by housing for workers. This was not the collective housing of CIAM or Le Corbusier whose ideas of putting numerous collective blocks on the hillside above Zlin were rejected by Jan Bat'a in April/May 1935. All hopes of working for Bat'a were extinguished when Le Corbusier's design for the Bat'a pavilion in Paris in the World Exposition 1937 were turned down. Jan Bat'a, like Tomáš Bat'a, found Le Corbusier [as an architect] rather individualistic and in any case too expensive.

Thus Le Corbusier's hopes died out in the correspondence, not always pleasant, on financial questions.<sup>21</sup>

Although there was further development in Zlin the whole model of expansion was now controlled by the students of Pavel Janak at the Arts and Crafts School of Prague. The new town planning department was established where Robert Hubert Podzemny and Vladimír Kubečka drew up further development plans, to be replaced by the new authorities State Planning Departments in the post Second World War era.

## **5. Prague, Brno and beyond – Private Villas**

From the mid 1920s to the late 1930s there was a demonstration of the Modern in many private dwellings throughout the Czechoslovak Republic. One of these is the Villa Fuchs, Brno 1926-28 that has been discussed previously. The progression from that point forward was a dramatic embracing of Modern Movement.

I am convinced that one of the special features of this kind which we would not have encountered anywhere in Europe at that time, is that special combination of naivism and magic realism with which the members of the Purist Four (Fragner, Linhart, Honzik and Obrtel) endowed their drawn studies and a large majority of uncompleted projects, along with a number of kindred architects.<sup>22</sup>

To return to the work of Karel Honzik, Prague 1929, in partnership with Josef Havlíček, the Villa Smíchov (5.8) reveals the extent to which the situation, design, and materials stage in villa construction became a fully resolved whole. The villa standing on high ground, constructed with a reinforced concrete frame, hollow concrete breeze block walls and a reinforced beam and slab roof occupies three floors, the whole being

4.8 Karel Honzik , Josef Havlíček, The Villa Smíchov, Prague 1929



The house stands on high ground, and the terrace, approached from the landing at second floor level, commands a view over the landscape to the southwest.

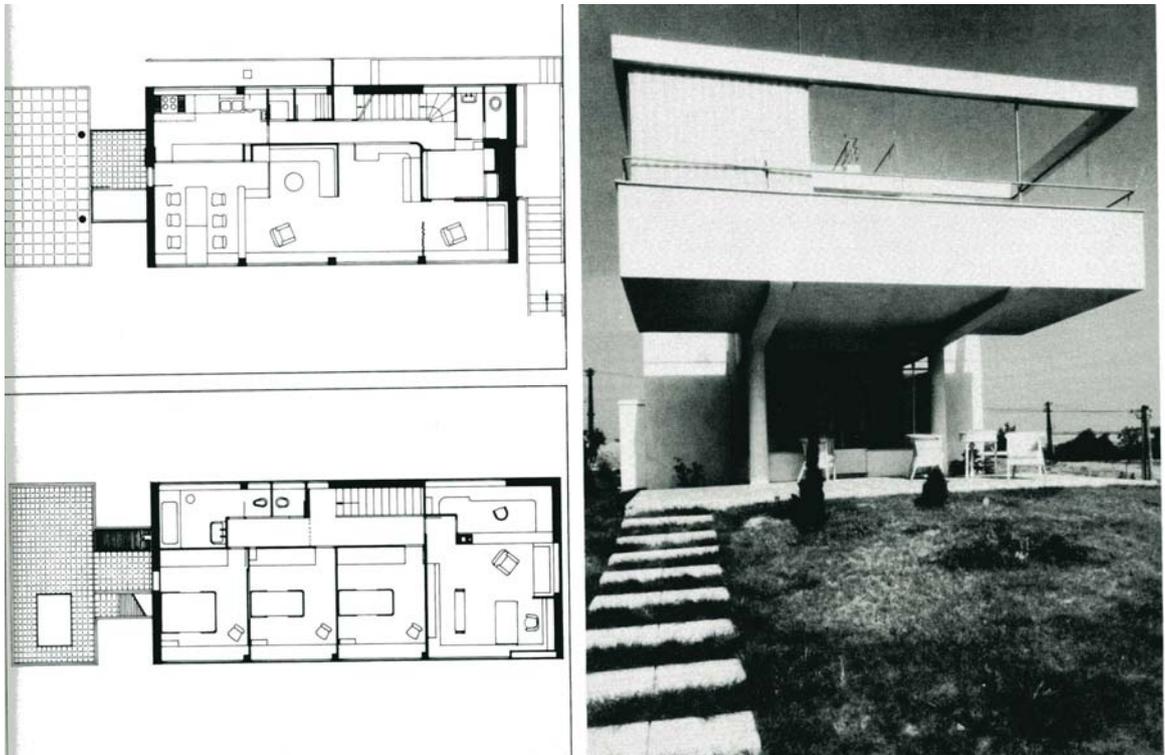
© The Architectural Press / Yorke 1934

surrounded by gardens. The exterior was rendered in bright white fine marble chippings embedded in white cement. The floor plans show that the lower ground floor was the service areas with kitchen, laundry and cellar. On the ground floor the villa expanded in all directions increasing the floor area by 50%. The open plan living and dining room are serviced from below by a lift which rises to a concealed position under the staircase balustrade just below the upper part of the ground floor. The space is lit by a large window that runs the entire width of the wall and up through the two floors.

Although the Villa Smíchov was not the first of the 'White Cube' villas, it was distinct among them because of the handling of form, space and light. Two houses which had the same presence as the Villa Smíchov were from the drawing board of Amyas Connell – High and Over, Amersham 1929-30 and Basil Ward – New Farm, Grayswood 1932. In looking at New Farm we can see a very complex arrangement of forms and levels, all tied as one by the glazed staircase tower above an offset cantilevered porch roof echoing the rise of the stairs above. The wrap around corner window on the right side relieves the mass of white render above a lower floor glazed gallery. Equally the glazed staircase is balanced by a vertical window to its left. This type of cubic massing often arranged over three floors was the norm for two to three years, being superseded by a horizontal, often two-storey form, frequently with a bridge head observation platform on the roof and to one end or side an enormous overhanging deck, under which one could rest in shade. The weight and mass of the deck was supported on two cantilevered columns. An example of this type of construction was Ladislav Zak's, Villa Hain, Prague 1932 (5.9), where all the latest materials were used. Thick, hollow blocks, Petras Liko, were covered by Rabitz wire mesh to stop cracks appearing in the rendering. Heraklith insulation boards for walls and Luxfor glazed bricks were utilised for the best use of light and heat; the whole being supplied with hot water by a Strobel boiler.

The floor plan and photographs reveal rooms that are divided by dwarf partitions which on occasion are fitted with bookcases and other furniture. This built-in furniture was mass produced in alder with oak veneering rejoicing in the name 'Jerry'. Equally important to the ambience of the interior was the lighting designed by the engineer M. Prokop. For 1932 the advanced use of indirect channel reflector lighting, task lighting and suspended pendants and wall fittings reflected in the Xyolin and Lincrusta-covered walls, or playing across the wooden roller doors of the cupboards, created a modern building. With pale yellow sprayed outer walls, sitting within a landscaped garden of birch, cypress, juniper and poplar trees, overlooking the Prague aerodrome at Ruzyne

4.9 Ladislav Zak, Villa Hain, Prague 1932-33



© Architectural Association/Piechl 1987

both the villa and aerodrome read as statements of a buoyant economy leading to the very latest design, as stated by Adolf Bens.

By working in the spirit of modern architecture, we are creating a new life style and a new character for human beings, with space, light, and air in place of the gloomy, closed arrangements of the past. We are thus creating the possibility for a free and bold people with a new attitude to society.<sup>23</sup>

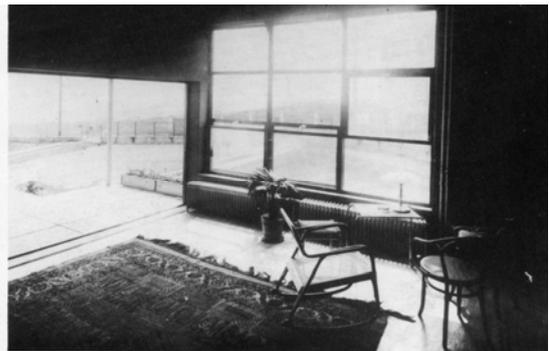
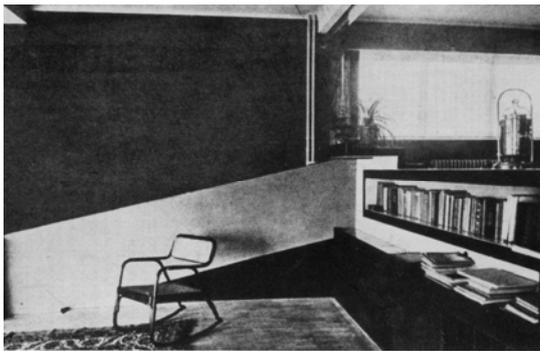
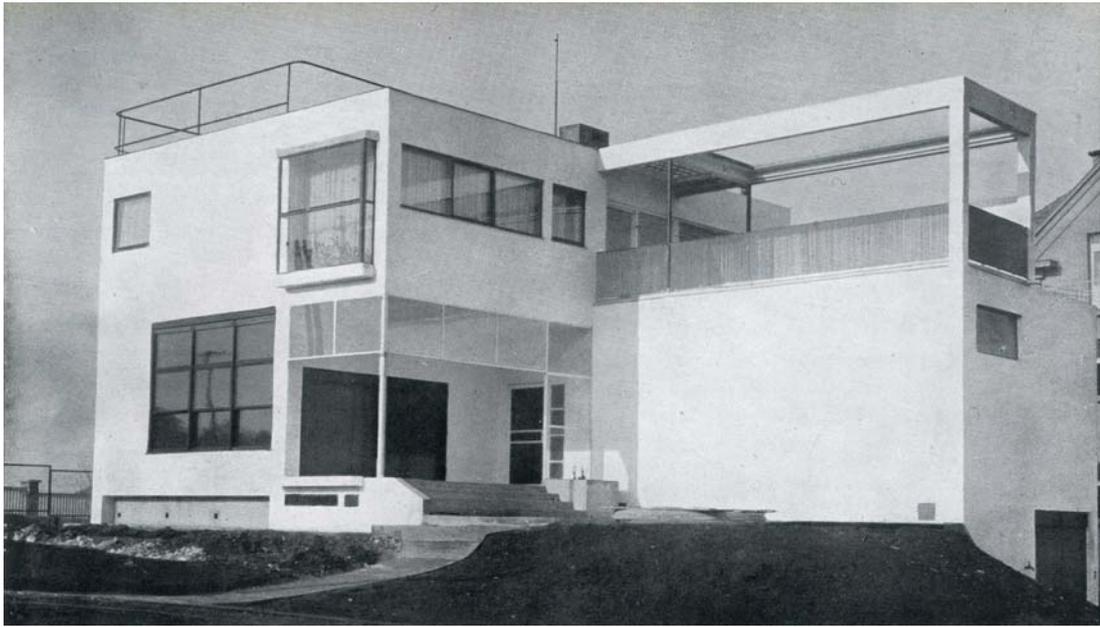
F. R. S. Yorke's seminal work, 'The Modern House', first published in May 1934, updated 1935, 1937, 1943, 1944 and reprinted 1946, features within its pages 94 architects from 14 countries – all working in similar 'Modern' ways between 1926 and 1944. For our purposes if we discount those houses after 1939 and exclude the American houses, we find a Pan-European white cubic style with sun porches, flying bridges, internal and external spiral staircases and open plan rooms with vast expanses of glazed banding. From France to the Czechoslovak Republic, from Norway to Greece this was a prevalent style developed by many nations at the same time as the Modern Movement – a solution to the 'new society' as explained by Bens and many others.

It is therefore questionable when Wojciech Lesnikowski and Vladimir Slapeta should attribute the first design of a Functionalist villa in Prague, Evžen Linhart in his own house of 1926-28 as being,

inspired by Le-Corbusier.<sup>24</sup>

Unless this observation is due to the meetings of architects in the winter of 1924-25 (referred to previously), where despite Le Corbusier's expressed admiration for Czech architecture, we are in retrospect obliged to see his ideas and works as the progenitor of works that followed. Although it is accepted that from 1925 Le Corbusier started to gain considerable influence in architectural circles he was not at this time the *eminence grise* he later became. Architecture throughout the Czechoslovak Republic demonstrated advanced use of materials and form in both theory and practice and from 1926-1929 much work would be generated that would bring these unknown architects to greater public attention. Evžen Linhart's house (5.10) displays form and construction that is an enlivening of Le Corbusier's Purist vocabulary, from the covered entrance arranged as a *sala terrena* (a ground floor room opening directly onto the garden) to the semi-circular balcony on the eastern façade and a number of roof terraces on the northern facade reached by an exterior projecting staircase. Most revolutionary was an interconnecting ramp between the two floor levels of the living room.

4.10 Evžen Linhart, House in Prague 1930



© Rizzoli/Lesinkowski 1996

The two key works of Le Corbusier and Pierre Jeanneret, The Villa De Monzie [Stein], Garches 1927, and the Villa Savoie, Poissy 1930, straddle the germination and birth of the Linhart House where the debate was now in regard to Le Corbusier and his 'five points of architecture'.

Arguably, in order of chronology outside of Central Europe the most influential buildings of the period are The Schroder House, Utrecht 1923-24, Gerrit Rietveld; Workers' Houses, Pessac 1925, Le Corbusier and P. Jeanneret. Beyond Europe it is undeniable that two works, one by R. M. Schindler, The Beach House for Dr P. Lovell, California 1925-26; the second, Demonstration Health House, [Lovell House], California 1927-29 by Richard Neutra are very important. In addition, the Masters' Houses at the Dessau Bauhaus by Walter Gropius, 1926, deserve praise. One final group of houses worthy of mention are Hans and Wassili Luckhardt and Alfons Anker, Am Rupenhorn, Berlin 1928, which despite comprising three houses can be looked at individually for their articulation of landscape with decks and platforms.

It is clear that Le Corbusier by the actions of *Congres Internationaux d'Architecture Moderne* (CIAM) and his theoretical treatises on architecture became the voice of the Modern Movement. The first (CIAM) conference at Chateau La Sarraz near Lausanne in 1928 promoted themselves as the voice of International Modernism. The group founded by Helene De Mandrot, Sigfried Giedion and Le Corbusier with the attendance of Walter Gropius somewhat belatedly proposed that the:

most efficient method of production is that which arises from rationalization and standardization.<sup>25</sup>

These words were much in tune with Adolf Bens, Tomáš Bat'a and the activities of the Moric brothers who had established design and build in Brno from 1924:

The La Sarraz Declaration also took a radical attitude to town planning by calling for a functional order [where] the redistribution of land [is] the indispensable preliminary basis for any town planning.<sup>26</sup>

A good deal of this thinking had been demonstrated in city planning in Zagreb, Ljubljana, Brno and particularly Zlin, the CIAM form being an extension of those ideas enhanced and improved by the passage of time.

The CIAM meetings were supportive of Le Corbusier whose views of social architecture, urbanism and housing led the direction of the Congress until 1947. In fact Reyner

Banham observed that the Athens Charter based on debates about 'The Functional City' with its

insistence upon rigid functional zoning, green belts and a single type of high density urban housing was actually just the statement of an aesthetic and intellectual preference.

Banham was polite in his view but Auke van der Woud in 'CIAM, Housing, Town Planning a review of an exhibition and original documents from CIAM, Kroller Muller Museum, 1983, was less reverential:

In the beginning there was darkness and chaos and the spirit of Gropius and Le Corbusier moved over the waters. And CIAM divided the water, land and functions and said, let there be light, air and sun. And there was light, air and sun. After that CIAM created a paradise, or rather it wanted to do so, but with that everything went wrong that could go wrong.<sup>27</sup>

This is clearly an overstatement of the failings of CIAM but it does contain certain truths. Van der Woud was unconvinced by the arguments put forward by CIAM however retrospectively he viewed them. In 1933 when Emil Kaufmann wrote his 'Von Ledoux bis Le Corbusier' or in 1936 when Nikolaus Pevsner published 'Pioneers of Modern Design', and in 1941 when Sigfried Giedion published 'Space, Time and Architecture', Le Corbusier's position as *eminence grise* of the Modern Movement was assured. With these books, and particularly the last-named work, the historical and cultural dimensions of the architectural production of the 1920s were defined for many years. Clearly Giedion's friendship and collaboration with Le Corbusier particularly in CIAM led to,

a static and hermetic historical picture, the elements in which continually refer to each other.<sup>28</sup>

What is most revealing about the La Sarraz Declaration and the later Athens Charter is that a number of the authors of the work were not even acknowledged. This was particularly annoying as observers could see in the presentation of detailed proposals that issues of zoning and urban development were approached with analytical exactitude.

## 6. Prague – Baba, the Werkbund Housing Estate 1932

The Prague Werkbund differed from all other Werkbund housing estates in Wroclaw/Breslau and Zurich in a number of respects: the houses were all single family, flat-roofed, two-storey urban villas where every property had a surrounding low fence with harmonized planting and street furniture. The lighting of all streets and paths was uniform, conferring a sense of safety and security. The whole estate and development of facilities were financed from private sources.

The architects working on Baba came from three distinct eras; Pavel Janák and Josef Gocár were representative of Cubist ideas as the 'Godfathers'; Evžen Linhart and Oldřich Starý were champions of a Purist/Functionalist form as the 'Lieutenants' and Ladislav Zak as a champion of the latest ideas within the Modern Movement was distancing himself from White Functionalism as one of many 'Young Pretenders'.

In order of how the houses appear on the official Werkbund site plan the names of the houses and their architects are as follows:

1. Munk House, Josef Fuchs;
2. Perina House, František Kerhart;
3. Rezac House, Vojtech Kerhart;
4. Zaorálek House, Ladislav Zák;
5. Vaváček Triple House; Oldřich Starý;
6. Lisý House, Evzen Linhart and Antonín Heythum;
7. Joska House, Jaroslav and Karel Fišer;
8. Bouda House, Oldřich Starý;
9. Košťál House, František Kerhart;
10. Dovolil House, Pavel Janák;
11. Jiroušek House, František Kerhart;
12. Letosnik House, František Kavalir;
13. Villa Suk, Hana Kucherová-Záveská;
14. Cenek House, Ladislav Zak;
15. Zadák House, František Zelenka;
16. Luzná House, Zedenek Blazek;
17. Poláček House, Jan Evangelista Koula;
18. Moravec House, Vojtech Kerhart;
19. Linda House, Pavel Janák;
20. Bantz House, František Kerhart;
- 20a. Villa Glücklich, Josef Gocár;
21. Villa Mojžiš-Lom, Josef Gocár;
22. Herain House, Ladislav Zak;
23. Balling House, Hana Kucherová-Záveská;
24. Herman House, Oldřich Starý;
25. Palicka House, Mart Stam;
26. House for a Painter (never built), František Kerhart;
27. Špíšek House, Ladislav Machon;
28. Uhlír House, František Kavalir;
29. Sutnar House, Oldřich Starý;
30. Belehrádek House, František Kerhart;
31. Kytlica House, Josef Gocár;
- Maule House, Josef Gocár;
33. Pavel Janák.

The houses were all named after people in the public eye – politicians, sociologists, government ministers, educationalists, designers architects, statesmen, army officers, composers, historians, activists company directors, builders, conservators, reporters, customs officer and statisticians – the founders of the new Czechoslovak Republic.

Despite the degree of private patronage, the well-educated bourgeoisie who were driving this building forward came under continual attacks from the 'Left'. The 'Leftist' view was that the Baba (old woman) did not address the apartment block, row house or any kind of communal living. Therefore the Baba could not be seen as a vehicle for change as in other Central European countries. However, given that all of the architects were determined to create space for people to live within their own controlled boundaries, working as client and architect in a symbiotic dialogue, the 'Left' should have understood the ideas embodied in Baba. Although often dismissed by the 'Left' with only a cursory glance, the houses were very varied in their conception, from the needs of a childless couple in a minimal dwelling, to large villas with staff quarters and multi-family houses and studio houses.

Baba was not an architectural laboratory for experiment and exploration as all of the architects had mastered their craft years previously. The truly amazing fact of Baba is that every architect and every construction engineer and building firm was Bohemian. This was not an International Exhibition in any sense – though Mart Stam, because of his connections, was allowed in. The Dutchman enjoyed a collaborative relationship with Karel Teige as they both shared similar views enshrined in 'architecture is science' and prior to that Stam had a dialogue with Bohuslav Fuchs as the master of Czech architecture through Lotte Beese, who was Fuchs' assistant for a time.

The survival of Baba over the decades was due to it disappearing in a sea of greenery of high hedges and trees that screened the houses. Within this green oasis the original inhabitants and their families cared for their properties, immersed in their fate; neighbours were forced to flee, some were imprisoned to be replaced by politically acceptable occupants who enjoyed the very last of all the Werkbund estates and all it had to offer.

Initially as a model for cosmopolitan living we see that the President of the Charles University was able to talk to the painter 'over the garden fence'. This factor alone should have alerted the 'Left' to Baba being able to mix people from all backgrounds, incomes and social groups. It was not until the Communists installed their preferred residents that this mix broke down. In effect the 'Left' (Communism) undid the very thing for which the Baba Estate was designed. To understand this mix of people better an evaluation of selected events and houses reveals the possibilities of the Baba Estate.

The first knowledge of Baba was seen in the publication *Zij'eme* and through a travelling exhibition of Czechoslovak design and architecture in Geneva, Malmo, Bucharest and

Strasbourg from 1930 -1932. Many of the views and images used in these arenas were in direct opposition to the CIAM 1929 Convention with an emphasis on the collective house. Despite all of the Tiege's critique of how modern housing should be divided into:

The smallest apartment in a collective house shall be for living in, a room for an adult person. These cubicles shall be arranged in the fashion of a large beehive. The way of leading one's life necessitates abolishment of the traditional family household and socialization of children's upbringing and education. In these cubicles there is no dining room, no living room, and no children's room. It is a place for sleeping, for resting alone, for studying and for cultural work, for the intellectual and personal life of each individual.<sup>29</sup>

This view of life and family could prevail as Antonin Urban and others were to find. Urban had proposed a work on the theme of a 'growing house' where cubicles were arranged around a central core of sitting room, kitchen and bathroom. This proposal was turned down, as was a proposal for a semi-detached house by Bohuslav Fuchs and row housing from prefabricated parts by Havlíček and Honzik. All were refused as private capital and entrepreneurship rejected this approach to living, clearly insisting on single family houses instead.

Rather than viewing houses in isolation it is far better to view them in context with their neighbours, (4.11) shows the Janak House, Balling House and Herman House are part of the same complex and Palicka House (4.12) which all work independently as singular houses but also as units within a clearly defined boundary. The disposition of villas reveals a space-defining bank with small trees that despite the difference in relative heights, the footprint allows for all to be light and airy. All are provided with large windows to permit air flow. Sun balconies, and in two cases sun terraces benefiting from their flat roofs, are incorporated almost as 'another room'. In looking at the Palicka House by Mart Stam we see all of the cross-pollination from east-west and west-east in this particular work, although what we see here is only 20% of Stam's intended concept. The client, master builder, Jirí Palicka, changed many of the original design ideas; these ideas can be best seen by comparing (4.12) as designed with the same elevation in (4.12) as built.

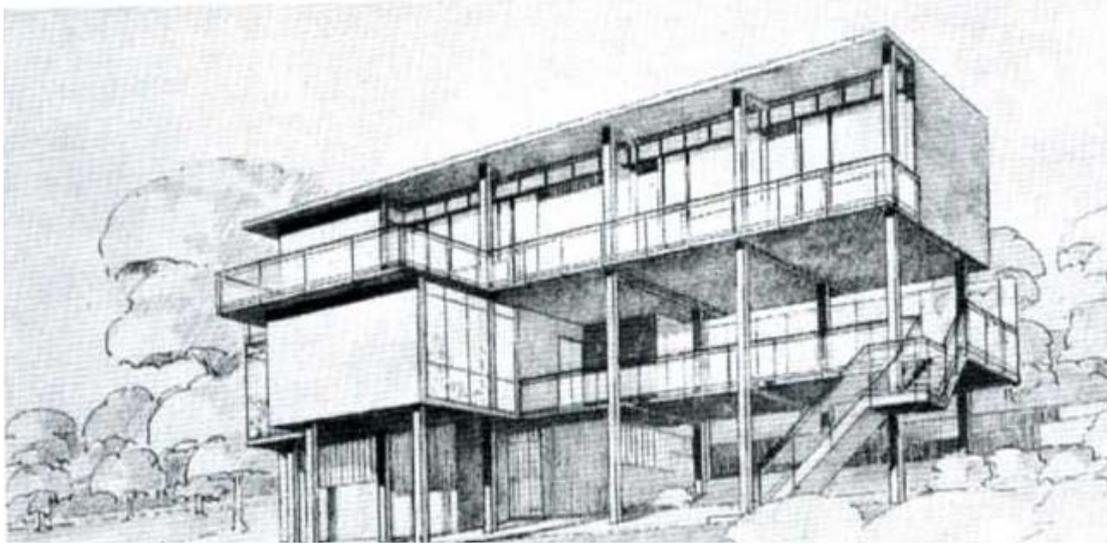
4.11 Pavel Janak, Janak House, Werkbund Housing Estate, Prague 1932



During Construction

© Birkhauser/Tempel 1999

4.12 Mart Stam, Palicka House, top the original design and below as 'modified' by the owner Jiri Palicka



© Birkhauser/Tempel 1999

The most visible change is that the external stairway leading to the garden in the original is outside of the house proper, whereas as constructed the stairway is placed inside the end wall of the house. The projecting glazed box 'bay window' has been removed, leaving an unbalanced space after the area created by the double-height columns with first floor rail. The floor above, although echoing Stam's design, is equally unresolved as it ends unhappily squared off, abutting a clumsy, imbalanced rectangle with no fenestration above the ground level which, because the main entrance floor is lifted above, appears even lower, trying to bury itself in the ground. All of this was in contradiction to Stam's 1924 study 'The Expandable House' upon which the Palicka House was supposed to be based.

The greatest trespass this house committed against Stam's intended form was in building the lower floor directly into the hillside instead of terracing the whole. This latter solution would have resulted in a house where one can see through, under, around and over spaces creating room for an integral garage, above which the house rises from the ground up. In the built form the house is rather stolid and uninspiring, not quite the 'dumb box' but it is only just saved by visible framing, that is, the concrete skeleton for the non-supporting walls and screens.

Although Gocar was seen by some as the 'older statesman of Cubism', in the Villa Glücklich he constructed a residence for Julius Glücklich who championed the great Bohemian patriot Budovec of Budov. Budovec was executed by having his head cut off in Old Town Square, Prague in 1621. As a consequence in his building Gocar used a cubist version of the English Country House, from the rusticated wall base to the formal entrance porch. The elongated villa beckons people in through lighting the way via a porch roof punched through with ten square interstices. Visible, via two bands of strip windows, is the reinforced concrete skeleton which is dictated by the exterior arrangements. The porch is duplicated on the top floor as a sheltered area with supporting columns to a continuation of the upper floor roof. The internal arrangement is a logical development of the exterior and, as in all Gocar's work; one can define inner space from external appearance. The three rectangular rooms along the front elevation are balanced by the three square rooms adjoining despite their subdivision as staircase, cloakroom and other utilities. On the north side is the delivery entrance, servants' entrance and quarters; all of which reinforces the hierarchy, tradition and regimen which Glücklich worked with throughout his life.

Houses 4, 14 and 22 (as named above) were a compendium of new building materials: 'Petrašek' moulded bricks, Heraklith wood-wool insulation, slabs, Rabitz stabilizing

mesh, (Xylolith) (sic) [Xylolin] compressed fibre board, Luxfar Glass Brick, all of which were discussed earlier, as 'House at Prague 1932', an evaluation of the house for Miroslav Hain. This was very similar to the Zaorálek House and needs no further description here. The Herain House and Cenek House have far more similarities and, although they were Zak's first constructed works, they propelled him instantaneously into the pantheon of Czechoslovak architects.

In both houses the medium scale and longitudinal plan on the ground floor are in contrast to the rectangular cells of the upper floor which house bedrooms and a bathroom within a delicately balanced, slim concrete skeleton. The Cenek House adds variance with a change in roof on the north elevation which with its step down looks like the drop from the side of the bow of a ship to deck level. This nautical reference is also found in a port-hole window in the same elevation. Structurally the most interesting part is the glazed verandah on the west elevation which with its vast windows cuts into the total block, yet is scaled in proportion and therefore does not overpower the whole. Finally, the L-shaped section on the roof, i.e. the rise in height from 'deck to bow', provides a unifying element. The glazing of the verandah is in balance with the other glazed section on the ground floor.

Zak's understanding of space and proportion allowed him to design asymmetrical buildings which with their juxtaposition of wall, glazing and open vistas, appear both harmonized and symmetrical. It is from this development that the typology of the single-family house is seen, from Teplice to Kostolec, from Brno-Pisárky to Barrandov and Jevany. Designed by Zak, Oehler, Frágner, Fuchs, Gregr and the Slapeta brothers, all these buildings remained rooted in their local context and specific topography. And nowhere was this mastery of context and topography better resolved than in the re-planning of Ljubljana by Jože Plečnik where a harmony of classical balance imbued with modern vitality was achieved.

---

Notes to Chapter 5

- <sup>1</sup> Banham R., *Architectural Design 51 1/2-1981, From Futurism to Rationalism The Origins of Modern Italian Architecture*, p.38  
see also Banham R., *Theory and Design in the First machine Age*, The Architectural Press, London, 1980, p.116-137, for a thorough evaluation of the ideas of Antonio Sant'Elia through, *La Cita Nuova*, 1914.
- <sup>2</sup> Ibid. Tschumi B., p.26
- <sup>3</sup> Op.cit Banham R., 1980, p.128
- <sup>4</sup> Ibid., p.288
- <sup>5</sup> Hitchcock H.R. and Johnson P., *The International Style*, Norton Library, New York, 1966, p.46
- <sup>6</sup> Ibid., p.143
- <sup>7</sup> Isaacs R., *Gropius an Illustrated Biography of the Creator of the Bauhaus*, Bull finch Press, Boston, Toronto and London, 1991, p.120-123
- <sup>8</sup> Op.cit., Banham R., 1980, p.287
- <sup>9</sup> Peichl G. and Slapeta V., *Czech Functionalism*, Architectural Association, London, 1987, p.45  
The exhibition catalogue of Czech Functionalism was the first English language publication to contain this quote, the accuracy of which was verified by Vladimir Slapeta.
- <sup>10</sup> Slapeta V. and Templ S., *Prague 20<sup>th</sup>. Century Architecture*, Zlaty rez, Prague 1999,  
Practical guide to Prague's modern architecture organised by districts, with highly detailed maps with all buildings. This was a constant guide during the Prague episodes of this research.
- <sup>11</sup> Walker F.A., Professor Emeritus of the University of Strathclyde, Department of Architecture and Building, Glasgow. Frequent writer on architecture, architectural history and urban form.
- <sup>12</sup> Sramkova A., *The Trade Fair Palace in Prague*, Prague, 1995, p.3
- <sup>13</sup> Dluhosch E. and Švácha R. (eds.), *Karel Teige 1900-1951 L'Enfant Terrible of the Czech Modernist Avant Garde*, MIT Press, Cambridge MA., 1999, p.112
- <sup>14</sup> Slapeta V., *The Brno Functionalists*, Alvar Aalto Museum, Helsinki, 1983, p.19
- <sup>15</sup> Op.cit., Peichl and Slapeta, 1987, p.65
- <sup>16</sup> Op.cit., Dluhosch, 1999, p.155
- <sup>17</sup> Švácha R., *Forma Sleduje Vedu*, (Form Follows Science), Prague, 2000
- <sup>18</sup> Op.cit., Peichl and Slapeta, 1987, p.131
- <sup>19</sup> Op.cit., Meller, 2001 p.133
- <sup>20</sup> Ibid., p.133
- <sup>21</sup> Ibid., p.131, see also p.129-145 for an exploration of 'Garden City Building in a Modern Idiom'
- <sup>22</sup> Švácha R., *Zlaty Rez (Golden Section) No.13, Winter 1996*, Prague, p.10
- <sup>23</sup> Op.cit., Peichl and Slapeta, 1987, p.117
- <sup>24</sup> Lesnikowski W., (ed.) *East European Modernism Architecture in Czechoslovakia, Hungary and Poland Between the Wars 1919-1939*, Rizzoli, New York, 1996, p.61
- <sup>25</sup> Op.cit., Blau and Platzer, 1999, p.228-235, *From CIAM to CIAM Ost*,
- <sup>26</sup> Ibid
- <sup>27</sup> van der Woud A., *CIAM Housing Town Planning*, Delft University Press, Rijksmuseum Kroller- Muller, Oterloo, 1983, p.11
- <sup>28</sup> Op.Cit., Blau and Platzer, 1999, p.37
- <sup>29</sup> Templ S., *Baba The Werkbund Housing Estate Prague*, Birkhauser, Basel, Boston and Berlin, 1999, p.19