

The CIAM Discourse on Urbanism, 1928–1960

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Modern Architects' Congress, 1928

CIAM (Congrès Internationaux d'Architecture Moderne) was founded at the Château de La Sarraz, Switzerland, in June 1928. This first meeting was organized in Paris by Le Corbusier and Gabriel Guévrékian, and in Zurich by members of the Swiss Werkbund and the art historian Sigfried Giedion. From the beginning, CIAM was conceived of as an instrument of propaganda to advance the cause of the new architecture that was developing in Europe in the 1920s. The congress was attended by twenty-four architects from eight European countries, who signed a joint Declaration during the event.¹ Sponsored by Madame Hélène de Mandrot, a French-Swiss noblewoman, with the cooperation of Karl Moser, a leading Zurich architect and teacher, CIAM was intended to create an international avant-garde of modern architecture. It was to be an elite new structure of association for architects to advance their cause against the then-dominant neoclassicism of the academies of architecture, which its founders hoped would place the new architecture into its "true economic and social environment."²

After La Sarraz, the tireless publicizing of modern architecture and the name of CIAM by Le Corbusier, Giedion, and other members gave the event a mythic quality, often remembered as the point where various avant-garde movements coalesced into what came to be known as the "Modern Movement." More recently, this interpretation has been challenged by historians who see the early history of CIAM as a series of disconnected episodes, with shifting participants whose positions were not always clearly defined, and whose goals were often in conflict. While this view provides a necessary counterbalance to the overstated claims of unity by CIAM's members, the formation of CIAM does appear to be a defining moment in the formation of a new approach to architecture.

CIAM's initial direction was shaped by the interaction of Le Corbusier and other mostly French-speaking proponents of a new architecture with the mostly German-speaking representatives of a leftist and technocratic approach to

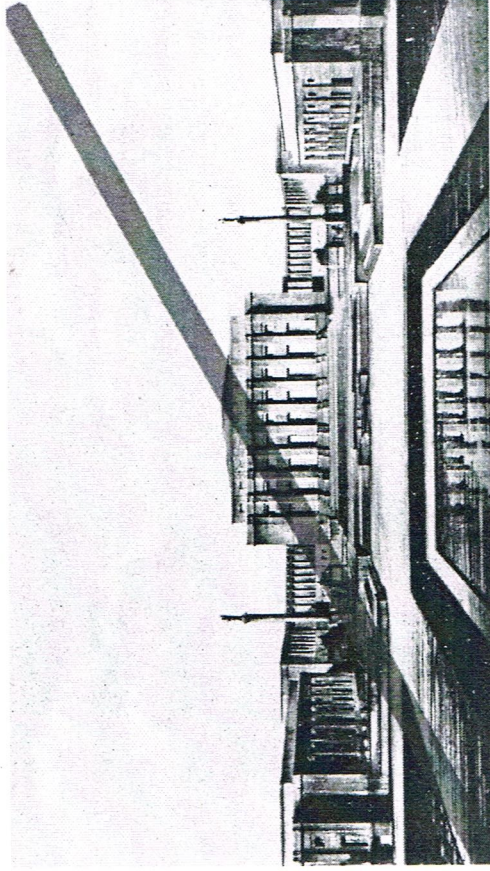
architecture and social organization. In the changed social and political conditions in Europe after the First World War, the limited prewar efforts to make a more socially responsive architecture took a new and decisive turn. Shortly after the La Sarraz "preparatory congress," Giedion, the newly appointed CIAM secretary, wrote to the Dutch architect and town planner Cornelis van Eesteren (1897–1988)³ that the goals of CIAM were:

- a) To formulate the contemporary program of architecture.
- b) To advocate the idea of modern architecture.
- c) To forcefully introduce this idea into technical, economic and social circles.
- d) To see to the resolution of architectural problems.⁴

Insofar as a common agenda can be said to have existed, CIAM was intended both to define the basis of the new architecture and to vigorously promote it to official clients and the public at large.

The growth of the new architecture in the 1920s, with architects in Germany, the Netherlands, and Belgium especially active in its development, was a major contributing factor in the creation of CIAM. Equally important, however, was the rejection of the entry by Le Corbusier and his cousin Pierre Jeanneret (1896–1967) in the League of Nations competition in Geneva the previous year. The nine-member jury of H. P. Berlage of the Netherlands, Victor Horta of Belgium, Josef Hoffmann of Austria, Karl Moser of Switzerland, Ivor Tengbom of Sweden, Charles Lemaresquier of France, C. Gato of Spain, Sir John J. Burnett of Britain, and A. Muggia of Italy had been unable to agree on a single winner from the 377 projects submitted. Although favored by Moser, Berlage, Hoffmann, and Tengbom, the Le Corbusier and Jeanneret entry was disqualified on a technicality by the French juror, Lemaresquier, a powerful figure at the *Ecole des Beaux-Arts* and enemy of modern architecture, who had the support of the French government. Le Corbusier and Giedion, the young Zurich art historian and architectural critic,⁵ then began an international campaign to have this verdict overturned. One result was their participation in CIAM, which they saw from the outset as a valuable instrument of propaganda for their cause.

There were other forces leading to the formation of CIAM as well. A group of architects involved in designing the demonstration dwellings at the German Werkbund's Weissenhof Siedlung in Stuttgart, planned under the direction of Ludwig Mies van der Rohe (1886–1969), met there in 1927. These meetings seem to have been connected in part to conflicts between Hugo Häring (1882–1958), secretary of the Berlin "Ring" of radical architects,⁶ who initiated them, and the efforts of Mies and of Walter Gropius (1883–1969), then director of the Bauhaus and presi-



1.1 Nénot, Flegenhaimer, Broggi, Vago & Lefébvre, winning scheme for the Palace of the League of Nations, Geneva, 1931, as presented by Alberto Sartoris in 1932. The slash mark was a device used by the Swiss ABC group to indicate architectural works it considered incorrect.

dent of the National Association of German Architects, to "purify" the new architecture of Expressionist and other divergent tendencies.⁷ In a letter to the Dutch architect J. J. P. Oud, Giedion indicated that he thought the hidden agenda of the Stuttgart meetings was to respond to Mies's directive that the nascent Modern Movement "must be cleaned up." According to Giedion, this "secret cleansing" would be carried out by Gropius, Mies, Le Corbusier, Oud, Van Eesteren, the Dutch architect Mart Stam (1899–1986), and Hans Schmidt (1893–1972), who represented the "Swiss collective."⁸ The links between these meetings and the first CIAM in the next year are not entirely clear, but many of the same architects were also invited to La Sarraz.

Schmidt had worked with students of the Zurich architect Karl Moser in completing a "demonstration apartment" in Mies's Weissenhof apartment building under the sponsorship of the Swiss Werkbund.⁹ Led by Schmidt and Max Ernst Haefeli (1901–1976), the participants in this effort included Karl Moser's son Werner M. Moser (1896–1970), Rudolf Steiger (1900–1982), Karl Egenger, and Hans Hoffmann. The secretary of the Swiss Werkbund, Friedrich Gubler, met with Gropius in Stuttgart at this time and suggested that Madame de Mandrot, an important patron of the Swiss Werkbund, might be interested in sponsoring the first meeting of the proposed international group of modern architects at her château at La Sarraz.¹⁰

After Gubler had discussed this proposal with Gropius and Häring in Stuttgart, de Mandrot herself raised the idea with Le Corbusier in Paris, where she lived part of the year. According to an account he wrote after her death in 1948, it

was she who raised the topic of his participation in the midst of a conversation about his rejected League of Nations design.¹¹ As she was a joint heiress to the land that was to be sold for the proposed League headquarters site, he was hoping she could bring pressure to overturn the rejection of his project. According to this account, he at first refused to participate in the proposed congress, but finally agreed on the condition that a work program with issues for discussion be printed up in advance, probably aware that otherwise the proceedings would be dominated by Schmidt, Stam, and the other Swiss and German participants.¹²

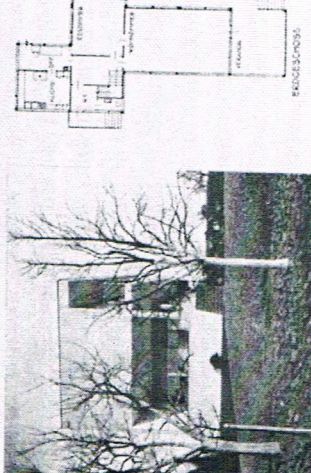
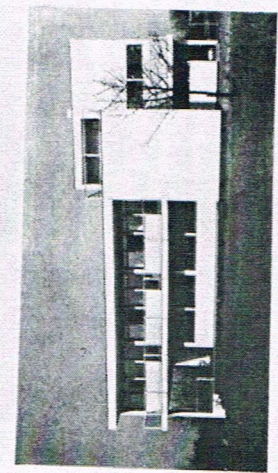
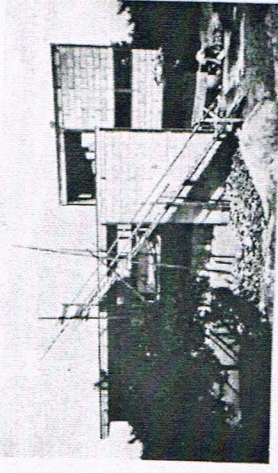
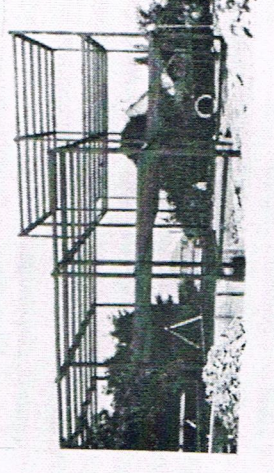
These architects published *ABC: Beiträge zum Bauen* (Contributions to building), edited by the Rotterdam-born Stam and the Basel architect Schmidt. Stam had worked in Switzerland for Karl Moser in 1924 before founding the Basel-based journal, which was inspired by El Lissitzky's Russian-German-French journal, *Veshch Gegenstand Objekt*.¹³ After the successful establishment of what Hannes Meyer called the "functionalist-collectivist-constructivist" ABC, which played a significant role in publicizing the new architecture in Switzerland, Stam and Schmidt also took part in the efforts to create an international equivalent of the German "Ring" of architects, which culminated in the founding of CIAM.¹⁴ In 1927 their efforts had converged with Giedion and Le Corbusier's, with Stam writing a piece in *izo* defending Le Corbusier's League of Nations entry.¹⁵

The first CIAM Congress was the result of these efforts from several directions, which most significantly included the international campaign in favor of Le Corbusier's League of Nations design, and the Weissenhof meetings involving members of the Berlin Ring and the Swiss Werkbund in 1927. Beyond these immediate causes were earlier efforts of El Lissitzky (1890-1941) and others to promote an international association of avant-garde architects, efforts which had led to the formation of numerous avant-garde journals across Europe.¹⁶ As Jacques Gubler has noted, the techniques of these avant-garde groups were primarily literary, typographic, and iconographic, but by the late 1920s "more highly structured events were organized,"¹⁷ and the first CIAM Congress was one of these. Stated abstractly, the various forces leading to the foundation of CIAM can be seen as, first, the effort to link certain new formal and technical strategies (and not others) to a program of collectivist social transformation through architecture and city and regional planning; second, the effort to promote these strategies to official clients like the League of Nations and to municipal governments then constructing housing; and third, although less directly, efforts to "purify" this new architecture, efforts that remain somewhat mysterious.

The arrangements for the La Sarraz meeting were entrusted by Le Corbusier to a friend of de Mandrot, the Istanbul-born architect Gabriel Guévrékian (1900-1970), formerly the chef d'atelier for Rob Mallet-Stevens. Le Corbusier made

Technische und wirtschaftliche Resultate eines Wohnhausbaues (1927).

Architekten Adolf L. Schmid, Edgar W. H. ...
 Die Auszahlung erfolgte in ...
 Die ...
 Die ...
 Die ...



1. ...
 2. ...
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1-2 Page from *ABC: Beiträge zum Bauen 4* (1927/28): 9, illustrating Hans Schmidt and Paul Arataria's Colnaghi House, Basel, said to be the first steel-framed house in Switzerland.

two drafts of a "Work Program" for the event consisting of these six questions for discussion by the Congress:

1. Modern architectural expression
2. Standardization
3. Hygiene
4. Urbanism
5. Primary School Education
6. Governments and the modern architecture debate¹⁸

The preparation of this work program coincided with Le Corbusier's writing of two pamphlets in 1928 for the elite technocratic group Redressement Français headed by Ernest Mercier, the managing director of France's largest utilities company, not long after Le Corbusier had set out his "Five Points of a New Architecture" in a book published in conjunction with his design for two houses at Weissenhof Siedlung.¹⁹ Mercier's group, whose slogan was "Enough politics. We want results," favored the creation of a government headed by experts which would use rationalized industrial production as a means of addressing social injustice, leading to the victory of "Ford over Marx." Lucien Romier, a leading spokesman of the group and soon to be a patron of CIAM, voiced the industrialists' fear that miserable dwelling conditions made the workers ripe for Communist propaganda.²⁰

Le Corbusier was enlisted to participate on an urban study committee for this group, which was focused on the question of working-class housing in Paris. His first pamphlet for the Redressement Français, published as a supplement to their monthly *Bulletin* in February 1928, elaborated on the ideas of his Plan Voisin of 1925.²¹ Based on technical and economic arguments, he advocated that the density of central Paris should be quadrupled, with 90 percent of the land left free for vegetation. At the same time, he made clear his hostility to the Garden City movement and its French implementation at Suresnes, and he held up Ernst May's new housing settlements in Frankfurt as a superior model. He argued for a law creating a new "authority" with unrestricted eminent domain for acquiring land for redevelopment at current market values, an authority independent of "parliamentary politics."

His second pamphlet for the Redressement Français, which appeared in their *Bulletin* in May 1928, was focused on the question of standardized housing. Illustrated with photographs of his Pessac housing settlement for Henri Frugès and his two houses at the Weissenhof Siedlung, it included what he considered detailed technical information. After the April 1928 elections the Redressement Français gained political influence, and during the summer the Loucheur Law was passed, which the Redressement claimed was the "pure and simple application of our

ideas." This law provided aid for the construction of 200,000 low-priced and 60,000 medium-priced dwellings, triggering a housing boom and giving Le Corbusier hope that his vision would soon be implemented in his adopted country.

This was the atmosphere in which he composed (possibly with the assistance of Giedion) the second draft of the Work Program for La Sarraz. In the first of the twelve points under his fourth question on "Urbanism," he emphasized that through the ages urbanism had always employed the most efficient techniques available. In the second point of this section, he identified contemporary ones: "Today, steel and reinforced concrete provide us with the most efficient means to produce an urbanism consistent with the profound economic and social revolution which is the result of the machine."²² The "Urbanism" section further emphasized that these economic and social changes had put entire national territories within the scope of urbanism, but since no central body existed to direct future development, "confusion is general, chaos reigns, danger is everywhere." The solution, he proposed, was the creation in each country or region of a stable body, directed by a powerful "responsible and competent personality" able to make new laws governing development, laws which must be consistent between all cities and regions.

These laws would allow the assembly of large parcels of land for redevelopment for common use and would permit the distribution of profits from land development to the community. In some ways, this was a restatement of the ideas of Ebenezer Howard's Garden City. Unlike Howard, however, the "Urbanism" section of Le Corbusier's "Work Program," like his articles for the Redressement's *Bulletin*, asserted the importance of building at very high densities in the centers of cities while still allowing the maximum space for greenery and transportation routes, through the use of design elements such as roof gardens and streets on pilotis. The "Urbanism" section also restated the ideas of his Plan Voisin in emphasizing the need for urban "surgery" to reorganize existing cities following orthogonal principles, rather than applying the mere "medicine" of enlarging existing streets.²³

To create an international elite of architects to promote these and related ideas, Le Corbusier and Giedion, whose involvement had been recommended by Karl Moser,²⁴ developed a list of architects to be invited to the proposed Congress. A number of prominent architects whom they invited indicated that they could not attend, including Tony Garnier, Auguste Perret, Adolf Loos, Henry van de Velde, Gropius, Mies van der Rohe, Erich Mendelsohn, and Oud. Somewhat surprisingly, two of the Beaux-Arts-trained architects who had jointly been selected instead of Le Corbusier and Jeanneret to design the Palace of the League of Nations, Julien Flegenheimer and Joseph Vago, asked to be invited but were refused.²⁵ By mid-June the invitation list included most of the participants who actually attended. Others invited who it appears did not actually attend were listed as Rob Mallet-Stevens, Moreux, the interior architect Djo-Bourgeois, and Jourdain, all of Paris; Krejcar and

Stary of Prague; Biaggini of Italy, Van Eesteren, and Sven Backlund, a Swedish journalist.²⁶

CIAM 1, La Sarraz, Switzerland, 1928

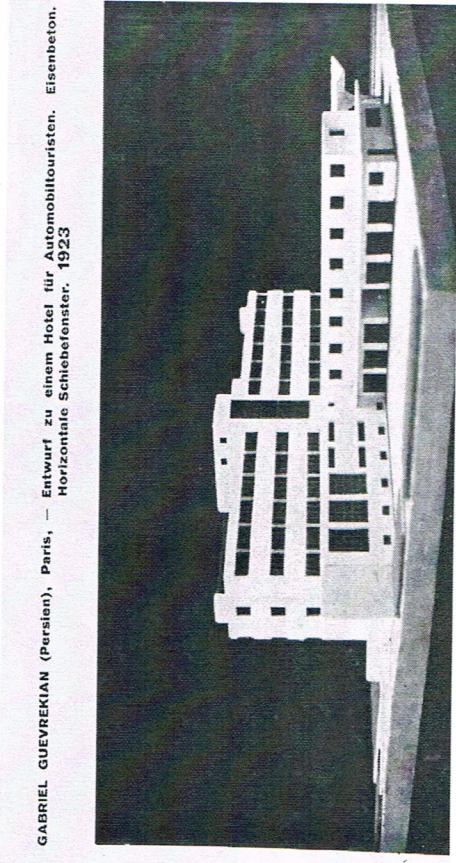
Although all shared an adherence to the new architecture, no single group or position predominated among those who attended the La Sarraz congress at de Man-



1.3 Group photograph, First CIAM Congress, La Sarraz, Switzerland. From left to right; top row: Mart Stam, M. E. Haefeli, Rudolf Steiger, Hans Schmidt, Paul Arataria, Friedrich Gubler, press; second row: Richard Dupierreux, Institut Cooperation-intellectuelle, Paris, Pierre Chareau, Victor Bourgeois, Ernst May (obscured), Gabriel Guévrékian (arms folded), Hugo Häring, Juan de Zavala, Lucienne Florentin, Le Corbusier (obscured), Madame de Mandrot, Rochat (press), André Lurçat, H. R. von der Mühl, Gino Maggioni, Huijbrecht Hoste, Sigfried Giedion, Werner M. Moser, Josef Frank; third row: Pierre Jeanneret (hand in pocket), Gerrit Rietveld, Alberto Sartoris (obscured behind Guévrékian); seated: Fernando García Mercadal, Ms. Weber, Tadevossian.

drot's ancestral château near Lausanne from June 26 to 28, 1928.²⁷ The largest national contingent present was Swiss: besides Stam, Schmidt, his partner Paul Arataria (1892–1959), Haefeli, Werner Moser, Steiger, and Giedion, other Swiss participants included Hannes Meyer (1889–1954), who became director of the Bauhaus later that year; another student of Karl Moser, the Lausanne architect

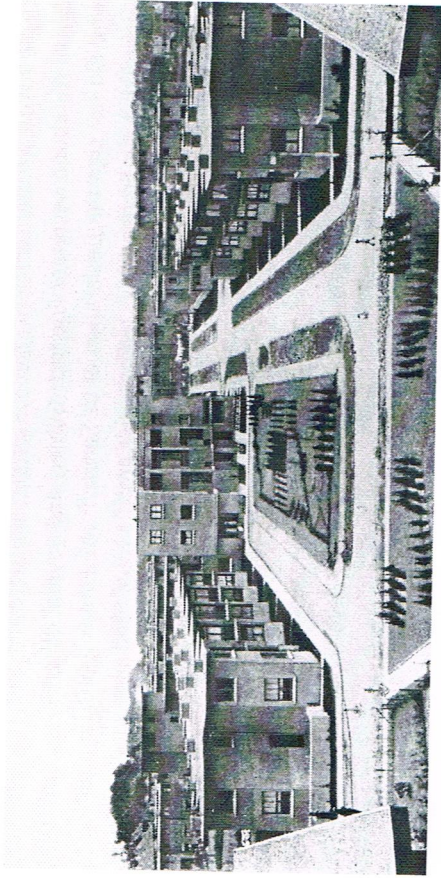
Henri Robert von der Mühl; the Geneva garden city architect Arnold Hoechel; the Swiss Werkbund secretary Friedrich Gubler; and several other Swiss attendees who did not sign the Declaration of La Sarraz.²⁸ The French group, in addition to Guévrékian, the French-Swiss Le Corbusier, and his cousin and associate Jeanneret,



1.4 Gabriel Guévrékian, project for a hotel for auto tourists, 1923.

was André Lurçat (1894–1970)²⁹ and Pierre Chareau (1883–1950).³⁰ Also present were the journalist Christian Zervos, founder of the Paris *Cahiers d'Art*, and Richard Dupierreux, chief of the arts section of the International Institute for Intellectual Cooperation in Paris.³¹

Belgium was represented by Victor Bourgeois (1897–1962), friend of Le Corbusier and architect of the concrete “Cité Moderne” housing project in Berchem-sur-Bruxelles (1922) and similar works;³² and by Huijbrecht Hoste (1881–1957), also a socialist Garden City advocate influenced by De Stijl.³³ Both Bourgeois and Hoste were members of the Groupe L'Equerre, which published the Neoplasticist journal *7 Arts*. In addition to Mart Stam, the Netherlands was represented by H. P. Berlage (1856–1934), and Gerrit Rietveld (1888–1964),³⁴ who was by this time a member of De Stijl and also an active socialist. Van Eesteren was not able to attend. The German Ring was represented only by Häring and by Ernst May (1886–1970),³⁵ the energetic municipal architect of Frankfurt-am-Main. Others present included Josef Frank (1885–1967)³⁶ from Austria, who had designed a house at the Weissenhof Siedlung, but not Adolf Loos, who was also invited. Italy was represented by the young Swiss-educated Alberto Sartoris (1901–1998), standing in for the Italian Gruppo Sette member Carlo Rava (b. 1903) who was unable to attend; and by the interior designer Gino Maggioni, a friend of de Mandrot. Spain was represented by



1.5 Victor Bourgeois, La Cité Moderne, Berchem-sur-Bruxelles, Belgium, 1922.

Fernando García Mercadal (1896–1985) and Juan de Zavala. From the USSR, Litsky and Moisei Ginzburg (1892–1946) would have attended but were denied visas by the Swiss government.

Most of the La Sarraz Congress consisted of debates over the work program drawn up for the event by Le Corbusier, discussed below, but one formal lecture was given by Berlage. Auguste Perret (1874–1954), Tony Garnier (1869–1948), Karl Moser (1860–1936), and Berlage had all been invited “from the older generation,” but only Berlage attended and spoke at La Sarraz. Karl Moser, due to his importance both as a sympathetic teacher and employer of many of the Swiss members of CIAM, and as a supporter of Le Corbusier’s design on the League of Nations competition jury, was made CIAM President in absentia, a position he held until 1930 when replaced by Van Eesteren.

It was Berlage who arguably had the more significant, though largely unacknowledged, influence on the urbanistic preoccupations of CIAM, even though he did not participate actively in the discussions at La Sarraz. Though his urbanistic work was perhaps less conceptually significant than Garnier’s, he had much greater success in actually implementing his ideas. His town planning work in Amsterdam was seminal for a generation of Dutch architects, from Michel de Klerk and the other architects of the Amsterdam School to advocates of functionalist “Nieuwe Bouwen” like Stam, who later rejected this approach.³⁷ Berlage’s 1917 plan for Amsterdam South had demonstrated the feasibility of large-scale urban design sponsored by a labor-oriented city government and based on improved working-class housing. It had served as a model for socialist advocates of housing and town planning in Berlin such as Bruno Taut and Martin Wagner. Even though Berlage’s street-oriented, perimeter block planning would be rejected by CIAM, the basic premises

of the Amsterdam plan, like those of Garnier’s Cité Industrielle, remained the point of reference for the CIAM approach to urbanism.³⁸

The importance of Berlage’s ideas and example were seldom mentioned in later CIAM deliberations, just as the proponents of divergent other approaches to modern architecture were eventually excluded or chose, like Mendelsohn, not to be part of CIAM. Nevertheless, the Amsterdam example of successful common efforts between progressive architects and a municipal administration committed to improving everyday living conditions was one backdrop against which CIAM began its discourse on urbanism.³⁹

The major voices at La Sarraz were those of Le Corbusier, May, Stam, Schmidt, Meyer, and Lurçat, whose differences were expressed in debates during the congress and over the final version of the Declaration of La Sarraz, the first CIAM manifesto and the demonstration of its aspirations to be the elite vanguard of the new architecture. As several scholars have examined in detail, these conflicts can be seen in the differing French and German versions of the text of the Declaration, and they reflected ongoing tensions between speakers of the two languages in the early years of CIAM.⁴⁰ Giorgio Ciucci has clarified that the basic point of contention was a conflict over the architect’s proper role in modern society; he writes that this role “in the French text [of the Declaration] is understood to be that of a technician who, in associating himself with industry, moves beyond the academic tradition, while in the German version the problem is rather how to fit him [the architect] into the productive process.”⁴¹ These differences for the most part also reflected the political conflict between Le Corbusier’s wish to accommodate architecture to the demands of large-scale industrial capitalism and the Dutch, German, and German-Swiss efforts to use the advanced techniques of capitalism to help bring about a new collectivist society.

The various facets of Le Corbusier’s urbanism up to 1928 have been extensively studied.⁴² His initial hostility toward the nineteenth-century city of corridor streets and dense housing blocks derives in part from the Garden City movement, which he became familiar with through the work of Raymond Unwin and through Georges Benoit-Lévy’s *La Cité jardin* (The garden city, 1904). As Paul Turner has shown, like many other architects of his time, he adopted the Nietzschean notion of an elite community of artists who would discover spiritual truth in the uniting of “art” (intuitive creation) and “science” (a priori Cartesian reasoning) and then reveal this truth to the rest of mankind.⁴³ Though politically he favored strong business leadership and leaned to the right, this focus on the importance of guiding elites put Le Corbusier in line with a Saint-Simonian or even Leninist conception of a vanguard party of activist intellectuals necessary to direct the transition to a new society.

The development of his famous vision of a rationally organized city of high-rise office towers surrounded by housing blocks has been studied by Francesco

Passanti, who has found influences of both Perret and Peter Behrens on Le Corbusier's interest in a designing a city of regularized business skyscrapers.⁴⁴ American skyscrapers were discussed in Berlin between 1910 and 1912, when business interests had begun lobbying for the abolition of city's height limitations.⁴⁵ Though these limitations were left in place, Passanti has argued that Behrens's comments on the issue had an effect on the subsequent skyscraper designs of both Le Corbusier and Mies van der Rohe. Behrens asserted that since Berlin was becoming a "business city," it "must be graspable as a closed architectural image. . . . A horizontally developed city requires corporeality and this can only be obtained through compact vertical masses."⁴⁶ As in these earlier European discussions of skyscrapers, the point of reference for Le Corbusier's Ville Contemporaine was American downtowns like Manhattan, but reorganized as the "closed architectural image" of "compact vertical masses" demanded by Behrens, sited in the "sea of greenery" envisioned by Perret. In appropriating this image as the starting point for his visionary urban utopia, Le Corbusier performed what Barthes has defined as the basic operation of myth: the transformation of history into nature. He transformed the semi-rational and historically contingent American skyscraper city into a "naturalized" and universal image, which he presented as the inevitable rational outcome of modern social and technical forces.

Barthes further argues that myth "transforms a meaning into form," which is what occurs in Le Corbusier's creation of the image of the Ville Contemporaine.⁴⁷ The original meaning of the skyscrapers—which might be described as profit-seeking transcending the old constraints of stairs and stone—is transformed into an image of modernity which does not deny the economic rationale of the towers, but which becomes a symbol not of profits sought by a few but of a better society for all. This basic image of the skyscraper "wilderness" of capitalistic striving ordered and cultivated into a new "apolitical" urban utopia of better living conditions for all would remain a basic theme in Le Corbusier's work.

Throughout the 1920s, Le Corbusier maintained that he was an apolitical technocrat seeking only to apply the lessons of Frederick Winslow Taylor and Henry Ford to the production of housing and cities.⁴⁸ This position, like Ford's, held that because the code of mass production was "natural," it could be (and was, of course) applied under any political regime. Hence for Le Corbusier it was "above politics." This attitude lay behind the basic premise of his urbanistic philosophy, that physical design rather than political action could provide solutions to the poor living conditions of industrial cities: "Architecture or revolution. Revolution can be avoided."⁴⁹ But avoiding revolution, of course, meant working closely with large interests with the capital to implement his overarching vision of social and architectural transformation. Such interests transcended national borders, and he was prepared to welcome a capitalist internationalism in the service of social rationali-

zation and reform along Taylorist lines. In his *Urbanisme* (titled in its English translation *The City of Tomorrow*) he suggested that Paris should be rebuilt along the lines of his Ville Contemporaine with foreign capital, since German, American, Japanese, and English investment would insure the city against future attacks, and in issues of *L'Esprit Nouveau* he emphasized the international character of the new avant-garde.

As part of his efforts to overturn the rejection of his and Jeanneret's League of Nations entry, he was willing to participate in an international congress of architecture, even though he knew that the German-speaking leftist advocates of the Neues Bauen (New Building) would try to dominate the proceedings. Two months before the La Sarraz meeting, Hans Schmidt had written to Karl Moser stressing that the ABC architects would advocate a radical "propaganda-oriented" position and would not actively participate unless their views were given precedence at the proposed conference.⁵⁰

ABC: Beiträge zum Bauen, edited by Stam and Schmidt, in its initial issue had plainly declared its preference for the "engineering approach" of the Soviet avant-garde over the "outspeakingly feminine" and decorative approach of American architecture.⁵¹ In *ABC* Stam constantly emphasized that the better exploitation of materials meant increased production in a shorter time, thus freeing up greater resources for the greater number. *ABC*'s concepts of *Kollektive Gestaltung* (collective forming) are related to the ideas formulated in Alexei Gan's *Constructivism* (1922), which identified this "engineering approach" with Communism, and drew attention to how the "capitalist" Beaux-Arts buildings hindered social reorganization. Gan focused on the problem of *konstruktivnaia*, the design process needed to create "correct" buildings which could further social collectivity.⁵²

In retrospect, although it was justified in terms of this socialist engineers' aesthetic, the formal logic of works by Stam and others published in *ABC* is also related to the elementarist compositional methods taught at Vkhutemas, as well as to the work of De Stijl and Le Corbusier. Though claimed to be purely purpose-oriented, the assigning of separate programmatic "functions" to distinct geometric volumes constructed of glass, concrete, and steel and linked by sharply defined and dramatically supported circulation systems was clearly related to a specific formal attitude that did not arise only from a scientific analysis of the design problem at hand.

In some respects the Constructivists' response to industrial imagery resembled Le Corbusier's transformation of the skyscraper modernity of Manhattan: they transformed specific factory and dock forms from Western industrial engineering, whose original meaning could perhaps be described as relatively blank and "tool-like," into a highly charged vocabulary expressive both of the collective working power of the proletariat and of a break with the classical system of architecture. Yet while both Le Corbusier and the Constructivists appropriated forms generated by

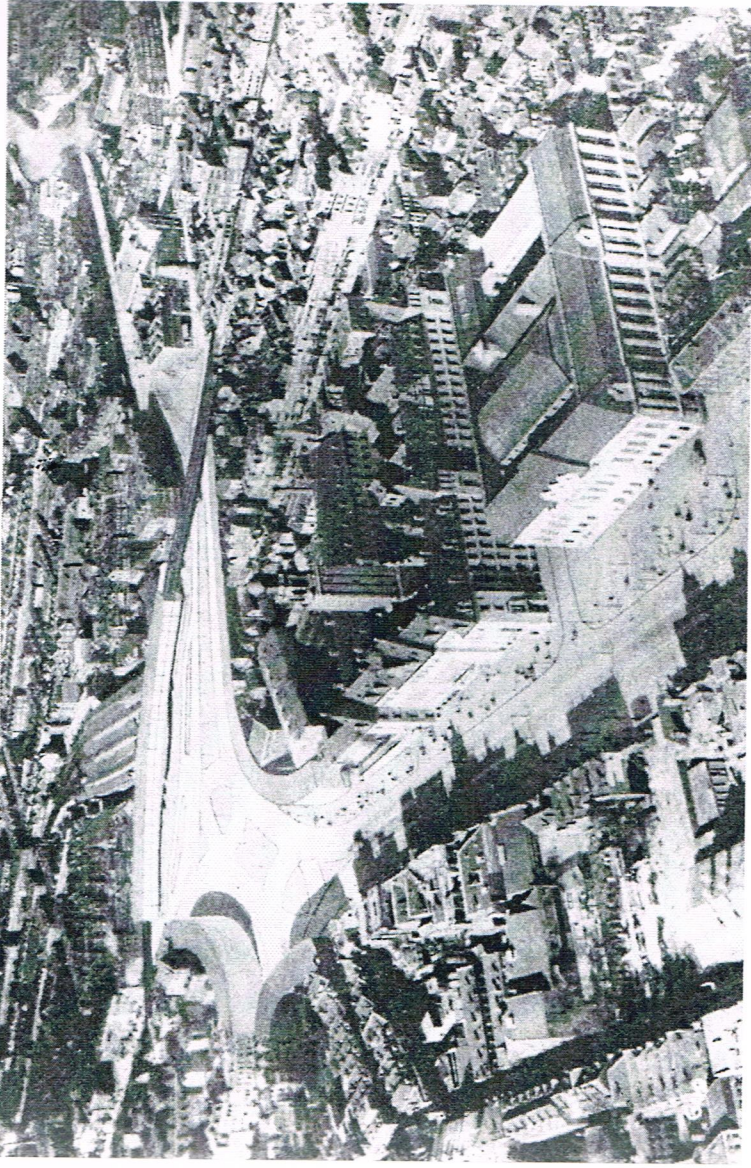
capitalist modernity, there was a sharp class division between their sources. Le Corbusier's Manhattan towers housed and represented the administrative side of capitalism, oriented toward the abstract manipulation of numbers, ideas, and people, while the Constructivists' pieces of industrial equipment were what aided or replaced the manual labor of production itself. In their work the "inevitable" coming dictatorship of the proletariat prophesied by Marx was to be furthered by the "dictatorship of the machine,"⁵³ freeing the working class from manual drudgery by evoking the forms of that which would increase production in the new Communist state.

Prior to La Sarraz, in 1927, the contradictions between Stam's constructivist functionalism and Lissitzky's formalism had led to a break between *ABC* and Lissitzky's Soviet group, *Asnova*. *ABC* then established new ties with the Swiss Werkbund, which already included Max Haefeli, Rudolf Steiger, and Werner Moser, who all had been aware of *ABC* but had kept their distance for various reasons.⁵⁴ Prior to this point, the Swiss Werkbund, founded in 1915 by Max Haefeli, Sr., was not a radical group, but the participation of the *ABC* members in the demonstration apartment at the German Werkbund's Weissenhof Siedlung marked a new direction for it which led directly to the CIAM meeting at La Sarraz.

Parallel to these developments Stam was also active in the Rotterdam group *Opbouw*, which also included van Eesteren. In 1927 *Opbouw* published a manifesto in *izo*, which declared that traffic was the "foundation of town-planning design." This meant that the closed body of the classical city must be replaced by an open-ended one, and might also mean the "sacrifice" of historic buildings in the general interest. A few months later, *ABC* published a scheme for the Hofplein in Rotterdam by *Opbouw*, with Stam's collaboration. This scheme projected greatly enlarged traffic arteries, with edges of the surrounding blocks configured to follow the curves of the streets. In the perspective drawing an elevated transit line arcs over the traffic, slicing through the square in front of the train station.⁵⁵

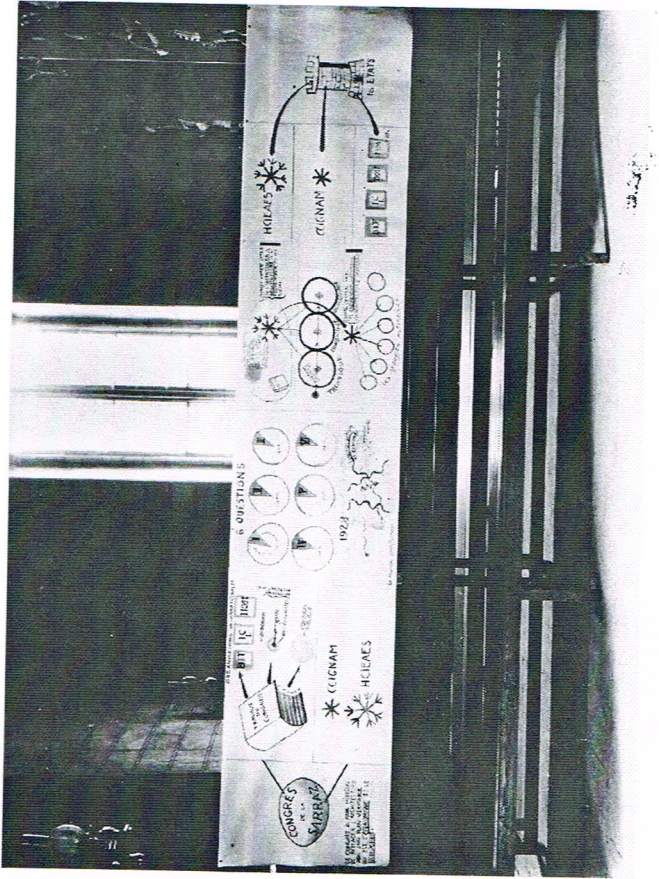
Le Corbusier's efforts to determine the direction of the Congress with his "Work Program" were somewhat successful, although the debate over each point was so prolonged that only four of them were discussed. These were the first question, now renamed "Architectural results of modern techniques," "Standardization," "General economic system" (which replaced "Hygiene"), and "Urbanism." "Primary school education," an issue of great interest to architects in Frankfurt and elsewhere, was not discussed in detail, and the last question, on modern architecture and government clients, was dealt with only in Berlage's talk.

The discussions began on Tuesday, June 26, in the fourteenth-century chapel of the château. On this day, the themes were "Architectural results of modern techniques," led by Victor Bourgeois and Le Corbusier, and "Standardization," led by Ernst May.⁵⁶ During the first session, Le Corbusier unveiled a large diagram which depicted "the State" at one end as a tower citadel under attack by arrows from



1.6 Opbouw (with Mart Stam), project for the Hofplein, Rotterdam, 1927, from *ABC: Beiträge zum Bauen 4* (1927/28): 5.

three directions. One arrow represented the different agencies of the League of Nations, with which Le Corbusier proposed that CIAM would collaborate; another one represented the HCIEAES, a "High International Commission for the extension of architecture to economics and sociology," which would be a committee of "economically and politically influential persons"; and the third stood for CCIGNAM, the "Central committee of national groups of modern architecture," soon to be renamed the CIRPAC, "Comité International pour la Réalisation des Problèmes d'Architecture Contemporaine," which might be translated as "International Commission for the implementation of contemporary architecture."⁵⁷ The response to this diagram was not recorded in detail. In the next session, on "Standardization," May insisted on the differences among the participants, distinguishing between those who held onto their "personal artistic qualities" and the others. The discussion on standardization focused on those who advocated prefabrication of the entire dwelling, such as Josef Frank, as opposed to those who would limit it only to certain elements, such as Lurçat or Le Corbusier.⁵⁸



1.7 CIAM "battle plan" drawn by Le Corbusier for La Sarraz meeting, 1928.

On the second day, the discussion was on "General Economy," led by Schmidt, and "Urbanism," which was to have been led by Oud, who was replaced by Lurçat. Berlage, addressing the sixth question of Le Corbusier's "Work Program," gave a speech on Thursday entitled "Der Staat und der Widerstreit in der modernen Architektur" (The state and its opposition in modern architecture). Berlage held up Holland as an exception to the usual hostility of governments to this kind of avant-garde architecture. He stated that in Holland, opposition between architecture and the state no longer existed, because the state was now under the control of the workers.⁵⁹ Despite this political stance, Berlage did not embrace the "Nieuwe Bouwen" of CIAM.

La Sarraz Declaration

On the same day as Berlage's talk, June 28, the draft text of the Declaration of La Sarraz was drawn up by a group that included Hannes Meyer, Giedion, Lurçat, Frank, and Le Corbusier. An impromptu costume party in homage to Madame de Mandrot was held that evening, during which Hans Schmidt and Arnold Hoechel edited the final text of the Declaration to reflect the debates.⁶⁰

To reconstruct precisely how the final text was created does not seem possible, but the final version reflects substantial changes from Le Corbusier's initial

program, apparently demanded by Schmidt, Meyer, and Lurçat.⁶¹ Gubler has analyzed the changes to the section on "Urbanism" in the "Declaration of La Sarraz" in detail. The term "urbanism" itself triggered debate; Häring considered it incomprehensible to the public at large, but Le Corbusier and Lurçat insisted on it being kept in the French text. The German text substituted "City and Regional Planning." At the same time, the socialist convictions of at least six of the most vocal signers (May, Meyer, Stam, Schmidt, Rietveld, and Lurçat) seem evident in the first sentence of the Declaration's section on "Urbanism":

1. Urbanism is the organization of all the functions of collective life; it extends over both urban agglomerations and over the countryside. . . . Urbanization cannot be conditioned by the pretensions of a pre-existent estheticism: its essence is of a functional order.⁶²

The first sentence seems related to the Communist Manifesto, where Marx and Engels called for the "combination of agriculture with manufacturing industries [and] gradual abolition of the distinction between town and country, by a more equitable distribution of the population over the country."⁶³ This is followed in the second point on "Urbanism" by the first statement of three of what would later become the "four functions" of urbanism, included at the insistence of Hannes Meyer:

2. This order consists of three functions: dwelling, producing, and relaxation (maintenance of the species). Its essential objects are land subdivision, regulation of traffic, building legislation.

This marks the appearance of the idea of the "Functional City" right at the beginning of CIAM. In fact, by 1928 the components of this idea were already a major feature of international thought about planning, especially in North America. Land planning based on zoning by functional categories reflected the larger shift in planning thought in the 1920s away from three-dimensional urban design of the Hausmannian or Berlagian type toward what in Dutch was termed the *organisatie van bestemmingen*, the "organization of designations."⁶⁴ The shift was already evident at the 1924 International Congress of Town Planning in Amsterdam, and was paralleled by a similar concern with promoting universal zoning by function in the first portions of the *Regional Plan of New York and Environs*, which began appearing around the same time.⁶⁵

The third point under "Urbanism" of the La Sarraz Manifesto insists that the "chaotic division of land, resulting from sales, speculations, inheritances, must be abolished by a collective and methodical land economy" and that "this land redistribution, the indispensable preliminary basis for any town planning, must include

the just division between the owners and community of the unearned increment resulting from works of joint interest." These points would have been acceptable to the socialist members, but a more specifically Corbusian stress in the "Program" on building at high densities in the centers of surgically reorganized cities was excluded in the final document. The fourth point under "Urbanism," with its emphasis on traffic control, again recalls ABC's ideas and the *10* manifesto, and the fifth point reflects the agreement between Le Corbusier and the other members on the importance of new building legislation, an issue to which the recent Loi Loucheur in France had given special relevance.

At the outset, then, the "CIAM urbanism" of the La Sarraz Declaration (which went on to stress the importance for architects of influencing public opinion and government clients through academic training) is a not altogether rational compromise between the urbanistic vision of the French-speaking delegates, much of it first developed in Le Corbusier's *Ville Contemporaine*, and the more generalized collectivist planning ideas of the socialist advocates of the new architecture. While they all believed in the desirability of centralized land planning for the common good, Stam, Schmidt, and Meyer and the others were unwilling to endorse the Corbusian focus on the replanned high-rise central city or the specific architectural gestures derived from his "Five Points of a New Architecture," which had also been part of his preliminary work program.

Perhaps surprisingly, given their divergent political views, there was also substantial agreement on an implementation strategy for the new CIAM urbanism. The CIRPAC would provide direction for CIAM in the same way as the Central Committee of the Communist Party, suggesting that this architectural vanguard was to some extent inspired by the Leninist model, even if Le Corbusier's own political views favored the leadership of strong industrialists and other capitalists. The proposed CIRPAC included Karl Moser, the newly named president in absentia; Giedion, who replaced Guévrékian as secretary of CIAM; and one or two delegates each from fifteen countries. Of those present, these were Bourgeois and Hoste for Belgium, May and Häring for Germany, Le Corbusier for France, Stam and Rietveld for the Netherlands, Sartoris and Rava for Italy, Frank for Austria, Schmidt and Steiger for Switzerland, and García Mercadal and Zavala for Spain. Those appointed to the initial CIRPAC but not present at La Sarraz included El Lissitzky for the USSR, Richard Neutra (1892–1970) and Knud Lomberg-Holm (1895–1972) for the United States, Lars Backer for Norway, Sven Markelius (1889–1972) for Sweden, Szymon Syrkus (1893–1964) for Poland, Jaromir Krejcar (1895–1940) for Czechoslovakia and Marcel Breuer (1902–1981) for Hungary.⁶⁶ These CIRPAC delegates were instructed to cooperate with others whom they believed would work "im Sinne der Bewegung" (in the sense of the movement), and they were specifically instructed not to simply draw upon the existing organizations of architects in their countries.⁶⁷

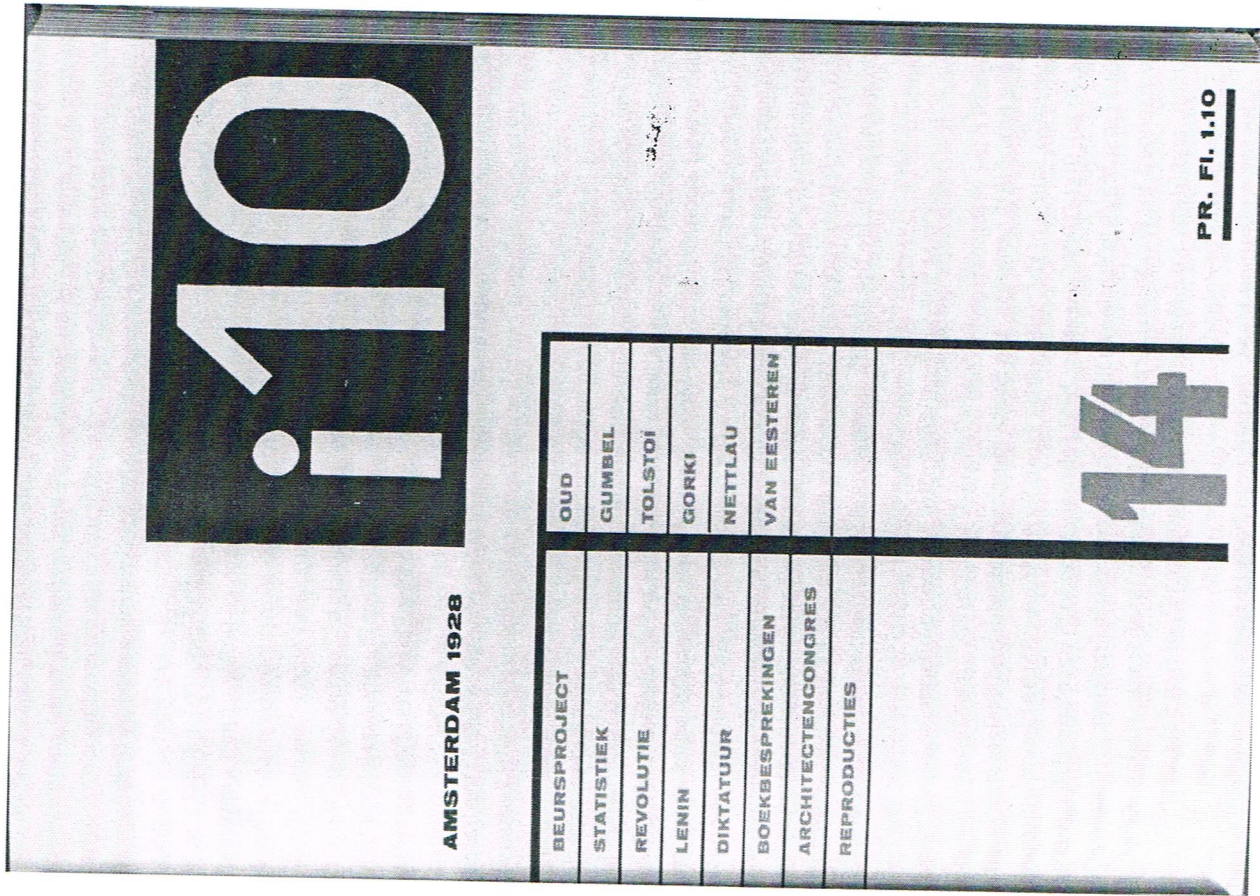
Le Corbusier's HCIEAES (Haut Comité International pour l'Extension de l'Architecture à l'Economique et au Sociologique) was prefigured by the committee of CIAM patrons that he and Giedion had created for the La Sarraz meeting, a group that included Henry Frugès, the manufacturer who had commissioned Le Corbusier to design workers' housing at Pessac; the French industrialists Jean Michelin and Gabriel Voisin, the latter the sponsor of the Plan Voisin; Richard Bühler, President of the Swiss Werkbund; the German industrialists Bosch of Stuttgart and Junkers of Dessau; the Czechoslovakian minister of foreign affairs, Edouard Benes; the French art critic and historian Elie Faure; Richard Dupierreux; and Albert Thomas, the director of the Bureau International du Travail, a branch of the League of Nations concerned with working conditions.⁶⁸ These choices reflect the postwar internationalism of the 1920s, showing that Le Corbusier's vision for CIAM was of an organization that would work closely with the League of Nations and other international organizations concerned with the amelioration of living conditions within the framework of Western-dominated capitalism. Reflecting his collaboration with Redressement-Français, for CIAM he envisioned an exclusive cadre of architects providing built solutions to problems defined by the business elite and international experts.

The socialist delegates appeared willing to go along with this definition for the moment, no doubt because they expected that the inevitable forces of modernization would soon result in the vindication of their views and bring about the substitution of a Leninist vanguard for the business elite. With all parties in basic agreement that the future, whether as a capitalist or a communist technocracy, was to be organized from above along lines thought to be best for the general welfare of industrial societies everywhere, the obvious next step was for the new Congress to develop and publicize the specific architectural implications of this worldview.

CIAM 2, Frankfurt, 1929: The *Existenzminimum*

For the next CIAM congress, the Swiss members Schmidt and Steiger proposed a comparative study of the "difficulties faced by the Neues Bauen" in various countries. At the first CIRPAC meeting, held February 2, 1929 in Basel, the delegates accepted Ernst May's invitation to hold the next congress in Frankfurt.⁶⁹ This meeting was attended by Bourgeois, Breuer, Le Corbusier, Josef Frank, Häring, Sartoris, Schmidt, and Stam; José Manuel Aizpúrua (1904–1936), of San Sebastian, Spain; and Szymon Syrkus of Poland.

The town planning ideas, derived from both Le Corbusier and the German-speaking socialists, that formed the basis of the CIAM urbanistic discourse were not being developed in a vacuum. The Loi Loucheur in France; social democratic municipal governments in Belgium, the Netherlands, Germany, and elsewhere in Europe; and the 1917 Revolution in Russia, combined with the Soviet policy of



1.8 Cover of the issue of *i10* that included the "Declaration of La Sarraz," 1928.

attempting to trigger revolutions elsewhere: all offered an enormous stimulus to conceptualize new urbanistic forms for modern industrial societies.

After the great German inflation of 1923 and the subsequent imposition of the Hauszinssteuer, the 15 percent tax on rents in existing buildings, funds had become available to municipalities to construct new low-cost housing to meet an increasingly severe housing shortage. In 1926 Gropius and May were instrumental in obtaining a federal subsidy to develop housing settlements as testing grounds for standardization and rationalization. Much of the new construction continued in the vein of the German Garden City movement and the ideals of the conservative Heimatsstil, the "style of the homeland." Beginning in Celle, near Hannover, however, Otto Haesler had already begun to apply the new methods at his Siedlung Italienischer Garten, begun in 1923. Haesler's work was paralleled by projects by Bruno Taut and others in Berlin and by Gropius and the Bauhaus faculty's Siedlung Törten in Dessau. In Frankfurt after 1925 the new architecture became firmly linked to a widely publicized overall town planning strategy.

Here, in the "New Frankfurt," the basic planning strategy was related to Raymond Unwin's concept of satellite garden suburbs. May's innovations in service of a new socialist dwelling culture were developed within this basic diagram, a pattern he had projected after 1919 for Breslau (now Wrocław, Poland) and other cities in then-German Silesia. This approach was new for European cities like Frankfurt, which were typically extended by building along existing streets with perimeter block courtyard housing blocks. By enlarging the streetcar system, May and his associates were able to link the new settlements on previously open and inexpensive outlying sites back to the old center, providing large green areas in between.⁷⁰ This strategy was aided by the fact that many industries had already been sited in these outlying areas, allowing the housing to be placed nearby.⁷¹

The new two- and four-story terrace housing was flat-roofed and stuccoed. May adopted new forms of propaganda like the photomontage to promote his *Das Neue Frankfurt* in the magazine of the same name. The magazine publicized technical innovations in this housing work, such as precast concrete construction elements, the Taylorized Frankfurter kitchens and the standard specifications and details for window, door, and other hardware, the extensive use of electricity, and the built-in provision for radio reception.⁷² Just as important were the collective social facilities: kindergartens, daycare centers, meeting rooms, roof terraces and allotment gardens, and parks and parkways designed by Leberecht Migge in the former swamplands of the Nidda River valley. The intent throughout at Frankfurt was to demonstrate the use of assembly-line methods for socialist (or at least social democratic) ends: the comparison that American housing advocate Louis Pink made between the Frankfurt housing and the Ford car was far-fetched only in terms of the relative profitability per unit.⁷³

May and his associates planned more than twenty housing settlements near Frankfurt. The site planning of earlier projects like Bruchfeldstrasse, Höhenblick, Riederwald, Praunheim, and Römerstadt used a modification of street-oriented planning with generous interior gardens. Yet though these initial projects were basically rowhouses facing conventional streets, the attitude of May and his team toward the design of the street facades is more ambiguous than at Berlage's Amsterdam South. Despite its public and collective character, the association of the street with the nineteenth-century tenement city appears to have been too strong for May's attitude toward it to be affirmative. At Bruchfeldstrasse, where a zigzag arrangement of the building facades with respect to the street destroyed the usual perspectival effect, this ambiguous stance is particularly evident.⁷⁴ Some sort of transcendence of the old street architecture was being sought, and at Haesler's Siedlung Italienischer Garten in Celle, the "solution" had already been found in the use of the *Zeilenbau* (row building) pattern.

Long used for military barracks and other utilitarian encampments, the *Zeilenbau* offered the simplicity and repeatability demanded by assembly-line methods of building production. Its first use by an architect of the Ring in a completely "rationalized" way was said to be Gropius's winning competition entry of 1927 for the four-story Siedlung Dammerstock, near Karlsruhe.⁷⁵ The *Zeilenbau* soon came to be applied in Frankfurt as well, in the second stage of May's Praunheim settlement, where to emphasize that the new scientific approach to site planning was in fact the culmination of forty years of urbanistic "evolution," the vehicular routes, no longer streets, were named Camillo Sitte Way, Theodor Fischer Way, Hermann Muthesius Way, Fritz Schumacher Way, and Heinrich Tessenow Way.⁷⁶

In the midst of the Frankfurt experiment, the proposed second CIAM Congress was given the theme "Die Wohnung für das Existenzminimum" (The minimum subsistence dwelling), with the focus to be on design solutions to the problem of high rents for low wage earners.⁷⁷ The focus on the "dwelling ration" had become a pressing concern in the Frankfurt housing program as rising costs forced continual reductions in the units despite May's extensive efforts at standardization. May had determined that monthly rents in the new settlements should not exceed the worker's weekly wage, a goal which became increasingly hard to achieve.

It was hoped that the deliberations at CIAM 2 would be based on a thirty-eight-page questionnaire entitled "Hygienic and Economic Foundations of the Minimal Dwelling" circulated to the various CIAM groups in advance, a procedure reminiscent of the quasi-scientific methods of groups like the International Federation for Housing and Town Planning, which had already held Congresses on this question.⁷⁸ Proper tabulation and assessment of these questionnaires turned out to be impossible for CIAM, given its limited organizational apparatus, so in the end

agreement that the minimum dwelling was in fact the correct solution to the housing problems of industrial societies was assumed by the Congress.

May's Frankfurt and CIAM 2 were not the first efforts to consider the design of minimum housing units. Similar efforts had been undertaken to provide minimal housing for the working class in France and England since the nineteenth century. A major part of such efforts involved the standardization and rationalization of the dwelling unit within the smallest possible cubage; in one such project, a cooperative apartment building on the Rue Jean-Robert in Paris by Alcide Vaillant (1884), the three-room apartments were forty-four square meters and the two-room apartments thirty-five square meters, units smaller than many of those displayed at CIAM 2.⁷⁹ May's efforts to find the minimum dwelling "ration" based on "biological" and not economic requirements stemmed from this earlier history of philanthropic housing as well as from his own work with Parker and Urwin at Hampstead Garden Suburb in 1910.

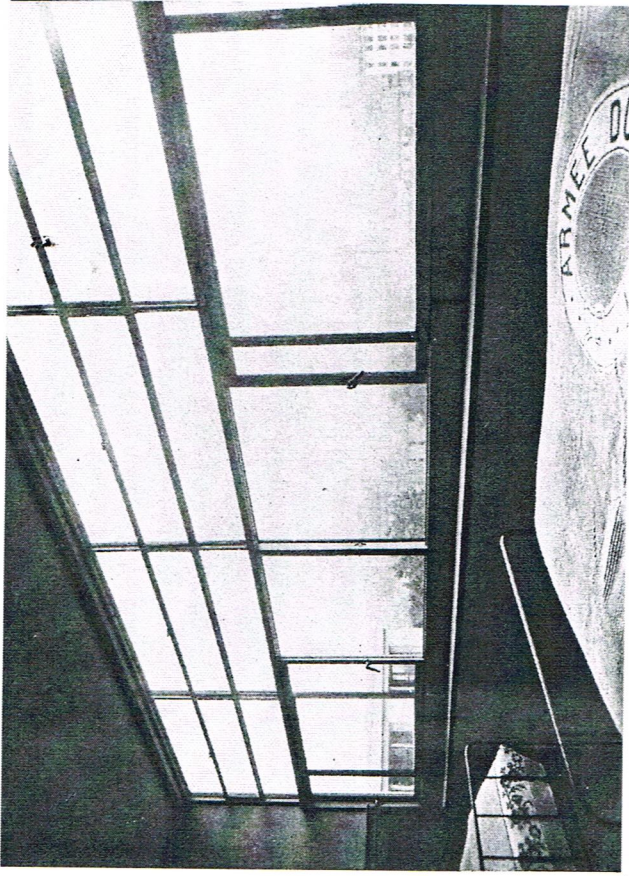
The nineteenth-century philanthropic roots of the effort to define the minimum habitable dwelling, much like the capitalist roots of functional zoning, were not acknowledged in the discourse of CIAM and the Modern Movement. Instead, Giedion, in his *Bauen in Frankreich, Bauen in Eisen, Bauen in Eisenbeton* (Building in France, building in iron, building in reinforced concrete, 1928) emphasized Le Corbusier's investigations into mass housing prototypes without indicating their conceptual relationship to these earlier efforts.⁸⁰ Though fascinated with nineteenth-century engineering, which he saw as the "subconscious" of academic architecture, and with furniture design, in his work Giedion completely ignored the large body of nineteenth-century philanthropic housing work and the ideas behind it, an omission that would remain an absence in the discourse of the Modern Movement.

The focus on what May termed the *Existenzminimum* was highlighted in Giedion's short illustrated book, *Befreites Wohnen* (Liberated living), which was issued a month before the Congress opened in the fall of 1929. Opposite the title page was a quotation from Henry Ford prophesizing a change in the form of housing away from the "solidly built" apartment houses of the present, since he asserted that they could not be remodeled. The illustrations, inspired to some extent by Le Corbusier's books, included works by Le Corbusier, Stam, Swiss CIAM members, Gropius, Oud, Neutra, Bijvoet and Duiker, and others, combining the theme of the minimum dwelling unit with the tectonic and visual strategies of the new architecture.

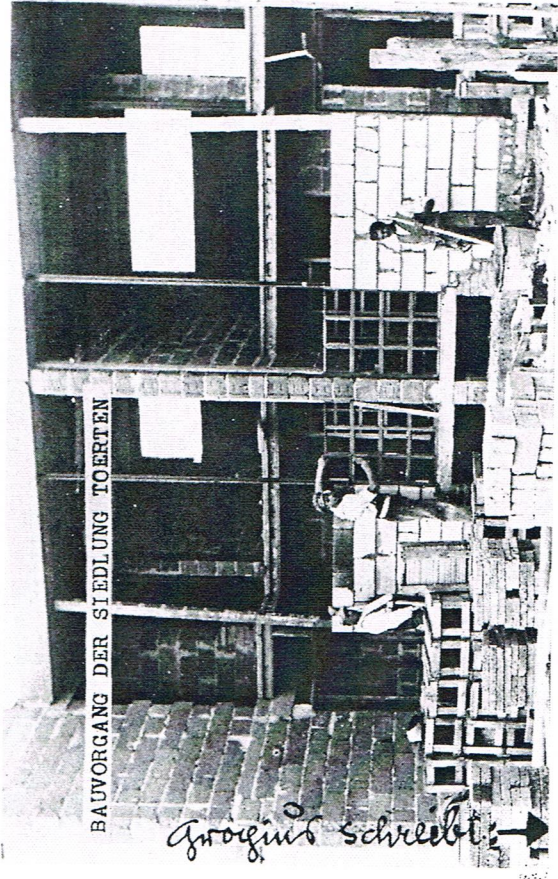
Giedion had at the same time begun a projected multivolume work on the "birth of modern man," which would serve to explain modernity to an age that had "lost its awareness of history."⁸¹ Part of his thesis was that the historian's emphasis should shift toward examining "minor daily events" in order to grasp the "essence of the age"; he explicitly attributed the source of this new sensibility to the "new painting," where the presentation of simple objects acts "upon our attitude toward life, upon our open sensibility."⁸² The projected second part of this work was to be devoted to a consideration



1.9 Cover of Giedion, *Befreites Wohnen* (Liberated living), 1929.



1.10 View of window and room in Le Corbusier and Pierre Jeanneret's addition to the Palais du Peuple of the Salvation Army, 29, rue des Cordelières, Paris, 1927, from Giedion, *Befreites Wohnen*, 1929.



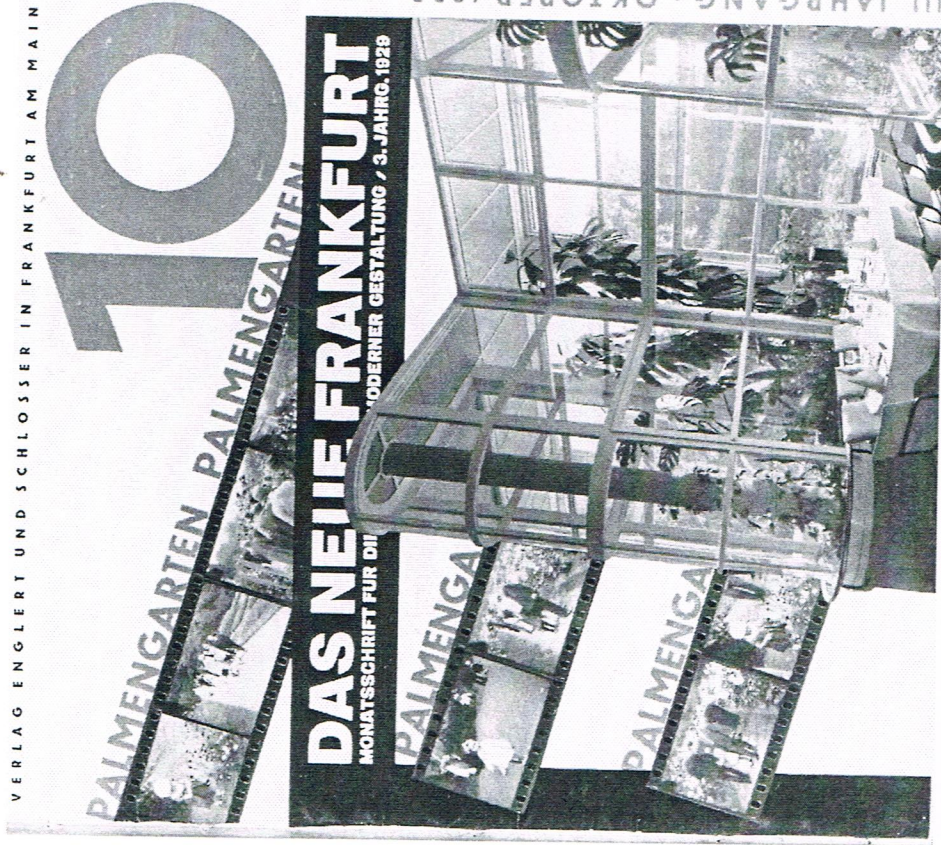
1.11 View of the housing settlement designed by Gropius and Bauhaus faculty at Dessau-Törten, Germany, under construction, ca. 1927; from Giedion, *Befreites Wohnen*, 1929. Gropius's caption describes the Taylorized production methods being used.

of the "Social Tasks of Architecture," and in the summer of 1929 he devoted extensive research time in the Bibliothèque Nationale in Paris to a study of the "biological foundations" of everyday life in the nineteenth century, including efforts at philanthropic housing. In contrast to the absence of such material in his published books, Giedion during this period gathered "vast documentation on the history of aid to the poor and the early history of social housing" as well as material on the role of women in both production and family life.⁸³ *Befreites Wohnen* revealed none of this work-in-progress; instead it reiterated the theme that what "the person" needed was "light, air, and openness," and that this the new architecture was uniquely able to provide.

As Giedion concentrated his historical work on propagandizing for the new architecture, a second preparatory meeting for CIAM 2 was held in Frankfurt in July 1929, attended by Mart Stam and May's associates, Ferdinand Kramer, Hans Leiszkow, and Joseph Gantner, editor of *Das Neue Frankfurt*. By this point the program had been settled: four lectures, by Gropius, Bourgeois, Schmidt, and Le Corbusier, on various aspects of the minimum dwelling, and the opening of an exhibition showing same-scale comparative plans prepared by May's associates of minimal apartment plans from twenty-six European cities and the United States.

CIAM 2 opened in the Palmengarten in Frankfurt-am-Main on October 24, 1929, "Black Thursday," the day the New York stock market crashed. In a report in *Das Neue Frankfurt*, Gantner estimated that around 130 architects from eighteen countries attended, including almost all the members of the Ring and delegations of ten or more members from France, the Netherlands, Switzerland, Spain, Poland, the USSR, and Scandinavian countries. He noted the absence of Oud and Lissitzky, as well as Le Corbusier, who was on his first South American lecture tour.⁸⁴ Karl Moser, Hans Schmidt, Rudolf Steiger, Mart Stam, Gerrit Rietveld, Ernst May, Hugo Häring, Victor Bourgeois, Alberto Sartoris, Fernando García Mercadal, and Sigfried Giedion were all present, and some new members made their first appearance: Josep Lluís Sert (1902–1983) from Barcelona (known also by the Spanish spelling of his name, José Luis),⁸⁵ Alvar Aalto (1898–1976) from Finland, and Farkas Molnár (1897–1945) from Hungary. Non-architect specialists were also invited for the first time to the meetings, which were not open to the public. The festivities included tours of the new Frankfurt housing settlements, and evening presentations of George Antheil's "Ballet mécanique" and Kurt Schwitters's "Ursonate." For visitors not attending the Congress, a several-day "Frankfurt Course in the New Architecture" was offered.

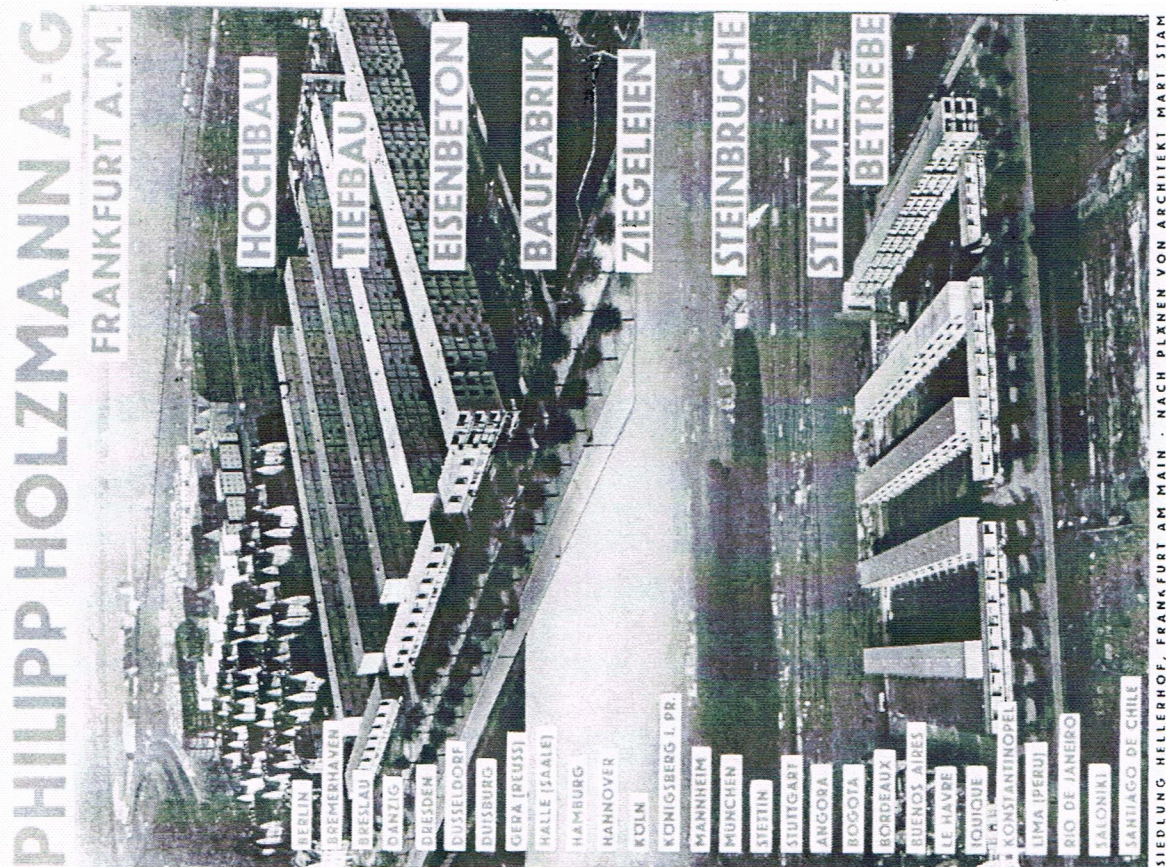
Although in later CIAM terminology the Frankfurt Congress is always referred to as "CIAM 2," in fact it was the first "real" CIAM Congress, since at La Sarraz no organizational structure yet existed. Prior to the Frankfurt Congress a set of "Statutes" for CIAM had been agreed upon, after considerable conflict.⁸⁶ A distinction was drawn between architect members and honorary members, with both to be nominated by the president and vice-presidents of CIAM. The "organs" of CIAM



1.12 Cover of *Das Neue Frankfurt* 10 (1929), which included photographs of CIAM 2. The full proceedings of the Congress appeared in the next issue, 11 (1929).

were defined as the "Congrès" itself, the "general assembly" that would meet every year or two, as called together by the president; and the CIRPAC, which had been proposed by Le Corbusier and created at La Sarraz. The CIRPAC members were to be called "delegates," with at least one from each CIAM national group. The CIRPAC was to plan each Congress and to carry out the decisions of the Congress, although in practice this second charge seems to have been difficult.⁸⁷

After Karl Moser's introduction, Giedion read Gropius's lecture, "The Sociological Foundations of the Minimum Dwelling."⁸⁸ Borrowing from the 1912 work of the sociologist F. Müller-Lyer, Gropius argued that a new era of "cooperatives and communal law" had opened, replacing the age of nineteenth-century individualism and the "rule



1.13 Advertisement on back of *Das Neue Frankfurt* 11 (November 1929), showing Stam's Hellerhof settlement, Frankfurt, 1929.

of money." In the new era this meant the family was losing "its character as a self-contained productive unit" and thus its cohesive power "is yielding to the rights of the individual citizen of the state." Mobility was increasing, and "most of the former family functions are gradually being assumed by the state." This meant that women's equality was also increasing, as women became able to look beyond the family and enter the world of business and industry. Gropius asserted that this new situation "awakens thoughts about new forms of centralized master households which partially relieve the individual woman of her domestic tasks by an improved centralized organization which is capable of performing them better and more economically than she can perform them herself." He noted the "growing shortage of domestic help" in furthering such desires, and observed that "in the hard battle for subsistence" the "woman seeks ways of gaining more free time for herself and her children while participating in gainful occupations and liberating herself from dependence upon the man." This desire for more collective social arrangements he saw as "the manifestation of an internal drive which is connected with the intellectual and economic emancipation of woman to an equal partnership with man."⁸⁹ In Gropius's view, the organizational structure of such "master households" is "connected intimately with the problem of the minimum dwelling." Biological considerations will determine its design; an "elementary minimum of space, air, light and heat" will be provided so that the dweller can "fully develop his life functions." Every "adult shall have his own room, small though it may be!"⁹⁰

Gropius may have been aware of similar discussions about minimum dwellings in the Soviet Union. Marx's view that private economic units like the family should give way to a collective domestic economy provided the justification there for developing more radical urbanistic solutions based on the "communal house," or *dom-kommuna*.⁹¹ This direction was powerfully reinforced by Lenin's statement of 1919 that the "real emancipation of women, real communism, will begin only where and when an all-out struggle begins (led by the proletariat wielding state power) against this petty housekeeping, or rather when its wholesale transformation into a large-scale socialist economy begins."⁹² By 1921, 865 communal dwellings had been set up in converted existing buildings in Moscow, then a city with a population of nearly two million people, and the idea of the *dom-kommuna* remained important to avant-garde architects even after the return of partial private enterprise with Lenin's New Economic Policy of 1921. An early example was Konstantin Melnikov's 1922 Serpukhov Ulitsa workers' housing competition project for a site in central Moscow, where he projected minimal housing units in long five-story housing slabs arranged in a fan-like configuration, connected to a communal building with second-level passageways.⁹³ The logic of Melnikov's unbuilt scheme seems related to El Lissitzky's contemporary efforts to infuse his Prouns (abstract paintings that suggested three-dimensional compositions) with Communist political significance, or in graphic compositions such as "What Have You Done for the

Front?" By using the Proun-like slab forms as elements of the new communal housing system, Melnikov projected a violent counterform to the "bourgeois" city of street-oriented courtyard apartment blocks.

In a 1927 issue of the OSA journal *S.A. (Sovremennaya Arkhitektura*, "contemporary architecture"), editor Moisei Ginzburg presented the case for the collective *dom-kommuna* based on a series of design competitions organized by the "Stroikom," the Soviet research and design section for the standardization of housing headed by himself. Ginzburg concluded that designing slab-type buildings with minimal housing units of about thirty to fifty square meters reached by exterior galleries could speed the transition to a more collective mode of life. Aware of the massive popular resistance to the new communal dwellings, Ginzburg argued that the incorporation of certain design features could "stimulate but not dictate" the transition to a "socially superior mode of life." In particular, the "well-lit access corridor could become a sort of forum, a setting for the development of purely collective functions and social exchanges."⁹⁴ Other communal facilities of these new Communist dwellings would be day care facilities, common cafeterias, and roof gardens. A built example of the new type was Ginzburg and Milin's Narkomfin (People's Commissariat for Finance) Apartments in Moscow, begun in 1928.

In his CIAM 2 lecture Gropius seemed to be advancing similar ideas. He argued that the changing "internal structure of the industrial family makes it turn from the one-family house toward the multistory apartment house, and finally toward the centralized master household." Possibly influenced by Le Corbusier, he went beyond both previous Weimar and Soviet discussions in advocating the high-rise apartment house as the best form for the new collective dwellings, raising for first time in CIAM the question of "Low-, Mid-, or High-rise Building?" He had calculated that by building higher it was possible to space housing rows more widely and to obtain greater densities of population on the same land area, without any decrease in sunlight or views. He could then argue that high-rise had

the biologically important advantages of more sun and light, larger distances between neighboring buildings, and the possibility of providing extensive, connected parks and play areas between the blocks. It thus appears necessary to develop the high-rise apartment building technically, incorporating into its design the ideas of the centralized master household.⁹⁵

This fateful formulation provided one justification for the vast numbers of high-rise slab projects built over the last seventy years around the world. Although Gropius had projected such a high-rise project in his 1929 competition entry for a settlement for Berlin-Hasehorst, he was unable to build any such projects in Germany before his departure in 1934. The first housing slab built of the type he pro-

posed seems to have been Van Tijen, Brinkman, and Van der Vlugt's Bergpolder Apartments in Rotterdam, The Netherlands, 1932–1934 (fig. 2.23).

May was opposed to high-rise housing, so much so that he insisted that Gropius's praise of it be deleted from the CIAM 2 publication a year later.⁹⁶ But at CIAM 2 the focus was not on this controversial question of high- versus mid-rise housing but on the design of the minimal units themselves. By perfecting the "scientific solution" to the minimum dwelling, CIAM members believed that the collective dwellings envisioned in the Soviet Union and Germany could become economically feasible for mass housing. Thus Gropius asserted in his talk that it was wrong to "look upon the very smallest dwelling as an auxiliary measure."

Gropius's talk in German was followed by one in French that continued this focus on the *Existenzminimum*. In "The Program of the Minimum Dwelling," Victor Bourgeois talked about the implications that the Taylorization of housework had for unit planning and advocated new mechanical ventilation and refuse removal systems.⁹⁷ In the afternoon the delegates attended the opening of the *Existenzminimum* exhibition, followed by a discussion led by Gropius and Bourgeois.

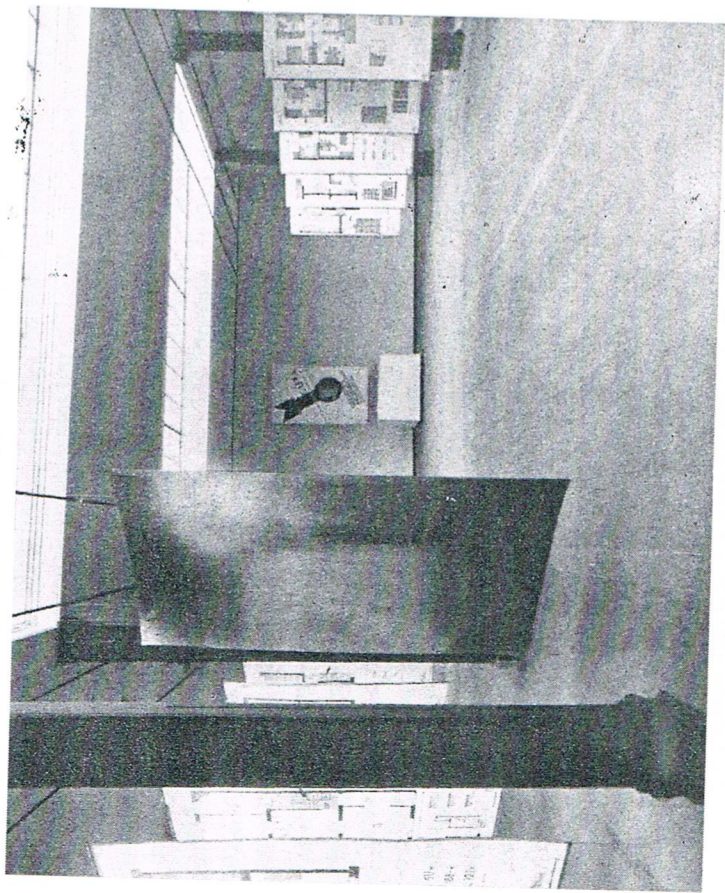
On the next day, October 25, 1929, Hans Schmidt spoke on "Criticism and Improvement of the Existing Building Regulations in Reference to the Minimum Dwelling." He noted the inherent conflict between building legislation and the demands of maximum profitability, and called for regulations of a "more general character" that would "grant the greatest freedom possible to the . . . manner of fulfilling the hygienical and social requirements." He pointed out that in the present system, idealistic building regulations without simultaneous engagement in production only benefit the well-off, who can afford the dwellings built to the higher standard of the regulations. He argued that regulations governing building technique, static safety, hygiene, and fire safety should give the builder the greatest possible freedom "within precise rules based on the latest scientific methods."⁹⁸

The final talk was Le Corbusier's on the built aspects of the minimum dwelling (read by Pierre Jeanneret on behalf of his cousin lecturing in South America). A printed schedule from the archives gives the title as "Criticism and Modification of Existing Regulations" which was changed to "Analysis of the Fundamental Elements of the 'Minimum House' Problem" in the book.⁹⁹ This talk stressed the biological nature of dwelling, the "poverty and insufficiency of traditional technique," and the need for "standardization, industrialization, and Taylorization." Though he described the use of the house as "a regular sequence of definite functions," a "traffic phenomenon," which "modern architectural science" must render "exact," Le Corbusier emphasized the specific architectural strategy he advocated, the now familiar "skeleton structure, with free plan and free façades," a strategy for which, he asserted, steel and reinforced concrete were the best materials.¹⁰⁰

On October 26, Karl Moser gave the official closing speech of CIAM 2, in which he explained how at La Sarraz the Congress had decided to create "a durable institution for the international exchange of ideas on the most-discussed problems of architecture." Its directives were based on "the intellectual progress and technique of the present hour," and rested on

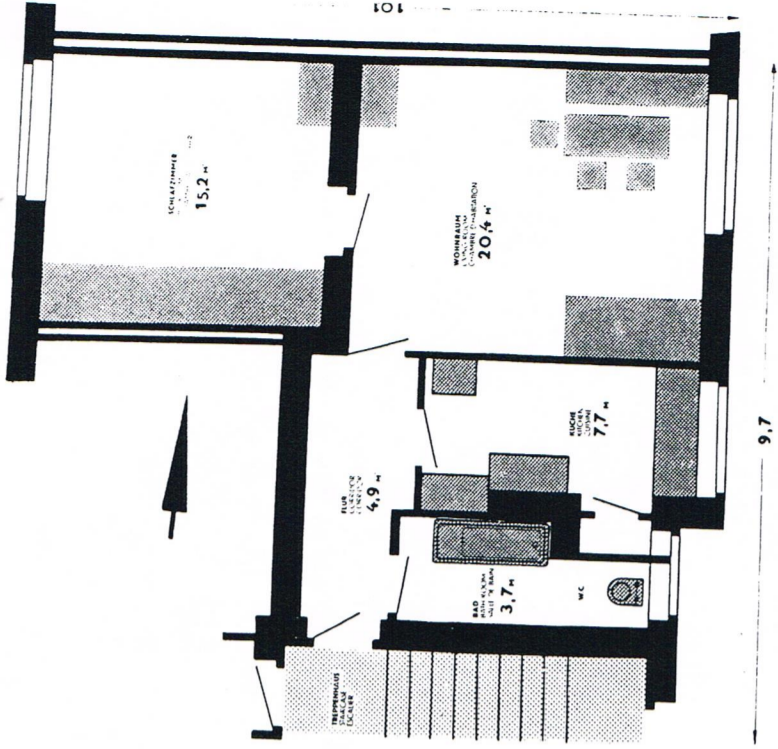
1. general rules of public economy
2. the science of town-planning
3. the relationships between architecture and public opinion
4. the relationships between architecture and government¹⁰¹

The exhibition "The Minimum Dwelling Unit" was then officially opened. Two hundred and seven floor plans of minimum units on 1.2 x 2 meter boards, organized in categories of one-, two-, or multifamily housing with indications of floor area, cubage, window area and the number of beds, were prepared under Stam's direction and presented in a uniform graphic format.¹⁰² To emphasize that a new com-



1.14 "Die Wohnung für das Existenzminimum" exhibition, Frankfurt, 1929.

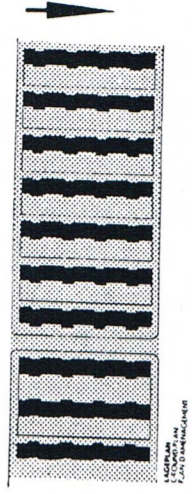
LODZ



WOHNFLÄCHE
FLOOR AREA
SURFACE HABITABLE 52.4 M²

UNBAUTER RAUM
CUBIC VOLUME
CUBAGE 204 M³

FENESTERFLÄCHE
WINDOW AREA
SURF. DES FENÊTRES 9 M²



BEZETZUNG: ANZAHL VON BETTEN
OCCUPATION: NUMBER OF BEDS
MATERIAL: 3

MULTIFAMILIENHAUS
HOUSE FOR SEVERAL PARTIES
MAISON POUR PLUSIEURS FAMILLES

146

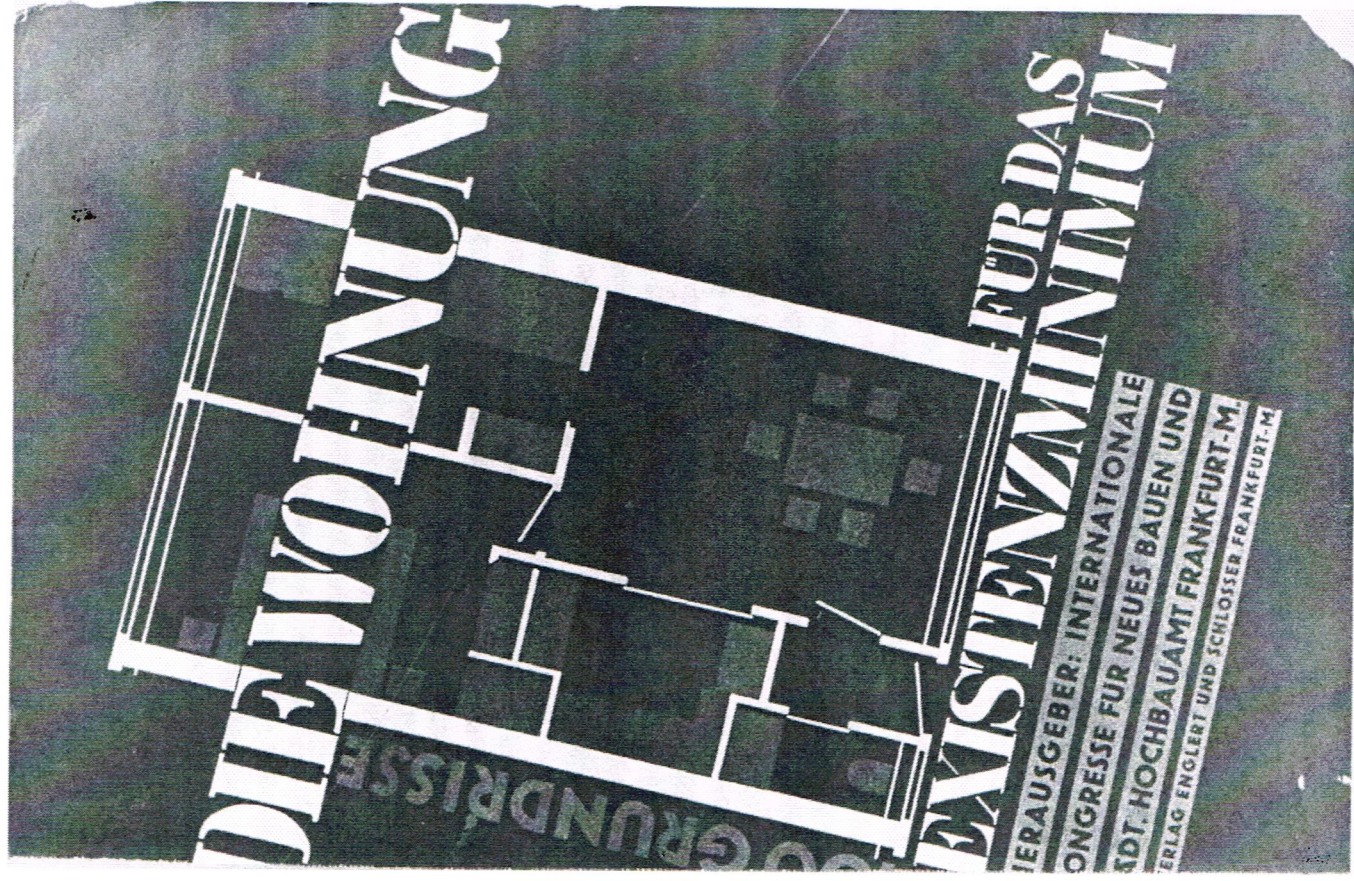
1.15 Plate 146, a three-bed unit from Łódź, from *Die Wohnung für das Existenzminimum*, 1930.

parative approach was being used, the buildings from which the units were taken were not represented, nor were the interiors of the apartments photographed. Locations were indicated by city only to allow comparisons of costs in relation to local wage levels, and the architects' names were not given. The majority of the plans came from German cities, with about half of these from Frankfurt projects; nearly all the others were from Brussels, Vienna, Paris, and other European cities.¹⁰³ Unit sizes ranged from 29.5 to 76.5 m² for one-family houses; 24.7 to 52.7 m² for individual units in two-family houses; and 23 to 91.2 m² for multifamily units.¹⁰⁴

After the Congress the exhibition then traveled through Europe; the talks and most of the plans were published in 1930 as the first CIAM book, *Die Wohnung für das Existenzminimum*.¹⁰⁵ This volume also included a text by Ernst May, translated as "The Dwelling for the Living Income Earner." May stressed the importance of constructing minimal dwellings for the poorest wage-earners, and attacked those who felt that the housing needs of this class should be serviced by their taking over older dwellings (later known as the "trickle-down" theory). He pointed out that Weimar Germany's high mortgage interest rates (11.5 percent in 1929) were a major factor in high housing costs, and advocated the building of more "public utility" housing. He concluded with a warning that the many questions concerned with housing cannot be left to architects alone, who "may want to foist [their] personal living and dwelling requirements upon the mass . . . of families with a living income only."¹⁰⁶

And housing costs were only increasing despite May's efforts to further Taylorize the production of minimum units to reduce costs. For the growing number of unemployed receiving government support payments, many of them craft workers displaced by mechanization, the rent on even a minimum unit was more than half their monthly government check. In fact, only those with steady salaried jobs could afford the minimum dwellings in Frankfurt, and this class was steadily decreasing by the time of CIAM 2.¹⁰⁷

The book that resulted from the Congress also included a listing of the official structure of CIAM. This was published as Karl Moser, president; Bourgeois and May, vice-presidents; and Giedion, secretary. The national delegates were Bourgeois and Raphaël Verwilghen (1885–1963) for Belgium¹⁰⁸; C. J. [sic] Robertson for Britain; Edward Heiberg and Poul Henningsen (1894–1967) for Denmark¹⁰⁹; May and Häring for Germany; Aalto for Finland; Le Corbusier and Pierre Barbe (b. 1900) for France;¹¹⁰ Stam and Rietveld for the Netherlands; Farkas Molnár and G. Masirevich for Hungary; Sartoris for Italy; Lars Backer (1892–1930) and Frithjof Stoud Platou (1903–1980) for Norway; Szymon Syrkus and Josef Szanajca (1902–1939) for Poland;¹¹¹ Sven Markelius (1889–1972) and Gunnar Sundbärg for Sweden; Schmidt and Steiger for Switzerland; García Mercadal and A. Salvador for Spain; Ginzburg and Nikolai Kolli (1894–1966) for the USSR; and Neutra and Lonberg-Holm for the



1.16 *Die Wohnung für das Existenzminimum* book cover, 1930.

USA. Groups in Austria, Japan, Czechoslovakia, and Yugoslavia were noted as “being formed and reformed.”¹¹²

Le Corbusier, the Green City, and His “Response to Moscow”

In February 1930, the CIRPAC met at Le Corbusier’s office in Paris to plan the Third Congress. Victor Bourgeois, the Belgian socialist housing reformer and a CIAM vice-president, extended his invitation to sponsor the Congress in Brussels; others in attendance were Stam, Schmidt, and Giedion. At this meeting Le Corbusier criticized the CIAM focus on the minimum dwelling without a corresponding examination of the overall provision of communal services, as was being done in the Soviet Union by Ginzburg and OSA. Le Corbusier had been making regular trips to Moscow for his Tsentrosilsoyuz project since 1928, and he contrasted the “piecemeal” communal efforts of May in Frankfurt with more comprehensive Soviet strategies being debated after the inauguration of the first Five Year Plan. He also proposed that a future Congress be held in Moscow.¹¹³

It was agreed that the focus of the next Congress, to be held in Bourgeois’s Brussels, would be “Rational Site Planning,” reflecting the importance May and Stam gave to the need to “rationalize” site planning along *Zeilenbau* lines; to reduce costs and facilitate (or at least represent) mass production. Both had been delegat- ed by May to design the Hellerhof settlement in Frankfurt along these lines. Gropius, however, and members of his circle in Berlin like the Hungarian-born Fred Forbat (1897–1972) initially objected to the proposed title. Forbat wrote that “entirely justifiable development methods are not yet the most rational and a determination of what is rational in our [higher] sense has not yet been found.”¹¹⁴ This reflected Gropius’s position that a focus exclusively on standardization privileged economic rationality over a “higher” rationality that would also include social and spiritual dimensions. Like Le Corbusier, Gropius believed these values could be furthered by high-rise building for the working class in redeveloped urban areas, a theme he had already touched on in his lecture at CIAM 2.

This growing debate among advocates of the new architecture over forms of site planning was reinforced by developments in the Soviet Union, where in early 1930 government-controlled labor unions sponsored a major competition for a decentralized “socialist garden city” for 100,000 people on a 15,000-hectare site thirty-seven kilometers northeast of Moscow. Intended as a “leisure city” for workers who would otherwise take their rare vacations at a distant Crimean resort or the like, the new “Green City” settlements would be the place for a day of relaxation after every four days of work in Moscow. With its “rational organization of leisure” it was conceived of as a vast “model proletarian health clinic” for Moscow’s workers.¹¹⁵ It was hoped that the competition would stimulate design thinking about new

housing solutions for Moscow’s “outmoded urban organism,” solutions that would combine Western technology with socialist principles to “carry out the utmost development of the collectivization of life possible in the present stage.” The competition crystallized the debate that had already begun at the Communist Academy between the (rather misnamed) “urbanists,” led by the economist Leonid Sabsovich, who advocated using the newly established electrification pattern to create contained settlements of limited size with collective housing blocks and communal kitchen, bathing, and laundry facilities, and the “disurbanists,” led by the economist Mikhail Okhitovich, who favored linear, dispersed settlements along transportation routes.¹¹⁶ The disurbanists rejected the idea of collectivized dwellings and instead favored individual detached dwellings, anticipating the basic principle of Frank Lloyd Wright’s Broadacre City, unveiled at Rockefeller Center in 1935. Like most progressive planners in the West, both urbanists and disurbanists opposed the existing metropolis: Sabsovich predicted that soon the biggest cities would be “swept from the face of the earth,” while Okhitovich defined the existing city as simply “a knot of communication, a knot of roads and rivers.”¹¹⁷

Designs for the Green City competition were received from, among others, Nikolai Ladovsky, Melnikov, and an OSA “Brigade” directed by Mikhail Barshch and Ginzburg. The OSA scheme was the clearest statement of the disurbanist position: based on an elaborate transportation network of trains, buses, and cars, it was designed so that no one would have more than a five- to ten-minute walk from home to transportation. The built fabric of mass-produced detached dwellings was laid out parallel to the transport lines, with communal facilities such as day care centers, dining halls, and playing fields located at the bus stops.

Shortly after the February 1930 CIRPAC meeting, Le Corbusier was asked to give his opinion on the Green City entries, which he did in his 1930 “Commentaries Relative to Moscow and the Green City.”¹¹⁸ While he shared the general distaste for the existing built fabric of Moscow, he could not countenance the disurbanist position. Arguing that economic, social, and cultural life were all dependent on a high density of settlements, he believed that the true solution to the “problem” of the existing city was neither the self-contained small centers of the misnamed urbanists nor the disurbanist linear city. Instead, he repeated his advocacy of a reconfigured high-density core surrounded by housing set amidst greenery, ideas he had already put forward in his plans for the Ville Contemporaine. But he went beyond his earlier work in embracing the Soviet focus on leisure and the “Fifth Day,” ideas that related to his growing syndicalist interests in the “real needs” of life.¹¹⁹

The Soviets were sufficiently impressed with Le Corbusier’s comments on the Green City competition that they then asked him to answer a lengthy questionnaire on Moscow’s future development, which he received in time for the next CIRPAC meeting, held in Brussels on May 17, 1930. In addition to a sixty-six page report, he

also submitted twenty-one drawings of his proposed reconstruction of the city. This "Response to Moscow," submitted June 8, 1930, was the first formulation of what he soon retitled the "Ville Radieuse," or "Radiant City," his rethinking of his Ville Contemporaine of 1922. In the written text he reiterated his belief that the high density of the metropolis must be retained, because "extreme manifestations of vitality are to be found in places of great concentration." He explained why Moscow should remain the capital:

Energy is multiple, multiform. The elites, the constructive spirits are all "of the same nature": constructive powers (energetic qualities) acting in various milieux, indissociable, interdependent symphonic events of human activity. In principle the city is precisely, necessarily the place of assembly, contact, competition and struggle of diverse energies. It would be dangerous and artificial to disperse [these energies]. It would be contrary to the instinctual forces of assembly that have given rise to the city. . . . To isolate would be to enfeeble.¹²⁰

This panegyric echoes his equally passionate celebration of the centralized metropolis in his South American lectures of the previous year, but in the Communist context his celebration of the great city as the natural place of the elites, the "great spirits" rings oddly. It sounded more natural when it was clear he was speaking of the capitalist-imperialist city, as he did to an audience in Buenos Aires:

So now I design this contemporary event: the Paris business district. Impense and magnificent, shining and orderly. Sustained by the history of the city, its vital power, its sense of the appropriate, its lively and creative spirit, even its quick and revolutionary mind, sustained by chronology, by the faith I have in the present time, by the ardent realities of impending morrows, I say coldly, with conviction and decision: "That, that is Paris!" I feel that the whole world has its eyes on Paris, hopes from Paris the gesture that commands, creates, and raises in order, the architectural event that will enlighten all other cities. I believe in Paris. I have hope for Paris. I beg of Paris to make, once more, its historical gesture: to continue.¹²¹

Despite the radical change in the potential patronage for his schemes, he repeated many of the basic plan elements of the Ville Contemporaine and Plan Voisin in his "Response to Moscow." Much like the Voisin Plan for the Right Bank of Paris, his Moscow scheme called for the total obliteration of the "Asiatic village" of the existing city, leaving only the Kremlin, Red Square, some historic churches, the Bolshoi Theater and the Lenin Mausoleum standing.

While the cruciform towers, rigidly separated high-speed transportation links, and redent block housing were retained, important modifications were made to the scheme. Instead of occupying the central position, both the business center of cruciform towers and the main train station are sited well away from the housing districts (an idea he had first proposed in his plan for Buenos Aires the year before). In his commentary Le Corbusier repudiated the "radio-concentric city" and in the new plan proposed a "heliothermic axis" to provide the best solar orientation, depicting various areas segregated by function in bands running perpendicular to the central spine. The redent blocks of his earlier schemes are retained, but are now all raised on pilotis, and the orthogonal grid of primary streets is now doubled to form four-hundred-meter square blocks. Along the main axis are sited cultural facilities and clubs, which now form the primary focus of the plan.¹²²

Many of the modifications of his earlier ideas seem to have come about as a direct result of Le Corbusier's exposure to the Green City entries, particularly Ginzburg and Barshch's OSA scheme. The changes include the move away from the static image of the Ville Contemporaine toward a more open-ended framework based on transportation, the new emphasis on correct solar orientation, which had also become a preoccupation in Frankfurt, and the elaboration of collective facilities inspired by the Soviet focus on workers' clubs. Yet the reaction from Ginzburg and other Soviet architects to the "Response to Moscow" was generally hostile, however much they continued to admire Le Corbusier as an architect. They objected to his unwillingness to break up the capitalist city, seeing in his celebration of it a deviation from the Communist Manifesto. Nikolai Miliutin charged that skyscrapers were "the last cry of capitalism," while Sergei Gorny condemned Le Corbusier's "reactionary" plan for continuing the "framework of old property relations."¹²³ Nor were his CIAM colleagues convinced by his belief that the same built solutions could be implemented under any sort of modernizing regime. Schmidt insisted that it was "obvious that even the most progressive western architecture cannot in its potential go beyond the boundaries imposed by capitalism." Schmidt also recognized that if CIAM were to take an explicitly anticapitalist stance it would lose the possibility of undertaking "practical, everyday work."¹²⁴

Le Corbusier, in his usual megalomaniacal way, was undaunted by these criticisms. At some point shortly after submitting his "Response to Moscow" in June 1930 he changed its title to "La Ville Radieuse" and began making preparations to exhibit it at the next CIAM Congress. Though it had been produced in response to the problems of the Communist metropolis, Le Corbusier's thinking at this point was continuing to move in a different political direction. After the seeming triumph of the agenda of the Redressement Français with the passage of the Loi Loucheur on the eve of the first CIAM Congress in 1928, no rational planning policy had emerged in France. For the most part, the new law only triggered a suburban building boom

of pseudo-Mediterranean villas, much as changes in the New York State tax laws had produced a boom in wood frame houses in and around New York City earlier in the decade. Le Corbusier became convinced that his earlier faith in Taylorism, Fordism, technocracy, and an architectural elite was not enough, and he changed his famous slogan to "Architecture and Revolution."

But although this change of viewpoint coincided with his several trips to Moscow, the revolution he had in mind was not a leftist one. Through his weekly basketball partner Dr. Pierre Winter, director of the clinic at the Paris Faculté de Médecine, Le Corbusier was introduced to Georges Valois's Faisceau des Combattants et Producteurs, a rightist group allied with Mussolini and Italian Fascism and popularly known as the Blue Shirts. He did not actually join this group, though he gained its support for the Plan Voisin. Through the Faisceau, however, he became part of a neosyndicalist movement in France. French Syndicalism before the First World War differed from Communism in that it sought to transfer control of the means of production not to the State, but directly to syndicalist unions. Its most salient feature was its complete rejection of parliamentary politics in favor of what the syndicalist leader Georges Sorel dubbed "action directe": general strikes and violent measures aimed at putting workplaces under the control of the workers. In France (unlike, for example, Barcelona) the appeal of syndicalism as a genuine working-class movement was largely over by 1918, but it was revived in the late 1920s by groups of young intellectuals whose sympathies leaned toward Mussolini and Fascism. Around this time Le Corbusier became aware of the movement, and in the early 1930s he began to write for the neosyndicalist reviews *Grand Route*, *Plans*, *Prélude*, and *L'Homme Réel*, activities that have been discussed and documented in detail by Mary McLeod.²⁵ Le Corbusier's involvement with syndicalism did not change his commitment to centralized master planning, but in combination with his exposure to the Soviet debates it altered his conception of the ideal future city.

In the Ville Radieuse there is an intensification and modification of the metaphor of the city-as-body, a notion retained from the classical tradition. For syndicalists, focused on the "real needs" of life, a major end of planning was the recuperation of a lost sense of biological harmony disrupted by capitalist development. Beyond the specific programmatic elements—playing fields, pools, sun terraces, and so on—intended to further this end, in Le Corbusier's Ville Radieuse the architectural and urbanistic strategies are themselves now explained through organic metaphors that proliferate well beyond the traditional classical figure. While the town plan still has a classical head (the business center) and heart (the cultural center), its centroidal axis no longer demands bilateral symmetry, and its openness is viewed as a form of "biological development" like the roots of a tree. Instead of the simple division made in the Ville Contemporaine between the single cell and the overall organism, the Ville Radieuse is defined as "multicellular," with

the basic cell one of seven types of "biological units" that granted fourteen (later reduced to ten) square meters per resident.²⁶

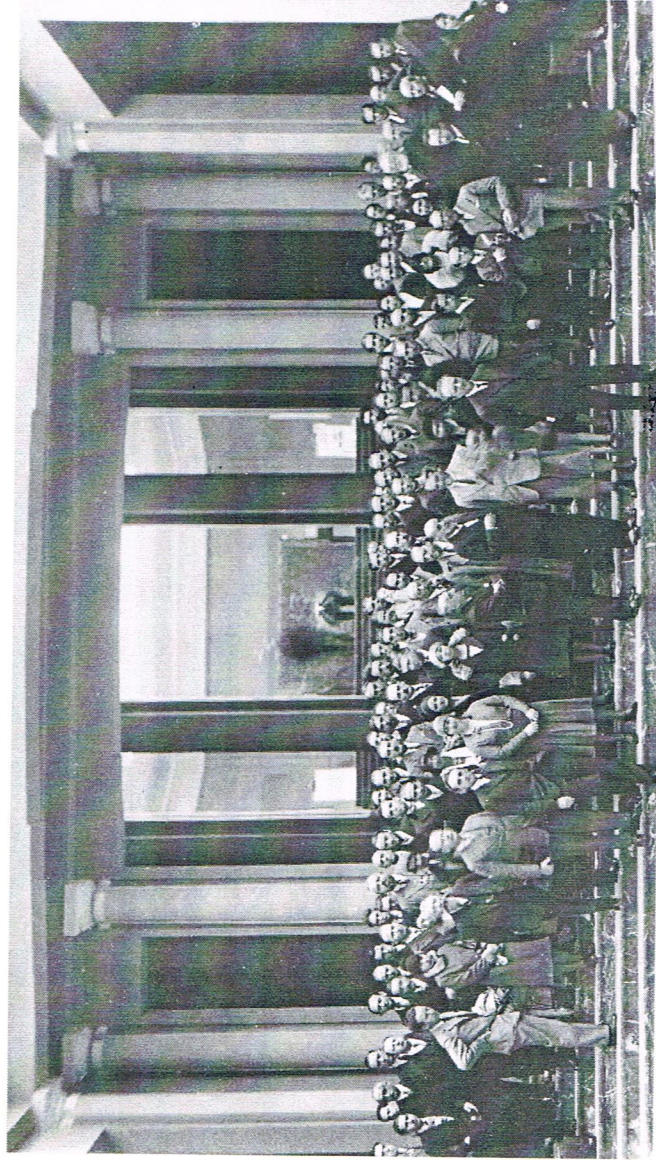
The Ville Radieuse moves from the fixed, quasi-academic perspectival panorama of the Ville Contemporaine toward a more open-ended, process-oriented conception of urbanism. What mattered to Le Corbusier now was not so much the final project as the methodology of planning, as a means of bringing the world under rational control for the common good. "Plans are the rational and poetic monument set up in the midst of contingencies," he wrote as a motto on the title page of *La Ville Radieuse*: the impulse to monumentalize was shifted from the fixed artifact to the act of planning. And the obvious locus for such "monumentalization" of the planning activity was of course CIAM itself.

CIAM 3, Brussels, 1930: Rational Lot Development

The presentation of the Ville Radieuse, displayed in sixteen boards, became the major part of Le Corbusier's contribution to CIAM 3, along with his explanatory lecture, "The Subdivision of the Land in Cities," where he defended his notion of demolishing existing cities and rebuilding them with buildings of "15, 20 or more stories," and increasing densities to as many as 250 to 500 persons per acre. The new pattern was justified both in the familiar Taylorist terms of saving time and money through shorter commutes and in terms of his growing interest in leisure, since in the new city 80 percent of the land was available for recreation. He also introduced a new argument, that such a city would be safer from aerial bombardment and gas attack.²⁷

The departure for the USSR in October 1930 of May's "architects' brigade," which included Stam and Schmidt, to plan new cities as part of the first Soviet Five Year Plan,²⁸ removed some of the opposition within the CIRPAC to Gropius and Le Corbusier's preoccupation with replanning urban areas with high-rise housing for the working classes. Despite the unchanged title, which might be translated as "Rational Site Development," the real theme of CIAM 3, held November 27–29, 1930, in the Palais des Beaux-Arts in Brussels, was a discussion of Gropius's question, "Low-, Mid-, or High-rise Building?," an investigation that paralleled Le Corbusier's views.²⁹ Related lectures were "Inquiry into the Overall Cost of Two- to Twelve Story Construction Methods" by May's associates Herbert Boehm and Eugen Kaufman, and "High-, Mid- and Low-rise Building in American Circumstances" by Richard Neutra.³⁰

Boehm and Kaufman's lecture at CIAM 3 was based on an excruciatingly detailed study (commissioned by the German Reichsforschungs-Gesellschaft)³¹ of the construction costs of various types of low-cost housing, where they had found that five-story *Zeilenbau* apartments of masonry construction were in fact the cheapest



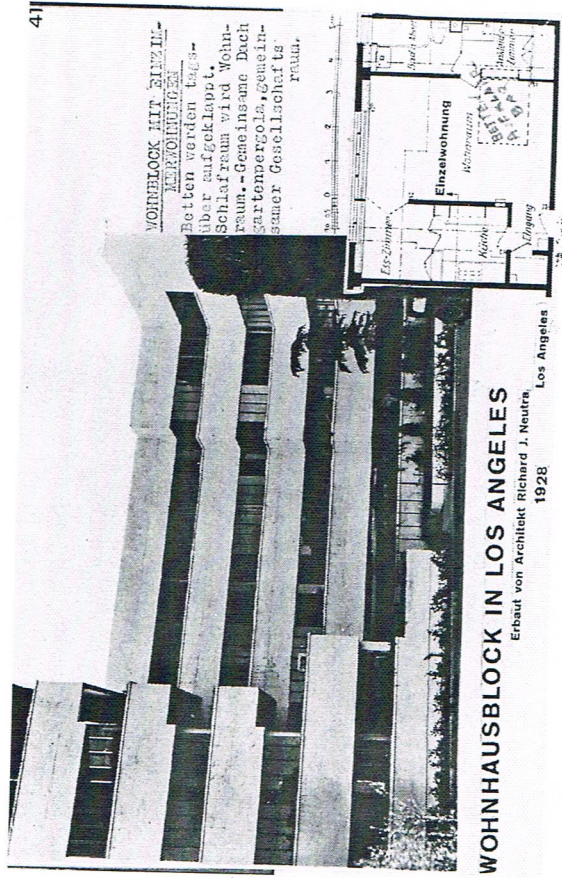
1.17 Group photograph, CIAM 3, Brussels, 1930. Johannes Duiker (out of focus) and Richard Neutra (right) at front left center, next to unidentified woman; Henry van de Velde (facing right) with arms folded; Mies van der Rohe (to right), Karl Moser, in center, Giedion to his right in middle row, Gino Pollini and Piero Bottomi to Giedion's right; Victor Bourgeois (in front at right center); José Luis Sert, Madame de Mandrot, García Mercadal, Le Corbusier at front right center; Gropius and Häring (with paper) at right in middle row.

form of conventional construction, affirming May's opposition to high-rise settlements.¹³² This finding led Giedion and Gropius to shift the debate over building heights away from strictly economic justifications toward the collective social and spiritual advantages of each type. Thus Gropius's lecture, "Low, Mid- or High-Rise Building?" in a sense the keynote address of the Congress, began with the argument that reasoning in city planning should not be strictly economic but also should take into account "psychological and social demands."¹³³ Gropius argued that best housing types were either the one-family house on the outskirts of the city, offering "the greatest quiet, seclusion and repose," or the ten- to twelve-story apartment building "in localities of high land utilization." Accepting that collective dwellings were the most desirable and economical form of working-class housing, he argued in favor of the latter. In opposition to May or Boehm and Kaufman he asserted that three- to four-story "medium-high" buildings were inferior, offering "less sun and too small a green area"; their "disappearance can only be called progress." In his own work he had demonstrated the new high-rise pattern with his first-prize entry

in the 1929 competition for Siedlung Haselhorst, Berlin, where he proposed ten-story steel slab blocks in a *Zeilenbau* pattern, and at CIAM 3 he also displayed a similar proposal for Buenos Aires developed with an associate, Frank Möller.¹³⁴

Gropius's high-rise schemes seem clearly related to the parallel work of Ludwig Hilberseimer (1885–1967), which Gropius did not mention or illustrate in his lecture.¹³⁵ As published in 1931 in *Rationelle Bebauungsweisen*, Gropius's talk is illustrated with diagrams comparing "old and new block division methods" and showing how taller, more widely spaced slab buildings can house more people per hectare. The published text also includes illustrations of Häring's "Flachstedlung" of one-story houses set in superblocks; a scheme by Otto Haesler for both mid- and high-rise slabs; and Gropius's own twelve-story apartment house scheme for Haselhorst. Already built examples of high-rise construction in America are indicated by a view of the rear of a Chicago apartment house adjacent to a grassy lot, opposite a picture of Raymond Hood's eighteen-story Beaux-Arts apartments in New York, with a caption noting the sun shading produced by the proximity of the buildings. A typical floor plan of Helmle, Corbett, and Harrison's Master Apartments in New York is included, with a caption praising its "clever utilization of plan depth." Also illustrated are two panels from Neutra's "Rush City Reformed" that paralleled Hilberseimer's work: "Le Corbusier's well-known housing towers[sic] for the center of Paris compared with the chaos of New York skyscrapers" (a comparison of "airplane views" that Gropius had already used in *Internationale Architektur* in 1925); a diagram by A. Lawrence Kocher and Gerhard Ziegler comparing their cruciform American "Sunlight Towers" scheme with a perimeter block apartment house;¹³⁶ a Merkelbach and Karsten project for a skyscraper in Amsterdam; the Dutch architects Duiker and Wiebenga's scheme for a high-rise city; and Gropius's own slab project for the Wannsee shore in Berlin. Notably absent is any mention or illustrations of the work of Hilberseimer. As for Le Corbusier and Gropius (and preceding the latter), Hilberseimer's initial point of departure had also been the "wilderness" of American capitalist downtowns, whose basic techniques and underlying instrumental logic he sought to reconfigure into a more rational pattern. But unlike Le Corbusier he was indifferent to the overall image of his totally objective city, which he offered without Le Corbusier's characteristic hyperbole. Hilberseimer's concern was simply that the urban plan be "clear and orderly; there must be no closed courtyards."¹³⁷ Not concerned with specific conditions, Hilberseimer sought "constitutive laws" of urban morphology, which led him to create a city of *Zeilenbau* slabs spaced to provide maximum light and air in each unit. Though Hilberseimer himself does not appear to have had a direct role in formulating the CIAM urbanistic discourse, similar ideas became a part of it through Gropius.

Gropius's presentation at CIAM 3, with its assimilation of Le Corbusier's and perhaps Hilberseimer's transformation of the American skyscraper city into a utopian



1.18 Richard Neutra, [Jardinette] apartments, Los Angeles, 1928, as illustrated in Giedion, *Befreites Wohnen*, 1929.

image, was reinforced by Neutra's pragmatic discussion of the American construction and organizational methods that made the skyscrapers possible. Neutra emphasized that high-rise housing in America was for the luxury market, and that the skyscrapers being built were the result of profit maximization.¹³⁸ This was the first CIAM Congress Neutra actually attended, though he had been listed as the American representative since La Sarraz. His participation in Brussels occurred as part of an extended trip to Asia and Europe to promote his Lovell House in Los Angeles.¹³⁹ In Berlin, Mies van der Rohe was sufficiently impressed with his lecture there to invite him as a visiting critic at the Bauhaus, and after teaching there in 1930 he briefly considered staying in Europe, but concluded that his prospects were better in America.¹⁴⁰

Also present in Brussels were Gino Pollini (1903–1991) and Piero Bottoni (1903–1973) from Italy, who replaced Rava and Sartoris as the Italian representatives; Mies, director since August 1930 of the Bauhaus, replacing Hannes Meyer, who had left for the USSR; and Henry van de Velde (1863–1957) from the older generation. Karl Moser attended but indicated that he wished to retire as president of CIAM, and it was expected that Victor Bourgeois would replace him. Gropius, however, supported Van Eesteren, and he was named the new president behind the scenes, apparently in part because of strong opposition from the German-speakers to a francophone president.¹⁴¹

At CIAM 3 some unfinished business from CIAM 2 remained, and it was also agreed that the national groups would be given the chance to report on the

status of housing conditions in their countries. These reports were not very systematic or comparable with each other, and the Czech representative, Karel Teige (1900–1951),¹⁴² summarized what he saw as the most salient issues in his report, “The Housing Problem of the Subsistence Level Population,” which was not given at a lecture but submitted later for the CIAM 3 publication, *Rationelle Bebauungsweise*.¹⁴³ Teige emphasized the seriousness and international nature of capitalism's chronic housing crisis, and clearly pointed out that for the poor it was a crisis of affordability, not one of supply. At the same time, as May was already finding in Frankfurt, “attempts to decrease the cost of construction and thereby reduce rents come up against the inevitable limitations of the economic system of today A reduction in the cost of housing could only come about from a decrease in the cost of construction brought about by rationalization, i.e. from a reduction in the price of materials and labor.”¹⁴⁴ Because “private enterprise can bring no relief to the housing crisis,” what is required is “a new form of collective housing for the working class”: “Thus today's boarding-houses, Dutch flats, residences for single women, apartment-hotels, boarding schools, homes for children and the elderly, etc., are embryonic forms of a future qualitative revolution in our housing form. Instead of the small-scale organization of individual households, we have the centralization of household functions and the conversion of the isolated nuclear household into a modern mechanized operation.¹⁴⁵ Echoing Le Corbusier, Teige also stressed that because housing was a mass need which “can only be solved by large-scale planning,” the “housing problem must be seen above all as a problem of town planning.” This requires the “clearing of old housing districts, where, because they cannot afford newly-built dwellings, hundreds of thousands of people of the subsistence level vegetate in the unhealthy and often quite inhuman rooms of the tenement blocks, in basement and attic dwellings with windows opening onto foul-smelling, sun-less back courtyards. The poorest levels of the population are warehoused in old blocks fit only for demolition.”¹⁴⁶

Rehabilitation, however economically justifiable, was clearly not on the housing agenda at CIAM 3, and the attitude in favor of a new urban pattern, whether or not it included high-rise building, was evident in the accompanying exhibition, also called *Rationelle Bebauungsweise*, which consisted of fifty-six site plans on aluminum boards with accompanying information. The names and locations of the projects were given, but no architects' names were listed. The uniform scale and manner of presentation gave the collection a unified appearance, but the plans were a grab-bag of different types of material, ranging from portions of Le Corbusier's visionary projects through built social housing in Frankfurt and elsewhere to presentations of ordinary nineteenth-century urban housing blocks in Amsterdam, Paris, Milan, and Basel. Like specimens under a microscope, the fifty-six plans in the exhibition were intended to be seen as samples of urban organisms. Their

uniform presentation, indifferent to issues of local cultural context and architectural convention, enhanced the notion, already widespread in planning circles, that “the industrial city” was a uniformly chaotic phenomenon susceptible to scientific improvement through the proper interventions from above. To this idea CIAM added its distinctive advocacy of certain formal strategies intended to maximize green space and to eliminate the traditional corridor street. Despite disagreements over the most appropriate building heights or issues of centralization versus decentralization, it was clear that CIAM rejected all previous forms of urbanism, which it could only see as evolutionary stages leading toward its new methods.

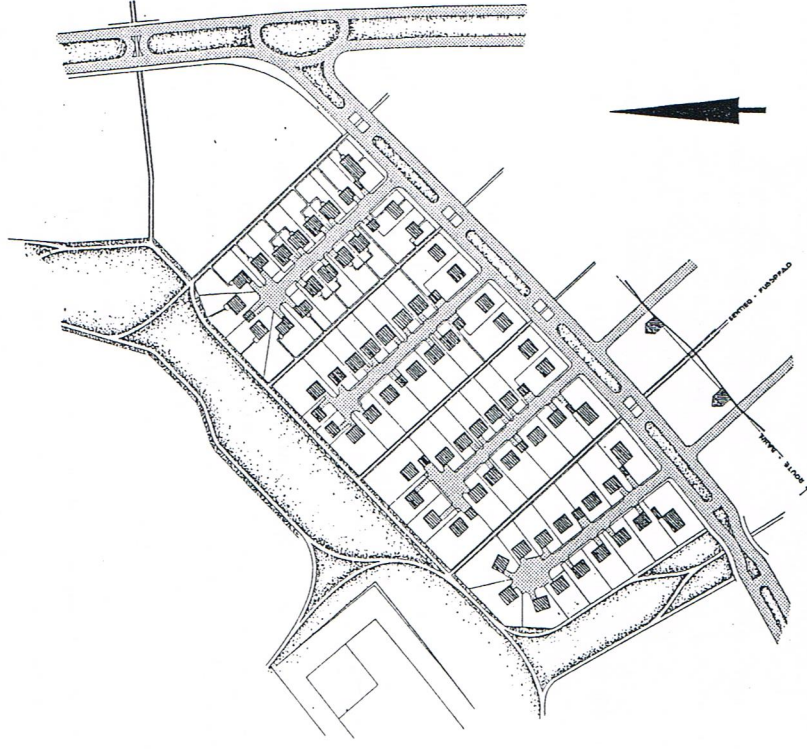
Categorized as low, middle, or high-rise, the majority of the projects displayed at CIAM 3 and published in *Rationelle Bebauungsweisen* came from Holland (eleven), Germany (nine), Belgium (eight), and Switzerland (six), with a few each from France, Italy, Poland, Czechoslovakia, Hungary, Finland, Sweden, and Denmark. Two of the five projects from France were Le Corbusier’s redent blocks from the Ville Contemporaine (#39) and the first presentations of his: Ville Radieuse (#40); the other two were the “negative” example of a Parisian courtyard apartment house, and a portion of the garden city of Plessis-Robinson (#26). From Britain the only project (#1) was Parker and Unwin’s Pixmore Hill at Letchworth; and from the United States, a cul-de-sac street from Stein and Wright’s Radburn (#9). These three Garden City schemes were criticized in the accompanying comments, which were probably written by Giedion. These noted that all three had “no regard for exposure,” while the European projects were criticized for retaining conventional street patterns. The Letchworth project was described simply as a “reaction against slums: planned on romantic village lines,” but Radburn, the “town for the motor age,” earned mild praise as an “attempt at systematisation of the English garden city.”¹⁴⁷

The projects which were praised, many of them proposals that remained unbuilt, rejected Garden City methods and focused on collective dwellings, solar orientation, and high density with wide spaces between buildings: projects in Frankfurt like Stam’s Hellerhof (#27) or Gropius’s Am Lindenbaum (#31), or the Swiss group’s Neubühl (#19) in Zurich. Oud’s Kiefhoek, Rotterdam (#7), was criticized for a lack of concern for uniform exposure and for the small distances between dwellings, while various perimeter-block schemes from Amsterdam South were accused of “playing with forms of blocks” and of lacking a “central up-to-date idea (#24),” or having “too small intervals between blocks” (#22).¹⁴⁸ Notably absent were the Berlin projects of Bruno Taut or Häring’s scheme for L-shaped courtyard houses later taken up by Hilberseimer as a “low-rise” model for families with children.

The demonstrations of the new architecture’s site planning were also contrasted with examples of undesirable urban conditions. These included typical working-class urban blocks in Amsterdam (#22–24), typical small-lot development

1:3000

9. RADBURN U. S. A. 1929



ORDRE SOCIAL: Colonie de villas	SOZIALE BESTIMMUNG: Villenkolonie	Gesamt-Strassenland / Superficie totale des rues 9.095 m ²	19,7 %
ELEMENT D'HABITATION: Maisons particulières avec front sur la rue, petites distances latérales, entre les maisons	WOHNLEMENT: Einzelfamilien mit Front gegen Strasse, seitliche Hausabstände gering	Bauland / Surface bâtie 46.155 m ²	80,3 %
CIRCULATION: Séparation entre les piétons et la circulation des automobiles	VERKEHR: Trennung zwischen Fußgängerverkehr (Unterführung) und Autoverkehr (Sackgasse)	Wohnungszahl / Nombre de logements	13
ORIENTATION: Sans égards pour l'ensoleillement	ORIENTIERUNG: Ohne Rücksicht auf Besonnung	Kopfzahl / Nombre d'habitants pr. ha.	
GENERALITES: Essai d'une rationalisation de la site-garden anglaise. Elle s'appelle: Ville de l'âge du moteur	ALLGEMEINES: Versuch einer Systematisierung der englischen Gartenstadt. Sie nennt sich: Stadt des Motorzeitalters (Town for the motorage)	Netto-Wohnfläche / Superficie habitable	
		Bodenpreis für unaufgeschlossenes Gelände in Mauerstunden / Prix du terrain préparé pour la construction, heures de travail maçon	
		Bodenpreis für aufgeschlossenes Gelände in Mauerstunden / Prix du terrain préparé pour la construction, heures de travail maçon	

1.19 Site plan with analytical comments from *Rationelle Bebauungsweisen*, 1931.

in Basel (#21), recently built courtyard apartments in Milan (#25), and the dense Parisian speculative apartment building allowed by current building laws (#37). These were all held up for criticism: the Amsterdam blocks had “sunless” living rooms and playgrounds, and “The quarter looks urban and stony”; the Basel development was “chaotic” and “over-dense”; in Milan the “traffic [was] too near to houses” and the blocks were “too near together”; the Paris example appeared so self-evidently bad that under “exposure” the only comment was “a notion as yet in-existent [sic].”¹⁴⁹ These criticisms echoed those of nineteenth-century tenement reformers and turn-of-the-century Garden City advocates, and were completely in line with Le Corbusier’s viewpoint at this time. In a 1929 article in *L’Intransigeant* he had indicated the defining element of the traditional city with particular vehemence:

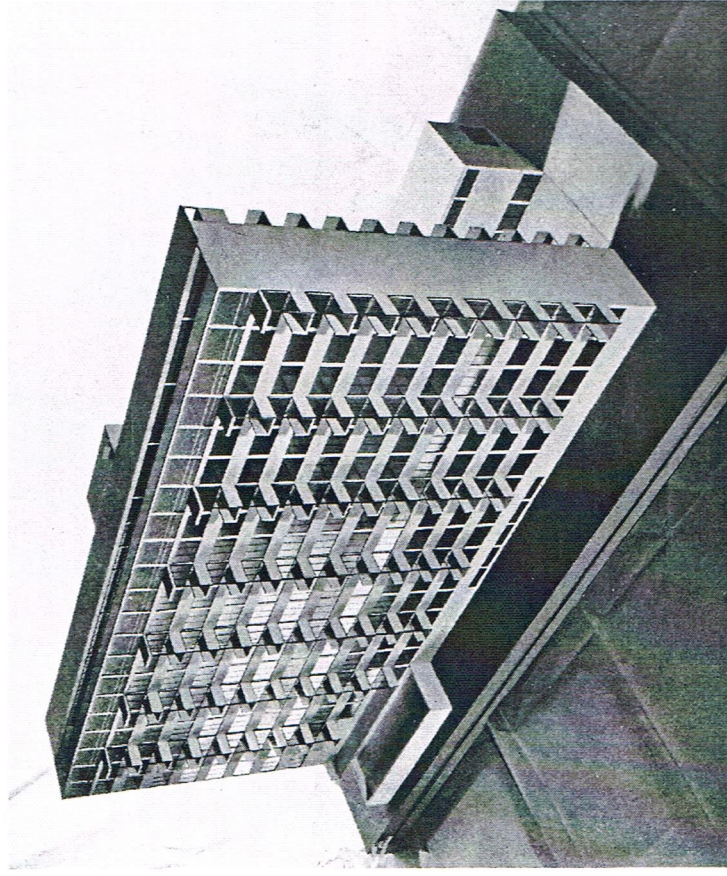
The definition of the street which has held good up to the present day is “a roadway that is usually bordered by pavements, narrow or wide as the case may be.” Rising straight up from it are walls of houses, which when seen against the sky-line present a grotesquely jagged silhouette of gables, attics, and zinc chimneys. At the very bottom of this scenic railway lies the street, plunged in eternal twilight. The sky is a remote hope far, far above it. The street is no more than a trench, a deep cleft, a narrow passage. And although we have been accustomed to it for more than a thousand years, our hearts are always oppressed by the constriction of its enclosing walls. . . . It is the well-trodden path of the eternal pedestrian, a relic of the centuries, a dislocated organ that can no longer function. The street wears us out. And when all is said and done we have to admit it disgusts us. Then why does it still exist?¹⁵⁰

While there is no doubt that the poor sanitation, bad daylighting and inadequate ventilation of nineteenth-century working-class districts, as well as the new dangers of automobile traffic in narrow streets, were a source of widespread and justifiable concern, CIAM’s universal revulsion for the city of streets and interwoven activities seems based on something deeper. Yet that “something” is never disclosed in the denunciations of Le Corbusier, and the need to abolish the street is assumed to be self-evident.

It was not a position unique to CIAM: the German city planner Werner Hegemann was equally antagonistic to the existing city, a bias he made clear even as he traced its history in his *Das steinerne Berlin* (The Berlin of stone) of 1930.¹⁵¹ Perhaps evoking Hegemann’s title, a local newspaper report on CIAM 3, probably the work of Giedion, stated that the Congress had concluded that the “city must more or less lose its stony character,” but emphasized that it still favored retaining its density. The newspaper report further stated that the Congress had agreed that the “apart-

ment house of the future” will be a high-rise set in greenery. This did not reflect the contrary economic arguments of Boehm and Kaufmann, though the records of CIAM 3 imply that the delegates agreed with Gropius that middle-rise apartment housing should be abandoned in favor of either one-family houses or collective high-rises set in greenery, even if the latter were “initially uneconomical.” Häring also voiced his objections to high-rise building, and in an article in the Ring’s *Bauwelt* complained about the lack of attention given to low-rise building at CIAM 3.¹⁵²

Ignoring Häring’s protests, Le Corbusier, Gropius and Giedion successfully conveyed that a general line of urbanistic discourse had emerged from CIAM 3. After the Brussels congress, the fifty-six one-by-two-meter aluminum panels were exhibited in Zurich in February 1931, and published in the book *Rationelle Bauungsweisen* in November 1931, where they were accompanied by an introduction by Giedion, the lectures, Teige’s text sent in later, brief reports of the Congress, and the text of the Declaration of La Sarraz.¹⁵³ The lectures and the commentary on the plans made the CIAM urbanistic discourse of 1930 clear: it



1.20 Walter Gropius, model of an eleven-story steel-framed slab apartment building with sixty small units, from *Rationelle Bauungsweisen*, 28.

excluded Garden City, Beaux-Arts, and Berlage's urbanistic methods as well as any kind of explicit "formalism." All forms of traditional urbanism were seen through a regularizing prism that made them appear dark, unsanitary, and chaotic, unsuited to "modern needs." Ostensibly focused on the problem of mass housing, the discourse was more concerned with promoting the replacement of the existing urban pattern in favor of widely spaced high-rises set in greenery along the lines laid down by Gropius and Le Corbusier and shared by Neutra, Bourgeois, and the other members of CIAM.

2

The Functional City, 1931–1939

The Theme of the Functional City

The concept of the Functional City, the most significant theoretical approach of CIAM, began to dominate its discourse immediately after the Brussels Congress. At the Berlin "Special Congress" held in 1931, sample analytical maps to be used to compare cities on this basis were presented, and the political implications of the idea were debated. The underlying concept was a simple one. At the organizational meeting to plan the next Congress on this theme, held in Zurich in February 1931, Cornelis van Eesteren asserted that the "Rationelle Bebauungsweisen" (Rational Site Planning) exhibition then traveling around Europe had shown that "districts for the masses, with their high population densities, suffer the consequences of incorrect development."¹ He declared that the "many disadvantages" of these districts, based on the "medieval" block form of street walls and lot lines, were unnecessary. With the "Die Wohnung für das Existenzminimum" exhibition, CIAM had demonstrated the fundamental importance of favorable solar orientation in low-cost apartments with their "intensely used rooms." Consequently, Van Eesteren argued that the best position for sunlight for a particular housing type should determine "the direction of the whole apartment series." At the same time, to insure low material transportation and installation costs, industrialized building methods demanded simple and clear property divisions. Therefore, he concluded, what are needed are not axial city plans, but new rational development methods that could be extended to the planning of entire cities.²

The CIAM members present at this meeting in Zurich—Le Corbusier, Gropius, Giedion, and the Swiss delegates Rudolf Steiger and Werner M. Moser—instructed the Dutch group under Van Eesteren's direction to prepare the analytical presentation guidelines for the next Congress, which was to be devoted to a theme they called "The Functional City."³ These guidelines were to be based on those already being used by Van Eesteren's Urban Development Section (UDS) of the Amsterdam Public Works Department, where he had been chief architect since 1929.⁴ There,